

# 5076

GEOLOGICAL REPORT

On Claims:

Beaver Dam 1 & 2  
Colleen 1 & 2

Quadra Island, B. C.

Nanaimo Mining Division

92K/3W

By:

E. Percy Sheppard, P.Eng.  
Consulting Geologist

August 6, 1974  
Vancouver, B. C.

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 5076 MAP

\* \* \*

C O N T E N T S

	<u>Page</u>
INTRODUCTION .....	1
PROPERTY .....	1
LOCATION & ACCESS .....	1
TOPOGRAPHY .....	1, 2
HISTORY .....	2
GENERAL GEOLOGY .....	2
DETAILED GEOLOGY .....	2
DIAMOND DRILLING .....	2
CONCLUSIONS .....	3
RECOMMENDATIONS .....	3

CERTIFICATE

APPENDIX

Cost of Drilling Program

MAPS:

	<u>Scale</u>
#1 Location Map	
#2 Claims Plan, Showing Geology	1" = 500'
#3 Claims Plan, Showing DD Hole BW-1	1" = 200'

## GEOLOGICAL REPORT

### On Claims:

Beaver Dam 1 & 2

Colleen 1 & 2

Quadra Island, B.C.

### INTRODUCTION

In addition to geological data, the following report contains information on diamond drilling done on mining claim BIT 1 in July 1973. The work was done for Prince Stewart Mines Ltd. (N.P.L.), which held an option on the property owned by Quadra Mining Co. Ltd. The report was authorized by Mr. William B. Kitchen, President of Quadra Mining Co. Ltd.

The drilling was performed by Interior Diamond Drilling Ltd. of Summerland, B. C., during the period July 14-19, 1973, and the core was logged by the writer on July 21, 1973, while the rig was still on the BW 1 hole.

### PROPERTY

The four claims covered by this report are as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
Beaver Dam 1-2	19566-7	July 24, 1974
Colleen 1-2	25812-3	July 12, 1974

The claims are owned by Quadra Mining Co. Ltd.

### LOCATION & ACCESS (Long. 125° 5'W, Lat. 50° 10'N)

The claims are located in the south-central portion of Quadra Island. The nearest settlement is Heriot Bay. Quadra Island is located off the east coast of Vancouver Island, the two being separated by Discovery Passage. From Campbell River on Vancouver Island a ferry leaves at hourly intervals for the 20-minute run to Quathiaski Cove on Quadra Island. Good gravel roads on the island make the claims easily accessible.

Quadra Island is covered by 4-1/50,000 map sheets: Sonora Island (92 K/6W), (92 K/6E), and Quadra Island (92 K/3W, (92 K/3E).

### TOPOGRAPHY

The surface of Quadra Island is characterized by sharp scarp faces, where volcanics underlie the area. Gentle slopes characterize the areas underlain by Coast Intrusives. Major features trend north-westerly, and drainage is generally southeast toward Gowlland Harbour.

The island is heavily forested with stands of Douglas fir, hemlock

and balsam. Aspen, alder and cedar cover the low-lying areas and swamps.

HISTORY

Quadra Island was first explored for minerals before the turn of the century. During 1952-53 the claims area was heavily explored, and approximately 13,000 tons of copper ore is reported to have been produced from the island.

GENERAL GEOLOGY

Quadra Island is underlain by Triassic, Jurassic and Pleistocene. The predominant rocks are Karmutsen formation volcanics, Quatsino formation limestones and Island intrusives of Middle Jurassic age, part of the Coast Intrusive complex.

The southern part of the island is covered by glacial debris. Glacio-alluvial deposits cover the main contacts and fault zones. These rocks are found throughout the Vancouver Island area and nearby mainland and islands. They are the host rocks for the important mineral deposits already known in the area, which range from magnetite, iron, gold and silver to copper-lead-zinc-silver-gold deposits such as Western Mines at Buttle Lake; "porphyry" type copper, molybdenum deposits of Island Copper at the north end of Vancouver Island, and the iron, copper deposits of Texada Mines on Texada Island.

DETAILED GEOLOGY

The claims area is underlain by Karmutsen volcanics, which consist chiefly of amygdaloidal basaltic lavas and dense, fine to medium-grained, heavily fractured volcanics. Mineralized areas are exposed as outlier islands and in the faces of exposed hills.

The mineral of interest is chalcocite ( $Cu_2S$ ), a secondary mineral of copper, with subordinate and local occurrences of bornite ( $Cu_5FeS_4$ ), cuprite ( $Cu_2O$ ), malachite ( $Cu_2CO_3(OH)_2$ ), and native copper, in highly oxidized material. Chalcocite occurs in the best showings as partial to complete replacement of the amygdules in the upper portion of an individual flow structure, veinlets and fracture fillings. Chalcocite veins occur in fissure filled fracture openings also. The disseminated amygdular ore is similar to the Keweenaw, Point Michigan, copper-bearing basaltic flows.

A small showing of chalcocite on BIT 1 was the target for the drill hole described herein.

DIAMOND DRILLING

A vertical hole (BW 1) was laid out to investigate the chalcocite showing on BIT 1. The hole was drilled to a depth of 107 feet, through massive Karmutsen basalts (volcanics), dark grey, fine-grained, with occasional epidote and quartz stringers at  $60^\circ - 80^\circ$  to the core axis. Widely spaced amygdules were noted from 10' to 70'. (See attached Diamond Drill Sampling Record.) Hole was stopped at 107 feet. No visible sulfide mineralization was encountered to this depth.



CONCLUSIONS

It is concluded that the vertical drilling on the occurrence in BIT 1 was unsuccessful in intersecting mineralization of the type seen on surface.

RECOMMENDATIONS

It is recommended that a series of slant holes be drilled at 50 ft. intervals along the projected strike of the chalcocite showing. At least four holes would be required to properly test the showing.

*E. P. Sheppard*

E. Percy Sheppard, P.Eng.  
Consulting Geologist

*E. P. Sheppard*

Vancouver, B. C.  
August 6, 1974

C E R T I F I C A T E

I, E. PERCY SHEPPARD, of the City of Vancouver, in the Province of British Columbia, hereby certify THAT:

1. I am a Consulting Geologist with offices at 315-402 W. Pender Street, Vancouver 3, B.C.;
2. I am a graduate of Dalhousie University, with a B.Sc. in Geology, and have been active in mining exploration and geophysics for over thirty years;
3. This report is compiled from data obtained during examinations on Quadra Island in 1970, 1971, 1972, and in 1973 when considerable geological work was carried out on the block of claims surrounding the four described in this report. The drilling program during July 14-19, 1973 was under my direct supervision and I subsequently logged the core on July 21, 1973;
4. I have no direct or indirect interest in the properties or securities of Quadra Mining Co. Ltd, and do not expect any such interest as a result of writing this report;
5. I am a member of the Professional Engineers Association of British Columbia, the American Institute of Mining Engineers, and a Fellow in the Geological Association of Canada.

DATED AT VANCOUVER, B.C., this 6th day of August 1974.

*E. P. Sheppard*

E. Percy Sheppard, P.Eng.

*E. P. Sheppard*

d

HOLE BW 1

COST OF DRILLING PROGRAM

BQ Core, 107' @ \$12/foot .....	\$ 1,284.00
Road building, 200', 3 hrs @ \$20/hr. ....	60.00
Professional Services:	
Core logging, sampling, 12 hrs @ \$25/hr..	300.00
Drafting & Report, 8 hrs @ \$25/hr. ....	200.00
	<hr/>
	\$ 1,844.00

Claim Bit 1  
Quadra Island

Signed:

*E. P. Sheppard*

E. Percy Sheppard, P.Eng.

*E. P. Sheppard*



BEAVER 2

EVELYN 1

19807

POND

CL Post

BM  
X28143

CL Post

DDHOLE 311' E1  
BWI -90°

ROAD

BIT 1  
19425

BIT 2 CL  
19426

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5076 MAP #3

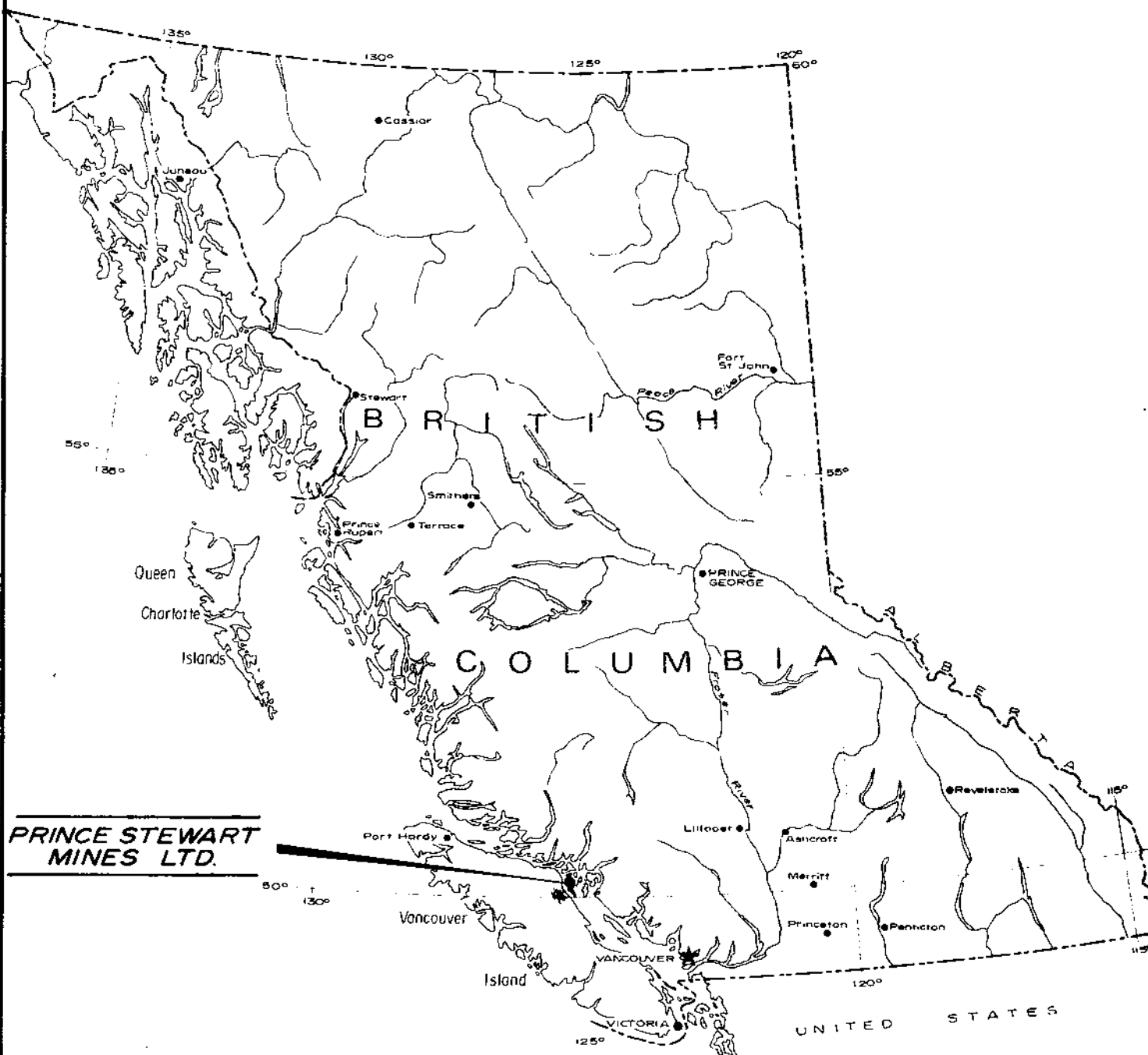
CLAIM MAP BIT 1

SHOWING D. DRILL HOLE BWI  
QUADRA ISLAND BC.

Scale 1" = 200'

Aug 6-1974





**PRINCE STEWART  
MINES LTD.**

Note:  
Reverted to Quadra Mining Co. Ltd.

**Department of  
Minas and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5076 MAP #1**

**PRINCE STEWART MINES LTD.  
QUADRA ISLAND  
NANAIMO MD, B.C.  
LOCATION MAP**

SCALE: 1" = 136 Miles

BY R. K. GERMUNSON Ph.D. JAN., 1972



- LEGEND
- POSTS IN PLACE
  - PROVEN ORE
  - INDICATED ORE
  - S-P ANOMALY
  - OUTCROP INTERVAL, 100'
  - 3 Tilt & alluvium
  - 2 Kaminian, Bush, & other flows
  - 1 Pillow Lava
  - Fault
  - Cu Mineral Showing (Copper)
  - Strike & dip of flow terraces

5076



Department of  
and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5076 MAP #2

PLAN A

PRINCE STEWART MINES LTD (NPL)  
CLAIMS PLAN  
SHOWING COPPER DEPOSITS  
QUADRA ISLAND BC

REVISED 1974  
FOR QUADRA MINING CO LTD  
EE

SCALE: 1"=500'

EP SHEPPARD & ASSOCIATES LTD DEC 1972