ARIS SUMMARY SHEET

District Geologist, Kamloops Off Confidential: 89.02.04

ASSESSMENT REPORT 17025 MINING DIVISION: Lillooet

PROPERTY: Swan
LOCATION: LAT 50 50 07 LONG 122 52 46
UTM 10 5631295 508489
NTS 092J15W
CLAIM(S): Swan,Swan I-II
OPERATOR(S): Van Benten, L.
AUTHOR(S): Butler, S.P.
REPORT YEAR: 1988, 25 Pages
GEOLOGICAL
SUMMARY: The claims are underlain by contorted cherts of the Permo-Triassic Bridge River Group. A small gabbro stock of the Upper Triassic Bralorne Intrusions and several quartz monzonite dykes of unknown age were found.
WORK
DONE: Geological,Geochemical
GEOL 100.0 ha
ROCK 5 sample(s) ;ME
SOIL 6 sample(s) ;ME

L. VAN BENTEN

Assessment Report

on the

Swan, Swan 1 and Swan 2
Mineral Claims

Gold Bridge Area
Lillooet Mining Division, British Columbia

N. Latitude: 50° 50' 00" **W. Longitude: 122° 53' 00"**

NTS 92 J/15 W

by

Sean P. Butler, B.Sc.

STRATO GEOLOGICAL ENGINEERING LTD.
3566 King George Highway
Surrey, British Columbia
V4A 5B6

March 4, 1988

STRATO GEOLOGICAL ENGINEERING LTD.

SUMMARY

In May of 1987 a two-man geological crew performed a reconnaissance geological mapping and sampling program on the Swan Claim Group. The Swan Claim Group is in the Bridge River district. Located to the southeast are the former producing Bralorne and Pioneer gold mines, the largest historic producers of gold in the Canadian Cordillera.

Two quartz veins were located and sampled, as well as several other altered rocks. A line of soil samples was also started but was postponed to a later program due to a deep volcanic ash layer.

Respectfully submitted,
Strato Geological Engineering Ltd.

Sean P. Butler

Sean P. Butler, B.Sc.
Geologist

March 4, 1988

STRATO GEOLOGICAL ENGINEERING LTD.

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1. INTRODUCTION

On May 21 and 22, 1987 a two-man geological crew performed a geological mapping, prospecting and sampling survey of the Swan claims. This included preparing a geological map (Figure 5) and a rock and soil sampling program.

1.1 Location and Access

The Swan Claim Group is located in the Gold Bridge area of British Columbia, approximately 180km north of Vancouver (Figure 1). The property is indicated on NTS map 92J/15W at latitude 50 degrees 50'N and longitude 122 degrees 53'W. The claim group is 2km southwest of Gold Bridge and is crossed by the road to Gun Lake. The town of Gold Bridge is reached by 96km of good gravel road from the town of Lillooet. Lillooet is on the B.C. rail line and a paved road leads to Lytton on the Trans Canada Highway. Also, summer access is available along the Hurley River Forest Road, a rough gravel road from Pemberton, B.C.

1.2 Physiography

The topography within the region is quite rugged, but other than a steep cliff on the Swan claim the property has generally moderate to gentle slopes. The elevation varies from 750m near Downton Lake to 1070m on Mount Zola. Other than Downton Lake, very little water was found on the property (Figure 2).

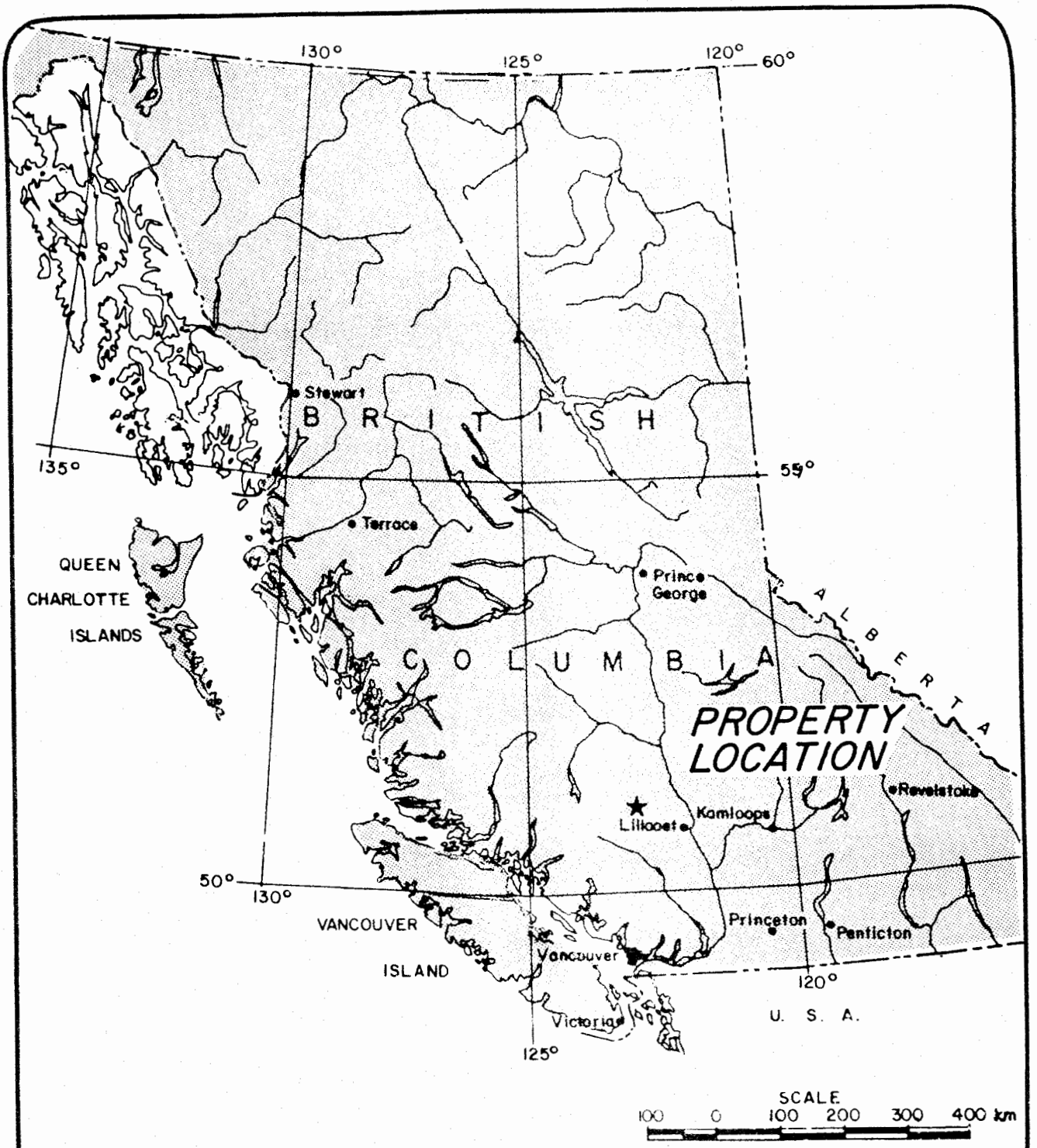

FIGURE 1

L. van Benten

GOLD BRIDGE AREA

LILLOOET M.D. —— NTS 92 J/15

LOCATION MAP

February, 1988

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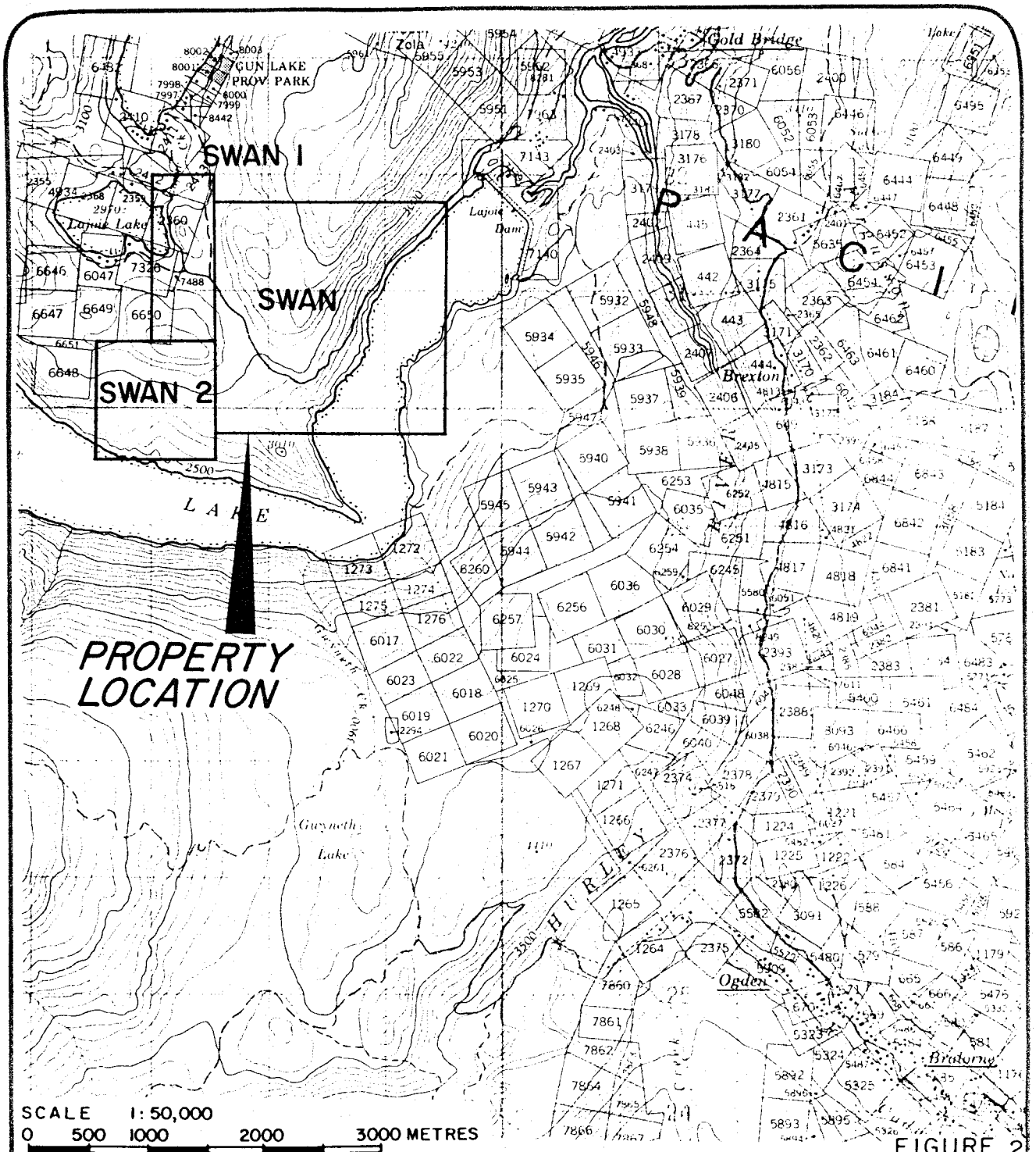
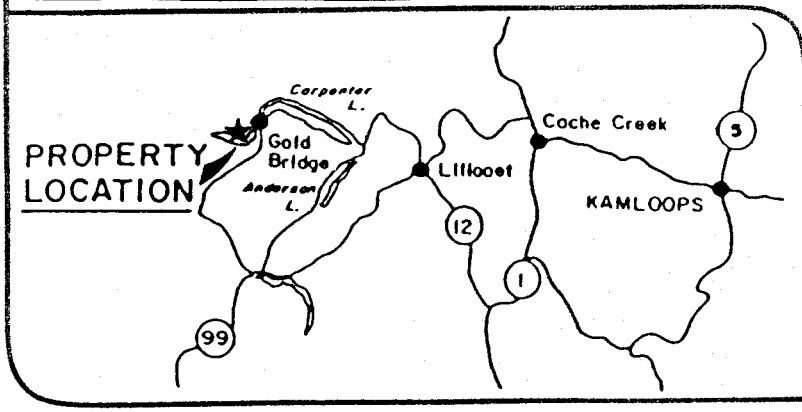


FIGURE 2



L. van Benten
GOLD BRIDGE AREA
LILLOOET M.D. —— NTS 92 J/15

TOPOGRAPHIC MAP

February, 1988

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1.3 History

Interest in the area was developed when placer gold was found in the Bridge River district in 1863. The Bralorne and Pioneer mines, eight and ten kilometers to the southeast of the claims, are the largest historic producers of gold in the Canadian Cordillera. The last production was in 1971 during a prolonged period of low precious metal prices. The area is presently under serious and active exploration by a number of companies.

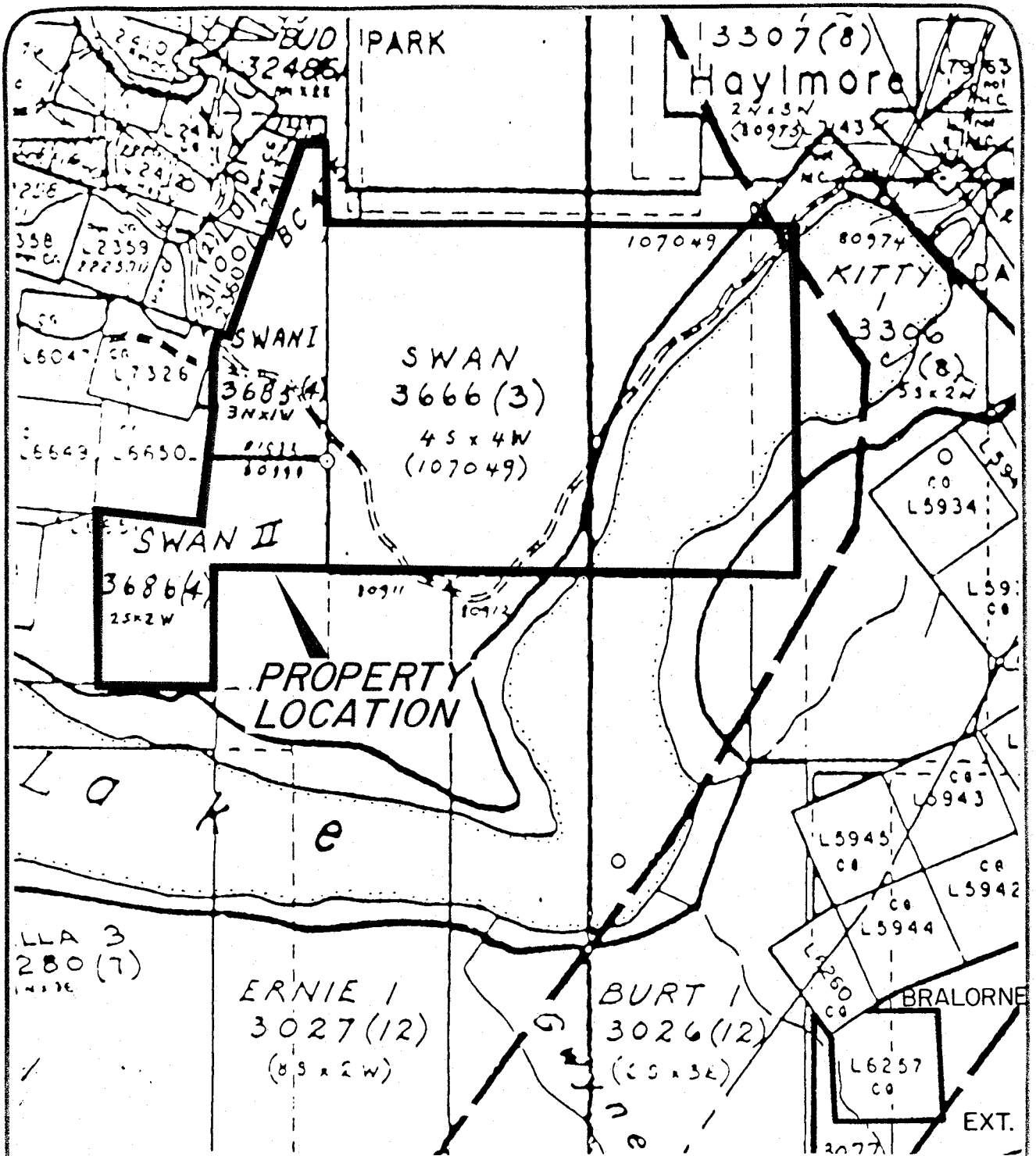
The only known recorded history of work on the claims is by Holt Engineering (1983) for Consolidated Paymaster Resources Ltd. This work involved some very widely spaced soil sampling and a number of rock samples. A quartz vein had been previously uncovered by trenching although no record of this work is known.

1.4 Property Status

The Swan Mineral Claim Group consists of the following claims:

Name	Units	Record No.	Expiry Date
SWAN	16	3666	March 23, 1988
SWAN I	3	3685	April 27, 1988
SWAN II	4	3686	April 27, 1988

The expiry date will be extended following application of the work outlined in this report (Figure 3).



SCALE 1: 25,000
0 400 800 1200 METRES

FIGURE 3

L. van Benten

GOLD BRIDGE AREA

LILLOOET M.D. —— NTS 92J/15

SWAN GROUP CLAIM MAP

February, 1988

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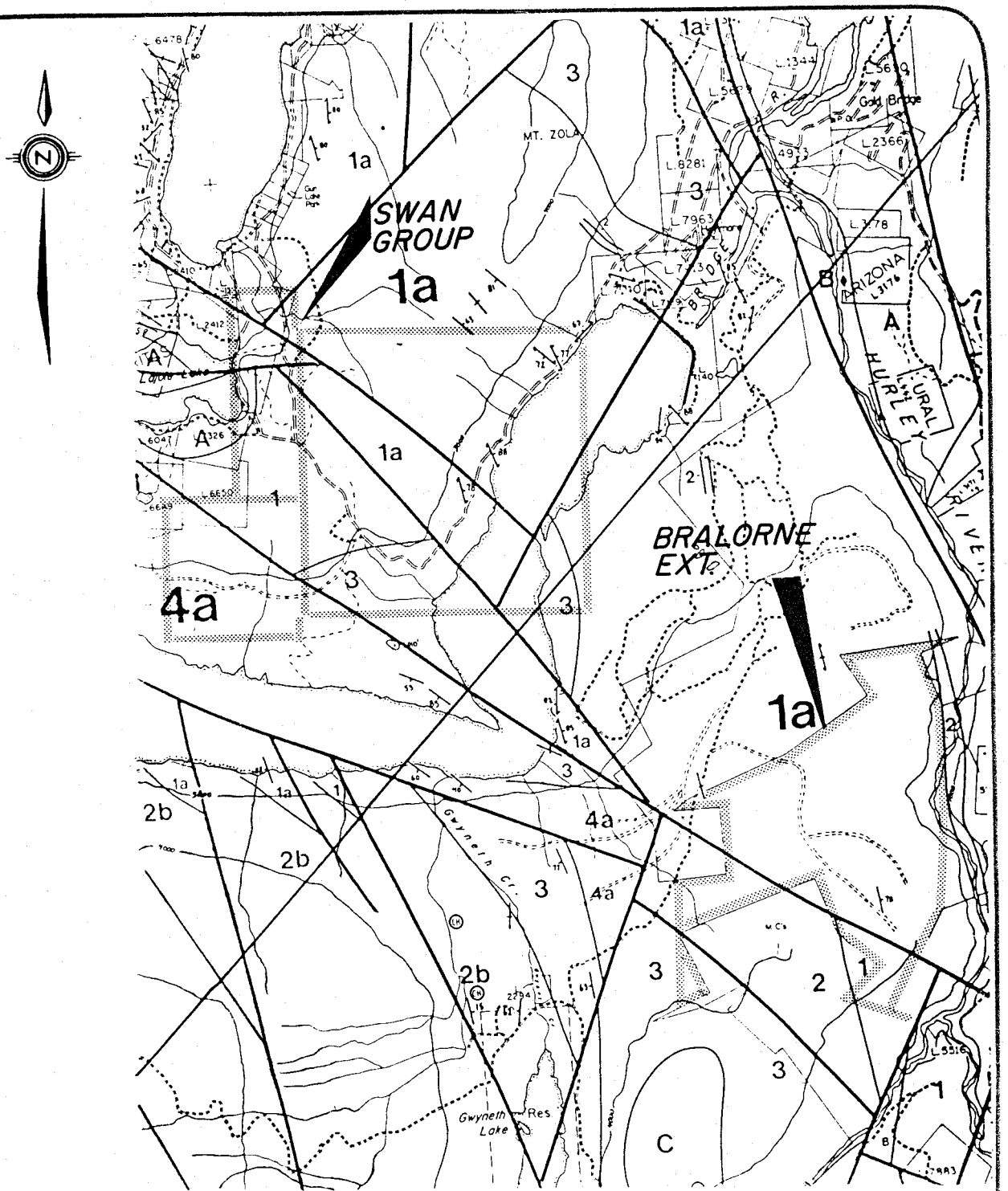
2. GEOLOGY

2.1 Regional Geology

The Bridge River area lies between the main Coast Range intrusive complex to the west and a series of outlying granodiorite intrusive bodies to the east. The area includes a regionally faulted and folded series of sedimentary and volcanic rocks, and their metamorphic equivalents, with a general northwesterly trend (Figure 4).

The region is underlain by the late Paleozoic and/or Mesozoic, volcanic and sedimentary, rocks of the Fergusson series (Bridge River group). Also the Upper Triassic Cadwallader Group volcanics and sediments of the Noel, Pioneer, and Hurley Formations occur within the region. All of these rocks have been invaded by and locally metamorphosed by a group of small intrusive bodies of the Jurassic Bralorne intrusives. These include augite-diorite, soda granite, quartz diorite, gabbro and ultrabasic rocks.

The regional fault traversing the area is the Cadwallader Fault system which trends northwesterly for many kilometers in the Cadwallader Creek Valley south of the Bralorne area, and then turns to a northerly trend at Bralorne. The main gold production for the region is from the Pioneer and Bralorne mines which are within a fault bounded lens of Bralorne intrusives, along the



FROM: Church & McLEAN 1987

LEGEND

TRIASSIC

CADWALLADER GROUP

4 — *HURLEY FORMATION: soft brown and green argillites, siliceous and calcareous argillites with sandstone and conglomerate (4a), limestone (4b) and volcaniclastics (4c)*

3 — *NOEL FORMATION: mainly black argillite and siltstone with some calcareous zones*

2 — *PIONEER FORMATION: basaltic pillow lava (2a), aquagene breccia (2b), tuffs and amygdaloidal laval (2c)*

PALEOZOIC

1 — FERGUSSON GROUP: *mostly ribbon chert (1a), ranging to biotite quartz gneiss (1b), some marble bands (1c) and fine-grained amphibolite (1d)*

A — *BRALORNE INTRUSIONS: mostly heterogeneous amphibolite, diorite and gabbro with felsic veinlets*

FIGURE 4

L. van Benten

GOLD BRIDGE AREA

LILLOOET M.D. —— NTS 92 J/15

REGIONAL GEOLOGY MAP

February, 1988

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Cadwallader fault system, at the bend from a northwesterly to northerly trend. This lens is about five kilometers in length and one kilometer in width. The mineralization is in fissure veins in tension fractures.

The Bralorne intrusives are the most favourable rock unit and contain other past producers such as the Wayside property near the town of Gold Bridge. The sediments and volcanics surrounding the Bralorne intrusives contain significant mineral properties including, the Minto Mine, a past producer, and the Congress Property, both presently under exploration.

2.2 Property Geology and Sampling

The Swan claims are underlain by the Triassic - Jurassic age Fergusson series of rocks and the Upper Triassic Noel Formation (Cairnes, 1938). Also a small stock of gabbro of the Jurassic age Bralorne intrusives, and a few quartz monzonite dykes of unknown age occur on the property (Figure 5).

The Fergusson series consists mainly of contorted chert and meta-argillite of the sedimentary package. The argillite grades into fine sandstones and has associated with it small lenses of grey limestone. Also small pods of meta-basalt of the Fergusson Series were found to outcrop.

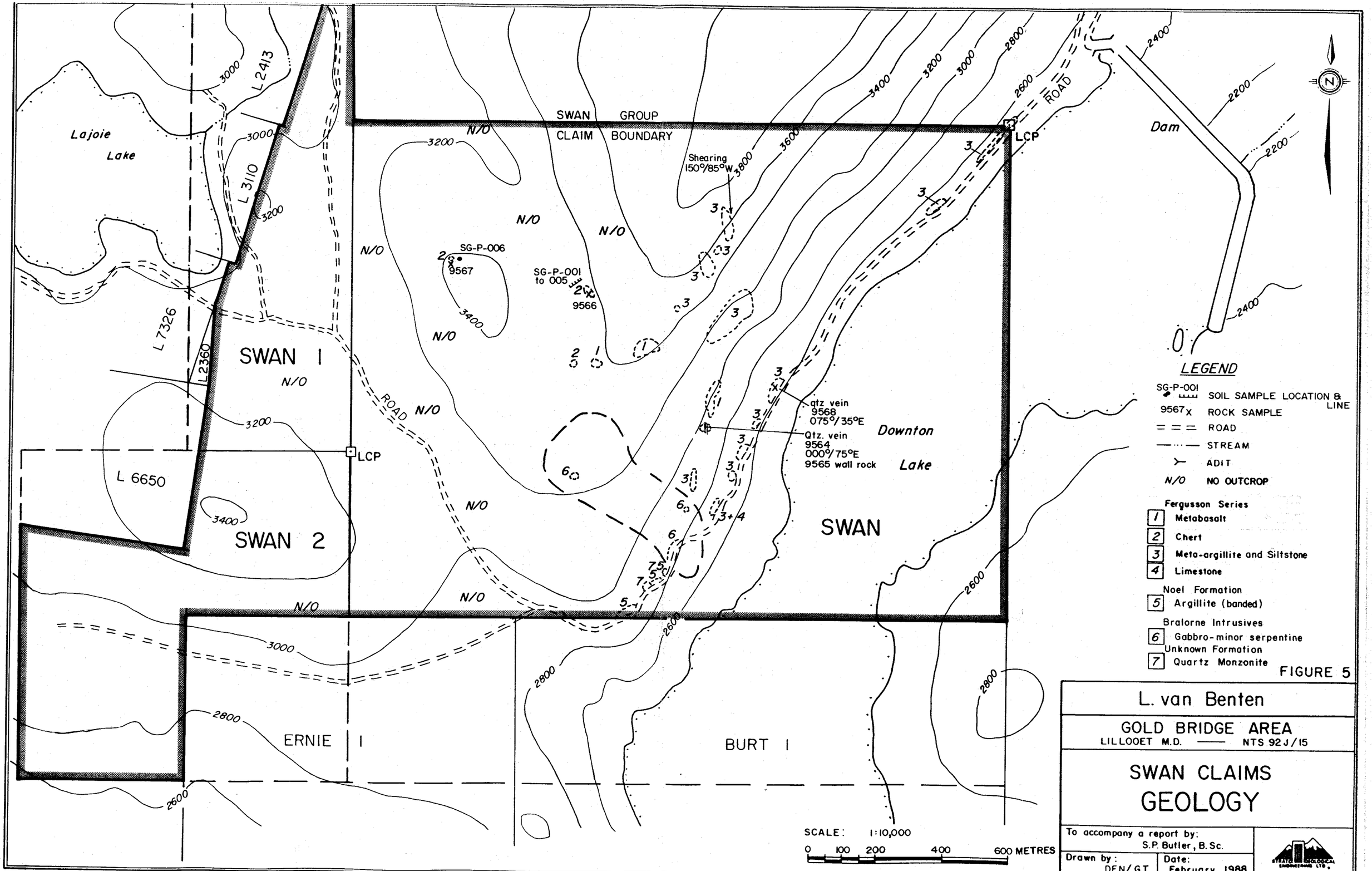

FIGURE 5

L. van Benten

GOLD BRIDGE AREA
LILLOOET M.D. —— NTS 92 J/15

SWAN CLAIMS
GEOLOGY

To accompany a report by:
S.P. Butler, B.Sc.

Drawn by: DFN/G.T.

Date: February, 1988

The Noel Formation was mostly banded argillites. These generally, as with the other rock units on the Swan claims, had a higher degree of metamorphism than elsewhere in the Bridge River area. The contacts between formations were not found in the field and therefore the relationships between the formations are unknown.

A small irregular stock of Bralorne gabbro intrudes the Fergusson Series. This formation is fine grained and relatively uniform, with a sheared section of serpentinite outcropping along the Gun Lake Road.

A couple of quartz monzonite dykes are uncovered on the road cut and abundant intrusive float suggests other dykes on the property.

Two quartz veins were found and sampled. The largest consists of creamy white quartz emplaced in what appears to be altered meta-basalt. The strike is approximately north-south and the dip is 75 degrees to the east. The vein varies from 0.5 to 2m in width and is exposed for about 15m in length. Sample SG-SB-9564, a random group of rock chips from the quartz vein, returned no gold in analysis. SG-SB-9565 is altered hanging wall rock from next to the vein; it also analysed no significant gold.

The second vein is a small (5-20cm) gash vein with weathered pyrite exposed in a road cut. Sample SG-SB-9568 from this vein returned no significant gold, but is anomalous in tungstem with 134 ppm. The other samples (SG-SB-9566 & 9567) were from silicified and altered rocks and also returned no significant mineral values.

The major recognizable topographic feature felt to have some significance is a depression on the south-west slope of Mount Zola in the northwest quadrant of the Swan claim. This depression has a strike generally similar to the regional trend of 150 degrees to 160 degrees. A soil line was attempted to sample across this depression but when 50 to 90cm of volcanic ash was encountered sampling was postponed to a later program when it could be performed more efficiently. Future programs should evaluate whether shovels, augers, or mattocks will be more effective to collect "B" horizon soil samples below this deep ash layer.

The five soil samples collected (SG-P-001 to 005) at a 10m spacing returned no significant gold or trace elements. Sample SG-P-006 is a resample of an anomalous sample by Holt (1983) and also shows no gold values.

Large areas of this claim have no outcrop, due to glacial sediments and volcanic ash on gentle slopes. Future work should attempt to determine the underlying rock units, structure, and mineral potential through "B" horizon soil sampling. The steep ground in the north-east corner of the claim area should also be prospected.

3. RECOMMENDATIONS

A follow-up soil geochemistry survey should be carried out to determine the mineral potential of the property. As the volcanic ash layer is thick on gentle slopes, a shovel or auger should be tested to see if they are more efficient for soil sampling than a mattock. Due to this ash layer sampling will be slower and take longer than normal to complete. The depression, a possible fault structure, on the SWAN claim should be tested on several soil lines with samples collected at a 30m spacing. Also prospecting and reconnaissance soil samplng of the SWAN 1 and 2 mineral claims is warranted.

Respectfully submitted,
Strato Geological Engineering Ltd.

Sean P. Butler

Sean P. Butler, B.Sc.
Geologist

March 4, 1988

4. REFERENCES

Cairnes, C.E. (1937)
Geology and Mineral Deposits of Bridge River Mining Camp, B.C.; Geological Survey of Canada, Mem. 213, with Map 431A.

Church, B.N., and MacLean, M., (1987)
Geology of the Gold Bridge Area (92J/15W). BCDM Open File Map 1987 - 11.

Cockfield, W.E. and Walker, J.F. (1932)
Cadwallader Creek Gold Mining Area, Bridge River Area, B.C.; Geological Survey of Canada, Summary Report, 1932.

Holt Engineering Ltd. (1983)
Report on the Au 1 to 3, All 1 and Mix 5 to 8 Mineral Claims in the Bridge River Gold Camp, B.C., Prepared for Consolidated Paymaster Resources Ltd.

Woodsworth, G.J. (1977)
Geology of Pemberton Map Area (92J); Geological Survey of Canada, O.F. 482.

5. CERTIFICATE

I, SEAN P. BUTLER, of 4525 W. 2nd Avenue, of the City of Vancouver, Province of British Columbia, do hereby certify that:

1. I graduated in 1982 from the University of British Columbia with a Bachelor of Science in Geology.

2. I am employed as a geologist by Strato Geological Engineering Ltd., with offices at 3566 King George Highway, Surrey, British Columbia, V4A 5B6.

3. I have practised my profession as a geologist since 1982 and have been involved in mineral exploration in western Canada and the western United States since graduation.

4. I am an associate member of the Geological Association of Canada.

5. I have not received, nor do I expect to receive, any direct, indirect or contingent interest in the Swan Claim Group.

6. This report is based on field examinations I performed and supervised on the property on May 21 and 22, 1987.

DATED at Surrey, Province of British Columbia, this 4th day of March, 1988.

Sean P. Butler

Sean P. Butler, B.Sc.
Geologist

STRATO GEOLOGICAL ENGINEERING LTD.

APPENDIX 1
Analytical Procedures

ACME ANALYTICAL LABORATORIES LTD
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Telephone: 253-3158

GEOCHEMICAL LABORATORY METHODOLOGY

Sample Preparation

1. Soil samples are dried at 60°C and sieved to -80 mesh.
2. Rock samples are pulverized to -100 mesh.

Geochemical Analysis (AA and ICP)

0.5 gram samples are digested in hot dilute aqua regia in a boiling water bath and diluted to 10 ml with demineralized water. Extracted metals are determined by :

A. Atomic Absorption (AA)

Ag*, Bi*, Cd*, Co, Cu, Fe, Ga, In, Mn, Mo, Ni, Pb, Sb*, Tl, V, Zn
(* denotes with background correction.)

B. Inductively Coupled Argon Plasma (ICP)

Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cu, Cr, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Geochemical Analysis for Au*

10.0 gram samples that have been ignited overnite at 600°C are digested with 30 mls hot dilute aqua regia, and 75 mls of clear solution obtained is extracted with 5 mls Methyl Isobutyl Ketone.

Au is determined in the MIBK extract by Atomic Absorption using background correction (Detection Limit = 1 ppb).

Geochemical Analysis for Au**, Pd, Pt, Rh

10.0 - 30.0 gram samples are subjected to Fire Assay preconcentration techniques to produce silver beads.

The silver beads are dissolved and Au, Pd, Pt, and Rh are determined in the solution by graphite furnace Atomic Absorption. Detections - Au=1 ppb; Pd, Pt, Rh=5 pp

Geochemical Analysis for As

0.5 gram samples are digested with hot dilute aqua regia and diluted to 10 ml. As is determined in the solution by Graphite Furnace Atomic Absorption (AA) or by Inductively Coupled Argon Plasma (ICP).

Geochemical Analysis for Barium

0.25 gram samples are digested with hot NaOH and EDTA solution, and diluted to 20 ml.

Ba is determined in the solution by ICP.

Geochemical Analysis for Tungsten

0.25 gram samples are digested with hot NaOH and EDTA solution, and diluted to 20 ml. W in the solution determined by ICP with a detection of 1 ppm.

Geochemical Analysis for Selenium

0.5 gram samples are digested with hot dilute aqua regia and dilute to 10 ml with H_2O. Se is determined with $NaBH_3$ with Flameless AA. Detection 0.1 ppm.

ACME ANALYTICAL LABORATORIES LTD.
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Telephone: 253-3158

Geochemical Analysis for Uranium

0.5 gram samples are digested with hot aqua regia and diluted to 10 ml.

Aliquots of the acid extract are solvent extracted using a salting agent and aliquots of the solvent extract are fused with NaF, K_2CO_3 and Na_2CO_3 flux in a platinum dish.

The fluorescence of the pellet is determined on the Jarrel Ash Fluorometer.

Geochemical Analysis for Fluorine

0.25 gram samples are fused with sodium hydroxide and leached with 10 ml water. The solution is neutralized, buffered, adjusted to pH 7.8 and diluted to 100 ml.

Fluorine is determined by Specific Ion Electrode using an Orion Model 404 meter.

Geochemical Analysis for Tin

1.0 gram samples are fused with ammonium iodide in a test tube. The sublimed iodine is leached with dilute hydrochloric acid.

The solution is extracted with MIBK and tin is determined in the extract by Atomic Absorption.

Geochemical Analysis for Chromium

0.1 gram samples are fused with Na_2O_2. The melt is leached with HCl and analysed by AA or ICP. Detection 1 ppm.

Geochemical Analysis for Hg

0.5 gram samples is digested with aqua regia and diluted with 20%-HCl.

Hg in the solution is determined by cold vapour AA using a F & J scientific Hg assembly. An aliquot of the extract is added to a stannous chloride / hydrochloric acid solution. The reduced Hg is swept out of the solution and passed into the Hg cell where it is measured by AA.

Geochemical Analysis for Ga & Ge

0.5 gram samples are digested with hot aqua regia with HF in pressure bombs.

Ga and Ge in the solution are determined by graphite furnace AA. Detection 1 ppm.

Geochemical Analysis for Tl (Thallium)

0.5 gram samples are digested with 1:1 HNO_3. Tl is determined by graphite AA. Detection .1 ppm.

Geochemical Analysis for Te (Tellurium)

0.5 gram samples are digested with hot aqua regia. The Te extracted in MIBK is analysed by AA graphite furnace. Detection .1 ppm.

Geochemical Whole Rock

0.1 gram is fused with .6 gm $LiBO_2$ and dissolved in 50 mls 5% HNO_3. Analysis is by ICP or M.S. ICP gives excellent precision for major components. The M.S. can analyze for up to 50 elements.

APPENDIX 2
Sample Analysis Certificate

ACME ANALYTICAL LABORATORIES 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG.C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR NA AND K. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOIL/ROCK AU* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: MAY 30 1987 DATE REPORT MAILED: June 6/87 ASSAYER: D. Toye. DEAN TOYE, CERTIFIED B.C. ASSAYER

STRATO GEOLOGICAL PROJECT - SWAN-BRALORNE File # 87-1503

SAMPLE#	MO PPM	CU PPM	PB PPM	ZN PPM	AG PPM	NI PPM	CO PPM	MN PPM	FE %	AS PPM	U PPM	AU PPM	TH PPM	SR PPM	CD PPM	SB PPM	BI PPM	V PPM	CA %	P %	LA PPM	CR PPM	MG %	BA PPM	TI %	B PPM	AL %	NA %	K %	W PPM	AU* PPB
S6-P-001 Soil	1	43	10	134	.1	27	10	236	2.97	15	5	ND	3	22	1	2	2	60	.25	.082	8	24	.51	80	.14	2	2.02	.03	.08	1	6
S6-P-002	1	32	10	114	.1	29	8	227	2.85	25	5	ND	3	17	1	2	2	53	.20	.092	7	24	.53	81	.14	2	2.54	.03	.09	1	3
S6-P-003	2	66	11	151	.2	58	14	1396	3.08	11	5	ND	5	37	1	2	4	61	.39	.044	19	32	.60	214	.17	2	2.45	.03	.12	1	1
S6-P-004	1	46	7	112	.1	39	9	665	2.53	2	5	ND	3	28	1	2	2	53	.30	.029	12	28	.49	126	.16	2	1.52	.04	.14	1	1
S6-P-005	2	40	8	177	.1	47	11	718	2.82	8	5	ND	4	23	1	2	2	58	.29	.075	9	31	.51	100	.15	2	1.56	.03	.13	1	6
S6-P-006	1	35	5	117	.1	46	11	669	2.77	6	5	ND	3	18	1	2	3	58	.24	.149	6	30	.58	94	.16	2	2.32	.02	.12	1	1
S6-SB-9564 Rock	1	11	2	2	.1	4	1	59	.38	3	5	ND	1	1	1	2	2	1	.03	.001	2	2	.01	2	.01	2	.02	.02	.02	1	2
S6-SB-9565	1	54	2	40	.2	15	4	349	1.61	2	5	ND	2	6	1	2	2	15	.02	.014	8	8	.38	41	.01	4	.51	.02	.07	1	5
S6-SB-9566	1	6	2	19	.1	2	1	126	.75	7	5	ND	1	2	1	2	3	1	.03	.008	17	1	.01	15	.01	8	.17	.05	.09	1	2
S6-SB-9567	2	74	8	63	.1	31	6	980	2.55	3	5	ND	4	8	1	2	2	18	.22	.025	18	10	.54	48	.12	15	.91	.01	.12	1	3
S6-SB-9568	1	3	4	9	.6	2	1	241	.66	49	5	ND	1	65	1	3	2	1	1.72	.003	2	1	.37	8	.01	2	.02	.01	.01	134	4
~~DE-SB-9569~~	~~2~~	~~41~~	~~4~~	~~53~~	~~.1~~	~~42~~	~~8~~	~~518~~	~~2.54~~	~~3~~	~~5~~	~~ND~~	~~2~~	~~11~~	~~1~~	~~3~~	~~3~~	~~32~~	~~.40~~	~~.031~~	~~5~~	~~58~~	~~1.17~~	~~37~~	~~.18~~	~~3~~	~~1.14~~	~~.02~~	~~.10~~	~~1~~	~~2~~
STD C/AU-R	21	58	35	130	6.7	68	28	993	3.98	40	17	7	35	47	17	16	21	63	.45	.096	35	59	.89	177	.08	39	1.76	.07	.13	12	490

APPENDIX 3
Time-Cost Distribution

TIME-COST DISTRIBUTION

The claims toward which work is being applied are the Swan, Swan I, and Swan II claims. A geological mapping and reconnaissance soil and rock sampling program was conducted by Strato Geological Engineering Ltd. personnel on May 21 and 22, 1987.

A listing of personnel and distribution of costs is as follows:

Personnel

S.P. Butler, B.Sc.	Project Geologist
H. Penner	Geological Assistant

Cost Distribution

Field Crew - 2 days	$ 900.00
4WD Truck (incl. mileage, gas, oil, insurance, etc.)	210.00
Room and Board - 4 mandays	130.00
Mob-demobilization - crew & equipment, 2 days, shared cost	400.00
Geochemical analysis	130.00
Assessment Report (incl. drafting, reproduction, copying, etc.)	1,100.00
TOTAL	$2,870.00

Signed _____

Strato Geological Engineering Ltd.