

LOG NO: 0106	RD.
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NTS 92I/13W  
Lat. 50 58'  
Long. 121 53'

GEOCHEMICAL ASSESSMENT  
REPORT ON THE  
PAVILION PROPERTY  
CLINTON AND LILLOET MINING DIVISIONS

SUB-RECORDER  
RECEIVED  
DEC 22 1987  
M.R. # ..... \$ .....  
VANCOUVER, B.C.

Owner and Operator:  
CLIVE ASHWORTH

Written by:  
Peter D. Leriche, B.Sc.

ASHWORTH EXPLORATIONS LIMITED  
Mezzanine Floor - 744 West Hastings Street  
Vancouver, B.C. V6C 1A5  
681-1277

Submitted:  
December 17, 1987

16,827

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**SUMMARY**

The Pavilion property consists of 8 contiguous claims totaling 124 claim units. It is located adjacent to the Fraser River, 25 miles north of Lillooet.

The Pavilion Mine (abandoned) lies on the Two Dog claim and the Big Slide Mine (abandoned) is on a single reverted crown grant that is surrounded by the Two Dog claim. The Big Slide Mine produced 1,378 oz of gold, 2,467 oz of silver and 15,231 pounds of copper (Poloni 1982). Quartz veins from the Big Slide appear to continue along strike into the Pavilion property. The Pavilion Mine saw limited production during the 1930's. During shaft sinking operations, an intersection of 2.0 oz/ton gold over 3 feet was reported.

Mineralization on the claims is related to the Fraser River fault zone. The main quartz veins on the property trend northwest subparallel to the Fraser River longitudinal fault system. Dioritic intrusions on the property probably provided the heat source for mineralized solutions that infilled the fractures.

Rock sampling by Ashworth Explorations Limited in 1987 has delineated two target areas. The first area is a quartz vein in which values ranging from .035 to .959 oz/ton gold were encountered. The second area is the Pavilion vein where one sample yielded .036 oz/ton gold.

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An exploration program has been recommended consisting of geological mapping, soil sampling, hand blasting, backhoe trenching and de-watering the Pavilion shaft at a total cost of \$172,000.

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**TABLE OF CONTENTS**

Page No.

SUMMARY ..... 1

1. INTRODUCTION ..... 1

2. PROPERTY ..... 1

3. LOCATION, ACCESS, AND PHYSIOGRAPHY ..... 3

4. HISTORY AND PREVIOUS WORK ..... 5

5. REGIONAL GEOLOGY ..... 6

6. PROPERTY GEOLOGY ..... 8

6.1 MINERALIZATION ..... 11

7. 1987 FIELD PROGRAMS ..... 11

7.1 SCOPE AND PURPOSE ..... 11

7.1.1 Field Visit 1 ..... 11

7.1.2 Field Visit 2 ..... 12

7.1.3 Field Visit 3 ..... 12

7.1.4 Field Visit 4 ..... 12

7.2 METHODS AND PROCEDURES ..... 12

7.2.1 Field Visit 1 ..... 12

7.2.2 Field Visit 2 ..... 13

7.2.3 Field Visit 3 ..... 13

7.2.4 Field Visit 4 ..... 13

8. RESULTS ..... 13

8.1 FIELD VISIT 1 AND 2 ..... 13

8.2 FIELD VISIT 3 ..... 15

8.3 FIELD VISIT 4 ..... 15

8.4 DISCUSSION OF RESULTS ..... 17

9. CONCLUSIONS ..... 17

10. RECOMMENDATIONS ..... 18

11. PROPOSED BUDGET ..... 20

REFERENCES ..... 21

CERTIFICATE ..... 22

ITEMIZED COST STATEMENT ..... 23

LIST OF FIGURES

Figure 1: General Location Map ..... 2

Figure 2: Claim Location Map ..... 4

Figure 3: Regional Geology Map ..... 7

Figure 4: Property Geology Map ..... 9

Figure 5: Sample Location and Geochemistry Map ... In Pocket

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**TABLE OF CONTENTS** (continued)

**LIST OF APPENDICES**

- Appendix A: Analytical Results  
Appendix B: Rock Sample Descriptions  
Appendix C: Analytical Techniques

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## 1. INTRODUCTION

This report summarizes geochemical work done by Ashworth Explorations Limited. The surveys were carried out during four periods; November 10, 1986 by Elizabeth Scroggins (geologist) and John Fleishman (geotechnician); December 9, 1986 by Alan Hill (geologist), Clive Ashworth (property owner) and John Fleishman (geotechnician); June 15, 1987 by Hugo Laanela, F.G.A.C. (consulting geologist) and Clive Ashworth (property owner); October 6 and 7, 1987 by Peter Leriche (writer and geologist), Lief Christenson (geologist) and John Fleishman (geotechnician).

## 2. PROPERTY

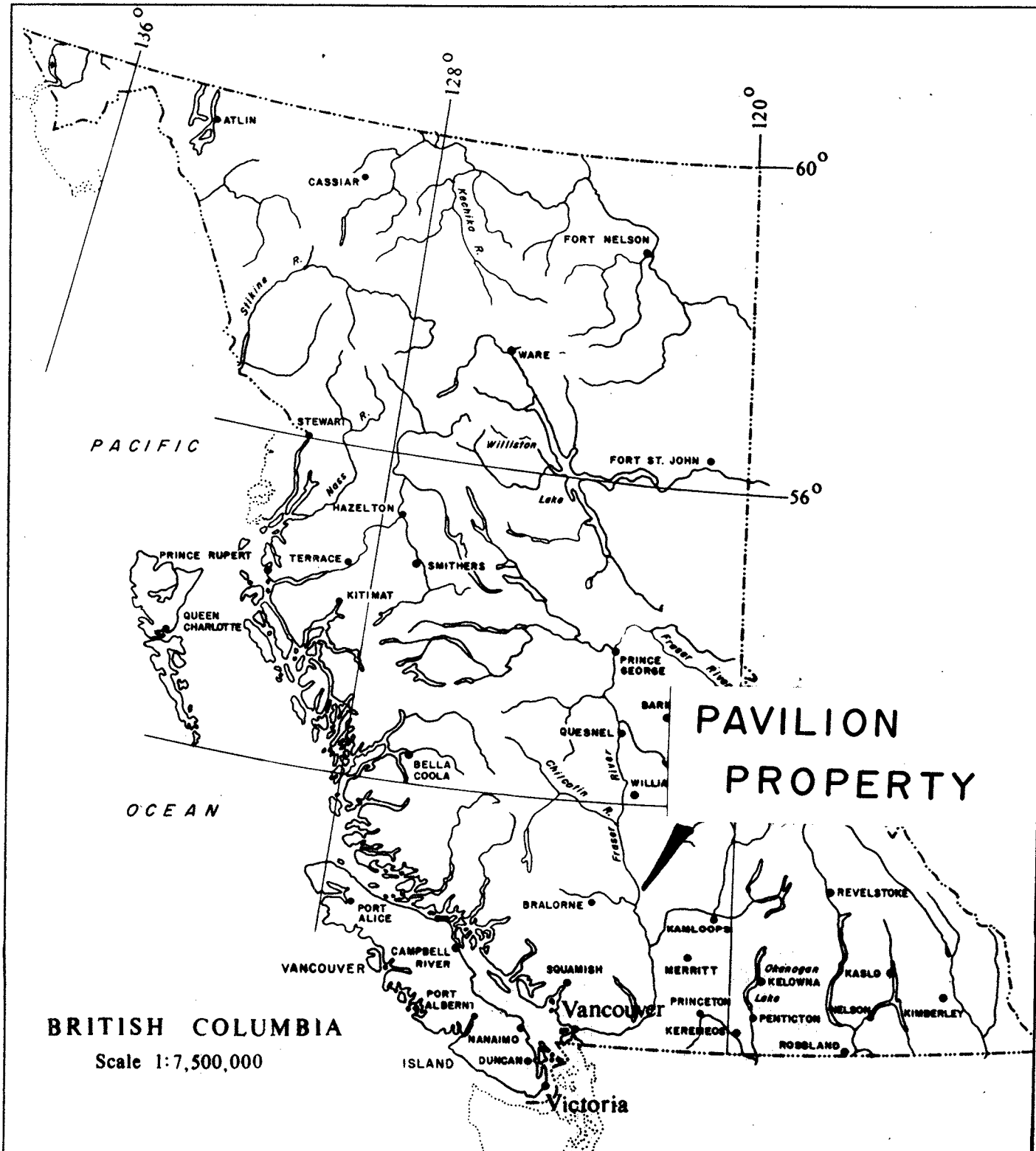
The Pavilion property, owned by Clive Ashworth and operated by Ashworth Explorations Limited, lies within the Clinton and Lillooet Mining Divisions of British Columbia. An option agreement has been signed with Golden Web Resources Inc. allowing Golden Web to earn a 50% interest in the property by expending a minimum \$500,000. The property consists of 124 claim units in two groups totalling 2975 hectares (corrected for overlap). Pertinent claim data is listed below (see Figure 1).

<u>Claim Name</u>	<u>Group</u>	<u>Record#</u>	<u>Mining Division</u>	<u>No.of Units</u>	<u>Expiry Date</u>
Two Dog	Lost Adit	2102	Clinton	*20	Nov.13,1988
Suzie	Lost Adit	2103	Clinton	18	Nov.21,1988
Lizzie	Lost Adit	2104	Clinton	15	Nov.21,1988
Lost Adit	Lost Adit	2105	Clinton	**18	Nov.21,1988
Amos	Lost Adit	3606	Lillooet	** 9	Nov.21,1988
Ali	Lost Adit	3605	Lillooet	9	Nov.21,1988
Cav	Kelly	2106	Clinton	20	Nov.21,1988
Kelly	Kelly	2107	Clinton	15	Nov.21,1988

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BRITISH COLUMBIA  
Scale 1:7,500,000

PAVILION  
PROPERTY



<b>PAVILION PROPERTY</b> CLINTON - LILLOOET M.D.	
<b>GENERAL LOCATION MAP</b>	
Scale 1:7500 000	Date: DEC. 1987
Drawn : J. S.	Figure 1
<b>Ashworth Explorations Limited</b>	

- \* overlaps reverted crown grant (Rec. No. 122) owned by Grange Gold Corp.
- \*\* partially overlaps ENY 1-4 claims.

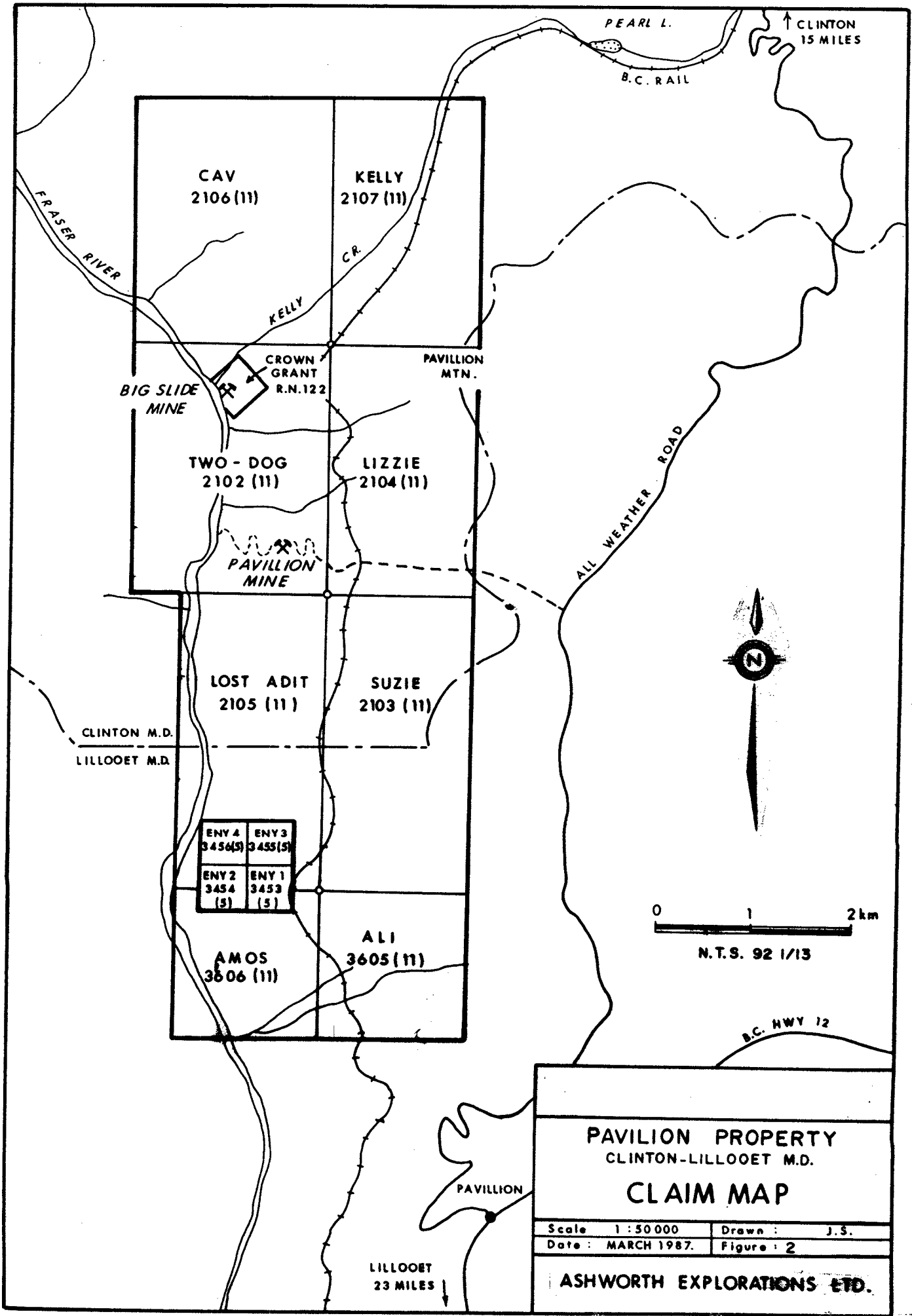
### 3. LOCATION, ACCESS, AND PHYSIOGRAPHY

The Pavilion property is located along the banks of the Fraser River on NTS map sheet 92I/13W. It is situated 25 miles (40 km) north of Lillooet and 15 miles (24 km) southwest of Clinton (Figure 1).

Access to the property is via an all-weather dirt road which branches north from B.C. highway #12 at Pavilion, 2 km south of the property. Several dirt roads fork westward from this road and descend to the B.C. Railway mainline and the Fraser River, which both traverse the property. The property can also be reached by B.C. Rail, using the old Moran stop.

The property lies on a fairly steep, west facing slope typical of the Fraser River gorge in the area. Elevations range from about 800 feet (244 m) above sea level at the river, to 4800 feet (1463 m) at the summit of Pavilion Mountain. Sparse open bush and desert like vegetation are indicative of the high temperatures and low precipitation which characterize the summers in this part of the interior dry belt. The area receives sparse snowfall (average 6-10 inches) from December through March.





ENY 4 3456(5)	ENY 3 3455(5)
ENY 2 3454 (5)	ENY 1 3453 (5)

**PAVILLION PROPERTY**  
CLINTON-LILLOOET M.D.

**CLAIM MAP**

Scale 1:50000	Drawn: J.S.
Date: MARCH 1987.	Figure: 2

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#### 4. HISTORY AND PREVIOUS WORK (from Hill, 1987)

"Gold was first discovered in the area known as the Big Slide by an Indian in 1872, making it one of the oldest lode-gold properties in the province.

In 1881 a crude arrastra was built, and in 1886 a 10-stamp mill was constructed. Considerable tunneling on quartz veins was performed during this period, but poor gold recovery techniques (chlorination) resulted in shut down.

In 1928 the mine was reopened, and after underground exploration a 25 to 50 ton mill was built in 1934. Production from this period totalled 1,378 oz gold, 2,467 oz silver and 15,231 lbs. copper from a system of sub-parallel quartz veins. Active operation ceased in 1935, partially due to mine flooding. At that time, development work had taken place on seven levels. The property lay idle until 1982 when Grange Gold Corporation drilled 1,872 feet of core in two holes, to explore the down dip continuity of the Big Slide veins. Three quartz-sulfide veins containing varying amounts of gold and silver were intersected. No further work has been reported at the Big Slide Mine.

The old Pavilion Mine is located at the southern part of the Two Dog claim. This operation involved the sinking of a 176 foot shaft and about 325 feet of lateral work. During shaft sinking operations, an intersection assaying 2 oz/ton Au over 3 feet was

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reported. Little else is known about this operation, since no production was ever recorded. In 1946 Rudson Mines Ltd. performed 1900 feet of diamond drilling, in four holes. Vein intersections were obtained but no assay data is available.

Numerous other undocumented surface workings were discovered on the Pavilion property. Five adits have been located. A shaft of unknown depth has also been located, approximately 3.0 km south of the Pavilion adit on the Lost Adit claim.

The ENY 1-4 two post claims, surrounded by the Pavilion property, reportedly also have a series of open cuts and an adit"

##### 5. REGIONAL GEOLOGY (Figure 3)

The area geology has been mapped by Trettin (1961 and 1980). Bedrock consists of Permian to Triassic volcanic and sedimentary strata, intruded by Cretaceous-Jurassic diorites and granodiorites.

The Permian age rocks (Cache Creek Group) consist of northwest trending chert, limestone, argillite, tuff, lithic sandstone and volcanic flows (Trettin, 1961).

The Triassic age rocks (Pavilion Group) consist of tuff, volcanic arenite, greywacke, volcanic flows, chert, argillite and limestone (Trettin, 1961). This unit is found unconformably over-



lying or in fault contact with the Cache Creek group.

Just northwest of the subject claims (across the Fraser River) Trettin (1961) has mapped a large body of olivine basalt that is Miocene-Pliocene in age.

Structurally, the property lies within the Fraser River fault zone where a complex graben system has downdropped large blocks and slices of rock. North to north westerly trending longitudinal faults border this graben system, which is often offset by smaller cross faults. Most of the faulting is normal, except for these crossfaults, where horizontal and vertical movements are varied.

#### 6. PROPERTY GEOLOGY

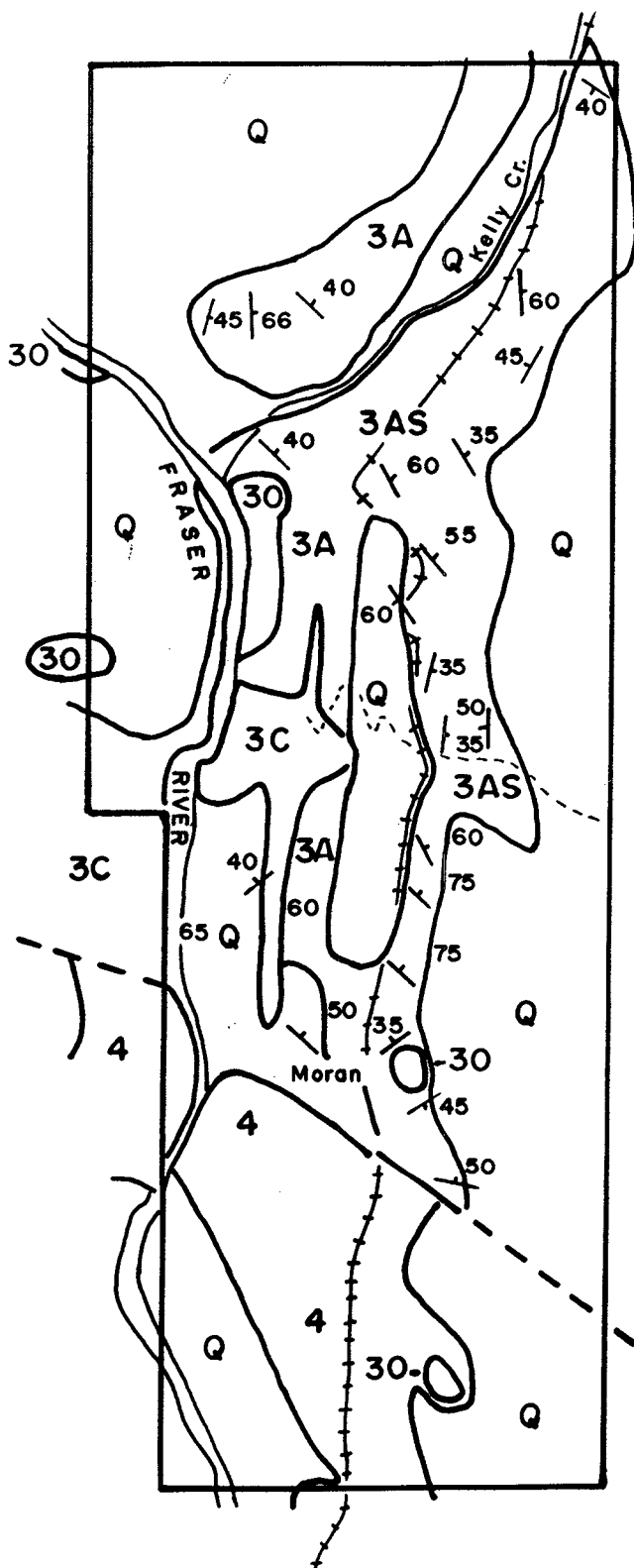
The property geology map (figure 4) is taken from mapping performed by Trettin in 1961. Recent prospecting work over a limited area by Ashworth Explorations Limited has found the 1961 mapping to be accurate.

The majority of the claims (approximately 50%) is underlain by recently deposited river gravels. These gravels are found on benches and scree slopes and are up to 50 ft (15 m) thick.

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**LEGEND**

Q

Quaternary Alluvium

30

**CRETACEOUS**  
Quartz diorite

4

**TRIASSIC**

**PAVILION GROUP**

Tuff, volcanic arenite, volcanic flows and greywacke

3

**CACHE CREEK GROUP**

3A: Chert, argillite, minor tuff, limestone, lithic sandstone, volcanic flows  
3AS: same, sheared and altered  
3C: Amphibolite, hornfels, migmatite, minor marble

Geology by Trettin, 1961

Strike and dip of bedding

Contact

Contact, approx. location

Fault

Fault, approx. location

Railway

Road

Scale 1:50000



N.T.S. 92 1/13

**PAVILION PROPERTY**  
CLINTON-LILLOOET M.D.

**PROPERTY GEOLOGY**

NTS: 92 1/13

By: P.L.

Drn: V.G.W.

Date: December 1987

Fig.: 4

Ashworth Explorations Limited

The northern 2/3 of the property is underlain by rocks of the "western belt" of the Cache Creek Group (Units 3A and 3C, Trettin, 1961). Unit 3A consists of radiolarian chert, pellicite, lesser limestone and volcanic rocks. These rocks, as observed along the railway cut, are highly contorted cherts and argillites containing small quartz veinlets and lenses of massive pyrite. Unit 3C as mapped by Trettin (1961) occurs as a long north-south trending outcrop in the central part of the claims. It consists of amphibolite, hornfels, migmatite and minor marble.

The Pavilion Group rocks occur in the southern 1/3 of the property in fault contact with the Cache Creek Group. Trettin has mapped them as tuff, volcanic arenite, volcanic flows and greywacke.

Three outcrops of diorite occur on the claims. One is present at the Big Slide mine and another at the Pavilion shaft area. The writer believes that these Cretaceous intrusive rocks may have provided the heat source for mineralized solutions that came up along faults and fractures. Another small diorite stock was mapped (Trettin, 1961) 300 metres west of the Moran railway stop.

## 6.1 MINERALIZATION (from Hill, 1987)

### Big Slide Mine

"The ore at the Big Slide Mine occurs in two lenticular quartz veins. The main vein strikes at 150 degrees and dips at 70 degrees NE over an exposed strike length of at least 1,000 ft. The vein pinches and swells from several inches to four feet. The host rock is a hornblende diorite.

The ore occurs as banded sulphides and pods within the quartz veins. Ore minerals include pyrite, chalcopyrite, pyrrhotite, arsenopyrite, marcasite, limonite and native gold.

### Pavilion Mine

The Pavilion Mine vein strikes 150 degrees and dips gradually south-west similar to the second vein at Big Slide. The exposed strike length is over 200 ft."

## 7. 1987 FIELD PROGRAMS

### 7.1 SCOPE AND PURPOSE

#### 7.1.1 Field Visit 1

On November 10, 1986, a geologist and geotechnician performed prospecting and rock sampling. The purpose of this visit was to attempt to follow and sample the Big Slide vein along strike.



### 7.1.2 Field Visit 2

In December 1986, the property owner (C. Ashworth), a geologist and geotechnician spent one day rock chip sampling. The purpose of this visit was follow-up on encouraging results from Field Visit 1.

### 7.1.3 Field Visit 3

In June 1987 the property owner (C. Ashworth) and a consulting geologist (H. Laanela) spent a day on the property. The purpose of this visit was to acquaint Mr. Laanela with the geology and known showings, plus look for adits or other physical workings.

### 7.1.4 Field Visit 4

In October 1987, two geologists and a geotechnician spent two days rock chip sampling and prospecting. The purpose of this visit was to follow-up on new areas discovered on visit 3 and to establish an exploration approach for the next phase of work.

## 7.2 METHODS AND PROCEDURES

Vangeochem Lab Ltd. performed the analysis on samples from visits 1 and 2. Acme Analytical Labs performed the analysis for visit 4. See Appendix C for Analytical Techniques.

### 7.2.1 Field Visit 1

Nine rock samples were taken. Control was established using topographic features (creeks and ridges), railway tracks, roads.

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An altimeter, compass and hipchain were used for pinpointing locations.

#### 7.2.2 Field Visit 2

A total of 20 rock chip and selected samples were taken using topographic features for control. An altimeter, compass and hipchain were used for locating sample sites.

#### 7.2.3 Field Visit 3

Five reference samples were taken from known showings. These samples were not assayed.

#### 7.2.4 Field Visit 4

A total of 21 rock chip and selected samples were taken. Topographic features, altimeters, compasses and hipchain were utilized for control.

### 8. RESULTS (Figure 5)

Refer to Appendix A for analytical results and Appendix B for rock sample descriptions.

#### 8.1 FIELD VISITS 1 AND 2 (after Hill, 1987)

Three adits were located, thought to have been dug during the 1930's. The adits cut highly fractured and pelitic sediments which host numerous carbonate veinlets and infillings along with a quartz vein. The vein ranges in width from 0.5 to 3.5 metres

and contains disseminations and pods of gold-bearing pyrite and arsenopyrite mineralization.

Adit #1 is driven a few metres into the side of an outcrop where the vein is exposed. A 3.5 metre chip across the vein assayed .166 oz/ton Au while a selected sample assayed .959 oz/ton Au. Adit #2 is 30 metres long and is driven into the hillside about 50 m downslope from Adit #1. A 0.7 m wide quartz vein yielded .141 oz/ton Au when chip sampled. Eight other grab samples gave values ranging from .035 oz/ton to 0.605 oz/ton Au.

A 10 cm wide quartz vein approximately 400 metres northwest of Adit 2 assayed 0.349 oz/ton Au and 0.767 oz/ton Ag. Samples from other parts of property gave highlights of .600 oz/ton Au, .22 oz/ton Au, .32 oz/ton Au, and 12.6% Zn.

Three samples were taken outside the shaft at the Pavilion mine. The best gold value was .036 oz/ton. Copper values for these samples were 0.57%, 0.46%, and 0.32% respectively.

All the quartz vein occurrences strike from 290 degrees - 350 degrees. The pinch and swell nature and the style of mineralization is similar to that of the Big Slide and Pavilion Mines. Whether the vein from Adits 1 and 2 is the same as the Big Slide Mine is unknown. It is almost certainly part of the same vein system. The continuity of this quartz vein system remains to be

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tested."

### 8.2 FIELD VISIT 3

This trip was successful in locating two adits (Adits 4 and 5) and two prospect trenches. Adit 4 is located approximately 700 metres west of the Pavilion shaft on the Fraser River. Adit 5 and the two prospect trenches were located on the northern part of the Cav claim.

### 8.3 FIELD VISIT 4

#### Adit 3

One rock sample (TDF87-6) was taken from a 20 cm wide quartz vein on the north wall of Adit 3 and did not yield any significant results. Total length of the adit is 20 metres.

#### Adit 4

This adit was driven east from the Fraser River for 232 metres. An ore car, 200 metres of track, an air compressor, water tank and a cable system to haul rocks up the bench are still on site. This writer believes that this was a crosscut adit, driven to intersect the down dip extension of the Pavilion vein. This goal was never achieved.

Samples TDC87-8 to 11 were taken from the face to the adit entrance. The best sample was TDC87-9 (142 ppb Au, 110 ppm Cu) from a 0.5 m wide shear zone infilled with limey clay gouge.

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#### Adit 5

Adit 5 was driven 5 metres into a rusty silicified brecciated argillite (?). One sample was taken from the adit and three samples from prospect pits in the area. Sample TDC87-R5 was weakly anomalous in gold (21 ppb). This sample was taken from an iron stained, limey tuff (?) within a prospect pit, 50 metres south of Adit 5.

#### Railway Cut

Five samples were taken along the railway cut within highly contorted Cache Creek sediments. Three samples were anomalous in gold; TDC87-12 (58 ppb), TDC87-13 (14 ppb), TDC87-15 (12 ppb). Mercury was analyzed in these samples and anomalies of 860, 240 and 910 ppb correlated with the elevated gold results.

#### Area North of Pavilion Shaft

Six samples were taken in this area from quartz veinlets, sericitic alteration zones and shear zones. Two samples were anomalous in gold with values of 15 ppb (TDC87-2) and 30 ppb (TDC87-1).

#### Big Slide

One reference sample (TDC87-7) was taken from the dump at the Big Slide Mine. The sample, taken from a copper stained pyritic quartz vein, was anomalous in gold (4145 ppb), silver (11.2 ppm),

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copper (1004 ppm) and arsenic (2393 ppm).

#### 8.4 DISCUSSION OF RESULTS

The prospecting and sampling to date has outlined two target areas.

The first area is along the quartz vein which strikes through Adits 1 and 2. Grab and chip sampling from these adits yielded gold results ranging from .035 to .959 oz/ton gold. Along strike from the adits approximately 400 metres northwest a 10 cm quartz vein assayed .349 oz/ton gold. This vein or vein system strikes into the Big Slide mine. More detailed mapping and hand blasting will be required to test the continuity, width and grade of the vein.

The second target area is the Pavilion vein. Assays of 2.0 oz/ton gold were reported from the underground workings in the 1930's. The best sample taken recently was .036 oz/ton gold from the mine dump.

#### 9. CONCLUSIONS

The writer believes the Pavilion claims have potential to host an epithermal precious metal deposit for the following reasons:

- 1) The subject claims surround a single reverted crown grant which hosts the Big Slide mine. Total production from 1928 to 1935 was 1,378 oz of gold, 2467 oz of silver and 15,231

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pounds of copper.

The Pavilion Mine (no production figures available) is located on the Two Dog claim.


- 2) Geologically, the Fraser River Fault system has provided conduits for mineralizing solutions driven by dioritic intrusions. This environment is associated with many epithermal vein deposits world wide.
- 3) The limited prospecting and sampling to date has delineated two target areas.

#### 10. RECOMMENDATIONS

The following program is recommended:

1. Lay-out a chain and compass grid over the Pavilion shaft area.
2. Geologically map the grid in detail to trace the Pavilion vein along strike or find parallel structures.
3. Soil sample the grid. Test pits should be dug to test soil development. At least some of the grid is probably underlain by recently deposited river gravels.

4. Perform backhoe stripping of the Pavilion vein along strike. Trench any other targets delineated by mapping.
5. De-water the Pavilion shaft. Map and sample the underground workings to test the grades at depth and define the attitude of the vein.
6. Blast and sample the vein along strike from Adits 1 and 2.
7. Perform reconnaissance mapping, contour soil sampling and silt sampling on the remainder of the property.
8. Stake 20 more units on the north boundary of the claims to cover two small adits that may or may not be within the present claims.
9. Perform magnetometer and VLF-EM geophysics on the grid if the geology and mineralization warrants it.
10. Study the available air photos and perform an air photo interpretation study.



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11. PAVILION PROPOSED BUDGET

Project Preparation	\$ 3,680
Geologists' Planning Visit	\$ 6,325
Mob/Demob (includes transportation, freight, and wages)	\$ 9,775
Field Crew	\$ 54,458
Field Costs:	
Helicopter Support \$600/hour	
Camp Rental & Fuel \$150/day	
Food	
Communications \$75/day	
Other Rentals - 2 pumps, generator, electric cable, discharge hose, head frame, winch, diesel fuel \$2,000/week x 1 week	
Supplies	
Blasting Supplies	
2 4x4 Trucks @ \$110/day	\$ 40,152
Contractors:	
Backhoe \$60/hr x 125 hrs	
Miner (Shifter Ticket) @ \$400/day	
Staking 20 units x \$50/unit	\$ 12,535
Reclamation	\$ 1,495
Lab Analysis	\$ 14,605
Supervision and Report	<u>\$ 17,800</u>
	\$ 160,825
Contingencies	<u>\$ 12,000</u>
Total	<u>\$ 172,825</u>
	(Say <u>\$ 172,000</u> )

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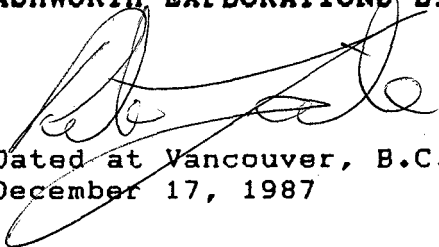
- Various newspaper clippings from 1932-1934.

**CERTIFICATE**

I, PETER D. LERICHE, of 3612 West 12th Avenue, Vancouver, B.C., V6K 2R7, do hereby state that:

1. I am a graduate of McMaster University, Hamilton, Ontario, with a Bachelor of Science Degree in Geology, 1980.
2. I have actively pursued my career as a geologist for nine years in British Columbia, Ontario, Yukon and Northwest Territories, Arizona, Nevada and California.
3. I have examined the Pavilion Claims during a visit on October 6 and 7, 1987.
4. That the information opinions and recommendations in this report are based on the field work carried out under my direction and on published and unpublished literature.

Peter D. Leriche, B.Sc.  
**ASHWORTH EXPLORATIONS LIMITED**



Dated at Vancouver, B.C.  
December 17, 1987

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ITEMIZED COST STATEMENT

Field Trip 1 - November 10, 1986

Field Crew

Geologist (Nov.10) 1 day @ \$325/day	\$	325	
Geotechnician (Nov.10) 1 day @ \$210/day		210	
Mob/Demob		<u>1,500</u>	\$ 2,035

Field Costs

4x4 Truck Rental 1 day @ \$110	\$	110	
Food and Accommodation 2 mandays @ \$90/day		180	
Supplies		<u>50</u>	\$ 340

Lab Analysis

9 rock samples - fire assay Au and multi-element ICP \$15/sample			<u>\$ 135</u>
---	--	--	---------------

Total			\$ 2,510
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Field Trip 2 - December 9, 1986

Geologist (Dec.9) 1 day @ \$325/day	\$	325	
Two Geotechnicians (Dec.9) 2 mandays @ \$210 day		420	
Mob/Demob		<u>1,800</u>	\$ 2,545

Field Costs

4x4 Truck Rental 1 day @ \$110/day	\$	110	
Helicopter Support 2 hours @ \$650/hr		1,300	
Food and Accommodation 3 mandays @ \$90/day		270	
Supplies		<u>50</u>	\$ 1,730

Lab Analysis

20 rock samples - fire assay Au and multi-element ICP \$15/sample			<u>\$ 300</u>
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Total			\$ 4,575
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## ASHWORTH EXPLORATIONS LIMITED

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## Field Trip 3 - June 15, 1987

Field Crew

Consulting Geologist 1/2 day @ \$450/day	\$	225	
Property Owner 1/2 day @ \$450/day		225	
Mob/Demob		<u>500</u>	\$ 950

Field Costs

Helicopter Support 1.5 hrs @ \$650/hr	\$	975	
Food and Accommodation 2 mandays @ \$90/day		180	
Supplies		<u>25</u>	\$ 1,180

Total			\$ 2,130
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## Field Trip 4 - October 6 and 7

2 Geologists 4 mandays @ \$325/day	\$	1,300	
Geotechnician 2 days @ \$210/day		420	
Mob/Demob		<u>1,800</u>	\$ 3,520

Field Costs

4x4 Truck Rental 2 days @ \$110/day	\$	220	
Helicopter Support 2 hours @ \$650/hr		1,300	
Food and Accommodation 6 mandays @ \$90/day		540	
Supplies		<u>150</u>	\$ 2,210

Lab Analysis

21 rock samples - fire assay Au and multi-element ICP \$15/sample	\$	315.00	
5 rock samples - Hg by AAS \$3.50/sample		<u>17.50</u>	
			\$ 332

Total			\$ 6,062
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Total - Field Visits 1,2,3, and 4			\$ 15,277
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Report and Supervision			1,527
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Management			<u>2,520</u>
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Total			\$ 19,325
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APPENDIX A  
ANALYTICAL RESULTS

ASHWORTH EXPLORATIONS LIMITED

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# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
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(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 860560 GA

JOB NUMBER: 860560

ASHWORTH EXPLORATION LTD.

PAGE 1 OF 1

SAMPLE #	Cu	Pb	Zn	Ag	Au
	ppm	ppm	ppm	ppm	ppb
TD 86-01	35	91	190	1.2	200
TD 86-02	359	37	80	26.3	12000
TD 86-03	120	10	195	5.4	3360
TD 86-04	372	65	90	3.8	20740
TD 86-05	140	20	212	1.1	50
TD 86-06	167	56	1350	3.0	7610
TD 86-07	910	56	126000	10.6	2740
TD 86-08	65	56	382	1.0	100
TD 86-09	40	45	285	7.0	10900

DETECTION LIMIT

nd = none detected

1 2

-- = not analysed

1 0.1 5

is = insufficient sample



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REPORT NUMBER: 860620 GA

JOB NUMBER: 860620

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PAGE 1 OF 1

SAMPLE #	Cu	Pb	Zn	Ag	Au
	ppm	ppm	ppm	ppm	ppb
JF- 1	5700	10	10	6.6	1230
JF- 2	4600	16	26	3.4	70
JF- 3	3210	4	14	2.1	80
LA- 1	81	15	64	.3	10
LA- 2	97	21	188	.6	10
LA- 3	120	16	115	.2	10
LA- 4	111	20	226	.2	10
LA- 5	86	19	130	.2	60
LA- 6	105	20	375	.7	340
LA- 7	79	21	145	2.8	4830
LA- 8	71	16	1880	2.9	2670
LA- 9	87	19	123	nd	55
LA-10	216	8	55	.4	150
NEW ADIT #1	51	21	85	.4	10
NEW ADIT #2	21	31	60	.5	5
TD - 2000	10	10	9	.4	10
UPPER ADIT GRAB 1	275	25	45	9.2	32800
UPPER ADIT GRAB 2	180	10	43	4.4	9390
UPPER ADIT GRAB 3	46	3	21	1.2	1200
UPPER ADIT 3.5m CHIP	362	10	850	2.3	5690

DETECTION LIMIT

nd = none detected

1

2

-- = not analysed

1

0.1

5

is = insufficient sample



**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 HG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: Rock Chips     AU\*\* ANALYSIS BY FA+AA FROM 10 GM SAMPLE. HG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: OCT 8 1987

DATE REPORT MAILED: *Oct 16/87*

ASSAYER: *D. J. ...* DEAN TOYE, CERTIFIED B.C. ASSAYER

ASHWORTH EXPLORATION

File # 87-4731

SAMPLE#	HG	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	HG	BA	TI	B	AL	NA	K	W	AU**	HG
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPB	PPB
TDC-87-1	1	8	7	28	.1	13	7	1659	2.09	5	5	ND	1	125	1	2	2	25	17.44	.010	3	16	1.33	57	.01	3	.93	.07	.06	1	30	-
TDC-87-2	12	20	177	193	1.0	8	7	771	2.85	4	5	ND	2	118	1	2	2	56	1.86	.033	4	6	.69	31	.10	2	1.27	.07	.11	1	15	30
TDC-87-3	2	48	7	56	.1	7	10	478	4.36	5	5	ND	1	58	1	2	2	32	.13	.037	2	7	1.07	26	.03	4	1.08	.07	.18	1	5	-
TDC-87-4	1	55	3	84	.1	7	10	562	3.77	2	5	ND	1	82	1	2	2	36	1.81	.049	2	5	1.08	34	.09	2	1.60	.14	.18	1	1	-
TDC-87-5	3	48	5	52	.1	12	7	549	3.55	9	5	ND	1	42	1	2	2	58	1.71	.041	2	26	.81	17	.16	8	1.41	.08	.04	1	21	-
TDC-87-6	1	88	7	55	.1	5	19	1519	5.63	2	5	ND	1	41	1	2	2	119	.94	.048	2	13	1.44	49	.24	2	2.27	.27	.46	1	1	-
TDC-87-7	1	1004	2	20	11.2	4	15	620	5.72	2393	5	4	1	19	1	3	2	1	4.24	.001	2	3	.05	3	.01	2	.10	.01	.01	2	4145	-
TDC-87-8	1	68	2	17	.1	13	7	194	1.99	2	5	ND	1	200	1	2	2	63	1.72	.024	2	36	.54	70	.08	2	1.10	.14	.14	1	23	-
TDC-87-9	1	110	12	41	1.2	33	14	866	2.86	2	5	ND	1	239	1	2	2	42	6.68	.038	2	69	1.48	10	.01	6	1.56	.10	.06	1	142	-
TDC-87-10	3	24	3	29	.1	22	10	1656	2.92	7	5	ND	1	199	1	2	2	49	12.55	.067	12	25	1.75	739	.01	2	.87	.04	.03	1	9	-
TDC-87-11	1	68	6	30	.1	21	9	699	2.33	3	5	ND	1	64	1	2	3	29	5.51	.041	7	25	1.27	46	.01	2	.69	.04	.16	1	5	-
TDC-87-12	76	73	43	45	1.1	105	15	233	17.49	113	5	ND	3	9	1	7	2	27	.17	.022	4	10	.32	9	.01	2	.72	.01	.15	2	58	860
TDC-87-13	13	104	15	184	.6	19	3	330	3.66	18	5	ND	1	122	1	7	2	29	3.78	.071	3	10	.07	36	.01	2	.36	.02	.12	1	14	240
TDC-87-14	3	102	7	36	.1	9	3	130	2.00	6	5	ND	1	6	1	3	2	4	.07	.012	3	7	.06	40	.01	2	.23	.01	.05	1	8	50
TDC-87-15	10	14	5	20	1.0	7	1	68	.88	8	7	ND	1	19	1	3	2	28	.01	.026	5	8	.08	106	.01	4	.21	.01	.11	1	12	910
TDC-87-16	19	58	10	101	.4	8	2	82	1.87	22	8	ND	2	61	1	4	2	23	.72	.051	5	6	.04	88	.01	2	.30	.04	.09	1	8	-
TDF-87-1	2	119	8	48	.6	13	15	688	7.53	6	5	ND	1	21	1	2	3	70	.68	.054	2	19	.93	15	.09	4	1.75	.06	.13	1	11	-
TDF-87-2	1	351	3	15	.2	3	10	521	3.62	2	5	ND	1	230	1	2	2	5	20.74	.035	3	3	.08	8	.02	2	.28	.01	.02	13	9	-
TDF-87-4	1	14	2	17	.1	7	3	2234	.58	2	5	ND	1	108	1	2	2	5	5.43	.027	10	1	2.24	28	.01	3	.07	.01	.03	1	1	-
TDF-87-5	1	6	7	21	.1	26	7	1576	1.69	2	5	ND	1	838	1	2	2	17	31.00	.011	2	28	.70	36	.01	4	.78	.01	.01	1	1	-
TDF-87-6	2	26	3	63	.1	74	14	1047	5.29	5	5	ND	1	325	1	2	2	41	14.87	.058	7	78	1.50	64	.01	2	1.27	.04	.08	1	1	-
STD C/AU-R	19	59	41	130	7.1	65	27	1130	3.91	40	21	8	36	50	18	17	20	56	.49	.083	38	61	.87	180	.06	34	1.83	.06	.13	12	485	1300

APPENDIX B  
ROCK SAMPLE DESCRIPTIONS

ASHWORTH EXPLORATIONS LIMITED

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Field Visit 1

**ROCK SAMPLE DESCRIPTIONS**

<u>Sample No.</u>	<u>Description</u>
TD86-01	Quartz float, abundant large boulders 1'x2', rusty quartz with chalcopryrite present.
TD86-02	Quartz vein strike 350 degrees, dip 70 degrees east exposed for 9 feet, then goes over a cliff, sample across 10 cm.
TD86-03	Quartz vein in adit strike 295 degrees/70 NE, 40 cm wide.
TD86-04	Quartz vein 20 cm wide on top of adit, 10 cm from vein (03), green weathered surface, Cu leaching.
TD86-05	Black sandy material, taken at the end of the adit.
TD86-06	High in pyrite, chalcopryrite within black fine grained volcanic.
TD86-07	Calcite vein (?), disseminated with pyrite and chalcopryrite, 5 cm wide running across roof (similar to 06), black host with quartz-carbonate stringers.
TD86-08	Quartz vein - 10 cm wide, up wall and across roof, fine grained sulphides, rusty with iron stains and sulphur present.
TD86-09	mineralized volcanic zone, dark, grey-green fine grained disseminated volcanic, lots of pyrite and chalcopryrite, small quartz stringers.

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## Field Visit 2

<u>Sample No.</u>	<u>Description</u>
LA-1	Carbonate stringers in siliceous grey rock, minor quartz stringers, highly weathered, no prominent structural direction (5 m chip sample).
LA-2	Carbonate rock with trace of pyrite, (5 m chip sample).
LA-3	The same as LA-2, but with 1-2% sulphides in small calcite stringers, 5 m chip sample.
LA-4	Carbonate crackle breccia rock with trace pyrite. (5 m chip sample)
LA-5	Sample collected from the right wall (facing into the adit), greyish, green pods of sulphide minerals, then back into cherty - carbonate rock. 5 m chip sample.
LA-6	Taken from the left wall, massive, black to grey rock with no mineralization 40-20 cm of carbonate vein, strikes 20 degrees and dips 70 degrees east (5 m chip sample).
LA-7	.7 m chip sample includes 20 cm of quartz vein, trace of sulphides - 35 cm of quartz carbonate with 3% sulphides and 15 cm of 10-20% pyrite, the vein strikes about 340 degrees dip 40 degrees east.
LA-8	Grab sample taken from quartz material with 5-10% sulphides.
LA-9	1.5 m chip sample of sheared crackle breccia, no visible mineralization.
LA-10	A chip sample over .7 metre quartz vein and silicified rock NE of adit #2, no obvious sulphides.
Upper Adit Grab 1	Semi-massive arsenopyrite, pyrite, powdery, green oxidized quartz vein with sulphide dissemination.
Upper Adit Grab 2	Green to grey siliceous crackle rock disseminated with pyrite, iron stained.

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Sample No.	Description
Upper Adit Grab 3	White bull quartz vein 10 cm wide disseminated with pyrite.
Upper Adit 3.5 Chip	Fairly continuous chip sample across a part of system that has two As stains, little sulphides in highly weathered material.
JF-1	White bull quartz vein with coarse pyrite, as py (10-15%), taken as a dump sample from the Pavilion Mine ore.
JF-2	White bully quartz vein with malachite pyrite and chalcopryite, 10% sulphides in rusty stained vein, dump from Pavilion mine ore (30 cm width of vein).
JF-3	Similar to JF-2, taken at 60 metres north of shaft, dump sample.
New Adit #1	Grab sample taken from Adit #3.
New Adit #2	Grab sample taken from Adit #3.
TD-2000	Grab sample taken from NE of adit #2.

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Field Visit 4

**ROCK SAMPLE DESCRIPTIONS**

Sample No.	Description
TDC-87-1	E-W trending shear between Pavilion shaft and River adit, blasted out gouge 10"-1' wide, rusty gouge with dolomite?
TDC-87-2	From sericite zone between Pavilion and Big Slide mines 6" shear runs 100 degrees, 80 degrees NW, Fe-stained, pyrite ghosts, silicified.
TDC-87-3	Small blast pit just above adit to north of Big Slide mine, sedimentary rock, may be argillite, completely altered to Fe-Ox, yellow clay, grab sample 1mx1m.
TDC-87-4	Grab sample taken from 5 metres long adit, below sample #3, altered rock, similar to above (#3), the sample collected from both walls of adit 8" wide, Breccia - no definable structure.
TDC-87-5	Grab sample 2m x 2m, 10 metres south of adit. Altered tuff, limey coats, weathered out pyrite, Fe staining.
TDC-87-6	Rusty altered zone of argillite, silicified contains 20-40% pyrite, perhaps other fine-grained sulphides, grab sample 2m x .5m of silicified rock.
TDC-87-7	Dump sample taken from Big Slide of quartz material just west of mill. Lots of pyrite, minor chalcopyrite, some Cu-staining. Bands of sulphides 2 cm wide.
TDC-87-8	Grab sample taken from 8 m away from face of tunnel, grab of floor material (Adit 4).
TDC-87-9	Shear zone NS, 85 degrees, .5 m wide, clay gouge - soft, limey, 120 m from face. (Adit 4).
TDC-87-10	Shear zone, splits, full of iron stain, 6" wide, center is 1 cm-3 cm calcite vein, host rock probable dolomite, 213 m from face. (Adit 4).

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Sample No.	Description
TDC-87-11	Taken at 222 m from face, 10 m from adit, .5 m shear zone full of calcite and Fe stains. (Adit 4).
TDC-87-12	Along railway track - pods of massive sulphides within shaley seds. pyrite, sph? >90% sulphides, broken host rock. Sulphides in egg shaped lenses, 12" long dimension.
TDC-87-13	Further south along RR track - Black silicified zone with gypsum in seds., lots of quartz.
TDC-87-14	Further south - quartz vein up to 10 cm wide, barren, some pseudomorphs after calcite, hosted by black shattered siltstone, associated with felsic dyke.
TDC-87-15	Further south railway track. Mn-rich zone in seds - some Fe-stains, yellow clays, grab sample over 3 m x 3 m, the black Mn zone continus for >100 m.
TDC-87-16	Grab sample rusty Fe-stained, zone with gypsum or calcite.
TDF-87-1	Sample from 1' wide silicified zone, visible sulphides, rusty with yellow and green powder, the zone strike 20 degrees N.
TDF-87-2	Rusty vein 0.3 metre wide, intense yellow, brown limonite, trending 28, azurite-malachite stain, pyrite and chalcopyrite dissemination.
TDF-87-4	Quartz vein strike 20 degrees N, 8-10 cm wide, 15 metres above adit 3, some epidote.
TDF-87-5	10-12 cm quartz vein, strike 20 degrees, dip 42 degrees in south wall.
TDF-87-6	15-20 cm quartz vein, sample taken across the vein exposed in the north wall (Adit 3).

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APPENDIX C

ANALYTICAL TECHNIQUES

ASHWORTH EXPLORATIONS LIMITED

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## VANGEOCHEM LAB LIMITED

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BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

December 1st, 1987

TO: Peter Leriche  
ASHWORTH EXPLORATION LTD.  
Mezz Fir - 744 W. Hastings St.  
Vancouver, B.C. V6C 1A5

FROM: Vangeochem Lab Limited  
1521 Pemberton Avenue  
North Vancouver, British Columbia  
V7P 2S3

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 Fahrenheit to form a lead "button".
- (c) The gold is extracted by cupellation and parted with diluted nitric acid.



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(604) 251-5656

(d) The gold bead is retained for subsequent measurement.

### 3. Method of Detection

(a) The gold bead is dissolved by boiling with sodium cyanide, hydrogen peroxide and ammonium hydroxide.

(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. Conway Chun or Mr. David Chiu and his laboratory staff.

A handwritten signature in black ink, appearing to read 'D. Chiu', written over a horizontal line.

David Chiu  
VANGEOCHEM LAB LIMITED



# VANGEOCHEM LAB LIMITED

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BRANCH OFFICE  
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(604) 251-5656

December 1st, 1987

TO: Peter Leriche  
ASHWORTH EXPLORATION LTD.  
Mezz Fir - 744 W. Hastings St.  
Vancouver, B.C. V6C 1A5

FROM: Vangeochem Lab Limited  
1521 Pemberton Avenue  
North Vancouver, British Columbia  
V7P 2S3

SUBJECT: Analytical procedure used to determine hot acid soluble  
for 28 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:HN03: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 dimineralized water and thoroughly mixed.



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### 3. Method of Analyses

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

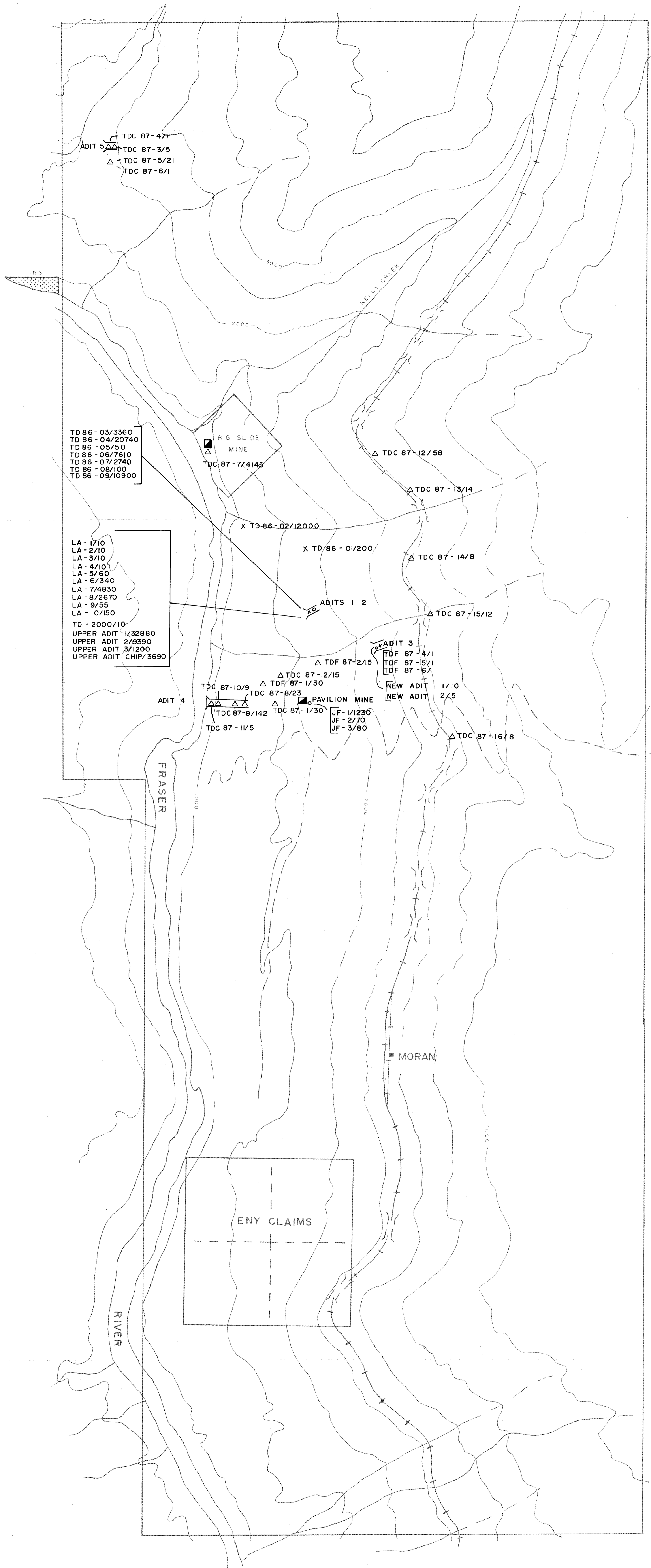
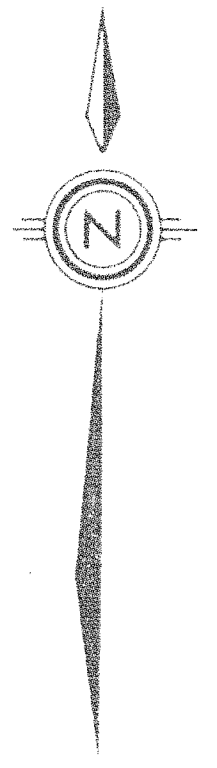
### 4. Analysts

The analyses were supervised or determined by either Mr. Eddie Tang, and, the laboratory staff.

A handwritten signature in cursive script, reading 'Eddie Tang', written over a horizontal line.

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Eddie Tang  
VANGEOCHEM LAB LIMITED



**ANALYTICAL RESULTS**

SAMPLE #	Cu	Pb	Zn	Pg	Au
	ppm	ppm	ppm	ppm	ppb
TD 86-01	25	91	196	1.2	280
TD 86-02	255	37	98	26.3	12900
TD 86-03	128	18	195	5.4	3360
TD 86-04	372	65	98	3.8	2870
TD 86-05	148	28	212	1.1	28
TD 86-06	167	56	1350	3.0	7610
TD 86-07	518	56	125000	18.6	2740
TD 86-08	65	56	382	1.0	180
TD 86-09	48	45	285	7.8	18900
JF-1	5700	18	18	6.5	1230
JF-2	4500	16	26	3.4	70
JF-3	3210	4	14	2.1	80
LA-1	81	15	64	.3	18
LA-2	97	21	188	.6	18
LA-3	128	16	115	.2	18
LA-4	111	28	226	.2	18
LA-5	86	19	138	.2	68
LA-6	195	28	325	.7	348
LA-7	79	21	145	2.8	4830
LA-8	71	16	1880	2.9	2670
LA-9	87	19	123	nd	55
LA-10	216	8	55	.4	150
NEW ADIT #1	51	21	85	.4	18
NEW ADIT #2	21	31	68	.3	5
TD-2000	18	18	9	.4	18
UPPER ADIT GRAB 1	275	25	45	9.2	3280
UPPER ADIT GRAB 2	189	18	43	4.4	9390
UPPER ADIT GRAB 3	46	3	21	1.2	1590
UPPER ADIT 3.5m CHIP	352	18	858	2.3	5690
TDC 87-1	8	7	28	.1	ND
TDC 87-2	20	177	175	1.0	ND
TDC 87-3	48	7	54	.1	ND
TDC 87-4	55	3	84	.1	ND
TDC 87-5	48	5	52	.1	ND
TDC 87-6	88	7	55	.1	ND
TDC 87-7	1004	2	20	11.7	4
TDC 87-8	48	2	17	.1	ND
TDC 87-9	116	12	41	1.2	ND
TDC 87-10	24	3	29	.1	ND
TDC 87-11	68	4	32	.1	ND
TDC 87-12	77	45	45	1.1	ND
TDC 87-13	104	15	184	.4	ND
TDC 87-14	102	7	54	.1	ND
TDC 87-15	14	5	26	1.0	ND
TDC 87-16	58	10	101	.4	ND
TDF 87-1	118	8	48	nd	4
TDF 87-2	251	5	15	.2	ND
TDF 87-3	14	2	17	.1	ND
TDF 87-4	4	7	21	.1	ND
TDF 87-5	24	3	42	.1	ND
TDF 87-6	58	45	122	1.1	40

**LEGEND**

- TDB6-01/100 Sample Number / Gold(ppb)
- X FIELD VISIT 1 - Sample Site
- O FIELD VISIT 2 - Sample Site
- Δ FIELD VISIT 4 - Sample Site
- MINESITE
- || ADIT
- PROPERTY BOUNDARY
- - - - - CONTOUR LINE (500' INTERVALS)
- ROAD (Approx)
- ~ CREEK
- RAILWAY

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**16,827**

SCALE 1:10,000  
0 100 200 400 500 800 METRES

N.T.S. 92 1/13

PAVILION PROPERTY  
CLINTON-LILLOOET M.D.  
SAMPLE LOCATIONS  
and GEOCHEMISTRY  
92 1/13

Scale: 1:10,000 By: PL Dm: VGW  
Date: DEC, 1987 Fig: 4

Ashworth Explorations Limited