

GEOPHYSICAL SURVEY REPORT
ON THE DAVE 1-8 GROUP OF CLAIMS,
AT THE HEAD OF DRIFTWOOD CREEK,
TWO MILES SOUTHWEST OF BEAR LAKE,
OMINECA MINING DIVISION

NTS 94 D-2 56° 126° SW

WORK DONE ON ABOVE COMINCO LTD.
CLAIMS DURING PERIOD JULY 14 TO
JULY 17 INCLUSIVE 1968

REPORT BY JOHN M. HAMILTON, UNDER
SUPERVISION OF J. RICHARDSON, P. ENG.

1616

EXPLORATION

WESTERN DISTRICT

GEOPHYSICAL SURVEY REPORT
ON THE DAVE GROUP OF CLAIMS,
DRIFTWOOD CREEK, OMINECA M.D.
NTS 94 D-2
56°126° SW

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3. Statement of Expenditures.	
4. Statutory Declaration Relating to Expenditures.	

CONCLUSIONS

1. An EM survey has been conducted over those interesting but drift-covered portions of the Dave Group area in which line-cutting was not necessary. No conductors were located.
2. The main showing area, and heavily mineralized hand specimens from it, do not conduct.

RECOMMENDATIONS

1. No other geophysical technique is likely to be able to locate and trace this mineralization quickly and economically.
2. In future, if possible, hand specimens of mineralization from a prospective EM survey-area in which Cominco has had little geophysical experience should be tested with an ohmmeter to determine whether the mineralization is likely to give rise to an EM response. This testing could be done in the field by the geologist prior to departure of the EM crew.

Submitted By *J. M. Hamilton*
John M. Hamilton,
Exploration Geophysicist.

Endorsed By *J. Richardson*
J. Richardson, P. Eng.

JMH:mk
August 20, 1968.
Attachments (4)
Distribution:
Mining Recorder, Smithers 2
Exploration, Western 1
District

C O M I N C O L T D.

EXPLORATION

WESTERN DISTRICT

ELECTROMAGNETOMETER SURVEY
DAVE GROUP, DRIFTWOOD CREEK
BEAR LAKE AREA, OMINECA M.D., B. C.
NTS 94 D-2

SUMMARY

An EM survey over the Dave Group was unsuccessful in locating or tracing new mineralized zones. In addition, known mineralization (Chalcopyrite-bearing specularite-quartz-carbonate veins) was found to be non-conductive both in hand specimen and in situ.

Minute limonite-bearing fractures which are common in the veins, or perhaps an unexpectedly low conductivity of natural specularite, or some combination of these factors, may explain why these "massive" metallic zones do not provide suitable EM targets.

INTRODUCTION

The Dave Group of ten mineral claims was staked in August 1967, to cover exposures of copper-bearing veins located during a reconnaissance stream sediment geochemical program. Due to the apparently "massive" nature of metallic mineralization in the veins, it was hoped that an electromagnetic survey would aid in extending known zones, and locating similar zones, if any were lying concealed under the thin but extensive mantle of soil and talus on the lower valley slopes.

GEOLOGY

Copper mineralization in the property consists of irregular chalcopyrite stringers and blebs in a gangue composed principally of specular hematite with quartz and, locally, calcite. The mineralization occurs as veins which seldom exceed one foot in width, although copper concentrations of roughly 2% appear common within the veins. The veins are fracture-controlled, and occur in Takla volcanics of Jurassic age; andesite is the most common rock type locally. Kastberg intrusions (Tertiary) of feldspar-quartz porphyry crop out two miles south of the property. Emanations from these intrusives may have been the source of mineralization observed in the volcanics.

ELECTROMAGNETOMETER SURVEY

The survey was conducted by the writer and a Summer Assistant, I.R. Mayers, between July 14 and 17, 1968, using an ABEM Minigun. This is a horizontal loop electromagnetic system which operates at a frequency of 3520 c.p.s. and a coil spacing of 200 feet. About 7.8 miles of line were traversed, and the reading interval was commonly 100 feet, although this was reduced to 50 feet in areas where anomalous readings were encountered. Survey "loops" were run by chain and compass methods, controlled by a picket base line. The EM cable was used as a chain, and no attempt has been made on the plan to compensate for the fact that slope chaining occurred throughout the surveyed area.

No conductors were located by the present survey. In addition, the main showing area did not produce any response when the EM system was set up over it, and heavily mineralized hand specimens were found to be non-conductive when tested by an ohmmeter. Apparently, specularite is not conductive enough in the present geological context to provide a suitable EM target. In addition however, it was found that "patches" of chalcopyrite in hand specimen were at best rather poor conductors. Close examination showed that chalcopyrite patches contain many hairline fractures filled with a rusty material (limonite?). It is possible that these limonitic fractures are present throughout the veins, thereby preventing them from responding as truly massive conductive zones. A second perhaps less likely possibility is that the conductivity of specularite is not as great as its metallic nature would suggest. The relative conductivity of specularite and sulphides is not known to the writer at this time.

C O M I N C O L T D.

EXPLORATION

WESTERN DISTRICT

1968 GEOPHYSICAL SURVEY EXPENDITURES
DAVE GROUP, DRIFTWOOD CREEK
OMINECA MINING DIVISION
94 D-2

SALARIES

1 Exploration Geophysicist (J.M. Hamilton) 4 days July 14-17 @ \$50/day	\$ 200
1 Field Assistant (I.R. Mayers) 4 days July 14-17 @ \$30/day	120

ELECTROMAGNETIC SURVEY

ABEM Minigun rental 4 days July 14-17 @ \$65/day	260
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LINECUTTING

2 man days @ \$30/day	60
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CAMP SERVICES

180

SAMPLING

2 man days @ \$30/day	60
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TRANSPORTATION

Charter helicopter 7 hrs. @ \$130	900
Charter Beaver Aircraft 2 hrs. @ \$50	<u>100</u>
	\$ 1,880

Signed J. Richardson.
J. Richardson, P. Eng.

This is Exhibit "A" to the Statutory Declaration of
J. Richardson, declared before me the 20 day of
August, 1968 A.D.

J. J. Jumper
Sub-Mining Recorder

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of

STATUTORY DECLARATION RELATING TO
EXPENDITURES ON A GEOPHYSICAL
SURVEY OF CERTAIN MINERAL CLAIMS
THE PROPERTY OF COMINCO LTD.
OMINECA MINING DIVISION.

I, JAMES RICHARDSON, Professional Engineer

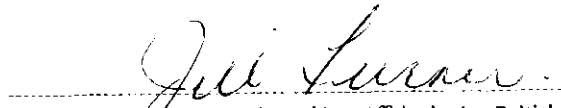
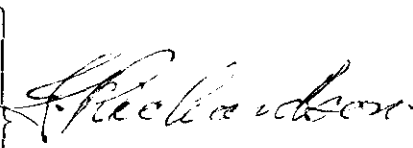
of the City of Vancouver

in the Province of British Columbia, do solemnly declare that

1. I do personally know J. M. Hamilton who prepared the accompanying geophysical report as a result of a survey carried out under my supervision on certain mineral claims situated in the Omineca Mining Division, owned by Cominco Ltd.
2. Copies of the said report are being filed with the Mining Recorder in Smithers.
3. Attached hereto and marked with the letter "A" upon which I have signed my name at the time of declaring hereof, is a statement of expenditures incurred in connection with the geophysical survey of the said claims showing in addition the dates during which those making the said survey performed their work.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 20
day of August, 1968, A.D.



~~A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia~~

Sub-mining Recorder

C O M I N C O L T D.

EXPLORATION

WESTERN DISTRICT

GEOPHYSICAL SURVEY REPORT
ON THE DAVE GROUP OF CLAIMS,
SITUATED AT THE HEAD OF DRIFTWOOD CREEK,
TWO MILES SOUTHWEST OF BEAR LAKE, OMINECA M.D.
NTS 94 D-2
56° 126° SW

The following is a list of claims comprising the Dave claim group and indicates the amount of assessment credit requested on each claim:

<u>Claim</u>	<u>Record No.</u>	<u>Date Recorded</u>	<u>Requested Assessment Credits</u>
DAVE 1-8 incl.	52513-52520 inclusive	Aug 30, 1967	1 year per claim
DAVE 9, 10	52521-52522	Aug 30, 1967	-----
		TOTAL	8 years

Work was carried out on the above claims by Cominco Ltd. during the period July 14, to July 17, inclusive 1968.

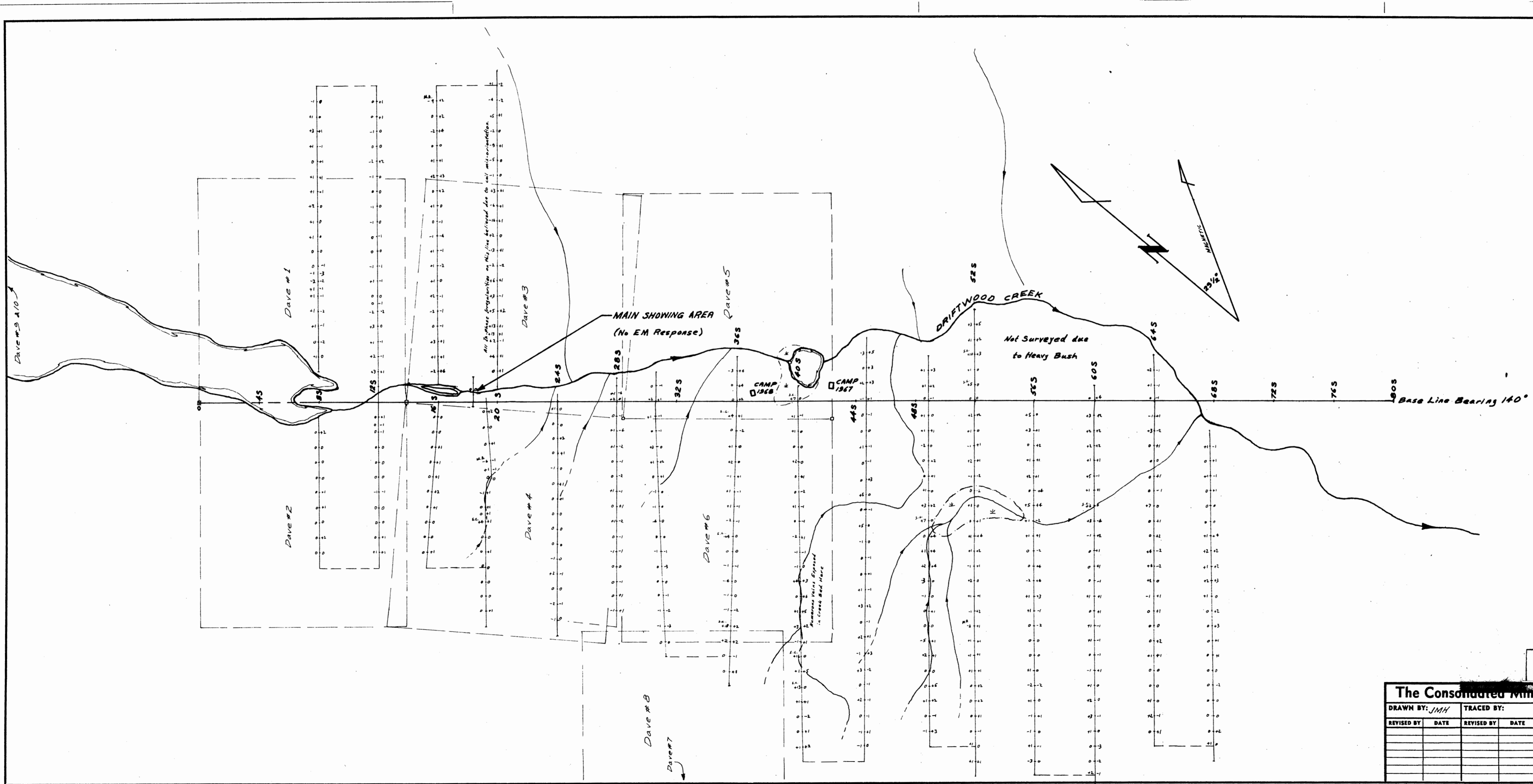
REPORT BY

JOHN M. HAMILTON

UNDER SUPERVISION OF

J. RICHARDSON, P. ENG.

August 20, 1968
Vancouver, B. C.



LEGEND & NOTES

1. In-Phase plotted on Right.
2. Out-of-Phase plotted on Left
3. Instrument: ABEM Minigun
Frequency 3520 cp.s.
Coil Spacing 200 feet
4. "S.C." denotes a Short Cable
5. "M.A." denotes Misaligned Coils
6. No conductors were located
7. No attempt has been made to reduce horizontal distances to compensate for slope chainage
8. Traverses controlled by chain and compass from a picket Baseline.

claim boundary

1616

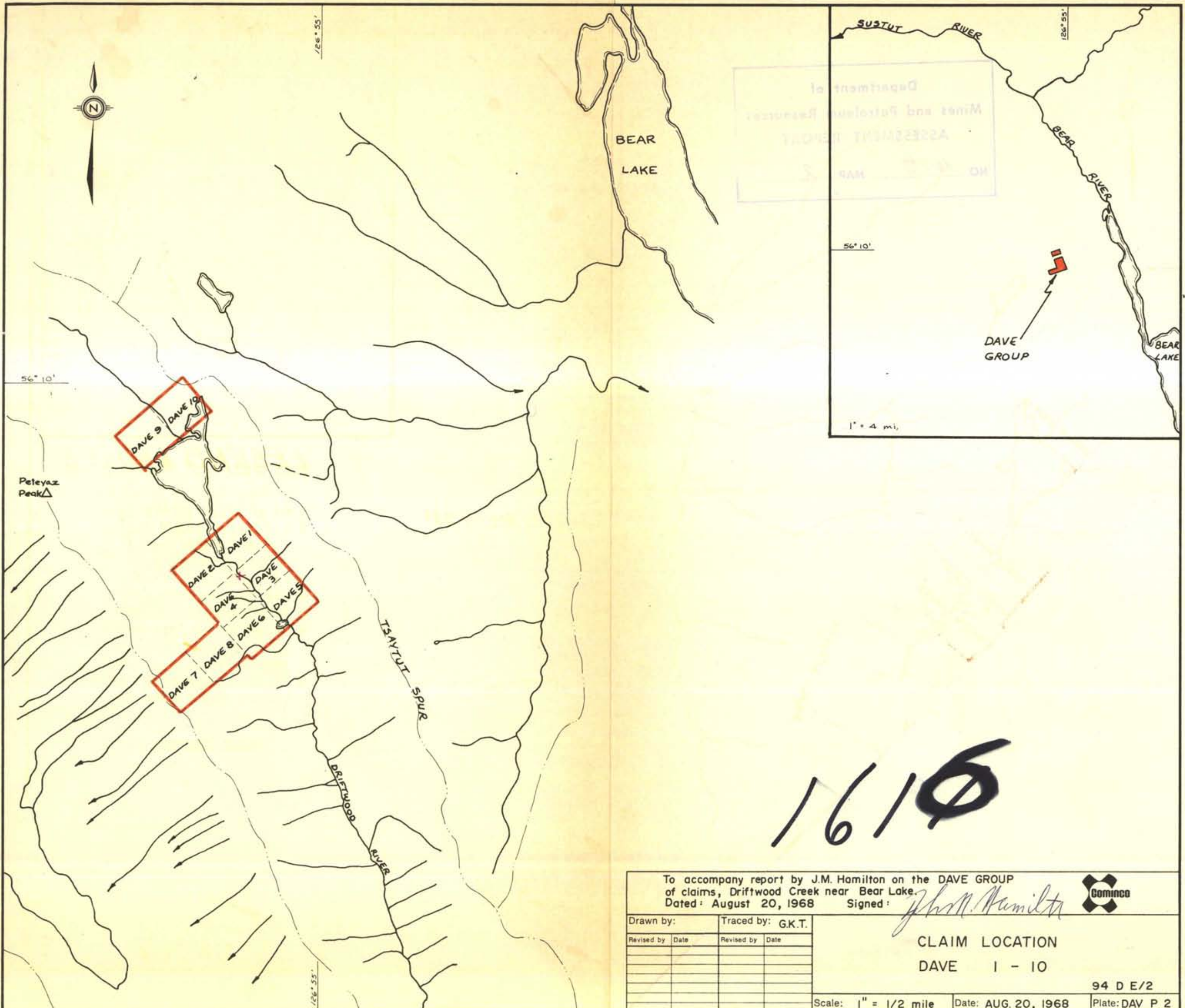
To accompany report by J.M. Hamilton on the DAVE GROUP of claims, Driftwood Creek near Bear River, B.C.
Dated: August 20, 1968 Signed: *J.M. Hamilton*

The Consolidated Mining and Smelting Company of Canada Limited

DRAWN BY: JMH		TRACED BY:	
REVISED BY	DATE	REVISED BY	DATE

ELECTROMAGNETIC SURVEY
DAVE GROUP
DRIFTWOOD CREEK, OMINICA M.D., B.C.


SCALE: 1"=400' DATE: July 29, 1968 PLATE: 5902 DAV-P1



1610

To accompany report by J.M. Hamilton on the DAVE GROUP of claims, Driftwood Creek near Bear Lake.
 Dated: August 20, 1968 Signed: *J.M. Hamilton*

Drawn by:	Traced by: G.K.T.		
Revised by	Date	Revised by	Date


CLAIM LOCATION
 DAVE 1 - 10

94 D E/2

Scale: 1" = 1/2 mile Date: AUG. 20, 1968 Plate: DAV P 2