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GEOCHEMICAL REPORT
ON THE
BARCLAY CLAIM GROUP

ALBERNI MINING DIVISION

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For

Clive Ashworth
 718 - 744 West Hastings Street
 Vancouver, B.C.
 V6C 1A5

and

Nevada Manhattan Mining Inc.

**GEOLOGICAL BRANCH
 ASSESSMENT REPORT
 20,824**

By

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January 11, 1991

SUMMARY

The Barclay Claim Group consists of two contiguous mineral claims totalling 30 units, situated in the Alberni Mining Division, approximately 12 kilometres southeast of Port Alberni, British Columbia.

The claims lie within the Mount McQuillan area which has an old production history for lode and placer deposits, dating back to the 1860's. Past producing mines and prospects near the Barclay Claim Group include the Debbie-Yellow property (formerly the Vancouver Island Gold Mine and Victoria showing), Regina showing, Lizard Group, Thistle Mine, Havilah Mine, Black Panther Mine, Black Lion showing, Golden Eagle showing and the B and K showing.

The claim group is underlain by Triassic Karmutsen volcanics which have been overthrust onto Tertiary intrusives and Cretaceous Nanaimo sediments.

Results from 1988 and 1990 field programs delineated one area of interest where a fault structure along the Pat Creek on the Barclay 2 claim host significant gold, silver and copper values. Rock sampling along the Pat Creek returned values up to 2900 ppb gold, 16,600 ppm copper and 14.8 ppm silver. Soil sampling returned values up to 182 ppb gold, 246 ppm copper and 2.5 ppm silver.

A Phase I exploration program at an estimated cost of \$34,000 is recommended. The program will consist of geological mapping, rock soil sampling, V.L.F.-EM survey and blasting to better define the Pat Creek fault zone.

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Map 1: Geology and Geochemistry In pocket

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1. INTRODUCTION

This report was prepared at the request of Mr. Clive Ashworth and Nevada Manhattan Mining Inc. to describe and evaluate the results of a geochemical survey carried out by Ashworth Explorations Limited from June 11-13, 1990 on the Barclay Claim Group, Port Alberni Area, B.C..

The report also describes the regional geology, past exploration activities in the area and outlines a proposed exploration program.

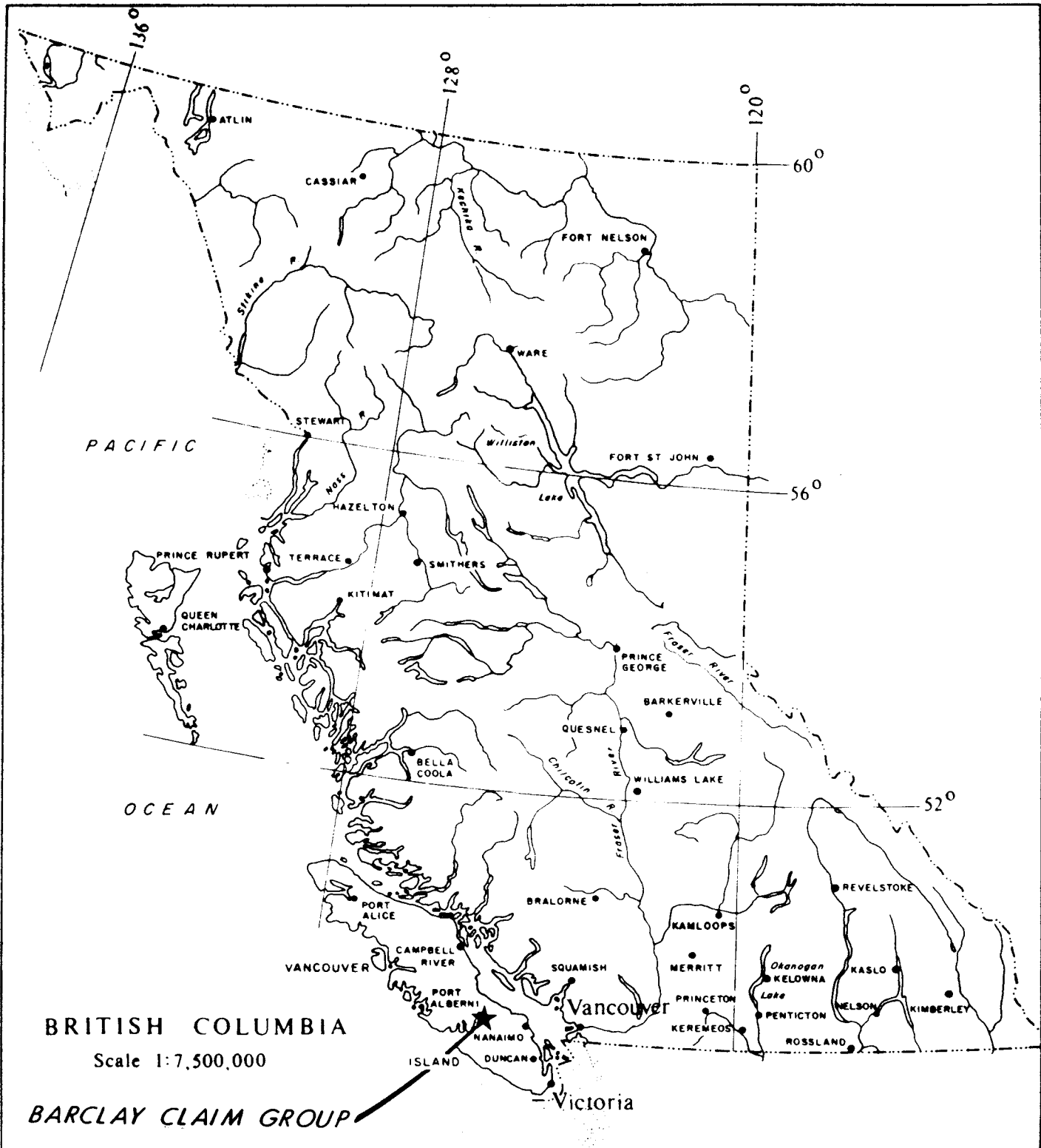
Mr. Fayz Yacoub planned and carried out all fieldwork and was the Geologist on the subject claim group.

2. LOCATION, ACCESS AND TOPOGRAPHY (Figure 1)

The Barclay property is located 12 kilometres southeast of Port Alberni on Vancouver Island.

The claims lie within the Alberni Mining Division between latitude $49^{\circ} 10'$ and longitude $124^{\circ} 45'$ on NTS Mapsheet 92F/2.

Access to the area is from Port Alberni along the Museum Creek and Franklin River road to a logging road operated by MacMillan-Bloedel Ltd. Four wheel drive is recommended to access the area. The Franklin River road goes through the north half of Barclay 2 claim providing good access to the property.



F. Jacob

BARCLAY CLAIM GROUP
ALBERNI MINING DIVISION, B.C.
GENERAL LOCATION MAP

Scale 1:7500000	Date: NOVEMBER 1988.
Drawn: J.S.	Figure 1

Ashworth Explorations Limited

The property is situated within the western coastal forest region characterized by abundant rainfall and heavy growth of large timber including fir, hemlock and cedar. A large portion of the Barclay 1 claim has been logged recently. The Barclay 2 claim is mainly second growth forest.

Patlicant Mountain is located in the middle of the Barclay 1 claim. Slopes vary from shallow to steep, with the steepest area being the ridge to the southwest of Patlicant Mountain where the slopes are measured at 40 degrees. Highest elevation is 1236 metres at the top of Patlicant Mountain to a low of 320 metres giving a total relief of 916 metres. Drainage is into China Creek to the north and Franklin River to the south, both of which flow into Alberni Inlet. The Franklin River flows westerly through the northern half of the Barclay 2 claim.

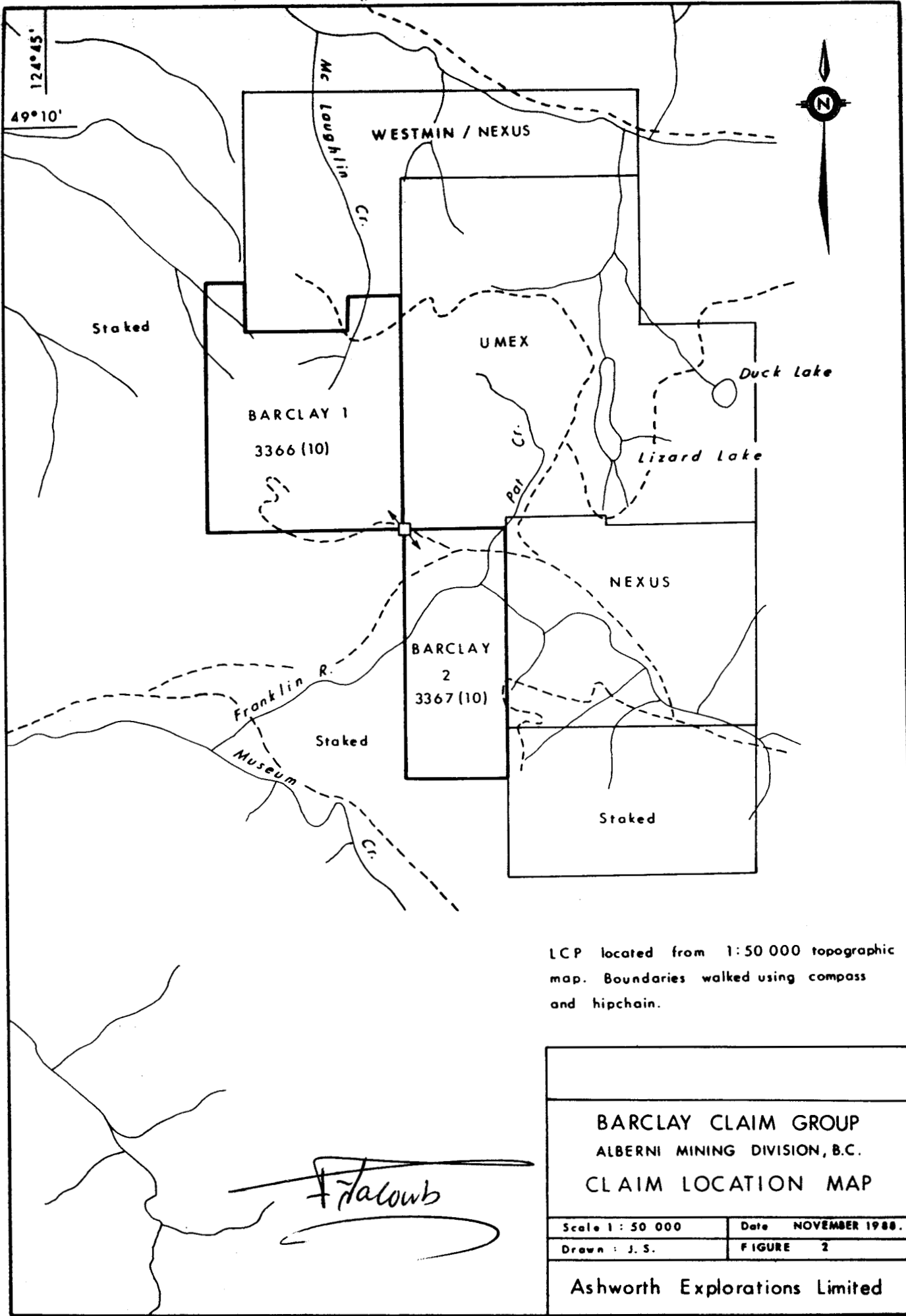
3. PROPERTY STATUS (Figure 2)

The Barclay Claim Group consists of two mineral claims in the Alberni Mining Division of British Columbia. The claims are owned by Mr. Clive Ashworth. In May 1989, Nevada Manhattan Mining, Inc. acquired a 60% interest of the Barclay Claim Group.

Pertinent claim data is given below:

<u>NAME</u>	<u>RECORD #</u>	<u>UNITS</u>	<u>RECORD DATE</u>	<u>EXPIRY DATE</u>
Barclay 1	3366	20	Oct. 15/87	Oct. 15/90 *
Barclay 2	3367	10	Oct. 15/87	Oct. 15/90 *

* Date up to which 1990 assessment work is accepted by Gold Commissioner to be applied to claims.



LCP located from 1:50 000 topographic map. Boundaries walked using compass and hipchain.

BARCLAY CLAIM GROUP ALBERNI MINING DIVISION, B.C. CLAIM LOCATION MAP	
Scale 1 : 50 000	Date NOVEMBER 1988.
Drawn : J. S.	FIGURE 2
Ashworth Explorations Limited	

The total area covered by the claims is approximately 750 hectares, or 1853.4 acres.

4. AREA HISTORY (Figure 4)

Gold in the area was first discovered in the gravels of China Creek, just north of Mt. McQuillan in 1862, followed by staking rushes and much mining activity. The Mt. McQuillan-China Creek area contains several modest past producers and numerous Au-Ag prospects, mostly vein-type, including the Black Panther mine, Havilah, Debbie Prospect, Golden Eagle, plus several less explored prospects in the area.

Debbie and Yellow Properties

The Debbie and Yellow properties occur in the vicinity of the major north-northwest trending faults. Local strong north-south faults, such as the Mineral Creek fault, which follows Mineral Creek on the north and extends south across China Creek.

On the Debbie claims, three main structurally controlled mineralized zones with vein-type gold mineralization have recently been identified: Mineral Creek Zone, 900 Zone and Linda Zone.

1) Mineral Creek Zone

The Mineral Creek structure has been traced for several kilometres in a northerly direction along Mineral Creek and Yellow Creek. On the Upper

Mineral Creek zone (Debbie property), gold with arsenopyrite is spatially related to the Mineral Creek Fault zone, which hosts rocks locally referred to as "gougy cataclasties". The zone is characterized by its rusty colour and occasional clots of green fuchsitic material and sulphides, primarily pyrite. Sulphide content may range up to 15 percent by volume but is generally low.

An exploration tunnel was used as a platform to drill ten widely-spaced holes (11,809 feet) to explore for new gold zones along the Mineral creek fault below and on strike to the north of the Mineral Creek zone. These holes also tested for veins and chert beds in the hangingwall fault block. Intersections of the Mineral Creek fault zone show strong alteration and mineralization with geochemically anomalous gold 1000 feet below the Mineral Creek Zone whereas the fault shows little alteration at depth to the north. Holes north of the Mineral Creek zone did intersect significant gold in black chert as listed below.

<u>Hole</u>	<u>Northing</u> (m)	<u>Bearing</u>	<u>Dip</u>	<u>From</u> (ft.)	<u>To</u> (ft.)	<u>Length</u> (ft.)	<u>Au</u> (oz/S.T.)
DU191	10462.7	270	-79	114.3	128.6	14.3	0.093
			includes	117.6	124.2	6.6	0.135
DU199	10462.7	270	-85	121.8	128.4	6.6	1.432

2) 900 Zone

The 900 Zone is located west of Mineral Creek. Native gold, pyrite, magnetite and trace arsenopyrite occur in quartz veinlets in chert and red jasper host rocks, and also in narrow carbonate veinlets that crosscut quartz veinlets.

Diamond-drill hole 50-87 in the 900 zone intersected 13.5 metres grading 39 grams per tonne gold, that includes 7.7 metres grading 61.8 grams per tonne gold (Northern Miner, December 8, 1987).

Nine holes tested for extensions and repetitions of gold mineralization near the previously defined 900 zone. Drilling four holes on one section has located a new zone of gold and pyrite. This new zone is represented by the following intersections.

<u>Hole</u>	<u>Bearing</u>	<u>Dip</u> (ft.)	<u>From</u> (ft.)	<u>To</u> (ft.)	<u>Length</u> (ft.)	<u>Au</u> (oz/s.t.)
DN 201	090	-48	84.3	87.3	3.0	0.058
			96.8	100.1	3.3	0.130
DN203	090	-60 includes	50.8	72.8	22.0	0.068
			50.8	54.1	3.3	0.166
DN204	090	-68	50.5	52.1	1.6	0.064
			55.4	58.7	3.3	0.056

Five holes which tested the south projection of the 900 Zone intersected anomalous gold but did not add to existing mineral inventory blocks.

3) Linda Zone

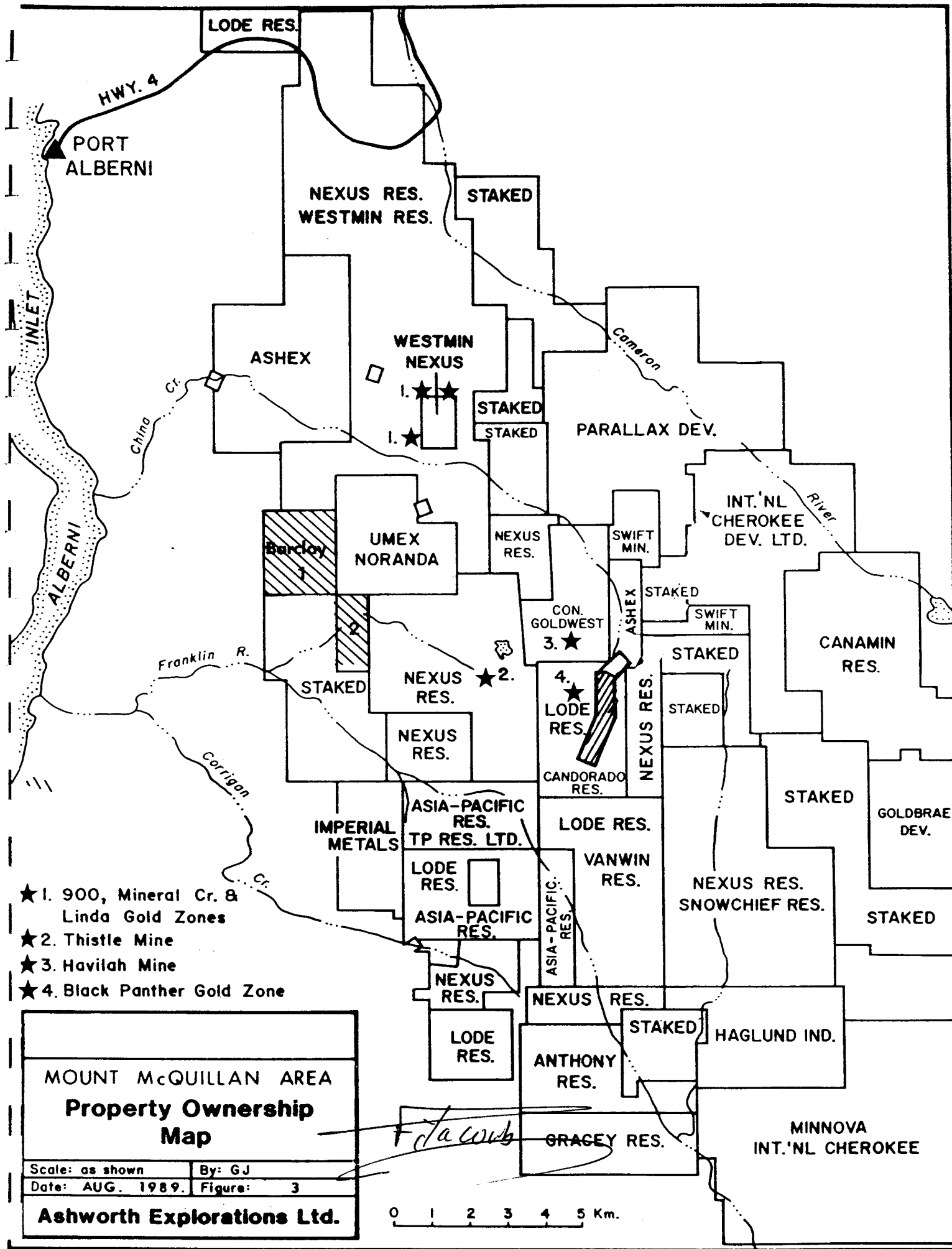
The Linda Zone is located approximately 800 metres east of the Mineral Creek Zone. It consists of a series of quartz veins which crosscut the Mineral Creek fault and are truncated in turn by younger shearing.

Twelve holes (2,784 feet) tested the Linda vein zone. The most significant intersection was 2.691 oz/s.t. Au over 2.3 feet of quartz vein structure.

Elsewhere on the Debbie property, massive sulphide targets have been identified, most notably at the Regina workings, and Rogers Creek Zone.

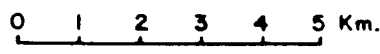
Regina Zone

The Regina Zone is located south of China Creek on the east side of the southern extension of the Mineral Creek fault. It consists of lenses and veinlets of quartz with pyrite, chalcopyrite and minor galena, carrying gold and silver values. The mineralized zones are in shears in silicified and pyritized basalt. The basalt underlies a rhyolite unit that may have been a felsic dome. A local jasper (chert) unit is present. Lead isotope data suggest that the mineralization is pre-Jurassic and it may be of Sicker age.



- ★ 1. 900, Mineral Cr. & Linda Gold Zones
- ★ 2. Thistle Mine
- ★ 3. Havilah Mine
- ★ 4. Black Panther Gold Zone

MOUNT McQUILLAN AREA Property Ownership Map	
Scale: as shown	By: GJ
Date: AUG. 1989.	Figure: 3
Ashworth Explorations Ltd.	



Rogers Creek Zone

The Rogers Creek Zone, located on the north side of McLaughlin Ridge, consists of thin lenses and layers of stratabound sphalerite and galena mineralization in a chlorite+sericite schist succession that is contained within a sequence of mafic volcanic rocks.

Regionally other examples of volcanogenic massive sulphide deposits in similar settings include the Lynx, Myra and H-W deposits at Buttle Lake; the Twin J and Lara on Mount Sicker; and the Thistle near Port Alberni. These various mineral occurrences and the old mines are described by Stevenson (1945) in his report on the China Creek area.

5. PREVIOUS WORK

A program of regional geological mapping, prospecting, silt and soil sampling was performed by Gunnex from 1964 to 1966, the area of the Barclay Claim Group was included in this program. Map 1 shows the geology of the area as mapped by Lannela (Gunnex Limited, 1964-1966).

In 1985, Ashworth Explorations Limited performed a geochemical, rock and soil sampling program on the Pat 1 (now the Barclay 2) and the Pat 3 (now the Barclay 1) claims. Soil and silt copper anomalies were located in the northern one-third of the Barclay 2 claim.

In 1986, prospecting and contour soil sampling was done by Ashworth Explorations Limited. Significant results were obtained from rock samples collected along Pat Creek in the northern corner of the Barclay 2 claim. Select rock samples returned up to 2900 ppb (.09 oz/ton) gold, 16,600 ppm (1.7%) copper and 14.8 ppm silver.

In 1988, a prospecting and geochemical work program by Ashworth Explorations Limited has outlined a fault zone on the Barclay 2 claim which hosts significant gold, copper, and silver values.

6. REGIONAL GEOLOGY (Figure 4)

The Barclay Claim Group is located just west of the Cowichan-Horne Lake Uplift, a geologically and economically favourable area on Vancouver Island. This uplift is some 125 kilometres long and 15-22 kilometres wide and it contains the past producers of the Mt. McQuillan-China Creek mining camps. The area is underlain by three rock units: the Triassic Vancouver Group, the Jurassic Bonanza Group and Tertiary intrusions.

The regional stratigraphy has been studied by the GSC (Muller, 1977, 1980 and updating of the Sicker Group by Massey et al, 1988).

The pertinent stratigraphy related to Mt. McQuillan camp is summarized as follows:

<u>Era</u>	<u>Period or Epoch</u>	<u>Name</u>	<u>Lithology</u>
CENOZOIC	Early to Middle Tertiary	Catfish Intrusions	Sills, dykes and small plutons of feldspar (Hornblende-plagioclase) porphyry. Associated with mineralized veins.
MESOZOIC	Upper Cretaceous	Nanaimo Group	Conglomerate, sandstone, shale and coal.
	Early and Middle Jurassic	Island Intrusions	Granitoid batholiths and stocks, largely dioritic compositions.
	Early Jurassic	Bonanza Group	Lava, tuff and breccia of basaltic and rhyolitic composition.
	Late to Middle Triassic	Vancouver Group	Limestone, argillites, greywackes and Karmutsen - basalts, pillow lavas and tuffs.
	Middle Penn. to early Permian	Sicker Group	<u>St. Marys Lake fm</u> - volcanic sandstone and conglomerate, argillite. <u>Mount Mark fm</u> - crinoidal limestone, chert, argillite.

<u>Era</u>	<u>Period or Epoch</u>	<u>Name</u>	<u>Lithology</u>
PALEOZOIC	Devonian		<u>Cameron River fm</u> - ribbon chert, argillite, limestone, sandstone.
			<u>McLaughlin Ridge fm</u> - tuffite, feldspar - crystal tuff, breccia, dacite
			<u>Nitinat fm</u> - meta basaltic lavas, agglomerate, massive tuffite.
			<u>Duck Lake fm</u> - pillowed and massive basaltic flows, breccias, cherty tuff, massive dacite and rhyolite. Largely occupies the Apex Group property area.

Structure and Igneous Intrusives

The Sicker Group rocks are buried under the Mesozoic cover except where they are now exposed in major uplift areas, such as the Cowichan-Horne Lake Uplift.

The structure of the Sicker Group appears to be the result of a complex structural history including normal and transcurrent faulting and folding. The rocks are steeply folded and are in places highly sheared and metamorphosed to chloritic schists.

Sicker rocks in the vicinity of Mt. McQuillan were affected by several intrusive events. Triassic diabasic and gabbroic sills and dykes were probably intruded in conjunction with extrusion of Karmutsen basalt followed by early Jurassic Island Intrusions (McQuillan stock) and the early Tertiary sills and dykes composed of light-coloured hornblende-plagioclase porphyry (Catfish Intrusions).

7. 1990 PROGRAM

7.1 Scope and Purpose

During June of 1990 the writer spent 3 days on the Barclay Claim Group, prospecting, rock and soil sampling. The purpose of this program was:

<u>Era</u>	<u>Period or Epoch</u>	<u>Name</u>	<u>Lithology</u>
	Devonian		<u>Cameron River fm</u> - ribbon chert, argillite, limestone, sandstone.
PALEOZOIC			<u>McLaughlin Ridge fm</u> - tuffite, feldspar - crystal tuff, breccia, dacite
			<u>Nitinat fm</u> - meta basaltic lavas, agglomerate, massive tuffite.
			<u>Duck Lake fm</u> - pillowed and massive basaltic flows, breccias, cherty tuff, massive dacite and rhyolite. Largely occupies the Apex Group property area.

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











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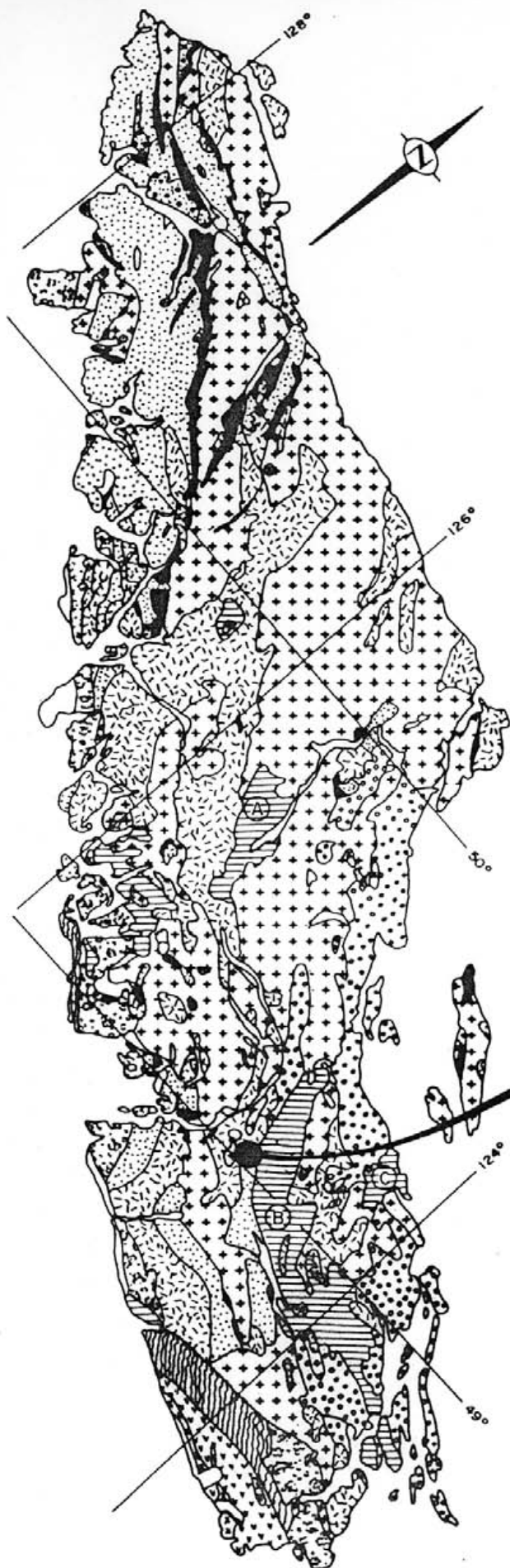
7. 1990 PROGRAM

7.1 Scope and Purpose

During June of 1990 the writer spent 3 days on the Barclay Claim Group, prospecting, rock and soil sampling. The purpose of this program was:

LEGEND

	Carmanah Group	Middle Tertiary
	Catface Intrusions	Early to Middle Tertiary
	Metchosin Volcanics	Early Tertiary
	Nanaimo Group	Late Cretaceous
	Queen Charlotte Group Kyuquot Group	Late Jurassic to Early Cretaceous
	Leech River Formation Pacific Rim Complex	
	Island Intrusions	Early and (?) Middle Jurassic
	Bonanza Group	Early Jurassic
	Vancouver Group Parson Bay Formation Quatsino Formation	Early and (?) Middle Triassic
	Karmutsen Formation	
	Sicker Group	Paleozoic
	Metamorphic Complexes	Jurassic and Older
(A)	Buttle Lake Uplift	
(B)	Cowichan-Horne Lake Uplift	
(C)	Nanoose Uplift	



PROPERTY

F. Jacob

Date: Jan 1991

FIGURE 4

GEOLOGICAL SKETCH MAP
OF
VANCOUVER ISLAND, B. C.
AFTER MULLER, J.E., 1980

20 0 20 40 60 80 100 Km

Ashworth Explorations Limited

- a) to assess the potential of the property for gold-bearing mineral deposits,
- b) to determine an exploration approach for the property.

7.2 Methods and Procedures

Contour soil lines were run on the Barclay 2 claim. Samples were collected at 50 metre intervals. The total number of soil samples taken was 20. All soil samples were taken with a grub hoe from the B horizon (approximate depth of 25 cm), placed into marked kraft paper bags, then sent to Vangeochem Lab Ltd. and analyzed for multi-element ICP.

A total of 6 rock samples were collected along the Pat Creek fault zone. All samples have been analyzed for gold by fire assay and multi-element ICP. See Appendix B for analytical reports and Appendix C for analytical techniques.

8. RESULTS

8.1 Property Geology

The property geology as mapped by Laanela (1965) is shown on Map 1. The area was mapped at a 1:50,000 scale in 1986 by Sutherland-Brown et al (GSC Open File 1271). Correlation between maps is reasonably good.

The property is underlain by three units: Tertiary intrusions, Cretaceous Nanaimo Group sediments, Triassic Karmutsen basaltic volcanics.

1. Tertiary Intrusions (Units 3)

These intrusions underlie 70% of the Barclay 1 and the western half of the Barclay 2. They are described as a quartz diorite and quartz diorite porphyry with hornblende and plagioclase phenocrysts.

Sutherland-Brown et al (1986) has mapped the intrusives on the Barclay 2 as granodiorite of Jurassic age.

2. Nanaimo Group Sediments (unit 2)

Cretaceous sediments of the Nanaimo Group occur mainly as "islands" on the Barclay 1 and extend into the northwest corner of the Barclay 2. In the Patlicant Mountain area they are dark grey-black siltstone, sandstone, carbonaceous and fossiliferous shale, and minor coal.

3. Karmutsen Formation Volcanics (Unit 1)

These are found in the eastern half of the Barclay 2 claim. Generally they occur as dark green-purplish theolitic pillow basalts.

8.2 Mineralization

During the 1990 work program the writer observed that mineralization and alteration on the property was related to a fault zone striking northeast located at the northeast corner of the Barclay 2 claim. Limonite, hematite and minor pyrite are the most common minerals present within the area of the fault zone which follows Pat Creek. The country rock is dark green to black, fine-grained volcanic basalt. Moderate to intense hematitic and limonitic alteration along the fault zone and it often masks all primary textures within the host rock.

The north-south trending thrust fault follows the east boundary of the Barclay 1 claim is the most prominent structural feature on the property and it transects the middle of the Barclay 2 claim. This fault has been interpreted as a thrust fault in which the Karmutsen volcanic rocks have been overthrust upon the younger sediments and intrusives.

8.3 Rock Geochemistry (Map 1)

The 1990 program included soil and rock sampling. A total of 6 rock samples were collected and graded as chip, grab and float. The following table documents the range of rock sample values collected from the property.

<u>Element</u>	<u>Range</u>
Au	nd - 10 ppb
Ag	<0.1 - 13.8 ppm
Cu	17 - 382 ppm
Pb	23 - 48 ppm
Zn	33 - 97 ppm

No rock samples returned significant values.

8.4 Soil Geochemistry

The following table documents the range of values in soils.

<u>Element</u>	<u>Range</u>
Ag	<0.1 - .4 ppm
Cu	59 - 148 ppm
Pb	9 - 35 ppm
Zn	36 - 89 ppm

No soil samples returned significant values.

9. CONCLUSIONS

Although assay results from the 1990 work program did not provide any significant values, the writer concludes that the Barclay Claim Group has the potential for hosting a precious metal deposit for the following reasons.

1. The claims are situated in an area that is well known for hosting a structurally controlled precious metal deposit within the Mt. McQuillan and China Creek Mining camps including the Debbie-Yellow property, Vancouver Island Gold Mine, Victoria showing, Regina showing and the Lizard group.
2. Previous work has located anomalies up to 2900 ppb gold, 16,600 ppm copper and 14.8 ppm silver along fault structure.
3. A large portion of the property has yet to be covered and good potential exists for locating significant mineralization on the remainder of the claim group.

For these reasons further exploration work is warranted.

10. RECOMMENDATIONS

1. Follow-up work of soil sampling, V.L.F.-EM survey, prospecting and geological mapping should be performed at the northern half of the Barclay 2 claim.

2. Lay out 15 kilometres of grid lines over the area of Pat Creek. Line spacing should be 50 metres with 25 metre station spacing.
3. Soil sampling should be carried out over the grid area at 50 metre station spacing.
4. V.L.F.-EM survey should be run over the grid area to better define the structure of Pat Creek.
5. Hand trenching, stripping and blasting to better expose the showing along Pat Creek.
6. Detailed mapping and rock sampling over the area of the grid.
7. Prospect and rock sample the rest of the claims.

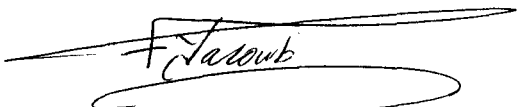
11. PROPOSED BUDGET: Phase I

**Geological Mapping, Prospecting,
Geochemical Soil Sampling and V.L.F.-EM Survey**

(Project geologist, prospector-blaster,
3 geotechnicians; 7 field days)

Project Preparation		\$ 1,400
Mob/Demob (includes transportation, freight and wages)		2,360
Field Crew		8,050
Field Costs (includes: food, communcations, supplies and 4x4 truck)		5,385
Lab Analysis:		
350 silt and soil samples @ \$15/sample	\$ 5,600	
50 rock samples @ \$18/sample	<u>900</u>	6,500
Statistical Analysis		1,400
Supervision and Report (includes: supervision, report writing, map plotting, drafting, work processing, copying and binding)		4,500
Sub-total		<u>\$ 29,595</u>
Administration @ 15%		<u>4,439</u>
TOTAL		<u><u>34,034</u></u>
	Say	\$ <u><u>34,000</u></u>

Respectfully submitted,



Fayz Yacoub, B.Sc., F.G.A.C.

January 1991

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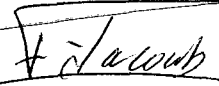
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CERTIFICATE

I, FAYZ F. YACOUB, of 13031 - 64th Avenue, Surrey, British Columbia, V3W 1X8 do hereby declare:

1. I am a graduate in Geology and Chemistry from Assuit University, Egypt (B.Sc., 1967), and Mining Exploration Geology of the International Institute for Aerial Survey and Earth Sciences (I.T.C.), Holland (Diploma 1978).
2. I am a fellow in good standing with the Geological Association of Canada.
3. I have actively pursued my career as a geologist for the past seventeen years.
4. The information, opinions, and recommendations in this report are based on fieldwork carried out by myself, and on published and unpublished literature. I was present on the subject property on June 11-13, 1990.
5. I have no interest, direct or indirect, in the subject claims.
6. I consent to the use of this report in a Prospectus of Statement of material Facts for the purpose of private or public financing.

ASHWORTH EXPLORATIONS LIMITED


Fayz Yacoub, B.Sc., F.G.A.C.

Dated at Vancouver, January 11, 1991.

ITEMIZED COST STATEMENTTHE BARCLAY CLAIM GROUP

Job Preparation:		\$	200.00
Mob/Demob: (includes transportation, freight and wages)			740.00
<u>Field Crew:</u>			
Geologist \$350/day x 2 days			700.00
<u>Field Costs:</u>			
Food and Accommodation			
@ \$100/day x 2 days	200.00		
Communications x \$25/day x 2 days	50.00		
4X4 Truck \$130/day x 2 days	<u>260.00</u>		
			510.00
<u>Lab Analysis:</u>			
6 rock samples @ \$11.25/sample	102.00		
2 soil samples	<u>150.00</u>		
(Aqua Regia/AA for Au & Multi-element ICP)			252.00
<u>Report:</u>			
Data Compilation and Report Writing	875.00		
Drafting and Maps	100.00		
Word Processing, Copying, Binding	<u>300.00</u>		
			1,275.00
Sub-total			<u>3,827.00</u>
Administration and Supervision @ 15%			574.00
TOTAL		\$	<u>4,401.00</u>

APPENDIX A

ROCK SAMPLE DESCRIPTIONS

THE BARCLAY CLAIM GROUP

Rock Sample Descriptions

<u>Sample No.</u>	<u>Description</u>	<u>Width (cm)</u>
BAR-90 FR-1	Grab; dark green to black fine-grained volcanic basalt, moderate hematitic, limonitic alteration, rusty weathered surface, 1-2% fine-grained pyrite dissemination.	---
BAR-90 FR-2	Chip; similar to FR-1, altered dark green volcanic basalt hosting barren quarta veinlets .5 to 1 centimetre wide.	60
BAR-90 FR-3	Sheared, altered volcanic basalt, 1-2% disseminated pyrite, 5% powderly hematite, minor limonite. Chip sample over 1 metre.	100
BAR-90 FR-5A	Chip; dark green to black, fine-grained volcanic basalt containing 1-2% pyrite, dark brown, rusty on surface.	100
BAR-90 FR-5B	Select sample taken from a rusty brecciated fine-grained basalt, moderate hematitic alteration, 1-2% disseminated pyrite.	150
BAR-90 FR-6	Float; brecciated basalt, minor pyrite, strong hematite and limonite.	---

APPENDIX B
ANALYTICAL REPORTS

GEOCHEMICAL ANALYTICAL REPORT
=====

CLIENT: ASHWORTH EXPLORATION LTD.
ADDRESS: 718 - 744 W. Hastings St.
: Vancouver, BC
: V6C 1A5

DATE: NOV 07 1990

REPORT#: 900732 GA
JOB#: 900732

PROJECT#: BARCLAY #320
SAMPLES ARRIVED: NOV 06 1990
REPORT COMPLETED: NOV 07 1990
ANALYSED FOR: Au (FA/AAS) ICP

INVOICE#: 900732 NA
TOTAL SAMPLES: 6
SAMPLE TYPE: 6 ROCK
REJECTS: SAVED

SAMPLES FROM: MR. FAYZ YACOUB
COPY SENT TO: ASHWORTH EXPLORATION LTD.

PREPARED FOR: MR. FAYZ YACOUB

ANALYSED BY: VGC Staff

SIGNED: _____

Fayz Yacoub

GENERAL REMARK: None

REPORT NUMBER: 900732 GA

JOB NUMBER: 900732

ASHWORTH EXPLORATION LTD.

PAGE 1 OF 1

SAMPLE #	Au
	ppb
BAR-90 FR-1	nd
BAR-90 FR-2	nd
BAR-90 FR-3	10
BAR-90 FR-5A	10
BAR-90 FR-5B	10
BAR-90 FR-6	10

DETECTION LIMIT
nd = none detected

5
-- = not analysed

is = insufficient sample

1630 Pandora Street, Vancouver, B.C. V5L 1L6
 Ph: (604) 251-5656 Fax: (604) 254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO₃ to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water.
 This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST: *Randy*

REPORT #: 900732 PA	ASHWORTH EXPLORATION LTD.		PROJECT: BARCLAY #320		DATE IN: NOV 6 1990		DATE OUT: NOV 19 1990		ATTENTION: MR. FAYZ YACOB		PAGE 1 OF 1														
Sample Name	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sn ppm	Sr ppm	U ppm	W ppm	Zn ppm
BAR-90 FR-1	<0.1	1.42	<3	37	<3	4.31	2.4	35	75	80	5.83	0.26	1.72	1181	7	0.08	59	0.03	23	<2	<2	75	<5	<3	56
BAR-90 FR-2	<0.1	0.46	<3	13	<3	>10.00	3.9	34	52	17	5.89	0.27	4.46	2021	11	0.08	55	<0.01	48	10	<2	134	<5	<3	64
BAR-90 FR-3	<0.1	3.40	<3	47	<3	1.34	3.7	41	193	148	7.68	0.20	2.78	998	19	0.15	83	0.03	37	4	<2	10	<5	<3	97
BAR-90 FR-5A	<0.1	3.82	<3	81	<3	0.50	3.6	38	151	165	>10.00	0.18	2.51	717	46	0.15	52	0.03	37	2	<2	13	<5	<3	86
BAR-90 FR-5B	13.8	0.66	<3	30	<3	0.06	1.0	46	61	382	3.31	0.05	0.07	837	4	0.04	31	0.03	23	21	<2	3	<5	<3	33
BAR-90 FR-6	0.1	3.55	<3	303	<3	1.65	2.6	48	95	325	6.39	0.21	2.47	1189	11	0.16	54	0.03	28	<2	<2	23	<5	<3	79
Minimum Detection	0.1	0.01	3	1	3	0.01	0.1	1	1	1	0.01	0.01	0.01	1	1	0.01	1	0.01	2	2	2	1	5	3	1
Maximum Detection	50.0	10.00	2000	1000	1000	10.00	1000.0	20000	1000	20000	10.00	10.00	10.00	20000	1000	10.00	20000	10.00	20000	2000	1000	10000	100	1000	20000

< - Less Than Minimum > - Greater Than Maximum is - Insufficient Sample ns - No Sample ANOMALOUS RESULTS - Further Analyses By Alternate Methods Suggested.

PRINTED IN CANADA



MAIN OFFICE
1630 PANDORA STREET
VANCOUVER, B.C.
V5L 1L6
TEL (604) 251-5656
FAX (604) 254-5717

BRANCH OFFICES
BATHURST, N.B.
RENO, NEVADA, U.S.A

GEOCHEMICAL ANALYTICAL REPORT
=====

CLIENT: ASHWORTH EXPLORATION LTD.
ADDRESS: 718 - 744 W. Hastings St.
: Vancouver, BC
: V6C 1A5

DATE: NOV 19 1990

REPORT#: 900733 PA
JOB#: 900733


PROJECT#: BARCLAY #320
SAMPLES ARRIVED: NOV 06 1990
REPORT COMPLETED: NOV 19 1990
ANALYSED FOR: ICP

INVOICE#: 900733 NA
TOTAL SAMPLES: 20
SAMPLE TYPE: 20 SOIL & SILT
REJECTS: DISCARDED

SAMPLES FROM: ASHWORTH EXPLORATION LTD.
COPY SENT TO: MR. FAYZ YACOUB

PREPARED FOR: MR. FAYZ YACOUB

ANALYSED BY: VGC Staff

SIGNED: 

GENERAL REMARK: None

1630 Pandora Street, Vancouver, B.C. V5L 1L6
 Ph: (604)251-5656 Fax: (604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 gram sample is digested with 5 ml of 3:1:2 HCl to HNO₃ to H₂O at 95 °C for 90 minutes and is diluted to 10 ml with water.
 This leach is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

ANALYST: *[Signature]*

REPORT #: 900733 PA ASHWORTH EXPLORATION LTD. PROJECT: BARCLAY #320 DATE IN: NOV 6 1990 DATE OUT: OCT 25 1990 ATTENTION: MR. FAYZ YACQUE PAGE 1 OF 1

Sample Name	Ag	Al	As	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sn	Sr	U	W	Zn
	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
BAR-90 S-1	0.3	3.58	<3	37	<3	0.72	3.8	41	66	148	5.51	0.14	0.91	662	6	0.10	40	0.02	35	<2	<2	51	<5	<3	78
BAR-90 S-2	0.2	2.61	<3	25	<3	0.85	3.0	24	55	83	5.04	0.13	0.55	414	7	0.10	24	0.05	26	<2	<2	83	<5	<3	52
BAR-90 S-3	<0.1	2.52	<3	29	<3	0.64	2.0	24	60	84	4.71	0.11	0.62	449	7	0.09	26	0.03	25	<2	<2	51	<5	<3	47
BAR-90 S-4	0.2	4.26	<3	43	<3	0.56	4.5	26	77	125	6.53	0.13	0.72	412	9	0.10	34	0.04	19	<2	<2	42	<5	<3	81
BAR-90 S-5	0.1	3.21	<3	41	<3	0.55	1.8	26	64	94	5.04	0.11	0.63	1603	8	0.09	29	0.04	16	<2	<2	40	<5	<3	63
BAR-90 S-6	0.2	3.85	<3	70	<3	0.91	2.5	36	77	113	5.50	0.14	1.06	1763	9	0.10	47	0.05	20	<2	<2	47	<5	<3	89
BAR-90 S-7	0.2	3.20	<3	58	<3	0.88	2.0	36	63	117	5.19	0.14	0.67	2080	9	0.10	33	0.04	25	<2	<2	49	<5	<3	82
BAR-90 S-8	0.3	2.61	<3	39	<3	0.77	1.5	22	57	71	5.37	0.13	0.57	603	7	0.09	20	0.03	26	<2	<2	45	<5	<3	57
BAR-90 S-9	0.3	3.50	<3	41	<3	0.46	2.3	23	75	103	5.13	0.10	0.72	919	9	0.08	28	0.03	25	<2	<2	38	<5	<3	61
BAR-90 S-10	0.2	2.27	<3	24	<3	0.56	1.6	20	57	59	4.77	0.10	0.59	711	6	0.08	19	0.06	19	<2	<2	40	<5	<3	35
BAR-90 S-11	0.4	3.29	<3	31	<3	0.33	1.6	19	70	85	4.85	0.08	0.71	319	9	0.07	23	0.02	16	<2	<2	30	<5	<3	44
BAR-90 S-12	0.3	3.60	<3	32	<3	0.34	2.6	22	83	94	7.48	0.11	0.58	320	7	0.09	23	<0.01	18	<2	<2	30	<5	<3	59
BAR-90 S-13	0.3	4.35	<3	33	<3	0.37	2.7	24	84	101	6.77	0.10	0.74	473	9	0.09	28	0.03	19	<2	<2	28	<5	<3	67
BAR-90 S-14	0.2	2.60	<3	26	<3	0.42	1.9	16	58	60	5.15	0.09	0.55	330	6	0.07	15	0.03	19	<2	<2	36	<5	<3	44
BAR-90 S-15	0.2	3.20	<3	35	<3	0.39	1.9	19	60	79	6.03	0.10	0.66	291	7	0.08	19	0.04	13	<2	<2	31	<5	<3	45
BAR-90 S-16	0.2	5.95	<3	43	<3	0.45	2.8	24	76	129	6.87	0.13	0.73	556	10	0.09	24	0.16	9	<2	<2	22	<5	<3	59
BAR-90 S-17	0.3	4.59	<3	42	<3	0.36	2.3	23	80	124	5.93	0.09	0.93	390	10	0.08	27	0.03	12	<2	<2	32	<5	<3	69
BAR-90 S-18	0.3	4.80	<3	40	<3	0.38	1.9	24	85	89	6.53	0.10	0.88	364	10	0.09	30	0.04	13	<2	<2	34	<5	<3	70
BAR-90 S-19	0.3	3.82	<3	34	<3	0.39	2.5	19	65	99	4.85	0.08	0.61	353	8	0.07	21	0.05	12	<2	<2	36	<5	<3	60
BAR-90 S-20	0.1	2.47	<3	30	<3	0.39	1.8	16	53	64	4.79	0.08	0.54	286	8	0.07	17	0.02	18	<2	<2	34	<5	<3	36

Minimum Detection 0.1 0.01 3 1 3 0.01 0.1 1 1 1 0.01 0.01 0.01 1 1 0.01 1 0.01 2 2 2 1 5 3 1
 Maximum Detection 50.0 10.00 2000 1000 1000 10.00 1000.0 20000 1000 20000 10.00 10.00 10.00 20000 1000 10.00 20000 10.00 20000 2000 2000 1000 10000 100 1000 20000
 < - Less Than Minimum > - Greater Than Maximum is - Insufficient Sample ns - No Sample ANOMALOUS RESULTS - Further Analyses by Alternate Methods Suggested.

APPENDIX C
ANALYTICAL TECHNIQUES

October 19, 1990

TO: Mr. Fayz Yacoub
ASHWORTH EXPLORATION LTD.
718 - 744 W. Hastings St.
Vancouver, BC V6C 1A5

FROM: VANGEOCHEM LAB LIMITED
1630 Pandora Street
Vancouver, BC V5L 1L6

SUBJECT: Analytical procedure used to determine gold by fire assay method and detect by atomic absorption spectrophotometry in geological samples.

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" x 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

2. Method of Extraction

- (a) 20.0 to 30.0 grams of the pulp samples were used. Samples were weighed out using a top-loading balance and deposited into individual fusion pots.
- (b) A flux of litharge, soda ash, silica, borax, and, either flour or potassium nitrite is added. The samples are then fused at 1900 degrees Farenhiet to form a lead "button".

-2-

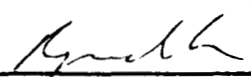
- (c) The gold is extracted by cupellation and parted with diluted nitric acid.
- (d) The gold beads are retained for subsequent measurement.

3. Method of Detection

- (a) The gold beads are dissolved by boiling with concentrated aqua regia solution in hot water bath.
- (b) The detection of gold was performed with a Techtron model AA5 Atomic Absorption Spectrophotometer with a gold hollow cathode lamp. The results were read out on a strip chart recorder. The gold values, in parts per billion, were calculated by comparing them with a set of known gold standards.

4. Analysts

The analyses were supervised or determined by Mr. Raymond Chan or Mr. Conway Chun and his laboratory staff.



Raymond Chan
VANGEOCHEM LAB LIMITED

October 19, 1990

TO: Mr. Fayz Yacoub
ASHWORTH EXPLORATION LTD.
718 - 744 W. Hastings St.
Vancouver, BC V6C 1A5

FROM: VANGEOCHEM LAB LIMITED
1630 Pandora Street
Vancouver, BC V5L 1L6

SUBJECT: Analytical procedure used to determine hot acid soluble for 25 element scan by Inductively Coupled Plasma Spectrophotometry in geochemical silt and soil samples.

1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" X 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

2. Method of Digestion

- (a) 0.50 gram portions of the minus 80-mesh samples were used. Samples were weighed out using an electronic balance.
- (b) Samples were digested with a 5 ml solution of HCl:HNO₃:H₂O in the ratio of 3:1:2 in a 95 degree Celsius water bath for 90 minutes.
- (c) The digested samples are then removed from the bath and bulked up to 10 ml total volume with demineralized water and thoroughly mixed.

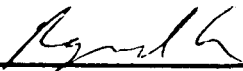
-2-

3. Method of Analyses

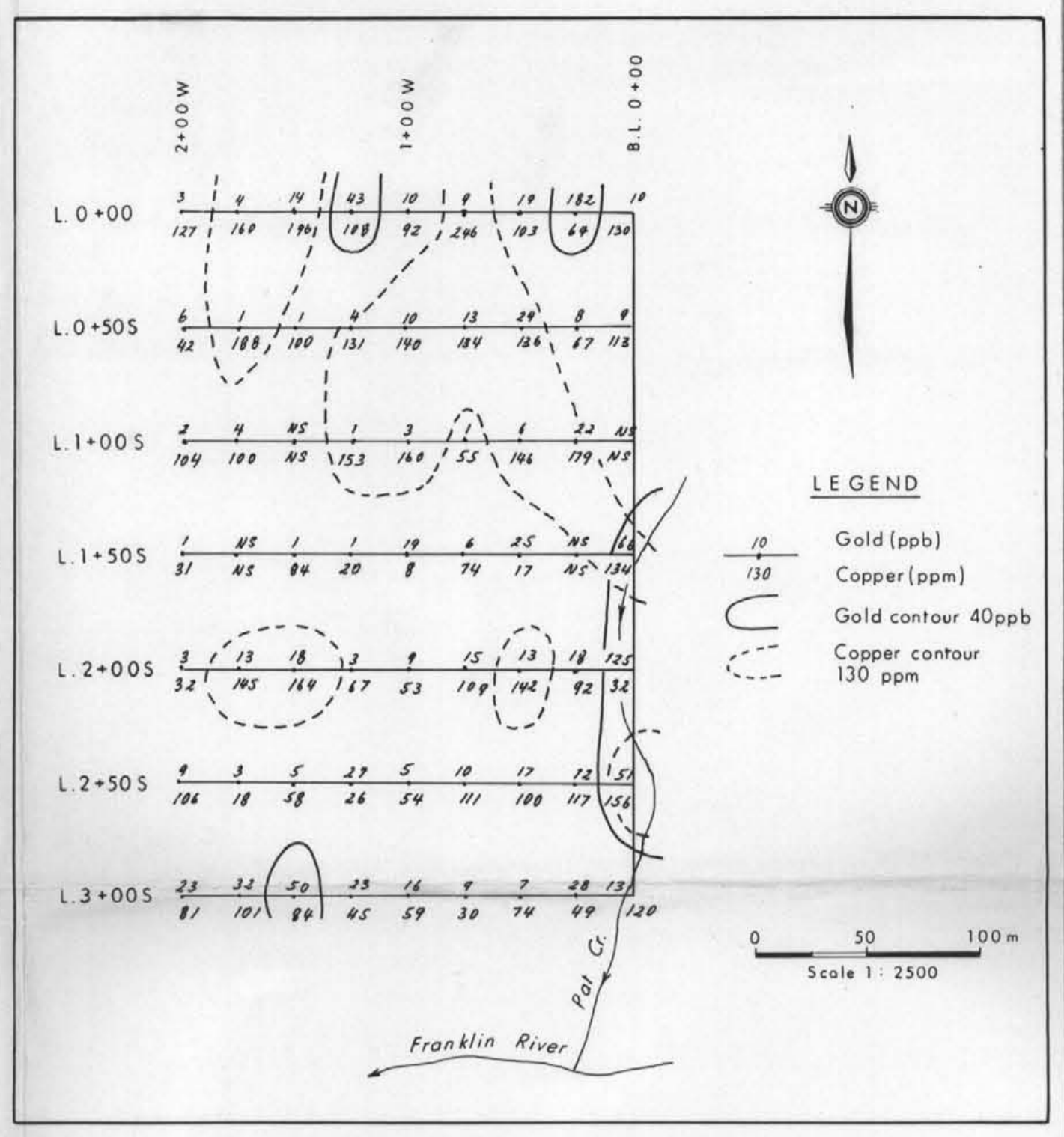
The ICP analyses elements were determined by using a Jarrell-Ash ICAP model 9000 directly reading the spectrophotometric emissions. All major matrix and trace elements are interelement corrected. All data are subsequently stored onto disketts.

4. Analysts

The analyses were supervised or determined by Mr. Conway Chun or Mr. Raymond Chan and his laboratory staff.



Raymond Chan
VANGEOCHEM LAB LIMITED



SOIL GRID INSET MAP

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**
20,824

- LEGEND**
- GEOLOGY**
- 1 Triassic Kamutsen Formation: basaltic lava, pillow lava, tuff.
 - 2 Cretaceous Nanaimo Group: shale, siltstone, sandstone.
 - 3 Tertiary intrusions: quartzdiorite - granodiorite porphyry.
- Geology by H. Laanela, Gunnex Ltd., 1965.
- SYMBOLS**
- ▲ 1990 rock sample location, Ag(ppm) / Au(ppb) / Cu(ppm)
 - 1990 soil sample location, Ag(ppm) / Cu(ppm)
 - ▲ 1988 rock sample location, Ag(ppm) / Au(ppb) / Cu(ppm)
BAR 88-VR 1 - 0-2 / 1180 / 119
 - △ Rock samples - prior to 1988, Ag(ppm) / Au(ppb) / Cu(ppm)
PT 86-19 - 14-8 / 880 / 16600
 - Soil samples - prior to 1988, Ag(ppm) / Au(ppb) / Cu(ppm)
- Geological contact; assumed, definite
 ~~~~~ Fault  
 --- Claim boundary  
 ■ Legal Claim Post  
 --- River, creek  
 --- Road  
 --- Topographic contour (Interval 200m)

0 100 200 300 400 500m

NTS 92 F/2

BARCLAY CLAIM GROUP  
ALBERTA: M.D.B.C.

**GEOLOGY AND GEOCHEMISTRY**

Scale: 1:5,000 By: V.W. Drawn: J.S.  
 Date: DECEMBER 1990. Map No.: 1

Ashworth Explorations Limited

*F. Jalow*