

84-#2208 - #12404
3/85

REPORT ON
STREAM SEDIMENT GEOCHEMICAL AND
GEOLOGICAL SURVEYS
ON THE
VIC CLAIM
NEAR PORT ALICE, VANCOUVER ISLAND, B.C.

Nanaimo Mining Division
NTS Map Area 92L/6 W
Lat. 50° 20'N / Long. 127° 20'W

Owned by W.G. Smitheringale
Operated by Vancouver Island Syndicate

Prepared by

W.G. Smitheringale, P. Eng.
W.G. Smitheringale & Associates Ltd.

Submitted
March 30, 1985
GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,404

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SUMMARY

The Vic claim is located in the Nanaimo Mining Division 10 km southeast of Port Alice, northern Vancouver Island. Access is from Port Alice via the Port Alice Main and Victoria Main logging roads, a distance of 20 km.

The claim contains 20 units, was recorded on April 2, 1982, is owned by W.G. Smitheringale and is operated by Vancouver Island Syndicate.

Geological mapping done in March, 1984, shows the claim to be partly underlain by andesite and dacite flows and tuffs interbedded with cherty argillite and argillaceous limestone. These units are tentatively assigned to the Parson Bay Formation. They are overlain by massive, amygdaloidal, plagioclase porphyritic andesite belonging to the Bonanza Volcanics. In places the Parson Bay volcanic units have been pyritized and silicified.

A stream silt geochemical survey, also conducted in March, 1984, indicates that the Vic claim is anomalous in Cu, Pb, Zn, Ag, As and possibly Au.

Further exploration work on the Vic claim is warranted.

The cost of the 1984 exploration program was \$2,925.82.

INTRODUCTION

Location and Access (Figure 1)

The Vic claim is located in northern Vancouver Island, 10 km southeast of Port Alice, as follows:

Lat. 50° 20'N, Long. 127° 20'W
NTS Map Area 92L/6 W
Nanaimo Mining Division

Access is from Port Alice via the Port Alice Main and Victoria Main logging roads, a distance of 20 km.

The claim extends from the nearly flat valley bottom of Teihsum River, at an elevation of 150 m (about 500 ft), up the moderate to steep side of the adjacent mountain to the ridge top, at an elevation of 1,200 m (about 3,900 ft). The valley floor is covered with thick bush. The lower part of the mountain slope, to an elevation of about 550 m (1,800 ft), has been logged and is covered with slash and bush. The upper slopes are covered with mature hemlock and Douglas fir, except in several steep areas where the overburden has slid away. A number of streams drain the mountain slope. Logging roads provide access to most parts of the claim up to about 550 m elevation.

Property Description (Figure 2)

Size: 20 units

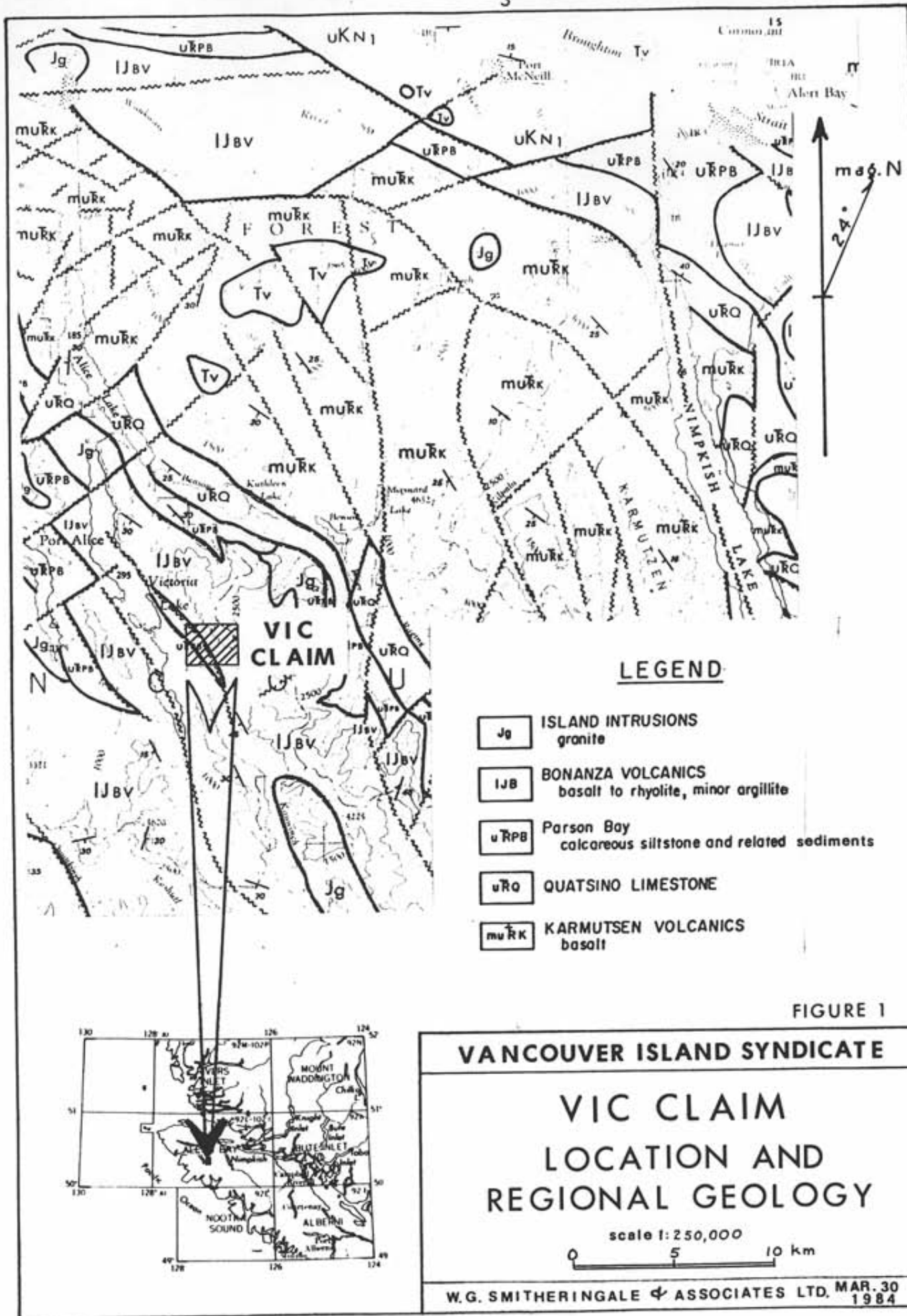
Record number: 1128

Expiry date: April 2, 1984

Owner: W.G. Smitheringale, in trust for Vancouver Island Syndicate

Operator: Vancouver Island Syndicate

The claim was staked in March, 1982, on the basis of a stream sediment sample anomalous in Mo, Cu, Pb, Zn, Ag and As that was collected in 1981 during a reconnaissance exploration program. To the writer's knowledge the area of the claim has not been staked before.



LEGEND

- Jg ISLAND INTRUSIONS
granite
- IJB BONANZA VOLCANICS
basalt to rhyolite, minor argillite
- uRPB Parson Bay
calcareous siltstone and related sediments
- uRQ QUATSINO LIMESTONE
- muRK KAR MUTSEN VOLCANICS
basalt

FIGURE 1

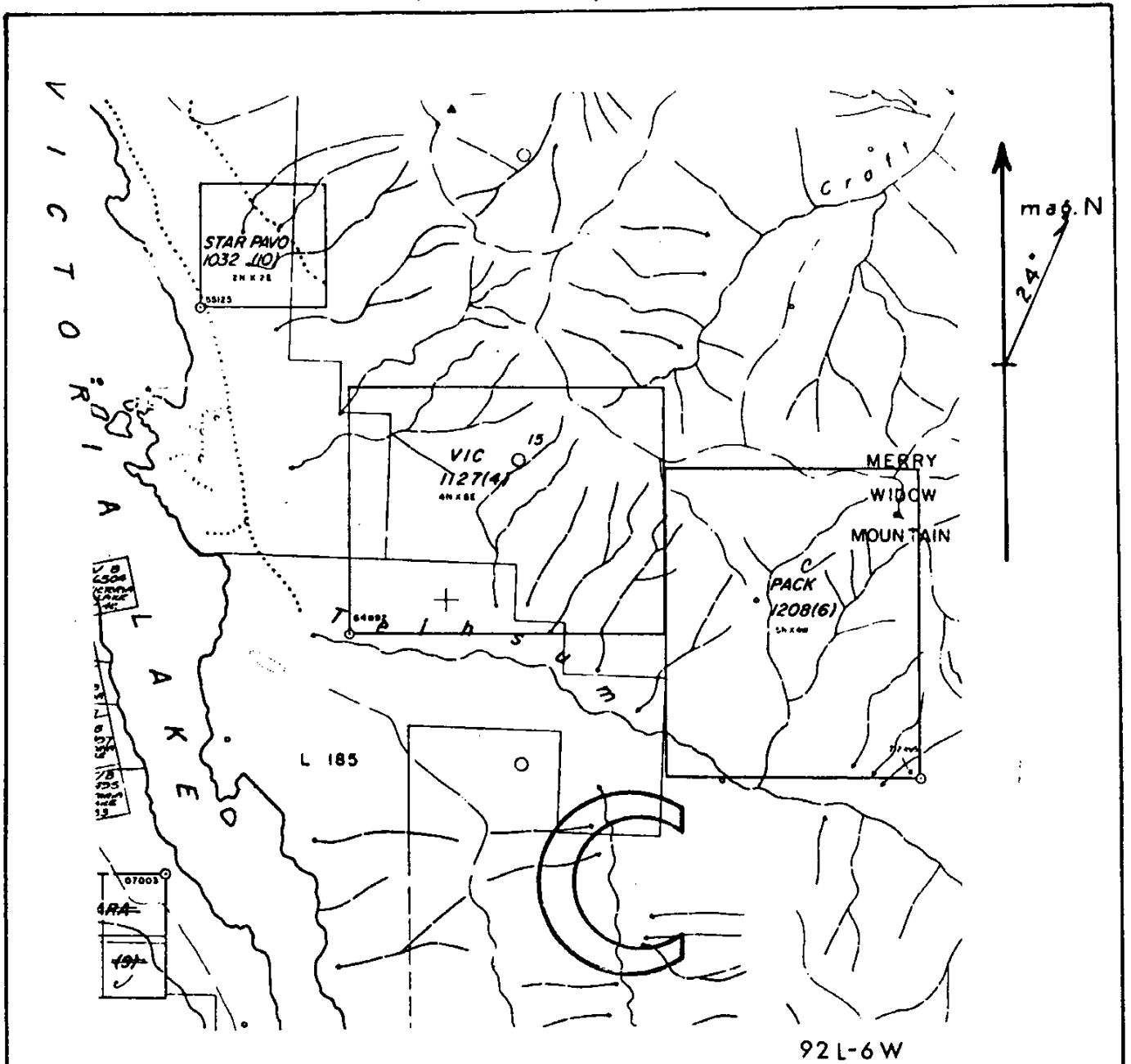
VANCOUVER ISLAND SYNDICATE

**VIC CLAIM
LOCATION AND
REGIONAL GEOLOGY**

scale 1:250,000



W.G. SMITHERINGALE & ASSOCIATES LTD. MAR. 30 1984



92L-6W

FIGURE 2

VANCOUVER ISLAND SYNDICATE	
VIC CLAIM CLAIM MAP	
scale 1:50,000	
W.G. SMITHERINGALE & ASSOCIATES LTD. MAR. 30 1984	

In 1983 the claim was maintained in good standing by paying cash in lieu of assessment work. The exploration program described in this report is the first exploration work done on the claim.

Summary of Work Done

During March 12 to 16, 1984, the following work was done on the Vic claim:

1. Stream silt geochemical survey: sieved silt samples were collected from 21 localities and the heavy mineral fraction analysed for Cu, Pb, Zn, Ag, As and Au.
2. Geological mapping: the southwestern half of the claim was mapped on a scale of 1:5,000. The area covered is approximately 200 hectares (8 units).

TECHNICAL DATA AND INTERPRETATION

Regional Geology

Most of northern Vancouver Island is underlain by a conformable sequence consisting, in order of decreasing age, of basaltic rocks known as the Karmutsen Formation, limestone known as the Quatsino Formation, calcareous siltstone and shale known as the Parson Bay Formation, greywacke, argillite and tuff known as the Harbledown Formation and andesite to rhyodacitic lava, tuff and breccia known as the Bonanza Volcanics. The age of the Karmutsen, Quatsino and Parson Bay formations is Upper Triassic and the age of the Harbledown Formation and Bonanza Volcanics is Lower Jurassic. These rocks are intruded by stocks and batholiths of quartz diorite and quartz monzonite of Middle Jurassic age that are known as the Island Intrusions.¹ In the vicinity of the Vic claim a northwest trending, elongate wedge of Parson Bay Formation up to 0.5 km wide is surrounded by Bonanza Volcanics (Figure 1). The northeast side of the wedge is a fault contact and the southwest side is a stratigraphic contact. Strata in both the Parson Bay Formation and the Bonanza Volcanics strike northwesterly and dip 30° to 50° southwestward.

1. Muller, J.E., Northcote, K.E. and Carlisle, D., 1974: Geology and Mineral Deposits of Alert-Cape Scott Map-Area, Vancouver Island, British Columbia; Geol. Surv. Canada paper 74-8, with geological map.

Property Geology (Figure 3)

A belt about 500 m wide that extends from the northwest corner of the claim southeastward at least as far as sample site 84-V-12 is underlain by light to dark grey and green andesite and dacite tuffs and flows, interbedded with light grey felsite, dark grey tuffaceous and cherty argillite and dark grey argillaceous limestone. In places the volcanic rocks are pyritic. A limestone outcrop west of sample site 84-V-8 contains numerous coral fragments. These rocks have been tentatively assigned to the Parson Bay Formation. It may be, however, that the interbedded volcanic rocks and dark grey cherty argillites at sample sites 84-V-9 to 12 and at sites 84-V-13 to 16 belong to the Bonanza Volcanics, and that shearing exposed in the creek walls near sites 84-V-3 and 84-V-8 represents a fault contact between Bonanza Volcanics on the northeast and Parson Bay coralline limestone and volcanics on the southwest. The dominant structure of this belt is a monocline. Strata strike northwesterly and dip 35° to 65° southwestward.

Southwest of this belt, and extending to the SW corner of the claim, there are scattered outcrops of medium grey, dominantly massive, fine grained, amygdaloidal andesite characterized by plagioclase phenocrysts between 3 mm and 10 mm long. The amygdules are chlorite and calcite. The contact between this unit and the Parson Bay strata was not observed. This unit is assumed to overlie the Parson Bay strata and has therefore been assigned to the Bonanza Volcanics.

Fine grained andesite dykes intrude all the rocks described above.

The only sulfide mineral seen on the property is pyrite. Pyritization in the form of disseminated grains and fracture fillings has affected volcanic rocks of the Parson Bay Formation in a number of places. Assay sample 4849 was collected from one of several large boulders of strongly pyritic, highly silicified volcanic rock found in a stream bed. Assay sample 4850 was collected from a 20 cm thick bed of rusty weathering, dark grey coloured, clay and pyrite rich tuff. This odd material may be the product of a volcanic related submarine hot spring. Neither sample returned a significant gold assay.

Stream Sediment Geochemical Survey

The purpose of the silt survey was to confirm a distinctly anomalous silt sample collected close to site 84-V-5 during a reconnaissance survey conducted in 1981, and to locate the source of the anomaly.

Silt samples were collected from 21 localities on the Vic claim.

Sampling Method

Sufficient material from the active part of a stream bed was sieved through a 20 mesh sieve to yield about 0.5 kg of -20 mesh silt. This sample was placed in a wet strength kraft envelope and submitted to Min-En Laboratories Ltd. of North Vancouver, B.C., for analysis of the heavy mineral fraction. The low specific gravity minerals (less than 3.1) were removed using heavy liquid flotation and the resulting heavy mineral concentrate was analyzed for Cu, Pb, Zn, Ag, As and Au by atomic adsorption.

Sample Results and Discussion

The sample sites are shown on Figure 3 and a copy of the analysis certificate appears in the Appendix.

In order to evaluate the results they have to be compared with regional background data obtained from the 1981 reconnaissance survey. Threshold values and 'probably anomalous' values from the 1981 survey, as determined by a combination of statistical and graphical methods, are given in the following table.

	<u>Cu</u> (ppm)	<u>Pb</u> (ppm)	<u>Zn</u> (ppm)	<u>Ag</u> (ppm)	<u>As</u> (ppm)	<u>Au</u> (ppb)
1981 Threshold	150	45	125	1.6	150	30
1981 Probably Anomalous	200	55	160	2.1	250	100
1981 anomalous sample near 84-V-5	174	56	450	2.6	260	5
84-V-5	151	69	372	2.8	1700	10

Of the 21 silt samples collected from the Vic claim all but two (84-V-19 and 20) are probably anomalous when compared to the 1981 data. Samples 84-V-19 and 20 are from streams with drainage basins underlain largely by massive plagioclase porphyritic andesite (map unit 2), whereas all other samples are from creeks with drainage basins underlain mainly by the interbedded volcanic and sedimentary rocks assigned to the Parson Bay Formation (map unit 1). The local threshold values for the Parson Bay Formation on the Vic claim are probably higher than the regional threshold values. Nevertheless, the numerous values that are significantly above the 'probably anomalous' values of the 1981 regional data indicates that the Vic claim is geochemically anomalous.

The northwest corner of the claim is most anomalous in all elements analyzed for except As (#16 highest in Cu and Ag, #13 highest in Pb and #3 highest in Zn and Au). The central part of the claim is most anomalous in As (the drainage system for samples 5 to 11).

Interpretation

Geological mapping shows that the Vic claim is partly underlain by cherty argillite and argillaceous limestone interbedded with volcanic flow and tuff units of intermediate composition. These rocks represent a geological environment in which volcanic exhalative deposits of base and/or precious metals sometimes occur. The stream silt geochemical data indicates that the area underlain by these rocks is distinctly anomalous in Cu, Pb, Zn, Ag, As and possibly Au.

The 1984 exploration program on the Vic claim indicates that further exploration work is warranted.

ITEMIZED COST STATEMENT

Wages:

W.G. Smitheringale, P. Eng.

Travel, Port McNeill to Vancouver - March 17, 1984 - 1 day

Field work, March 12 to 16, 1984 - 5 days

Report preparation, March 29, 30 - 2 days

8 days @ \$200/day \$ 1,600.00

Meals and Accommodation for 1 man at Port McNeill:

<u>Date</u>	<u>Meals</u>	<u>Accommodation (Dalewood Inn)</u>	
March 12	\$ 18.58	\$ 17.86	
13	23.85	17.86	
14	20.90	17.86	
15	24.65	17.86	
16	24.00	17.86	
17	<u>17.45</u>	<u>-</u>	
	\$129.43	\$ 89.30	218.73

Transportation:

Station Wagon rental from

W.G. Smitheringale & Associates Ltd.

6 days @ \$150/week 128.57

1185 km @ 10¢/km 118.50

Gasoline 88.56 335.63

Sample Preparation and Analysis:

21 silt samples @ \$32.45 each 681.45

2 samples, assay 16.50 697.95

Miscellaneous Expenses:

Maps and field supplies 15.40

Typing report 48.30

Map reproduction and xeroxing 9.81 73.51

Total \$ 2,925.82

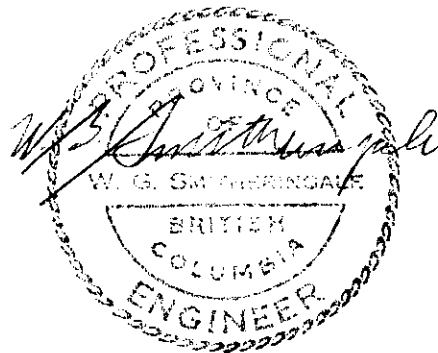
The cost of the silt survey was:

Sampling - 4 man days	\$ 800.00
Analysis	<u>681.45</u>
Total	\$ 1,481.45

The cost of report preparation was:

Writing and drafting - 2 days	\$ 400.00
Typing	48.30
Xeroxing and map reproduction	<u>9.81</u>
Total	\$ 458.11

Respectfully submitted,



W.G. SMITHERINGALE & ASSOCIATES LTD.
W.G. Smitheringale, Ph.D., P. Eng.

March 30, 1984

CERTIFICATION

I, William G. Smitheringale, certify that:

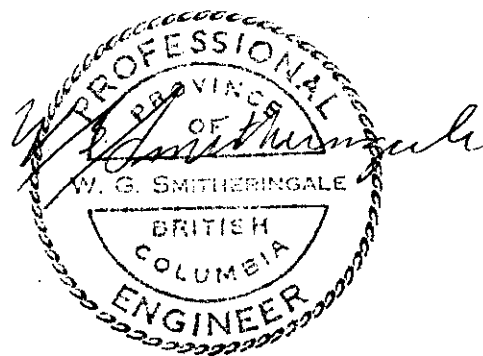
I am a practising Professional Geological Engineer, resident at 2008 Fullerton Avenue, North Vancouver, B.C.

I am a graduate of the University of British Columbia with a degree in Geological Engineering (B.Ap.Sc., 1955) and of the Massachusetts Institute of Technology with the degree of Doctor of Philosophy in Geology (Ph.D., 1962).

I have practised my profession continuously for twenty-two years as Geologist with the Geological Survey of Canada, as Assistant and Associate Professor, Department of Geology, Memorial University of Newfoundland and, since 1974, as a Consulting Geologist.

I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia (Registration No. 10,802).

This report is based on field work conducted by me on March 12th to 16th, 1984.



W.G. SMITHERINGALE, Ph.D., P. Eng.

March 30, 1984

APPENDIX

CERTIFICATES OF ANALYSES

GEOCHEMICAL ANALYSIS CERTIFICATE

COMPANY W. G. SMITHERINGALE & ASSOC.
PROJECT NO VIC
ATTENTION W. G. SMITHERINGALE

FILE NO 4-128
DATE MARCH 23/84

We hereby certify that the following are the results of the geochemical analysis made on 21 samples submitted.

SAMPLE NUMBER	CU PPM	FB PPM	ZN PPM	AG PPM	AS PPM	AU FPB	HM %
84-V-1	206	94	373	3.1	380	30	1.27
84-V-2	227	64	360	3.7	410	20	1.91
83-V-3	159	93	476	3.7	950	1650	1.71
84-V-4	117	48	241	3.2	250	25	0.98
84-V-5	151	69	372	2.8	1700	10	1.98
84-V-6	130	55	286	2.4	1875	5	2.27
84-V-7	205	75	345	3.4	3250	15	3.35
84-V-8	138	62	347	2.4	890	5	1.55
84-V-9	111	77	255	3.6	2850	10	2.74
84-V-10	108	84	400	2.8	1200	10	5.05
84-V-11	143	84	260	2.9	3000	5	4.18
4-V-12	290	52	195	3.1	950	190	3.14
84-V-13	195	128	280	4.4	700	10	4.52
84-V-14	188	58	313	3.6	400	5	1.75
84-V-15	321	57	329	3.9	420	15	1.43
84-V-16	490	83	270	4.8	275	10	3.53
84-V-17	209	46	182	2.3	250	10	0.63
84-V-18	112	70	234	3.0	700	60	2.29
84-V-19	51	31	107	1.5	165	10	1.37
84-V-20	60	37	127	1.7	205	5	1.45
84-V-21	127	43	178	2.0	675	15	2.51

*HEAVY MINERALS

Certified by



CERTIFICATE OF ASSAY

COMPANY W G SMITHERINGALE
PROJECT VIC
ATTENTION W G SMITHERINGALE

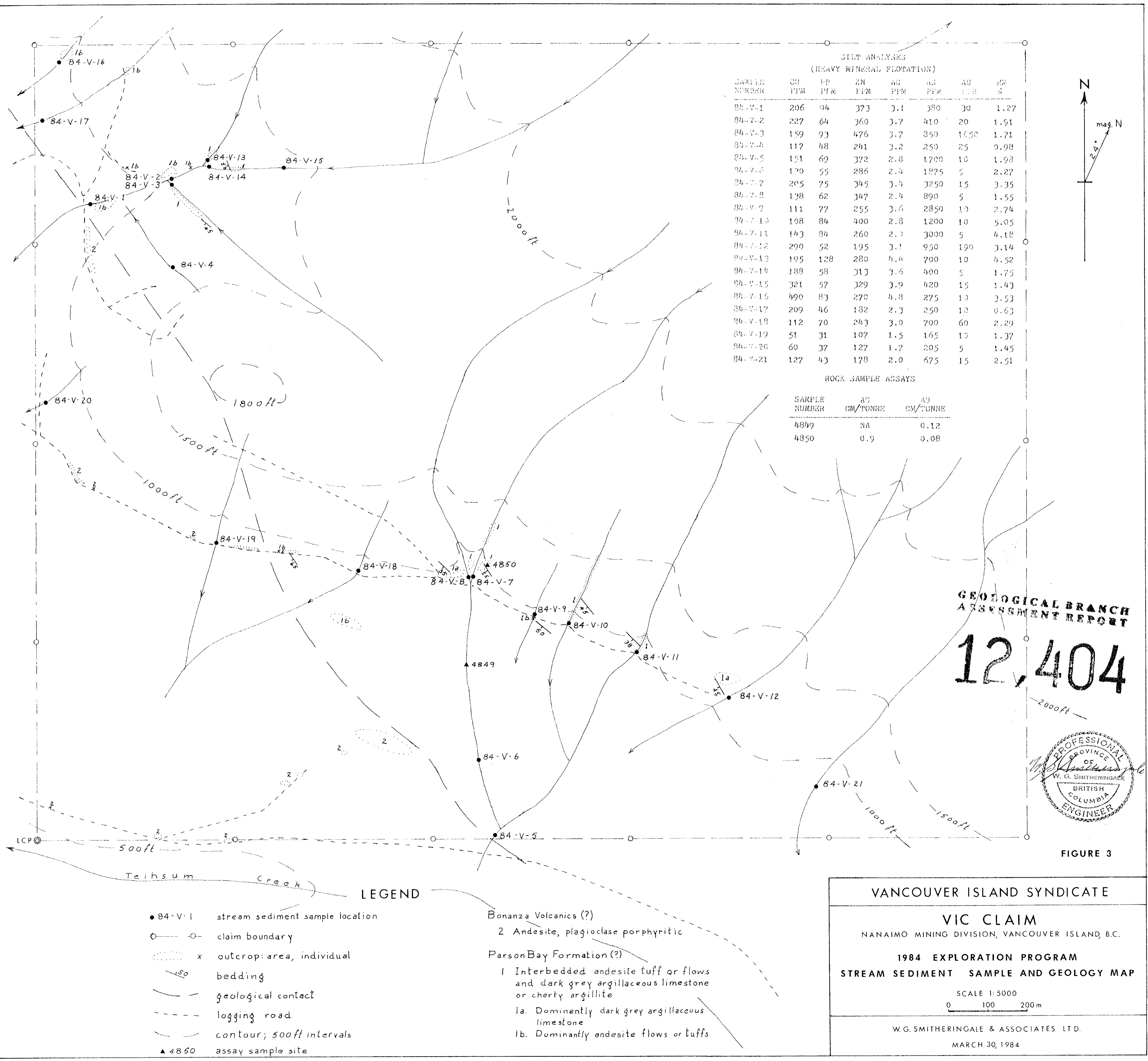
FILE NO 4-128
DATE MARCH 21/84

We hereby certify that the following are assay results for samples submitted.

SAMPLE NUMBER	AG G/TONNE	AG OZ/TON	AU G/TONNE	AU OZ/TON
4849			.12	0.003
4850	0.9	0.03	.08	0.002

Certified by

MIN-EN LABORATORIES LTD.



SILT ANALYSES
(HEAVY MINERAL FLOTATION)

SAMPLE NUMBER	CU PPM	FP PPM	ZN PPM	AG PPM	AS PPM	AU PPM	HW %
84-V-1	206	94	373	3.1	380	30	1.27
84-V-2	227	64	360	3.7	410	20	1.91
84-V-3	159	93	476	3.7	350	1650	1.71
84-V-4	117	48	241	3.2	250	25	0.98
84-V-5	151	69	372	2.8	1700	10	1.98
84-V-6	170	55	286	2.4	1275	5	2.27
84-V-7	205	75	345	3.4	3250	15	3.35
84-V-8	138	62	347	2.4	890	5	1.55
84-V-9	111	77	255	3.6	2850	10	2.74
84-V-10	108	84	400	2.8	1200	10	5.05
84-V-11	143	84	260	2.7	3000	5	4.12
84-V-12	290	52	195	3.1	950	190	3.14
84-V-13	195	128	280	4.4	700	10	4.52
84-V-14	188	58	313	3.6	400	5	1.75
84-V-15	321	57	329	3.9	420	15	1.43
84-V-16	490	83	270	4.8	275	10	3.53
84-V-17	209	46	182	2.3	250	10	0.62
84-V-18	112	70	243	3.0	700	60	2.29
84-V-19	51	31	107	1.5	165	10	1.37
84-V-20	60	37	127	1.7	205	5	1.45
84-V-21	127	43	178	2.0	675	15	2.51

ROCK SAMPLE ASSAYS

SAMPLE NUMBER	AG CM/TONNE	AU CM/TONNE
4849	NA	0.12
4850	0.9	0.08

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FIGURE 3

LEGEND

- 84-V-1 stream sediment sample location
- claim boundary
- ⊗ x outcrop: area, individual
- 150 bedding
- geological contact
- - - logging road
- - - contour; 500ft intervals
- ▲ 4850 assay sample site
- Bonanza Volcanics (?)
- 2 Andesite, plagioclase porphyritic
- Parson Bay Formation (?)
- 1 Interbedded andesite tuff or flows and dark grey argillaceous limestone or cherty argillite
- 1a. Dominantly dark grey argillaceous limestone
- 1b. Dominantly andesite flows or tuffs

VANCOUVER ISLAND SYNDICATE

VIC CLAIM

NANAIMO MINING DIVISION, VANCOUVER ISLAND, B.C.

1984 EXPLORATION PROGRAM
STREAM SEDIMENT SAMPLE AND GEOLOGY MAP

SCALE 1:5000
0 100 200m

W.G. SMITHERINGALE & ASSOCIATES LTD.
MARCH 30, 1984