

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

MQ Report #109  
Ref: RM2003

**14,362**

COQUIHALLA PROJECT

GEOCHEMICAL SOIL SAMPLING

N.T.S. 92 H/11E

Similkameen Mining Division

Latitude 49°32'N, Longitude 121°03'W

UTM 5485000mN 643000mE

by

A.W. Gourlay

of

**FILMED**

*Owner*

MineQuest Exploration Associates Ltd.

*Operator*

for

Clifton Resources Limited

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Date Recorded</u>
Aura II	1605	16 12	Nov. 30, 1981

January, 1986

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1.0

INTRODUCTION

After recognizing a potential for gold in Tertiary volcanic rocks in the vicinity of Coquihalla Mountain, MineQuest Exploration Associates Ltd. staked 13 claims during the period of November 1981 to February 1982, on behalf of Clifton Resources Limited.

In 1982 MineQuest Exploration Associates Ltd. conducted reconnaissance soil sampling, prospecting, and a geological examination. This work produced geochemical indications of anomalous gold, silver, arsenic and antimony in soils and prospective host rocks.

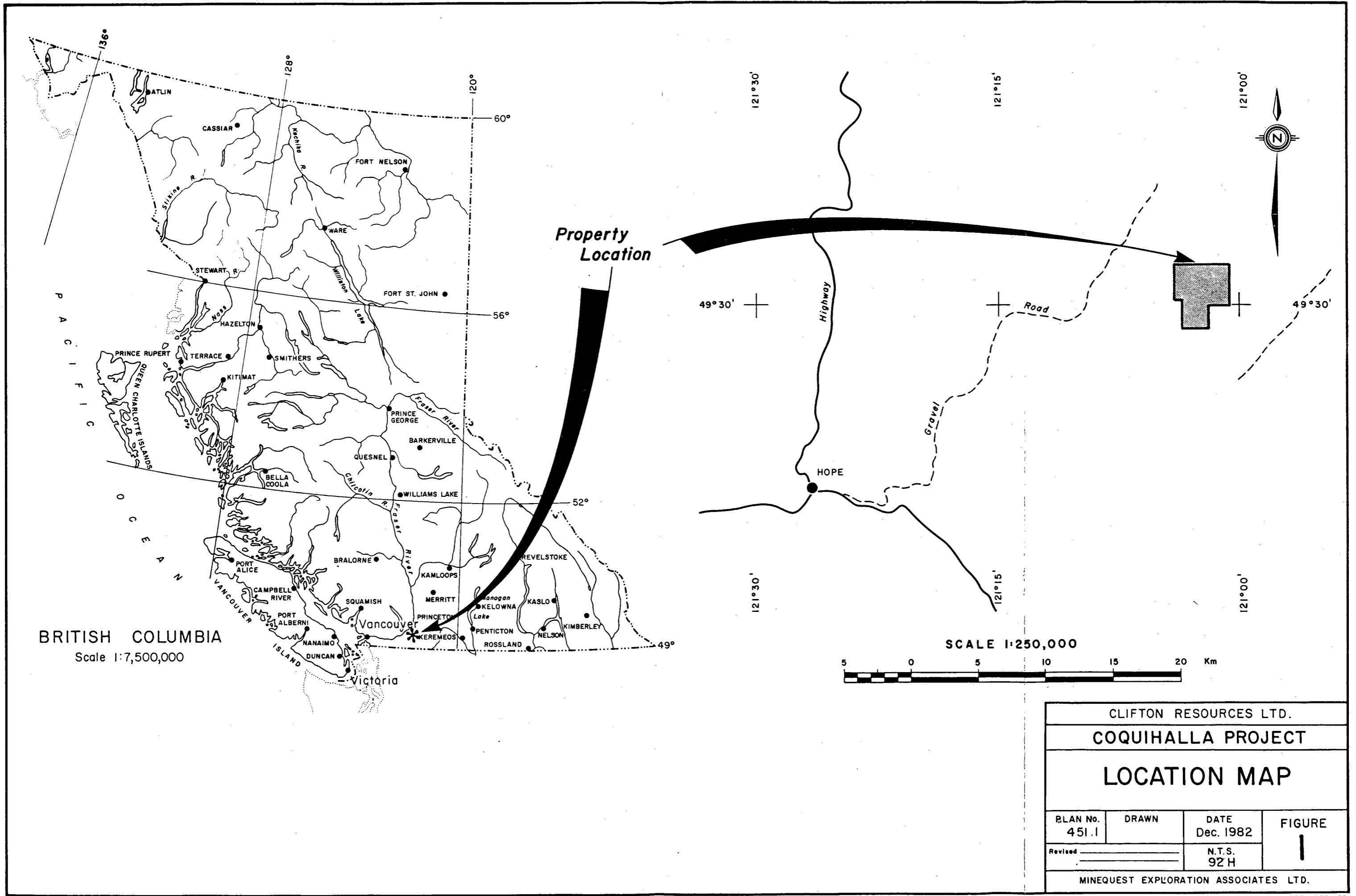
2.0

LOCATION, ACCESS, AND TOPOGRAPHY

The claims are located on the southeast flank of Coquihalla Mountain, straddling Jim Kelly Creek, in the Bedded Range of the Cascade Mountains, 30 kilometres northeast of Hope.

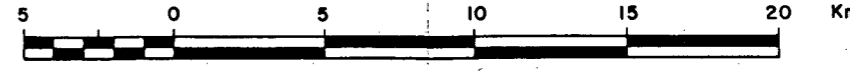
Access is via logging roads along the Tulameen River from Tulameen. At Jim Kelly Creek an old road is readily accessible by foot or motorcycle to the south portion of the claims; travel on the claims is by foot.

Elevations range from 1200m to 1800m above sea level and open forest covers elevations below 1400m.



BRITISH COLUMBIA  
Scale 1:7,500,000

SCALE 1:250,000



CLIFTON RESOURCES LTD.			
COQUIHALLA PROJECT			
LOCATION MAP			
PLAN No. 451.1	DRAWN	DATE Dec. 1982	FIGURE 1
Revised		N.T.S. 92'H	
MINEQUEST EXPLORATION ASSOCIATES LTD.			

EXCLUSIVE DRAFTING SERVICES LTD.

## 3.0

CLAIM STATUS

The following claims are held by MineQuest Exploration Associates Ltd. and Clifton Resources Limited, on the behalf of the latter.

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Due Date (before submission of this report)</u>
Aura I	1604	20	November 30, 1985
Aura II	1605	12	November 30, 1985
Aura III	1606	6	November 30, 1985
Aura IV	1607	4	November 30, 1985
Fine 2	1614	16	December 29, 1985

4.0

HISTORY AND PREVIOUS WORK

Earliest reports on the area are of gold-bearing quartz veins in the upper reaches of Jim Kelly Creek southwest of Coquihalla Mountain being worked for gold in 1914 (BCDMAR 1914 p K232).

The area experienced a second period of activity in 1937 when gold and silver-bearing quartz veins were worked with open cuts and short adits (BCDMAR 1937 p D21). The exact locations of these quartz veins and of those worked in 1914 are not apparent from contemporary descriptions.

In 1966 a considerable amount of work was done on the south side of Jim Kelly Creek by Bethes Exploration Limited which excavated thirty-two trenches totalling over 18,000 feet in length and drilled 2832 feet in five holes (BCDMAR 1966 p 174). The objective at the time appears to have been copper in a porphyry-type situation. Samples were assayed for copper and molybdenum but not for gold or silver.

In 1982 MineQuest Exploration Associates Ltd. conducted soil sampling on 5 contour lines and limited prospecting. Anomalous gold and arsenic values were returned on one line although rock chip sampling returned uniformly low gold values.

## 5.0

WORK CARRIED OUT IN 1985

Work carried out in 1985 consisted of prospecting, and contour soil sampling. Prospecting was hampered by snow and ice above tree level and proved a disappointing exercise. Snow conditions necessitated sampling at a lower than anticipated elevation of 1330 metres for a distance of 500 metres from a creek entering Jim Kelly Creek from the northeast (see Figures 2 and 3).

Prospecting and soil sampling were carried out by A.W. Gourlay and A.R. Zuk.

## 5.1

Laboratory Techniques

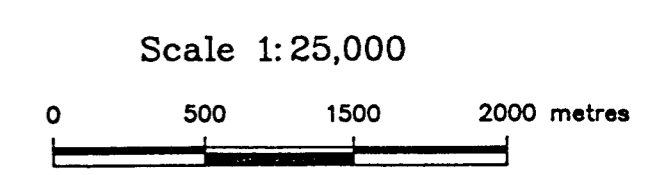
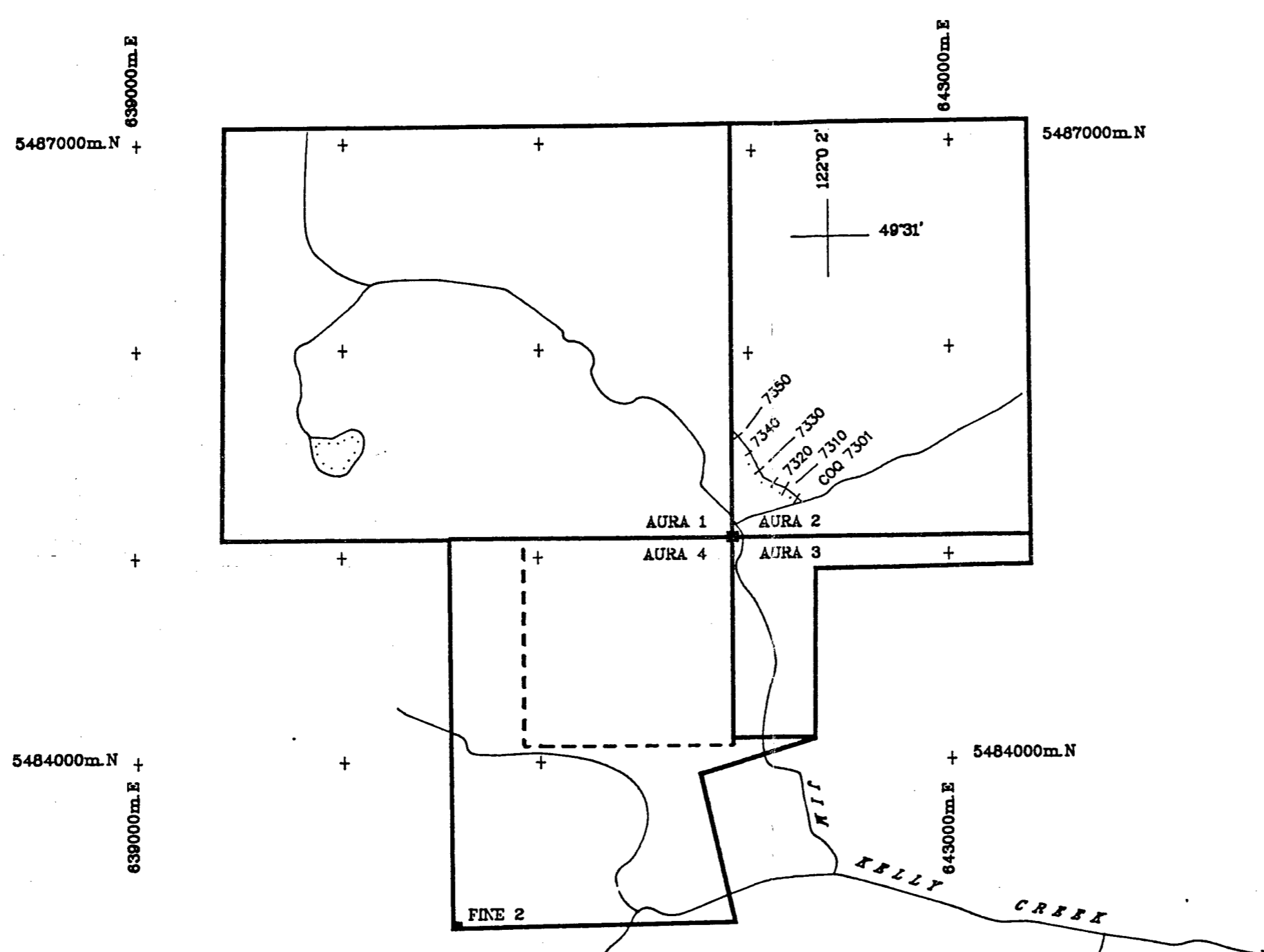
A total of 50 soil samples were collected from the B horizon at 10 metre intervals along the 1330m contour.

Each sample was sieved to minus 80 mesh. The fine fraction was then used to make composite samples, ten adjacent samples to one composite. The composite samples so made were then pulverized to further homogenize the distribution of gold. Each composite overlaps adjacent composite samples in the following manner: samples 1-10 (for example) are used to make the first composite, sample 6-15 the second, samples 11-20 the third and so on. A total of nine composite samples were analysed for gold, arsenic, and silver.

All soil composite samples were analyzed by Bondar-Clegg and Company Ltd., North Vancouver, British Columbia as follows:

<u>Element</u>	<u>Extraction</u>	<u>Analytical Method</u>
Silver	Lefort aqua regia	Atomic absorption
Arsenic	Nitric perchloric	Colourimetric
Gold	Fire assay	Atomic Absorption





CLIFTON RESOURCES LTD.			
COQUIHALLA PROJECT			
SOIL GEOCHEMISTRY			
SAMPLE LOCATIONS			
PLAN No. 886	DRAWN BY: GEO-COMP	DATE JAN.'86	FIGURE
Originator: AWG		N.T.S. 92H/11	2
MINEQUEST EXPLORATION ASSOCIATES LTD.			

## 6.0

GEOLOGY

The claims fall on both sides of a major fault that separates Jurassic-Cretaceous intrusives and Cretaceous sediments on the southwest from Tertiary rocks on the northeast. The Jim Kelly Creek Fault trends northwest-southeast along Unknown and Jim Kelly Creeks and appears to have been active at the time of Tertiary volcanism and may have been partly responsible for locating the volcanic centre.

The Jurassic-Cretaceous intrusive rocks, known as the Eagle Granodiorite, form part of a large body extending well beyond the map area. These intrusives range in composition from coarse grained granodiorite to diorite which often exhibits a weak northwest foliation. In the southeast part of the claims the Eagle Granodiorite extends to the northeast side of the fault.

The Cretaceous rocks on the southwest side of the fault are sediments (non-marine conglomerates, sandstone and argillites, Cairnes 1924) of the Pasayten group which rests unconformably on the Eagle Granodiorite.

A Tertiary volcanic centre, well described by Berman and Armstrong (1980), forms an equidimensional patch some 6km across surrounded on all sides by Jurassic and Cretaceous rocks. The Tertiary rocks range in composition from diorites through to rhyolites and in manner of emplacement from hypabyssal to pyroclastic.

The Tertiary volcanics appears to have been laid down next to the Jim Kelly Creek fault. Early in the stage of basin formation, preceding most of the volcanics, an avalanche breccia was deposited. The basin was then filled with lithic-crystal tuff some 1500 metres thick. This pile was intruded by stocks and dykes first of

pyroxene andesite and then of pyroxene diorite. Rhyolite domes and intrusive rocks are reported locally.

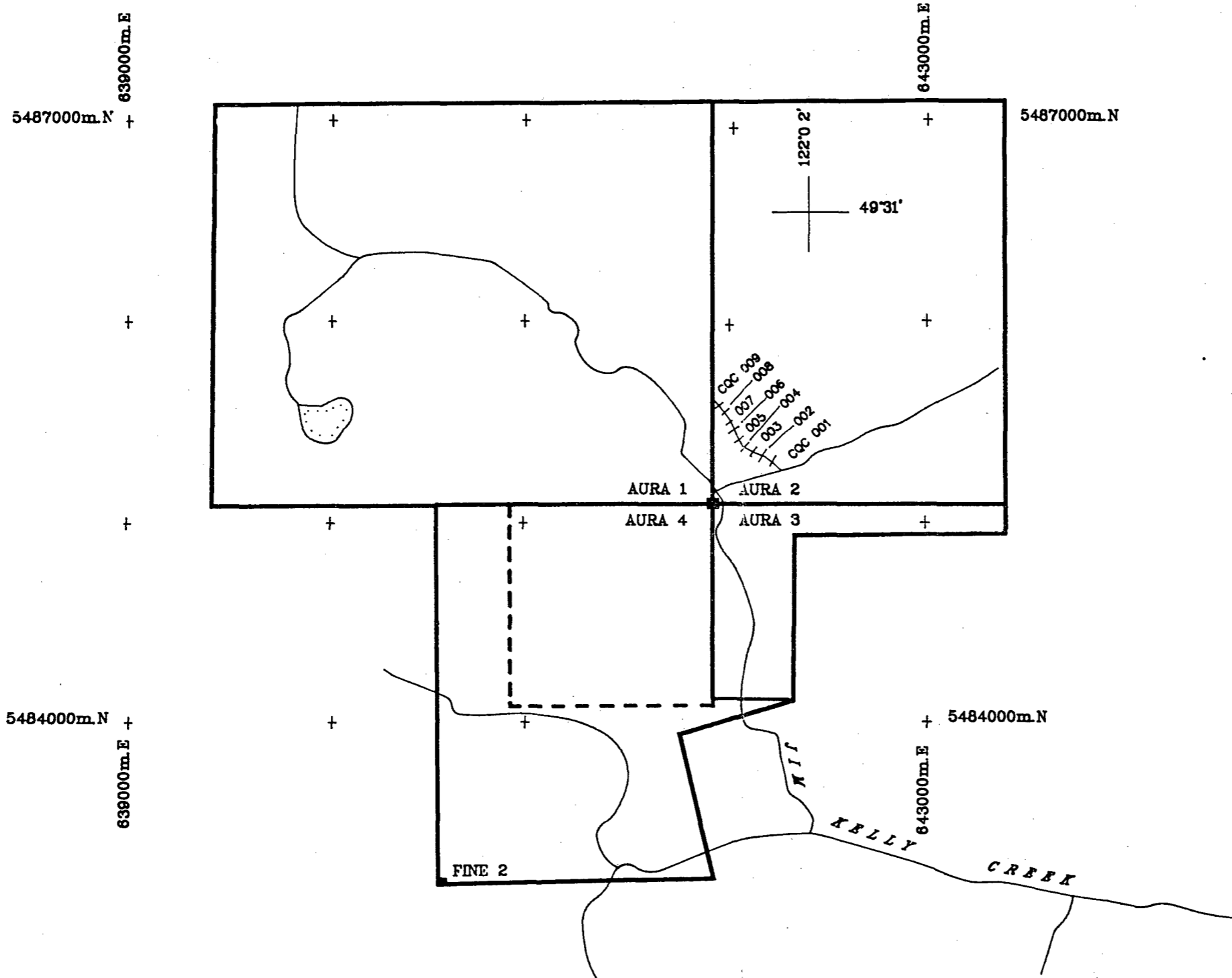
Some ring-like features visible on air photographs are tentatively interpreted as indicative of caldera-type subsidence during volcanism.

No geological mapping has been undertaken, however, the lithic-crystal tuff was examined and found to contain a considerable proportion of pyrite, locally up to 10%. Much of the lithic-crystal tuff exhibits a moderate to strong argillic alteration. Whether this is a hydrothermal affect or whether it is due to acid leaching by the pyrite needs to be determined. No silicification was observed.

#### 6.1 Soil Geochemistry

The objective of the 1985 sampling program was to extend the zone of anomalous gold values found in Soil Line A3 of the 1982 program to the southeast, across the contact between the Tertiary volcanic rocks and the Eagle Granodiorite.

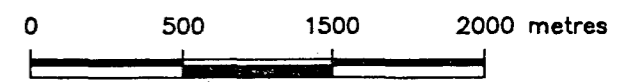
The 1985 soil line extended the coverage approximately 60 metres to the southeast. Gold and arsenic values here, and immediately downslope from Soil Line A3, did not duplicate the anomalous gold, arsenic, and antimony found in 1982. This suggests that the samples collecting in 1982 are closer to the source, or in an area of thinner overburden than those collected from forest soil.



**RESULTS**

SAMPLE NUMBER	Ag PPM	As PPM	Au PPB
CQC-001	<0.2	3	<5
CQC-002	<0.2	5	5
CQC-003	<0.2	5	10
CQC-004	<0.2	4	<5
CQC-005	<0.2	4	5
CQC-006	<0.2	3	<5
CQC-007	<0.2	3	<5
CQC-008	<0.2	3	<5
CQC-009	<0.2	4	5

Scale 1:25,000



CLIFTON RESOURCES LTD.			
COQUIHALLA PROJECT			
SOIL GEOCHEMISTRY			
COMPOSITE SAMPLE LOCATIONS AND RESULTS			
PLAN No. 867	DRAWN BY: GEO-COMP	DATE JAN '86	FIGURE <b>3</b>
Originator: AWG		N.T.S. 92H/11	
MINEQUEST EXPLORATION ASSOCIATES LTD.			

7.0

CONCLUSIONS

1. The regional setting: a major, probably transcurrent fault that may have been active during volcanism, a volcanic-sedimentary basin, and ring-like fracture systems suggestive of a caldera, are favourable features.
2. Preliminary geochemical work provided encouragement in the form of coincident anomalies for gold, silver, arsenic and antimony on Soil Line As and A3. Sampling downslope from Soil Line A3, in a forested area, did not duplicate the values found in the 1982 sampling.

8.0

RECOMMENDATIONS

The ground north and east of Soil Line A3 be thoroughly prospected, mapped, and rock chip sampled, with particular emphasis on areas of silicification, alteration, and faulting. These areas should also be explored by soil sampling on a close spaced grid.

9.0

REFERENCES

B.C. Department of Mines Annual Reports (and  
successor publications)

1914 pp K232-K233

1937 pp D21-D22

1966 p 174

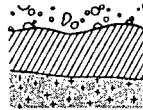
Berman, R.G., and Armstrong, R.L., 1980  
Geology of the Coquihalla Volcanics Complex,  
Southwestern British Columbia  
Can. J. Earth Sci. 17, pp 985-995

Cairnes, C.E., 1924  
Coquihalla Area, British Columbia  
G.S.C. Memoir 139

Longe, R.V., 1982  
Coquihalla Project - Geochemical Soil  
Sampling, for Clifton Resources Limited  
MineQuest Exploration Associates Ltd.  
Report #27a

APPENDIX I

Laboratory Reports



REPORT: 125-3799

PROJECT: COQ

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Ag PPM	As PPM	Au PPB
S1 CQC-001		<0.2	3	<5
S1 CQC-002		<0.2	5	5
S1 CQC-003		<0.2	5	10
S1 CQC-004		<0.2	4	<5
S1 CQC-005		<0.2	4	5
S1 CQC-006		<0.2	3	<5
S1 CQC-007		<0.2	3	<5
S1 CQC-008		<0.2	3	<5
S1 CQC-009		<0.2	4	5



APPENDIX II

Cost Statement

COST STATEMENT

COQUIHALLA PROJECT

September 1 to November 30, 1985

Fees and Wages:

R.V. Longe	.75 hrs. at \$ 80.00	\$ 60.00	
A.W. Gourlay	5 days at \$385.00	1,925.00	
A. Zuk	3 days at \$120.00	<u>360.00</u>	\$2,345.00

Disbursements:

Rental Vehicles	\$ 180.00	
Fuels & Lubricants	93.14	
Taxi, Parking	.30	
Meals, Accommodation	16.00	
Groceries	61.48	
Analyses	161.33	
Claim Recording & Renewal	120.00	
Telephone	21.82	
Courier, Postage	4.00	
Drafting	64.00	
Photocopies	9.00	
Maps	2.00	
Report Preparation	<u>32.76</u>	765.83

\$3,110.83

APPENDIX III

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Andrew Gourlay, hereby certify that:

1. I am presently employed by MineQuest Exploration Associates Ltd. as Senior Geologist
2. I am a graduate of the University of British Columbia (B.Sc. Hons., 1977, in geology).
3. I am a Professional Geologist in good standing with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, and a Fellow of the Geological Association of Canada.
4. I have practised my profession as geologist for 8 years.
5. The information used in this report is based on personal execution of the geochemical soil sampling.

Signed



Dated at Vancouver, B.C.  
this 15th day of February, 1986

**APPENDIX IV**

Statement of Exploration and Development



SUBMIT UNDER NO. 3748 NOV 14 1985 VANCOUVER, B.C.

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

Andrew W. Gourlay (Name) Agent for MineQuest Exploration Associates Ltd. (Name)  
311 Water Street (Address) 311 Water Street (Address)  
Vancouver, B.C. (Address) Vancouver, B.C. (Address)  
V6B 1B8 (Postal Code) 669 2251 (Telephone Number) V6B 1B8 (Postal Code) 669-2251 (Telephone Number)  
Valid subsisting F.M.C. No. GOURAW 274215 Valid subsisting F.M.C. No. MINEXA 274213

STATE THAT

1. I have done, or caused to be done, work on the AURA I, AURA II, AURA III

Record No(s) 1604, 1605, 1606 Claim(s)  
Situates at Coquihalla Mountain in the Similkameen Mining Division  
to the value of at least 2,888.82 dollars. Work was done from the 1st day  
of September 85 to the 15th day of November 85

2. The following work was done in the 12 months in which such work is required to be done:

[COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING]

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails.)

(Give details as required by section 13 of regulations.)

COST

TOTAL PHYSICAL

I wish to apply \$ of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)  
(The itemized cost statement must be part of the report.)

COST

I wish to apply \$ of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

C. DRILLING (Details in report submitted as per section 8 of regulations.)  
(The itemized cost statement must be part of the report.)

D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL  
(Details in report submitted as per section 5, 6, or 7 of regulations.)  
(The itemized cost statement must be part of the report.)  
(State type of work in space below.)

		COST
Geochemical soil sampling		2,888.82
TOTAL OF C AND D		2,888.82

Where the above statement requires a technical report as per section C of the Mineral Act Regulations, the author of the report shall complete both copies of the ASSESSMENT REPORT TITLE PAGE AND SUMMARY form and include the completed forms in the assessment reports.

Who was the operator (provided the financing)?

Name Clifton Resources Ltd.  
Address 960 - 652 Howe Street  
Vancouver, B.C. V6C 2T6

Portable Assessment Credits (PAC) Withdrawal Request

Amount to be withdrawn from owner(s) or operator(s) account(s):

		AMOUNT
Name of Owner/Operator		
[May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.]	1. ....	
	2. ....	
	3. ....	
TOTAL WITHDRAWAL		
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL		

I wish to apply \$ 2,400.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

Claim: Aura II Apply: 2,400  
Record No. 1605 Years Earned: 1  
Units: 12  
Month Due: November

Value of work to be credited to portable assessment credit (PAC) account(s).  
[May only be credited from the approved value of C and (or) D not applied to claims.]

		AMOUNT
Name of owner/operator	Name	
1. ....	MineQuest Exploration Assoc. Ltd.	488.82
2. ....		
3. ....		

I, the undersigned Free Miner, hereby acknowledge and understand that it is an offence to knowingly make a false statement or provide false information under the *Mineral Act*. I further acknowledge and understand that if the statements made, or information given, in this Statement of Exploration and Development are found to be false and the exploration and development has not been performed, as alleged in this Statement of Exploration and Development, then the work reported on this statement will be cancelled and the subject mineral claim(s) may, as a result, forfeit to and vest back to the Province.

*Andrew W. Bouley*  
Signature of Applicant