

LOG NO:	1109	PT
NOTION		

Prospecting Report

Claim Name: Copper Cliff 3196
 Rain 1 3193
 Rain 2 3194
 Rain 3 3195

SUB-RECORDER
 RECEIVED
 NOV 6 1989
 M.R. # \$.....
 VANCOUVER, B.C.

Mining Division: Nanaimo
 NTS: 92K3W
 Longitude: 50 degrees 07'
 Latitude: 125 degrees 15'
 Owner: David Heyman
 Operator: David Heyman, Michael Schuss
 Author: Michael Schuss
 Date Submitted: November 6, 1989

FILMED

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT**

19,282

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Introduction

The Copper Cliff and Rain claims were staked by Dave Heyman on November 5, 1988. The claims were staked to cover several known copper zones that were first discovered in 1919. A search of old records indicates that extensive exploration and development had indicated inferred copper reserves that had potential for a moderate tonnage bioleaching operation. The purpose of the prospecting program was to determine the following:

- 1) Verify the existence of mineralized zones on the claims
- 2) Determine if topography was suitable for construction of leach pads if exploration and development was positive.
- 3) Determine if the location was in a possible environmentally sensitive area
- 4) Determine if small open cut mining would effect forest growth in the immediate area
- 5) Reconiter claim area as to condition of access and condition of roads

Location and Access

The claims may be accessed by taking the ferry from Campbell River to Quathiaski Cove on Quadra Island. From there take the Heriot Bay Road to North Island Road. Follow the North Island Road until you reach Gowland Bay Road. Go west on the Gowland Bay Road to the head of the bay. From there several roads access the claims to the north, northwest and west. The property is mostly accessable by 4 x 4 but large windfalls are common.

History

The Copper Cliffs were first explored in 1919 when a small adit on a highgrade copper showing was driven. The first extensive exploration program was in 1952-53 which included trenching, mapping and 8,800 feet of diamond drilling in 145 holes by Dodge Copper Mines. In 1963 a shipment of 357 tons to the Britannia mill ran 1.63% copper. Quadra Mining Company Ltd. produced 1,232 lbs. of copper from 6,000 tons in a test insitu bio-leaching from the Pommeroy #1 in 1968. G.H. McLeod P.Eng. of McDonald Consultants recommended commercial production on the Pommeroy in 1969 with copper at \$0.42 Cnd. The provincial government granted a limited production permit in 1973 on reserves of 100,000 tons of 2.2% copper. Low copper prices and an unfavourable political environment lead to the property to lay dormant until now.

Property Geology

The property is underlain by Tertiary Volcanic rock of the Calden Series that dip gently to the southeast. The volcanic flows range in thickness from one to more than twelve feet and vary in composition from andesitic to basaltic. Many are highly amygdaloidal and the cavities are mainly filled with calcite, quartz, and chlorite. Regionally the volcanics are traversed by major faults that trend northwesterly and have associated jointing and fracturing.

Distribution of copper mineralization within the volcanics is erratic and occurs mainly along fractures, within quartz-calcite veinlets, in the amygdales, and disseminated in the flows. Chalcocite is the most abundant copper mineral, with some native copper, malachite and azurite.

Ore grade mineralization is present on the property in occurrences distributed over an area one mile long and two hundred feet wide on a belt down the middle of the property.

The known ore deposits occur mainly on the surface and have been extensively drilled, trenched and sampled.

By G.H. McLeod, P.Eng.
MacDonald Consultants
April 8, 1969

The prospecting was conducted by D. Heyman and M. Schuss on October 7, 8, 9 of 1989.

Summary of Prospecting

Prospecting was concentrated on the Pomeroy zones and a undocumented zone of what appears to be of a higher grade copper mineralization than that has been noted on the Pomeroy. These zones were prospected and traced on surface and fresh mineralization was exposed by a plugger and blasting. Copper mineralization was noted as erratic and representative bulk sampling would be required.

The Pomeroy Zones were a primary target, for these are the largest mineral resource and the main focus of previous operators. We traced the Pomeroy Zones over a strike of 600 feet of a northwest trending formation of volcanic flows.

Several parallel zones were noticed. The Pomeroy zones have been extensively trenched and sampled by large open cuts that exposed large areas of low grade copper mineralization in a calcite filled amygdales and veinlet stockwork that is evident everywhere on the property. Outcrop is plentiful and relatively light soil conditions make surface exploration easy. The Pomeroy #2 zone was the only zone that could be identified with any certainty. Closely spaced percussion drilling by previous operators was evident everywhere along with large and small test pits on mineralized zones.

The whole area had been cleared about 20 years ago and a network of access roads could be rehabilitated at minimal cost. All the mineralized zones have large piles of material that appear to represent that zone's composition. Obtaining large bulk samples or even mining the mineralization by surface appear to be easy. The Pomeroy zones lie in a relatively flat area that is free of large trees because of lack of topsoil and previous clearing and logging operations.

The other mineralized zone consisted of a more quartz, calcite veins containing massive copper sulphides in a 10 foot wide altered zone traced over 100 feet on surface. This zone was called the North showing and was exposed by plugger and blasting. A ruined building containing the remains of the bioleach pilot plant were located and examined. Remains of a coarse ore bin and a 12" jaw crusher suggest possible 20 - 30 TPD capacity. A small dam used as a watersupply is evident with another area appearing to be an overgrown tailings disposal area. A dismantled PCV pipe sprinkling system was observed in the workyard.

All showings that were exposed were surveyed by chain and compass and maps were produced and included in this report.

Statement of Wages and Expenses

Prospectors:

Dave Heyman
Michael Schuss

Days Worked	Oct 6/89	2 men	4 hrs	@ \$11.00/hr	\$ 88.00
	Oct 7/89	2 men	11 hrs	@ \$11.00/hr	\$ 242.00
	Oct 8/89	2 men	10 hrs	@ \$11.00/hr	\$ 220.00
	Oct 9/89	2 men	12 hrs	@ \$11.00/hr	\$ 264.00
	Oct 10/89	2 men	5 hrs	@ \$11.00/hr	<u>\$ 110.00</u>
					\$ 924.00

Rentals

One	4 x 4 truck	Oct 6 - 10	5 days	@ \$40/day	\$ 200.00
One	Gas Plugger	Oct 6 - 10	5 days	@ \$40/day	\$ 200.00
One	Chain Saw	Oct 6 - 10	5 days	@ \$15/day	<u>\$ 75.00</u>
					\$ 475.00

Room & Board

Oct 6 - 10	5 days	2 men	@ \$50/day	\$ 500.00
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Supplies & Misc.

Detonators	\$ 105.00
Powder	\$ 113.62
Gas & Oil	\$ 186.00
Ferries	\$ 68.00
Misc. (Flagging, Maps, Spray Paint)	\$ 32.42
Report Preparation 8hrs @ \$11.00/hr	\$ 88.00
Typing Service	<u>\$ 22.00</u>
	\$ 515.04
	<u>\$2414.04</u>
	=====

Discussion of Possible Environmental Concerns

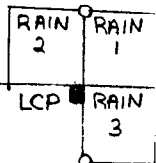
The majority of the property has had large scale surface disturbance from previous exploration and test mining operations. Poor topsoil conditions because of the lava flow nature has discouraged old tree growth and evidence of windfalls are everywhere. Small scale open cut or pit mining methods with proper reclamation would probably have minimal effect on the local area. The southern part of the Copper Cliff claim has been clear cut logged recently and an active log dump and sort operates to the southeast in Gowland Bay.

The operator of the log dump informed us that there were no spawning fish streams in the basin containing the Pomeroy deposit. The old Quadra Island garbage dump was located on the Rain #3 claim.



QUADRA ISLAND

MORIE LAKE



COPPER CLIFF
3196(11)

125° 15'

DISCOVERY
PASSAGE

COPPER
CLIFF

DUNCAN
BAY

STEEP
ISLAND

VANCOUVER
ISLAND

COPPER CLIFF, RAIN GROUP

CLAIM LOCATION MAP

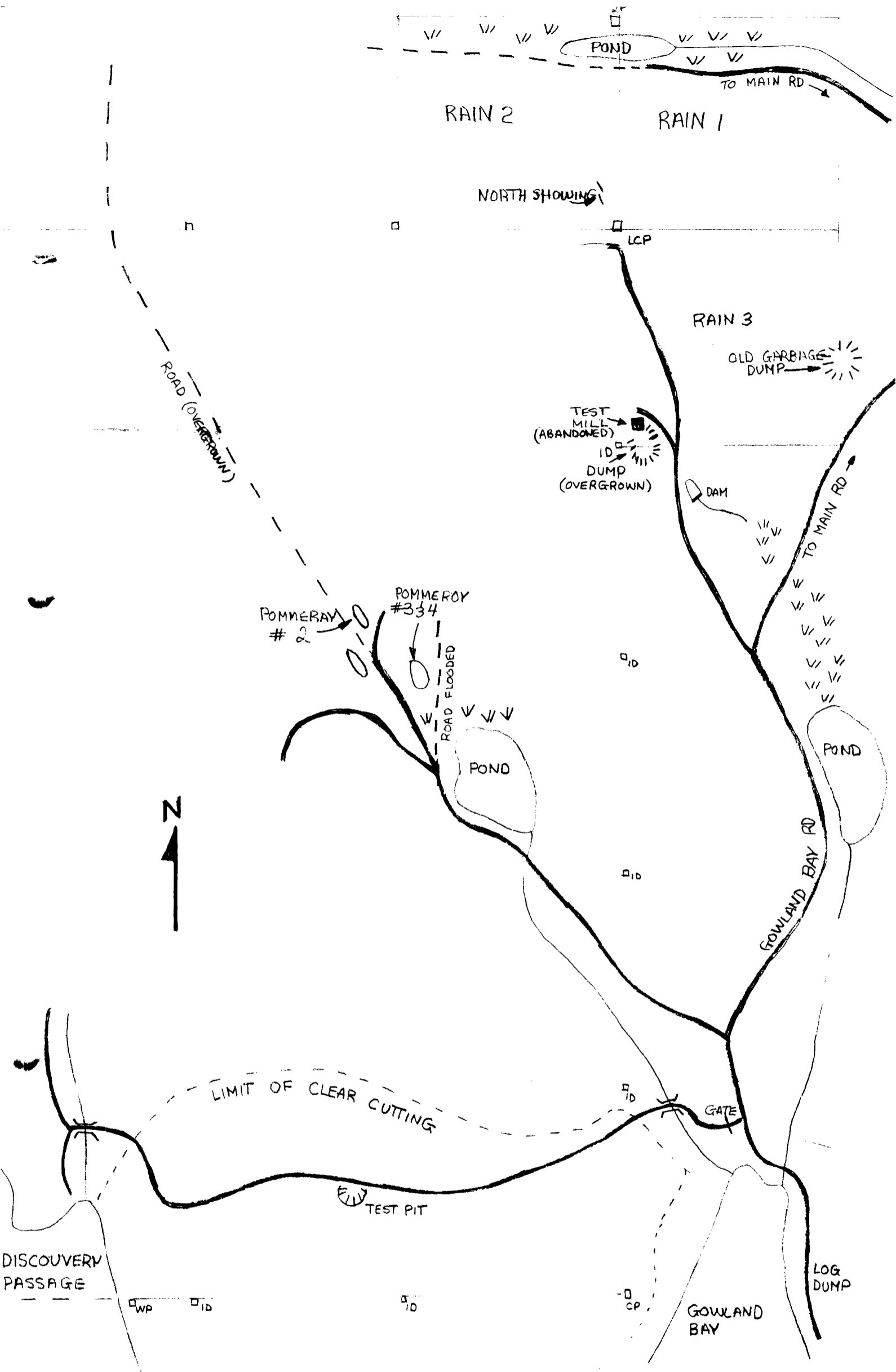
NANAIMO M.D. N.T.S. M.92K/3W

SCALE 1:50,000



MAP #1

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COPPER CLIFF RAIN GROUP

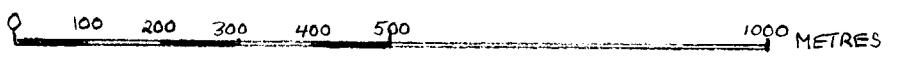
PROSPECTING OVERVIEW

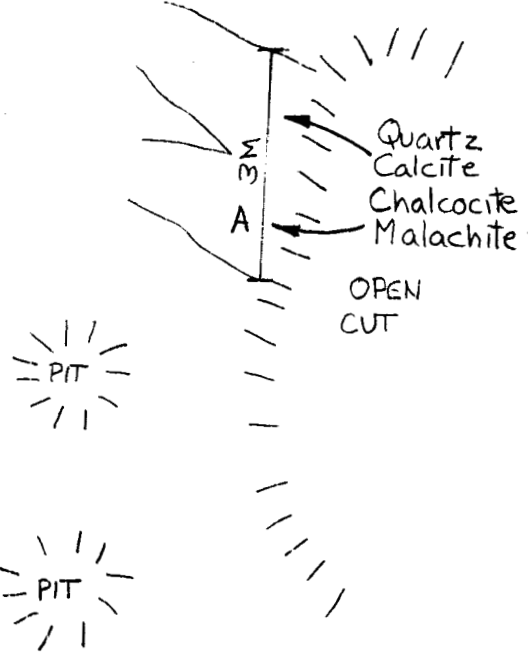
QUADRA ISLAND, NANAIMO M.D.

N.T.S. M92K/3W

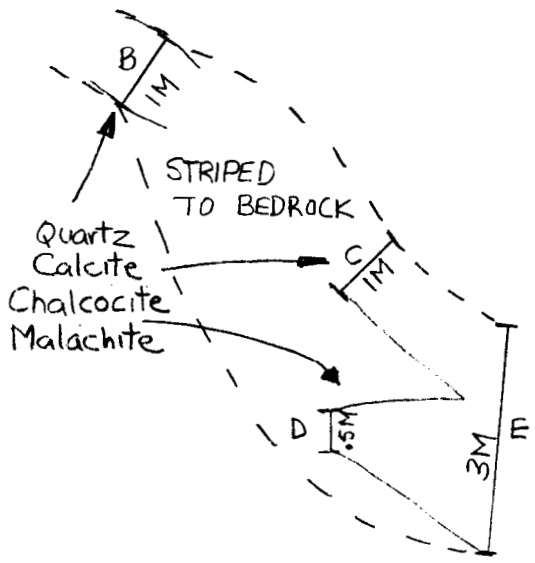
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MAP #2





A, B, C, D, E AREAS BLASTED & SAMPLED

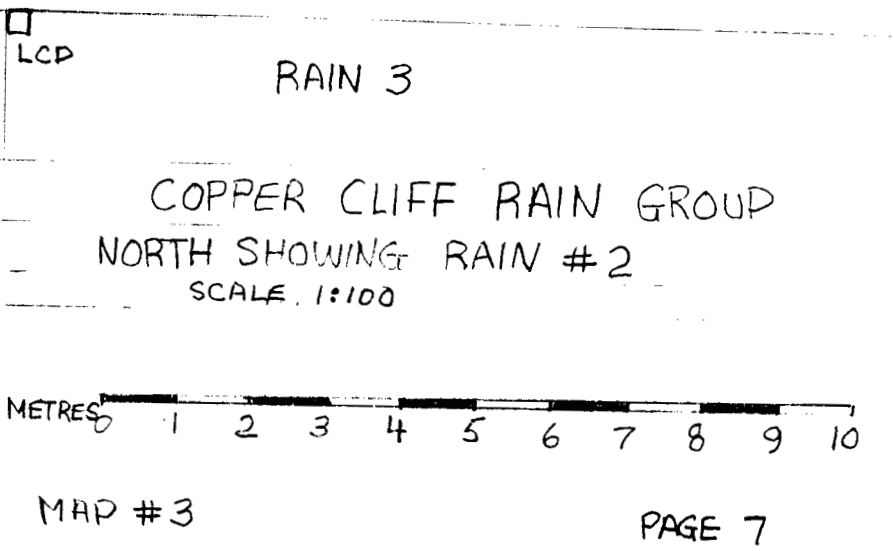
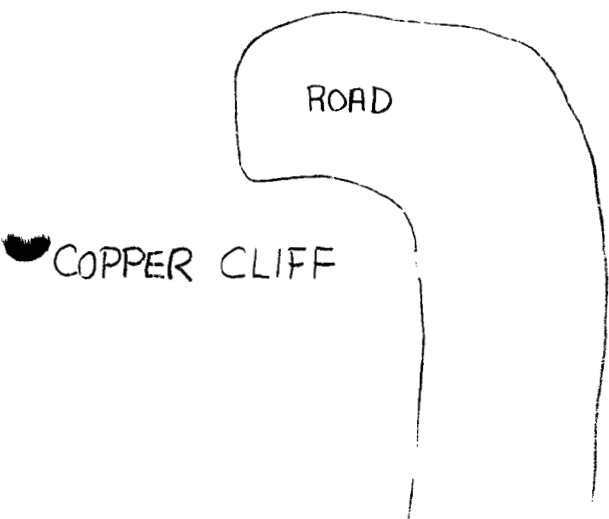
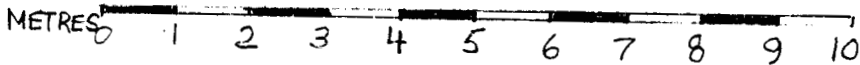


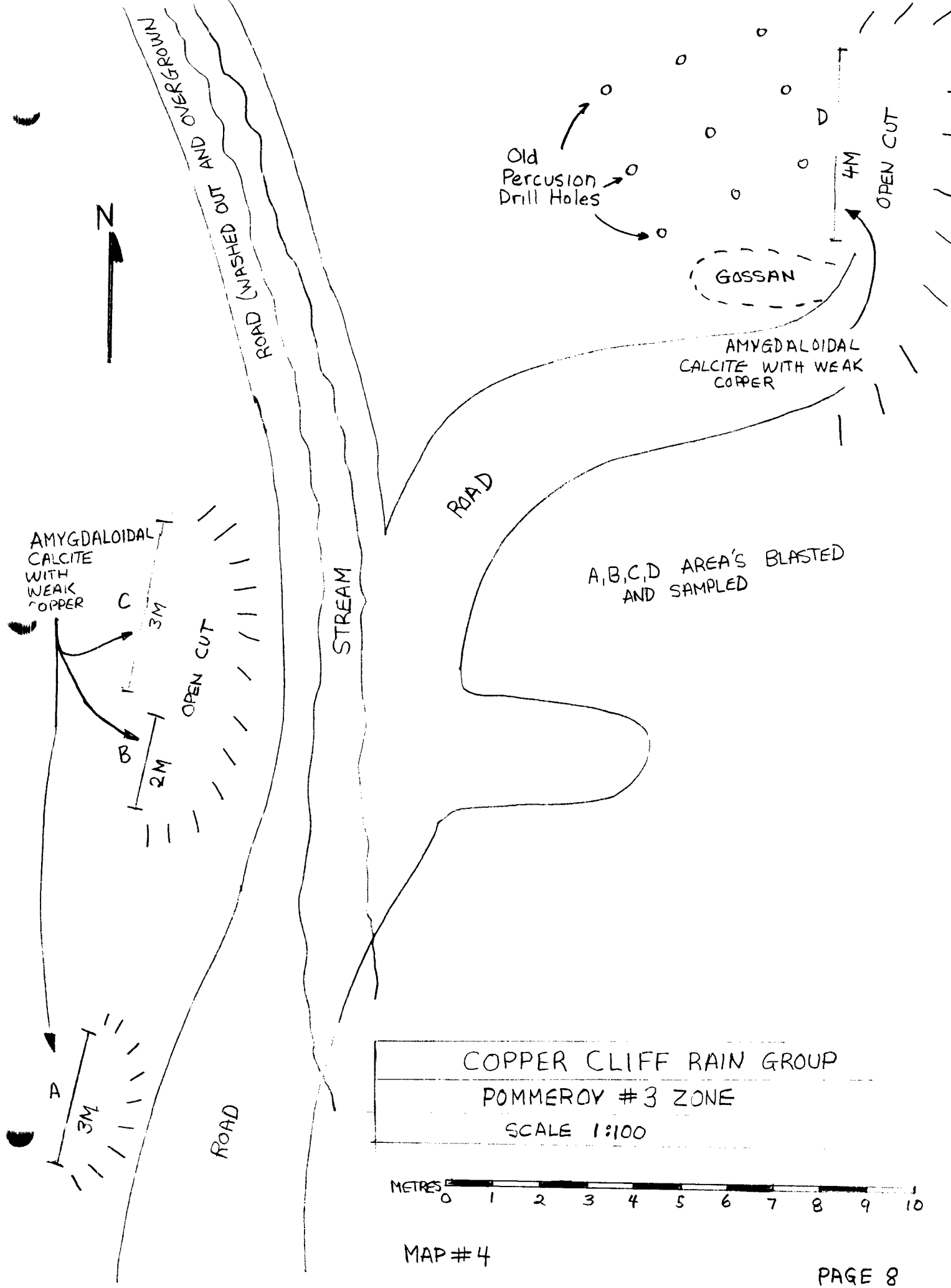
RAIN 2

RAIN 1

RAIN 3

COPPER CLIFF RAIN GROUP
NORTH SHOWING RAIN #2
SCALE 1:100





AMYGDALOIDAL
CALCITE
WITH
WEAK
COPPER

C

3M

B

2M

A

3M

OPEN CUT

ROAD

STREAM

ROAD

A, B, C, D AREA'S
BLASTED
AND SAMPLED

AMYGDALOIDAL
CALCITE WITH WEAK
COPPER

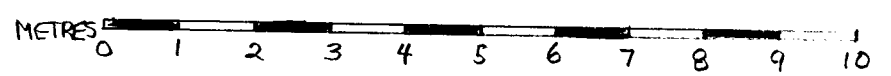
GOSSAN

Old
Percussion
Drill Holes

OPEN CUT

4M

COPPER CLIFF RAIN GROUP
POMMEROV #3 ZONE
SCALE 1:100



MAP #4

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Qualifications

- 1) I reside at 3475 East 47th Avenue in Vancouver, B.C.
- 2) I have been prospecting in B.C. since 1980 particularly on Quadra Island since 1987.
- 3) I have been actively involved in claim staking, property vending and prospecting professionally for 3 years.
- 4) I have visited the Copper Cliff property several times in 1988 and 1989.
- 5) I am a holder of a valid Free Miners License #305885.



Michael Schuss
November 6, 1989