

4465

CINDY GROUP

GEOLOGICAL REPORT

BY

D.C. MALCOLM, B.A.Sc., P. Eng., 2568
Consulting Geologist

Vancouver, B.C.

June 28, 1973

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 4465 MAP

4465

CINDY GROUP

OWNER: JAY BUTTERWORTH

Claims: Cindy Mineral claim Numbers 2 to 21.

Location: Princeton

Latitude: 49°

Longitude: 120° N.W.

Similkameen Mining Division

Author: D.C. MALCOLM, B.A.Sc., P. Eng., 2568

Dates of Work: May 31 to June 5, 1973

June 12 to June 16, 1973

June 24 to June 28, 1973

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SUMMARY

The Cindy claims are north of Princeton in a belt of Nicola Volcanics. They are along the east side of Coast Range granodiorite intrusives. The volcanics, and numerous intrusives, are extensively faulted by north and northwest striking major faults and by numerous minor faults and shears which strike in all directions. Cretaceous sediments and Tertiary basalts occur in isolated areas.

The Nicola Volcanics and the intrusives are mineralized by pyrite and there are areas of intense hydrothermal alteration containing pyrite, chalcopyrite, bornite, metallic chalcocite and molybdenite.

The Cindy claims are underlain by Nicola Volcanics intruded by a north to northwest trending belt of diorites. The Summers Creek fault lies to the east of the claim area but branching northwest striking faults cross the claims. Many other faults disrupt the continuity of the formations.

The claims have not been prospected but an extensive area, in altered diorite on Cindy No. 13 claim contains disseminated and fracture plane pyrite and some chalcopyrite. One quartz stringer with galena was found on Cindy No. 15 claim. Pyrite and minor chalcocite occurs in a breccia zone on Cindy No. 4 claim.



BRITISH COLUMBIA



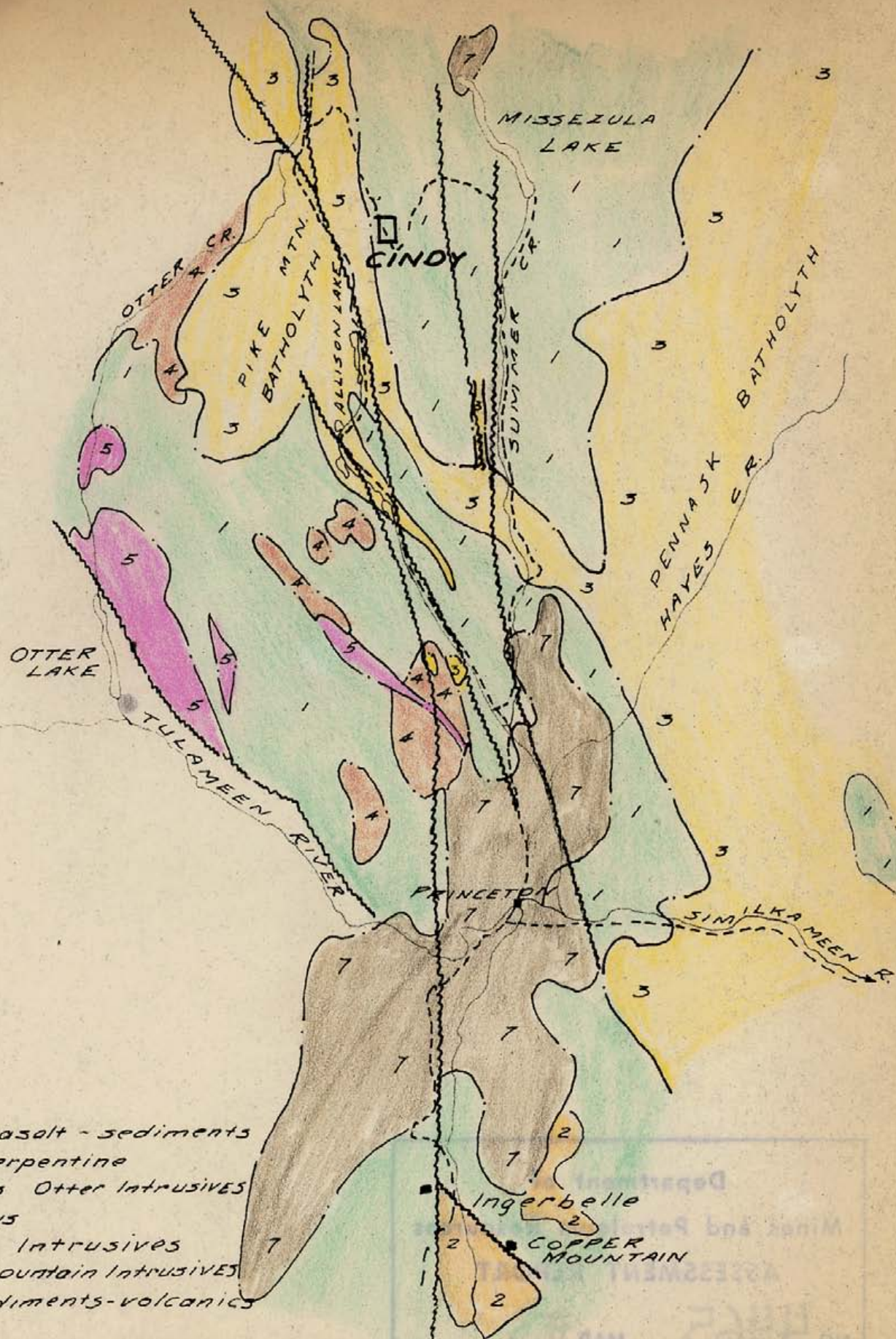
CINDY

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NO. 4465 MAP #2



LEGEND

- 7 Tertiary basalt - sediments
- 6 Gabbro serpentine
- 5 Cretaceous Otter Intrusives
- 4 Cretaceous
- 3 Jurassic Intrusives
- 2 Copper Mountain Intrusives
- 1 Nicola sediments-volcanics

CINDY GROUP

GENERAL GEOLOGY

Scale 1"=4 Miles

After Rice G.S.C. Map 888A

LOCATION

Latitude: 49°45' North
Longitude: 120°33' West
Elevation: 4,500 to 5,000 Feet

The claims are at the headwaters of Allison Creek 22 miles north of Princeton in the Similkameen Mining Division of British Columbia.

They are reached by Highway No. 5 north from Princeton to the Micro Tower road to the claims.

GENERAL GEOLOGY

The area north of Princeton is along the east contact of the Jura Cretaceous Pennask or Okanogan batholyth and south east of the Pike Mountain batholyth of the same age. The Nicola Volcanics of Triassic Age were intruded by these rocks and by granodiorite dikes connecting the batholyths.

Younger pegmatite, quartz feldspar porphyry, diorite and gabbro dikes and irregular shaped intrusives intrude the volcanics.

The major north and northwest striking Allison and Summers faults and numerous radiating branch faults extend northward from Copper Mountain. The rocks between these faults show numerous relatively minor faults and many large crushed areas.

The Cretaceous Princeton group and Tertiary volcanics and sediments cover the faulted older rocks. Tertiary Plateau basalts occur in isolated areas.

Mineralization, especially pyrite and copper mineralization is widespread both south and north of Princeton. Contact metamorphic zones with these minerals occur along the granodiorite contacts and zones of intense hydrothermal alteration with similar mineralization occur in many places.

Bedded chalcocite-hematite mineralization occurs in volcanic breccia zones.

CLAIM GEOLOGY

The Cindy claims are underlain by Nicola group andesites and porphyritic andesites in northwest trending areas and by Nicola group hematitic tuffs, green tuffs, agglomerates and limestones. These rocks are intruded by diorite, porphyritic diorite, siliceous hornblend porphyry and andesites. These intrusions trend northwest.

Several northwest and north faults can be traced but from the appearance of the outcrops and from the lack of continuity between blocks of rocks it is thought that the area is broken by numerous faults. One graben like fault was mapped on Cindy No. 20 claim.

Epidote alteration with magnetite, pyrite and traces of chalcopyrite is widespread.

Intense hydrothermal alteration showing sericite, silicification and some biotite, kaolin and feldspar alteration is found over a large area on Cindy No. 13 and No. 14 claims. The rocks are extensively pyritized and show some copper mineralization. A quartz stringer in this area on Cindy No. 14 contains pyrite and some galena.

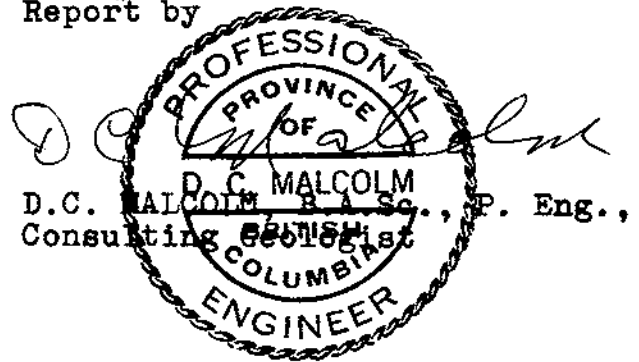
An area of agglomerate or brecciated volcanics on Cindy No. 3 and No. 4 contains pyrite, chalcopyrite and traces of chalcocite.

GEOLOGICAL CONCLUSIONS

The Cindy claims are underlain by blocks of Nicola group andesites, fragmentals and sediments intruded by a north to northwest trending series of irregular feldspar porphyry, hornblend porphyry and diorite dikes.

A zone of intense hydrothermal alteration with much pyrite and some chalcopyrite outcrops on Cindy No. 13 and a mineralized volcanic breccia zone occurs in limy fragmentals on Cindy No. 4 claim.

Report by



Vancouver, B.C.
June 28, 1973

ADDENDUM NOTE

Geological mapping and prospecting was done by the prospectors on lines at 400 foot intervals across the claims. The work was supervised by myself and the rock types identified. Difficulties were experienced in differentiating between varieties of diorites which grade from sericitized kaolinized rocks to fresh hornblend and feldspar porphyritic diorites. Similiar difficulties have been encountered on adjoining properties and, despite extensive petrographic studies, these intrusive types are hard to differentiate

REFERENCE

Geology and Mineral Deposits of the
Princeton Map-Area, British Columbia,
G.S.C. Memoir 243 by H.M.A. Rice

APPENDIX

<u>Claim</u>	<u>Record No.</u>	<u>Assessment Date</u>
Cindy 2	36,257	June 23, 1974
" 3	36,258	" " "
" 4	36,259	" " "
" 5	36,260	" " "
" 6	36,261	" " "
" 7	36,262	" " "
" 8	36,263	" " "
" 9	36,264	" " "
" 10	36,265	" " "
" 11	36,266	" " "
" 12	36,267	" " "
" 13	36,268	" " "
" 14	36,269	" " "
" 15	36,270	" " "
" 16	36,271	" " "
" 17	36,272	" " "
" 18	36,273	" " "
" 19	36,274	" " "
" 20	36,275	" " "
Cindy 21	36,276	June 23, 1974

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

In the Matter of

I, Jay Butterworth
 4727 Wesley Drive
 Delta, B.C.

of

in the Province of British Columbia, do solemnly declare that The following is the true cost of survey on the CINDY GROUP mineral claims.

LABOR

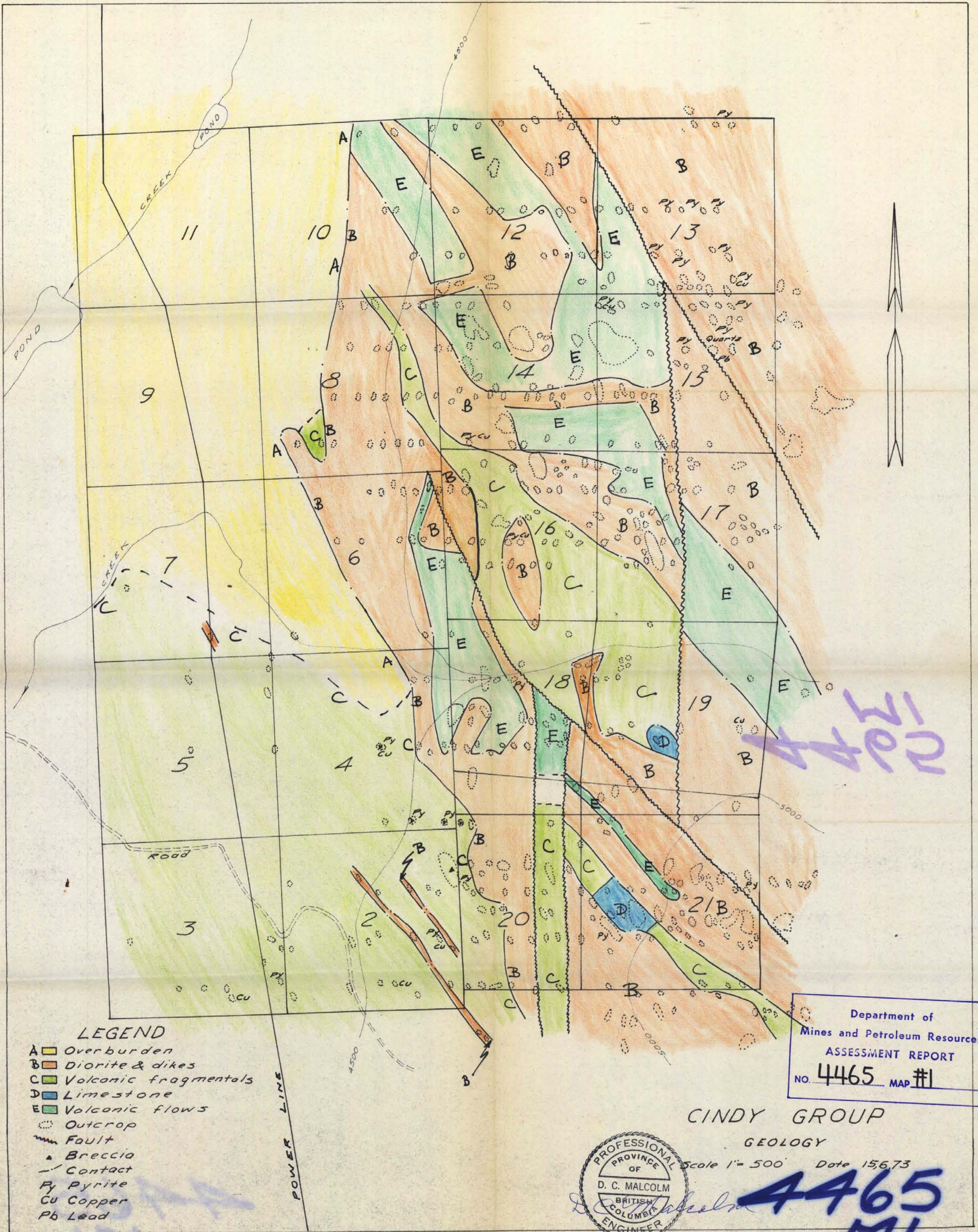
<u>NAME</u>	<u>DATES WORKED</u>	<u>DAYS</u>	<u>COST</u>	<u>TOTAL</u>
Jay Butterworth	May 31 - June 5, 1973	6	\$50.00	\$ 300.00
	June 12- June 16, 1973	5	50.00	250.00
Evan Sleeman	May 31 - June 5, 1973	6	50.00	300.00
	June 12- June 16, 1973	5	50.00	250.00
Food - - - - -				91.48
Lodging - - - - -				134.75
Vehicle 1,620 miles @ 15¢ per mile - - - - -				243.00
Supplies				
Flagging Tape - - - - -				39.08
Geological Mapping and Report - - - - -				400.00
D. C. Malcolm P. Eng.				
			Total	\$2,008.31

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 *4th*
 day of *July*, 1973, A.D.

Jay Butterworth

Paul Sub-mining Recorder
 A Commissioner for taking Affidavits for British Columbia or
 A Notary Public in and for the Province of British Columbia.



LEGEND

- A Overburden
- B Diorite & dikes
- C Volcanic fragmentals
- D Limestone
- E Volcanic flows
- Outcrop
- ~ Fault
- ▲ Breccia
- Contact
- P_y Pyrite
- Cu Copper
- Pb Lead

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4465 MAP #1

CINDY GROUP

GEOLOGY

Scale 1" = 500' Date 15, 6, 73



4465 MI