

REPORT

Geochemical Survey

JOY & SANDY CLAIMS

49° 14' N 124° 44' W

ALBERNI MINING DIVISION

BRITISH COLUMBIA

NTS 92F/2

for

HEATHER RESOURCES INC.

VANCOUVER, B.C.

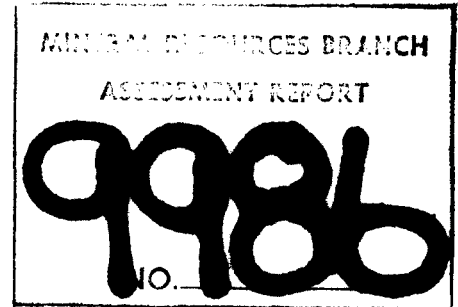
by

A. R. Bullis, P.Eng.

MAYNE ISLAND, B.C.

October, 1981

Property: N/G 1056  
Sandy #1 (1014)  
Joy#1 & #2 (1255 / 1256)



CONTENTS

Summary	1
Location Map	2
Recommendations	3
Map of Joy & Sandy Claims	4
Introduction	5
Purpose of Survey	5
Location & Access	5
History	6
Geology	6
Geochemical Survey	7
Interpretation	8
Geochemical Plan	10
Cost of Statement	11
Certificate of Analysis	
Author's Certificate	

Geochemical Program

JOY & SANDY MINERAL CLAIMS

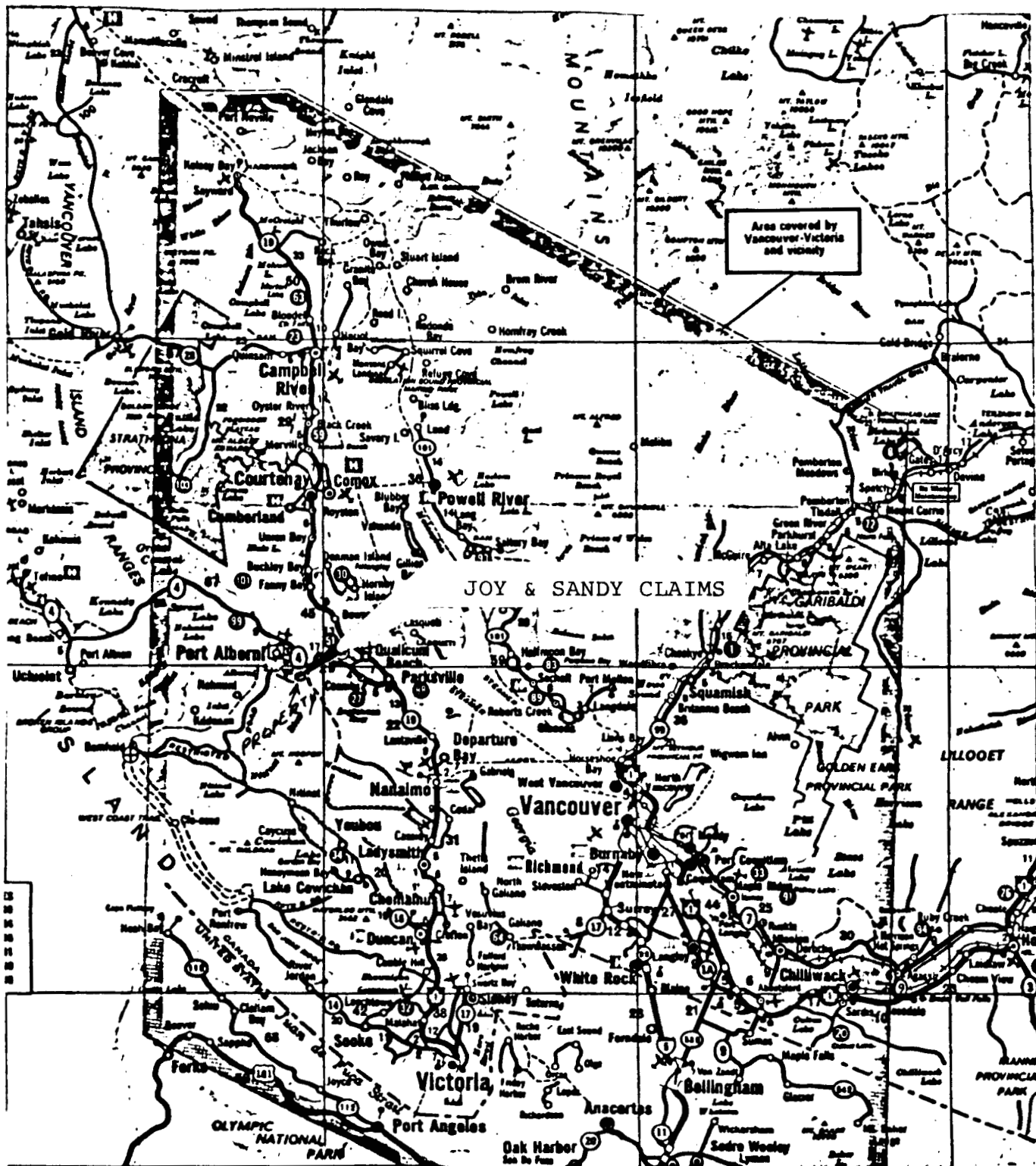
SUMMARY

The Joy and Sandy M.C's lies four kilometers due east of Port Alberni, B.C. and are located on Egg Hill.

The area for geochemical prospecting was selected where old trenches indicated that early workers had explored Egg Hill. Samples were collected on a north-south oriented grid at intervals of 30.5 metres between samples. One hundred five samples were collected in the field from the "B" soil layer, and these were analysed by Chemex Labs, North Vancouver, for silver, copper and gold.

No anomalous samples were found in the silver and copper populations.

Only one (gold) sample is anomalous. The sample contains 90 ppb, or nine times background, and is located on the baseline at the south edge of the area tested. Some additional sampling should be done on the Joy 1 M.C. south of the anomalous (gold) sample.



HEATHER RESOURCES INC.  
JOY & SANDY CLAIMS  
ALBERNI MINING DIVISION  
LOCATION MAP

RECOMMENDATIONS

The only area of interest lies near and south of the baseline at Line 2+00 where one anomalous sample (gold) is located.

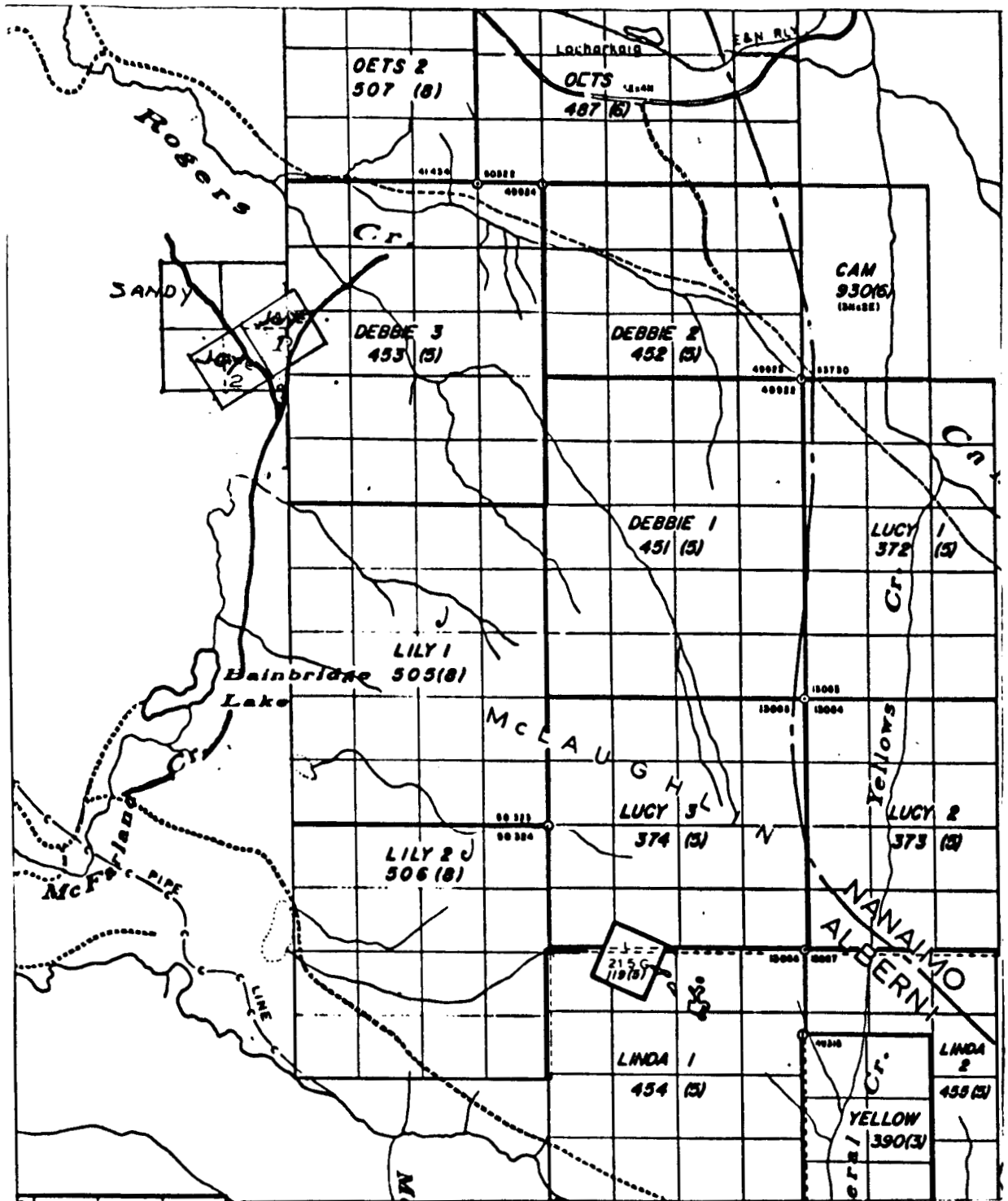
The grid should be extended south of the baseline and additional soil samples should be taken, at 15 metre intervals along lines 1+00 2+00 and 3+00, north and south of the Baseline.

These samples should be analysed for gold only and plotted with the data enclosed with this report.

Respectfully submitted

A handwritten signature in cursive script, appearing to read "A. R. Bullis".

A. R. Bullis, P.Eng.



HEATHER RESOURCES INC.

JOY & SANDY CLAIMS

ALBERNI MINING DIVISION

CLAIM MAP

92F/2E

Scale 1 - 50,000

JOY 1 & JOY 2 CLAIMS

INTRODUCTION

Heather Resources Inc., who own the Joy 1 & Joy 2 Mineral claims, engaged Bullis Engineering Ltd. to conduct a preliminary soil sampling program on the Claims. The field work was conducted during June 1981 and the report prepared in October, 1981. The maps are on a scale of one to two thousand.

All soil samples were submitted to Chemex Labs Ltd., North Vancouver, B.C. where they were analysed for copper, gold and silver by the Atomic Absorbtion method.

PURPOSE OF SURVEY

The soil sampling program was designed to test the area of the claims where old, and now unknown, prospecting is suspected to have occurred early in this century.

LOCATION & ACCESS

The Joy 1 and Joy 2 Mineral Claims are located in the Alberni Mining Division at  $49^{\circ} 14'$  N Lat and  $124^{\circ} 44'$  W Long. and are four kilometres east of Port Alberni on Egg Hill.

#### Location & Access (Cont.)

Good access is provided from Alberni via B.C. Highway 4 and the roads in the Cameron Division of MacMillan-Blodel Ltd.

The area is shown on NTS Sheet 92F/2.

#### HISTORY

The region was prospected before 1920 and stories persist that gold was discovered in the vicinity of Egg Hill.

The possible remains of old trenches were discovered on the eastern flanks of Egg Hill.

The soil sampling program described in this report was designed to test the area of old "pits" and "workings".

#### GEOLOGY

The Egg Hill area is underlain by fine-to-medium grained volcanic rocks of the Sicker Group. The only exposures found on the property were around the road and float from the old pits.

Heavy rains washed out much of the road and exposed, in part, a  $320^{\circ}$  striking shear zone. About a 1.2 metre width of shear has been exposed in a couple of places along the road. Within this shear, pyrite and pyrrhotite were noted and one of the stakers reported finding a few flakes of gold in float on the property.



GEOCHEMICAL SURVEY

The soil samples were taken on a north-south grid established on the Joy 1 & Joy 2 Mineral Claims.

One hundred five soil samples were taken from the "B" soil layer along the grid lines at intervals of 30.5 metres and these are shown on the accompanying map.

The soil profile consist of:

- "A" layer - black humus or dark soil, usually, about ten cm. thick but, rarely, up to forty cms. deep.
- "B" layer - fine red soil, rarely grey some sand and pebbles 30 to 50 cms. thick.
- "C" layer - usually grey in color and composed of clay, sand fine pebbles or gravel.

All samples were obtained by digging with a shovel to the "B" layer where a sample was taken and packaged in paper soil envelopes.

## SOIL SAMPLING INTERPRETATION

The bedrock underlying the Joy 1 & 2 M.C's, where it can be observed, is altered volcanic rock and, therefore, little or no bias is incorporated in the survey due to variations in the bedrock.

The soil samples were analysed for gold, silver and copper.

### Silver

All samples report low readings ranging from 0.1 ppm (parts per million) to 0.3 ppm. One sample read 0.4 ppm. There are no anomalous samples to be found in the silver population.

### Copper

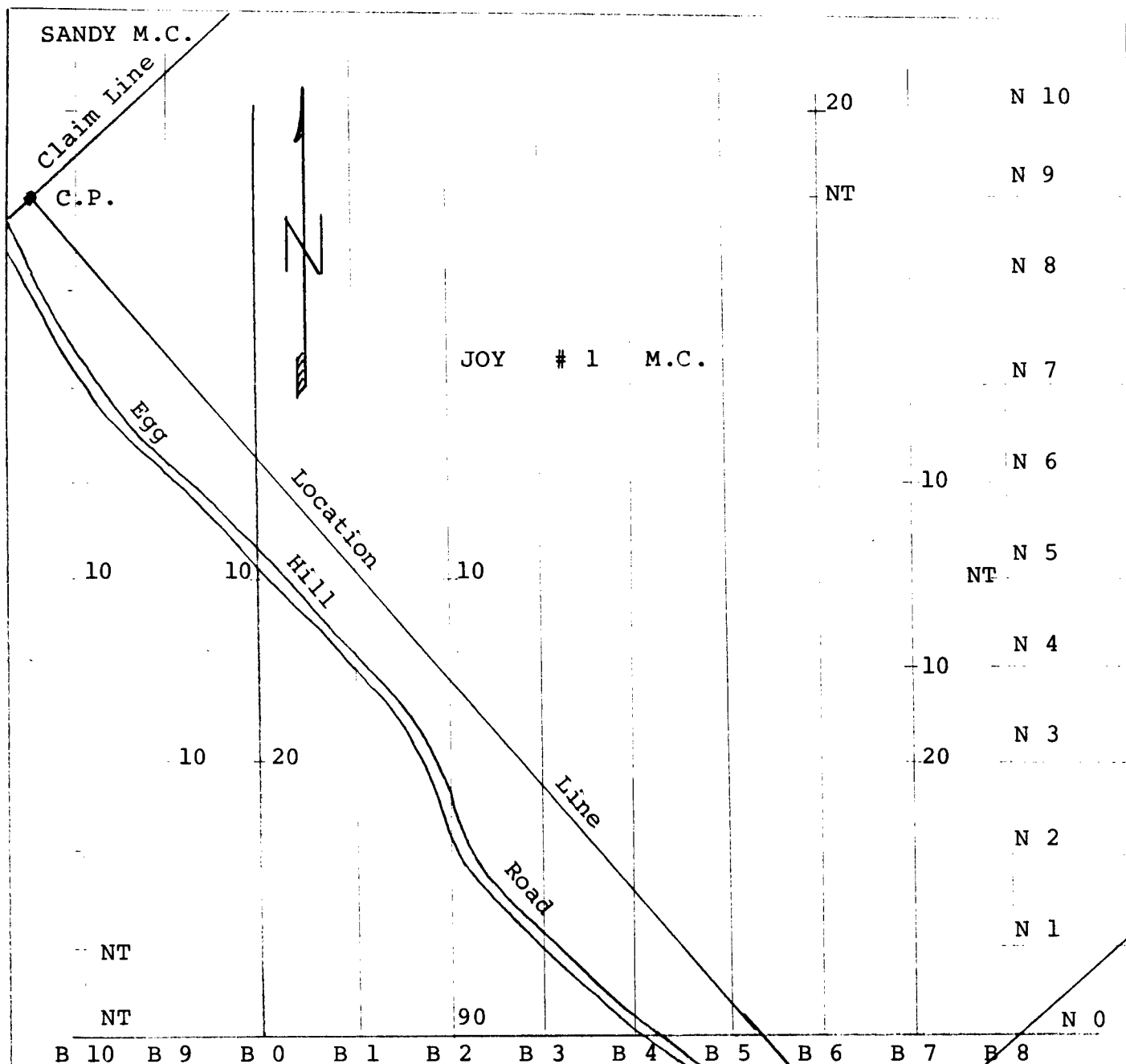
The copper "population" is quite uniform and no samples could be considered anomalous. Seventy percent of the samples submitted fell between 30 and 60 ppm; eighty two percent were less than 60 ppm. Only two samples reported greater than 100 ppm i.e. 104 ppm & 115 ppm.

### Gold

The gold samples were reported by Chemex Labs Ltd. in ppb (parts per billion). Ninety-one percent of the samples i.e. 96 samples reported "less than 10 ppb" Five samples, or five percent of the total, "report" 1 ppb, three samples or three percent, report 20 ppb.

Gold (Cont.)

One sample "reports" 90 ppb, and this should be considered anomalous. The anomalous gold sample occurs on the baseline at Line 2+00. No samples were taken south of the baseline and, therefore, additional sampling may be needed to determine whether or not the anomalous sample is isolated.



LEGEND

Gold in parts per billion -- 10  
 Sample not taken ----- NT  
 Where no value shown -- Less than 10 ppb

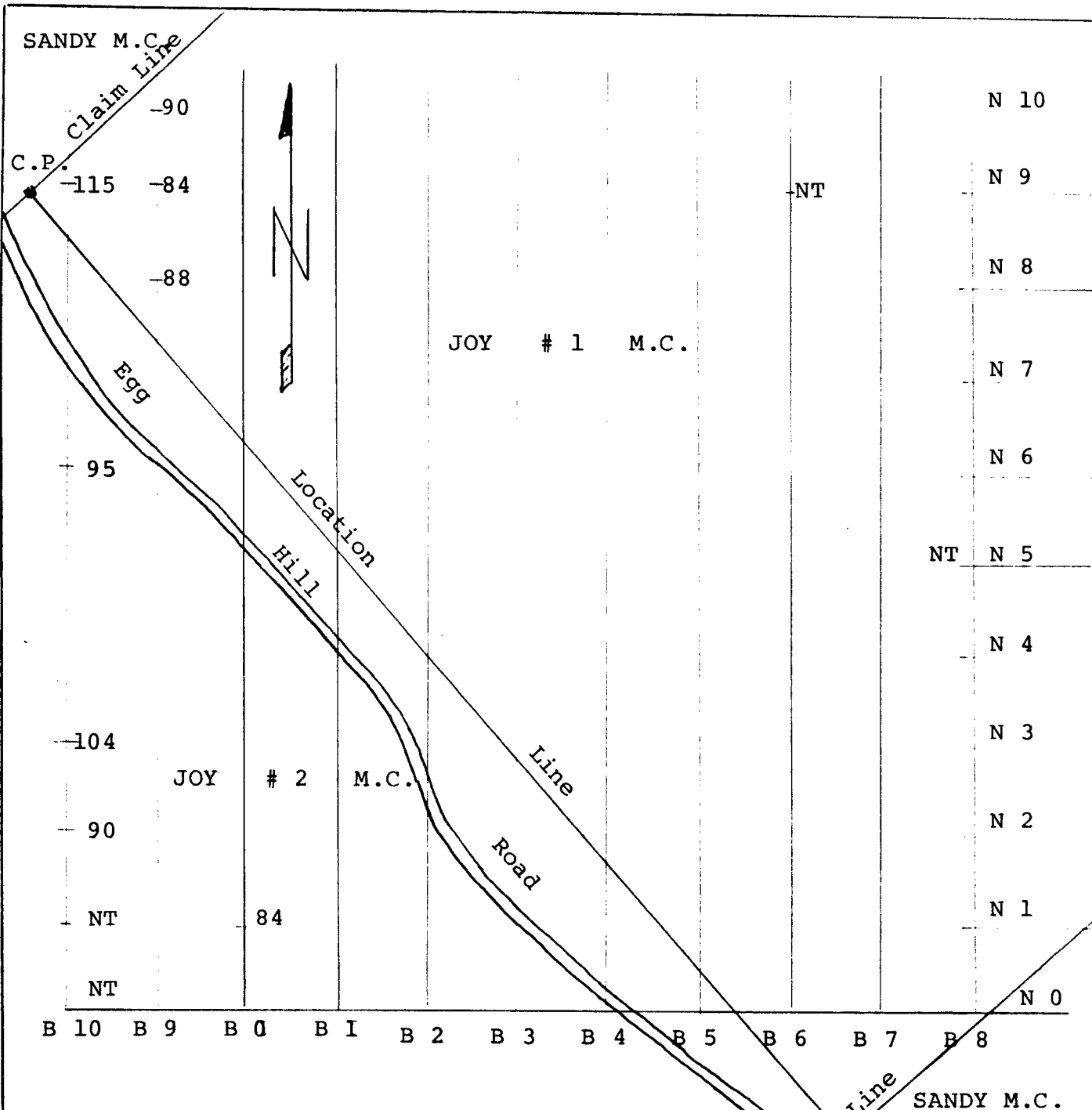
HEATHER RESOURCES INC.

GEOCHEMICAL SAMPLE PLAN

JOY CLAIMS

Gold in ppb

Scale 1 to 2000



LEGEND

- Copper in parts per million -- 90
- Sample not taken ----- NT
- Where sample not shown -- Less than 80 ppm

HEATHER RESOURCES INC.

GEOCHEMICAL SAMPLE PLAN

JOY CLAIMS  
 Copper in ppm  
 Scale 1 to 2000

COST STATEMENT

Field Wages

8 man-days @ \$100.00 \$ 800.00

Expenses:

Travel Ferry	21.75
Gas, oil etc.	120.10
Field supplies	17.00
Hotel/Motel	155.82
Meals	209.52

Sample Analyses

Chemex Lab Invoice #8111599 851.20

Report & Map Preparation

Fees: 3 days @ \$350.00	1,050.00
Secretarial & Drafting	75.00

TOTAL \$3,300.39

A. R. Bullis, P.Eng.

October 1981





STATEMENT OF ACCOUNT

**CHEMEX LABS LTD.**

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1  
TELEPHONE: 985-0648  
AREA CODE: 604  
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

TO: Bullis Engineering Ltd.  
Box 4  
Potter Road  
Mayne Island, B.C.  
VON 2J0

DATE: June 30/81

DATE	REF.	CHARGES	CREDITS	BALANCE
June 25/81	Invoice #8111599	\$851.20		
June 30/81	Balance Due			\$851.20

*Paid by  
HCS*

1½% PER MONTH (18%) PER ANNUM CHARGED ON OVERDUE ACCOUNTS



# CHEMEX LABS LTD.

212 BROOKSBANK AVE  
 NORTH VANCOUVER, B.C.  
 CANADA V7J 2C1  
 TELEPHONE: (604)984-0221  
 TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS
-------------------------

: BULLIS ENGINEERING LTD.  
 BOX 1039, STATION A  
 DELTA, B.C.  
 V6C 2P1

CERT. # : A8111599-001-A  
 INVOICE # : I8111599  
 DATE : 25-JUN-81  
 P.O. # : NONE  
 HEATHER

Sample description	Prep code	Cu ppm	Ag ppm	Au -(AA) ppb			
80-N0	201	56	0.1	<10	--	--	--
80-N1	201	84	0.1	<10	--	--	--
80-N2	201	45	0.1	<10	--	--	--
30-N3	201	48	0.1	20	--	--	--
80-N4	201	23	0.2	<10	--	--	--
80-N5	201	47	0.1	10	--	--	--
80-N6	201	28	0.1	<10	--	--	--
80-N7	201	59	0.1	<10	--	--	--
80-N8	201	44	0.2	<10	--	--	--
80-N9	201	50	0.1	<10	--	--	--
80-N10	201	45	0.2	<10	--	--	--
81-N0	201	48	0.1	<10	--	--	--
81-N1	201	41	0.3	<10	--	--	--
81-N3	201	50	0.2	<10	--	--	--
81-N4	201	62	0.3	<10	--	--	--
81-N5	201	57	0.3	<10	--	--	--
81-N6	201	68	0.1	<10	--	--	--
81-N7	201	40	0.2	<10	--	--	--
81-N8	201	34	0.3	<10	--	--	--
81-N9	201	36	0.2	<10	--	--	--
81-N10	201	34	0.1	<10	--	--	--
82-N0	201	24	0.1	90	--	--	--
82-N1	201	70	0.1	<10	--	--	--
82-N2	201	46	0.2	<10	--	--	--
82-N4	201	60	0.2	<10	--	--	--
82-N5	201	53	0.1	10	--	--	--
82-N6	201	68	0.1	<10	--	--	--
82-N7	201	50	0.3	<10	--	--	--
82-N8	201	40	0.1	<10	--	--	--
82-N9	201	38	0.1	<10	--	--	--
82-N10	201	51	0.1	<10	--	--	--
83-N0	201	43	0.2	<10	--	--	--
83-N1	201	72	0.1	<10	--	--	--
83-N2	201	68	0.2	<10	--	--	--
83-N3	201	58	0.1	<10	--	--	--
83-N4	201	60	0.1	<10	--	--	--
83-N5	201	35	0.2	<10	--	--	--
83-N6	201	46	0.2	<10	--	--	--
83-N7	201	40	0.3	<10	--	--	--
83-N8	201	30	0.2	<10	--	--	--

*Hart Bickler*

Certified by .....





# CHEMEX LABS LTD.

212 BROOKSBANK AVE.  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1  
TELEPHONE: (604)984-0221  
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

## CERTIFICATE OF ANALYSIS

: BULLIS ENGINEERING LTD.  
BOX 1039, STATION A  
DELTA, B.C.  
V6C 2P1

CERT. # : A8111599-002-A  
INVOICE # : 18111599  
DATE : 25-JUN-81  
P.O. # : NONE  
HEATHER

Sample description	Prep code	Cu ppm	Ag ppm	Au -(AA) ppb			
83-N9	201	48	0.1	<10	--	--	--
83-N10	201	40	0.2	<10	--	--	--
84-N0	201	36	0.2	<10	--	--	--
84-N1	201	36	0.1	<10	--	--	--
84-N2	201	33	0.2	<10	--	--	--
84-N3	201	40	0.3	<10	--	--	--
84-N4	201	29	0.2	<10	--	--	--
84-N5	201	52	0.1	<10	--	--	--
84-N6	201	30	0.2	<10	--	--	--
84-N7	201	10	0.2	<10	--	--	--
84-N8	201	38	0.2	<10	--	--	--
84-N9	201	58	0.2	<10	--	--	--
84-N10	201	35	0.2	<10	--	--	--
85-N0	201	41	0.1	<10	--	--	--
85-N1	201	48	0.2	<10	--	--	--
85-N2	201	52	0.2	<10	--	--	--
85-N3	201	45	0.3	<10	--	--	--
85-N4	201	35	0.4	<10	--	--	--
85-N5	201	11	0.2	<10	--	--	--
85-N6	201	43	0.3	<10	--	--	--
85-N7	201	42	0.2	<10	--	--	--
85-N8	201	30	0.2	<10	--	--	--
85-N9	201	31	0.2	<10	--	--	--
85-N10	201	50	0.2	<10	--	--	--
86-N0	201	26	0.2	<10	--	--	--
86-N1	201	38	0.1	<10	--	--	--
86-N2	201	30	0.1	<10	--	--	--
86-N3	201	62	0.3	<10	--	--	--
86-N4	201	16	0.2	<10	--	--	--
86-N5	201	22	0.2	<10	--	--	--
86-N6	201	32	0.3	<10	--	--	--
86-N7	201	27	0.3	<10	--	--	--
86-N8	201	30	0.2	<10	--	--	--
86-N10	201	15	0.1	20 ✓	--	--	--
87-N0	201	40	0.3	<10	--	--	--
87-N1	201	38	0.2	<10	--	--	--
87-N2	201	36	0.1	<10	--	--	--
87-N3	201	42	0.1	20 ✓	--	--	--
87-N4	201	16	0.2	10 ✓	--	--	--
87-N5	201	22	0.1	<10	--	--	--

Certified by .....



# CHEMEX LABS LTD.

212 BROOKSBANK AVE  
NORTH VANCOUVER, B.C.  
CANADA V7J 2C1  
TELEPHONE: (604)984-0221  
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

## CERTIFICATE OF ANALYSIS

: BULLIS ENGINEERING LTD.  
BOX 1039, STATION A  
DELTA, B.C.  
V6C 2P1

CERT. # : A8111599-003-A  
INVOICE # : I8111599  
DATE : 25-JUN-81  
P.O. # : NONE  
HEATHER

Sample description	Prep code	Cu ppm	Ag ppm	Au -(AA) ppb			
B7-N6	201	51	0.3	10	✓	--	--
B7-N8	201	12	0.1	<10		--	--
B7-N9	201	32	0.1	<10		--	--
B7-N10	201	34	0.1	<10		--	--
B8-N0	201	56	0.1	<10		--	--
B8-N1	201	36	0.1	<10		--	--
B8-N2	201	45	0.3	<10		--	--
B8-N3	201	26	0.1	<10		--	--
B8-N4	201	29	0.1	<10		--	--
B8-N6	201	44	0.1	<10		--	--
B8-N7	201	36	0.1	<10		--	--
B8-N9	201	32	0.1	<10		--	--
B8-N10	201	24	0.1	<10		--	--
B9-N1	201	50	0.1	<10		--	--
B9-N2	201	62	0.1	<10		--	--
B9-N3	201	55	0.1	10	✓	--	--
B9-N4	201	50	0.1	<10		--	--
B9-N5	201	55	0.1	<10		--	--
B9-N6	201	40	0.1	<10		--	--
B9-N7	201	35	0.1	<10		--	--
B9-N8	201	88	0.1	<10		--	--
B9-N9	201	84	0.1	<10		--	--
B9-N10	201	90	0.1	<10		--	--
B10-N2	201	90	0.1	<10		--	--
B10-N3	201	104	0.1	<10		--	--
B10-N4	201	42	0.1	<10		--	--
B10-N5	201	78	0.1	10	✓	--	--
B10-N6	201	95	0.1	<10		--	--
B10-N7	201	58	0.1	<10		--	--
B10-N8	201	28	0.1	<10		--	--
B10-N9	201	115	0.1	<10		--	--
B10-N10	201	64	0.1	<10		--	--

Certified by *Hart Bickler*

CERTIFICATE OF QUALIFICATIONS

I, Albert Ralph Bullis, do hereby certify:

1. I am a practising geological engineer with residence on Porter Road, Mayne Island, B.C.
2. I am a graduate of the University of B.C.
3. I have practised my profession since 1952.
4. I am a member of the Association of Professional Engineers of British Columbia.
5. I have no interest directly, or indirectly in the property of Heather Resources Inc.
6. The report is based on information obtained personally while performing the work program described in the report during June 1981.

A. R. Bullis, P.Eng.

October 1981

A handwritten signature in cursive script that reads "A.R. Bullis". The signature is written in black ink and is positioned to the right of the typed name and date.