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## GEOCHEMICAL REPORT ON THE

## PAVILION PROPERTY

## CLINTON AND LILLOOET MINING DIVISIONS

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For

CLIVE ASHWORTH 1010 - 789 West Pender Street Vancouver, B.C. V6C 1H2

By

Peter D. Leriche, B.Sc., F.G.A.C. 718 - 744 West Hastings Street Vancouver, B.C. V6C 1A5

January 30, 1989

#### SUMMARY

The Pavilion property consists of eight contiguous claims totalling 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 and not part of the subject claims) 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. 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 three feet was reported.

Mineralization on the claims is related to conduits created by the Fraser River fault zone. The main Fraser River fault trends at 170 degrees, approximately 500 metres west of the subject claims. The heat source for the mineralizing solutions was probably derived from Tertiary volcanism. Tertiary basalt flows occur 2.0 kilometres west of the property and basalt roof pendants have been mapped 4.0 kilometres east of the claims.

Rock sampling by Ashworth Explorations Limited from 1986 to 1988 has delineated three target areas. The first area is a quartz vein(s) exposed at Adits 1, 2 and 400 metres northwest of the adits. Values from the vein(s) assayed up to .959 oz/ton gold. These vein(s) strike toward the Big Slide Mine and could be related to the Big Slide vein system. The second target area is the Pavilion vein where samples have yielded up to .059 oz/ton gold, 11,515 ppm copper and

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15.1 ppm silver. The third area is on the Amos claim where one select sample assayed .032 oz/ton gold, 20.3 ppm silver and 5,178 ppm lead.

An exploration program has been recommended consisting of geological mapping, rock sampling, hand blasting, backhoe trenching and de-watering the Pavilion shaft at an estimated cost of \$167,000.

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Appendix A:	Rock Sample Descriptions
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## I. INTRODUCTION

This report summarizes geochemical work carried out by Ashworth Explorations Limited on April 22 and November 17 to 19, 1988 on the Pavilion Property, Lillooet Area, B.C. This report also briefly describes the regional geology, area history and outlines a further exploration program.

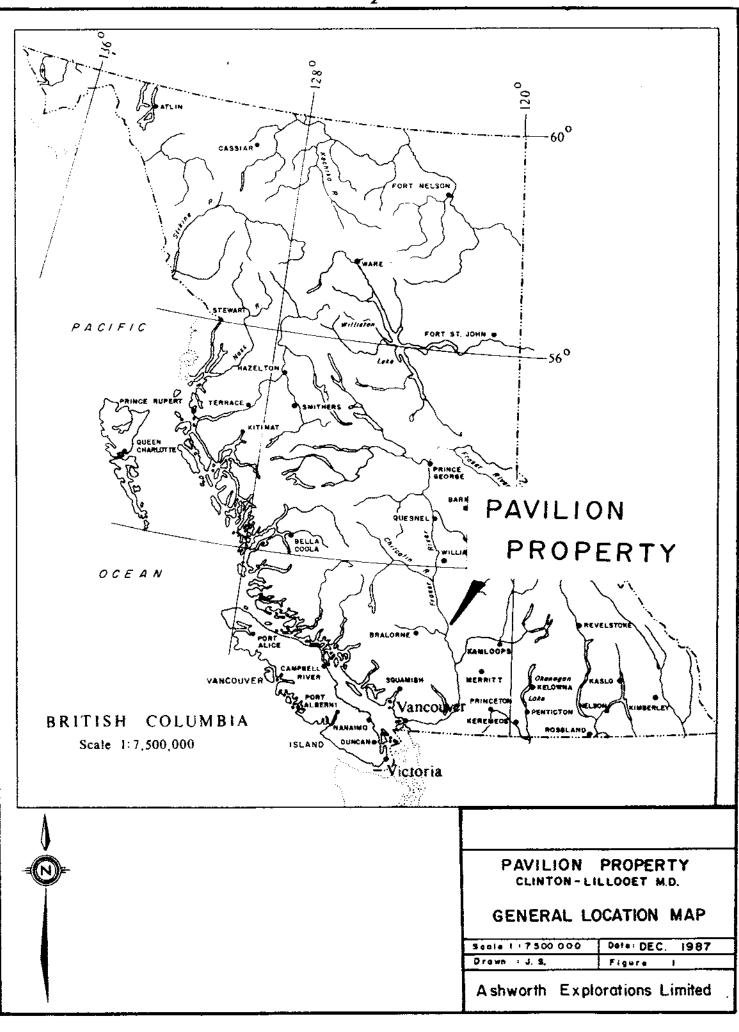
The writer planned and supervised all fieldwork and has examined the subject claims on October 6 and 7, 1987 and April 22, 1988.

## 2. LOCATION, ACCESS AND PHYSIOGRAPHY

The Pavilion property is located along the banks of the Fraser River on NTS map sheet 921/13W. It is situated 25 miles (40 kilometres) north of Lillooet and 15 miles (24 kilometres) 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, two kilometres south of the property. Several dirt roads fork westward from this road and descend to the B.C. Rail mainline and the Fraser River, which both transect the property. The property can also be reached by B.C. Rail, using the 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 metres) above sea level at the river to 4800 feet (1463 metres) 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 six to ten inches) from December through March.

## 3. CLAIM STATUS

The Pavilion property, owned 100% by Clive Ashworth of Vancouver, B.C., lies within the Clinton and Lillooet Mining Divisions of British Columbia. The property consists of 124 claim units in two groups totalling 2975 hectares (corrected for overlap). Pertinent claim data is listed below (Figure 2).

CLAIM NAME	GROUP	UNITS	RECORD #	RECORD DATE	EXPIRY DATE
(Clinton M.D.)					
Two Dog	Lost Adit	*20	2102	Nov. 13/86	Nov. 13/89
Suzie	Lost Adit	18	2103	Nov. 21/86	Nov. 21/89
Lizzie	Lost Adit	15	2104	Nov. 21/86	Nov. 21/89
Lost Adit	Lost Adit	+18	2105	Nov. 21/86	Nov. 21/89
Amos	Lost Adit	+ 9	3606	Nov. 21/86	Nov. 21/89
Ali	Lost Adit	9	3605	Nov. 21/86	Nov. 21/89
(Lillooet M.D.)					
Cav	Kelly	20	2106	Nov. 21/86	Nov. 21/89
Kelly TOTAL	Kelly	$\frac{15}{124}$	2107	Nov. 21/86	Nov. 21/89

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

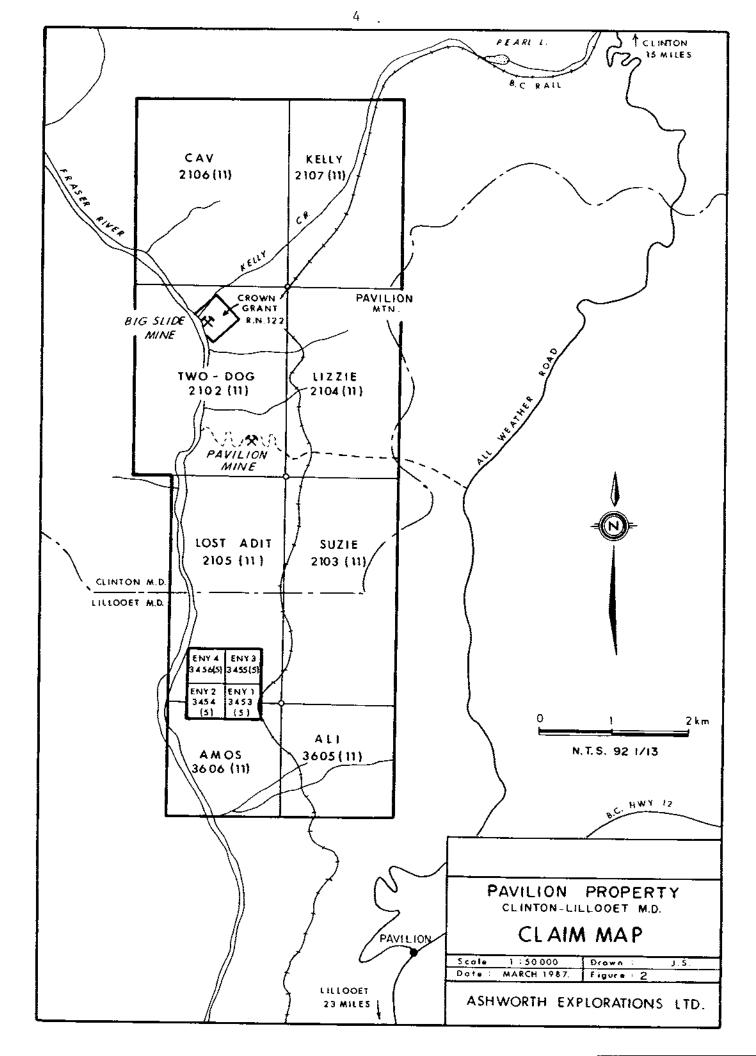
### 4. HISTORY AND PREVIOUS WORK

Big Slide Mine (from Hill, 1987) (encompassed by Two Dog claim but not part of subject claims)

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. Gaul (1935) blocked out reserves of 12,000 tons grading 0.60 oz/ton gold, after dilution. Of this, 4,300 tons were processed prior to mill shutdown in 1935. At that time. development work had taken place on seven levels. The width and grade of the veins was improving at lower levels (Allen, 1980). Flooding at the lower levels contributed to the mine shutdown, 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.

#### Pavilion Mine

The 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 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.

Recent Exploration Work (Results are shown on Figures 5 & 6)

The property was examined on November 10 and December 9, 1986. The

following summary is by 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 meters 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 (Figure 5) 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 grab samples were taken outside the shaft at the Pavilion mine.

The best gold value was .036 oz/ton from the Pavilion dump. 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 tested.

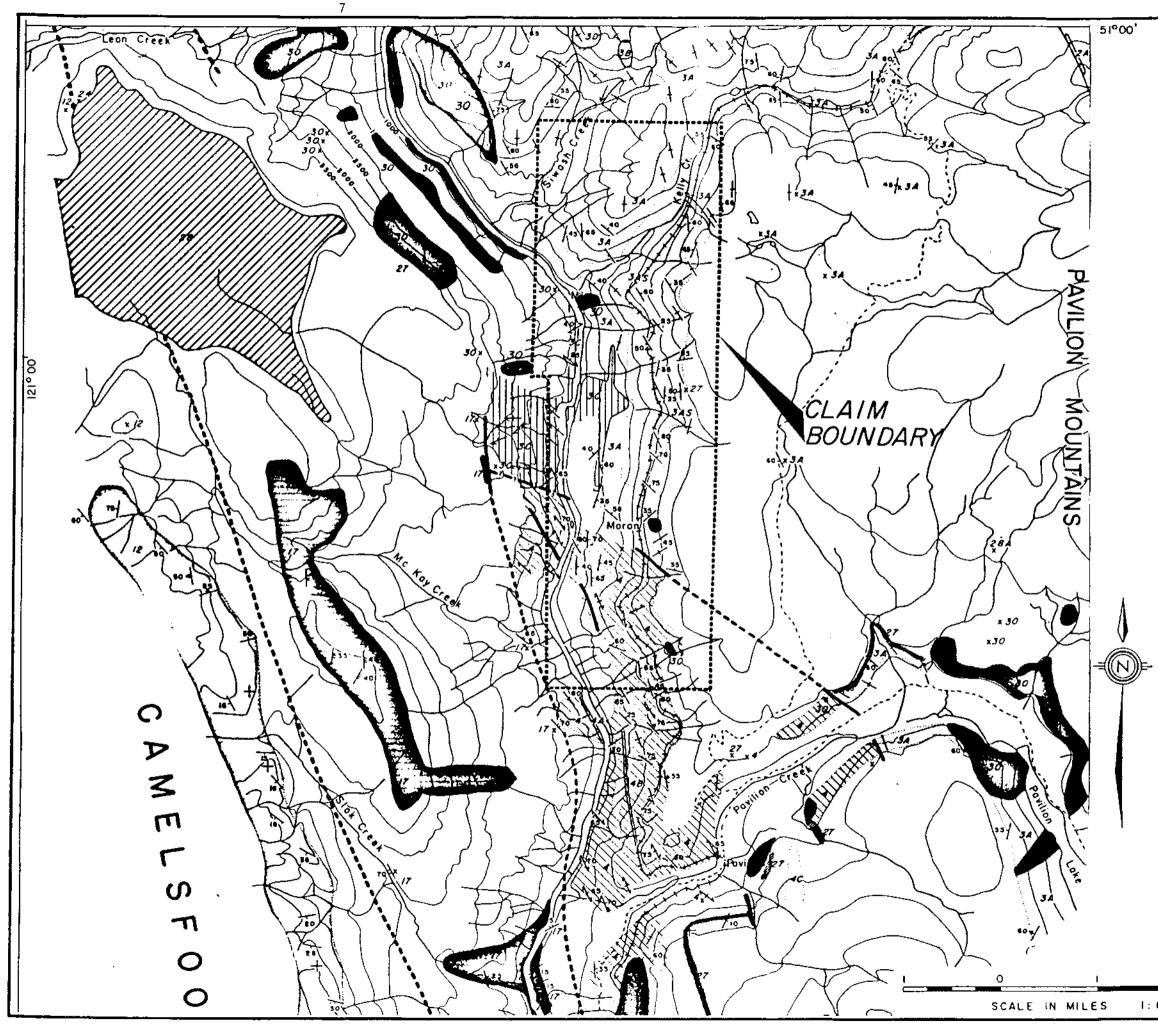
On June 15, 1987, the claim owner (C. Ashworth) and a consultant visited the property. This trip was successful in locating two adits (Adits 4 and 5) and two prospect trenches. Adit 4 is located approximately 700 metres west of the Pavilion shaft on the Fraser River. Adit 5 and the two prospect trenches were located on the northern part of the Cav claim.

On October 6 and 7, 1987, two geologists (including the writer) and a prospector performed geochemical rock sampling in Adits 3, 4 and 5 (see Figure 6) and elsewhere on the property. Altogether 21 rock samples were taken with one significant result of 142 ppb gold from a 0.5 metre wide shear. One select dump sample was collected at the Big Slide mine and results included 4145 ppb gold, 11.2 ppm silver, 1004 ppm copper and 2393 ppm arsenic.

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

The area geology has been mapped by Trettin (1961 and 1980) and Mortimer (1987). Bedrock consists of Permian to Triassic volcanic and sedimentary strata, intruded by Cretaceous-Jurassic diorites and granodiorites.

The oldest rocks in the area belong to the Permian-Triassic Cache Creek Group. This group has been divided (Trettin, 1961) into the "Central" and "Western Belts". The "Central Belt" consists of metabasalt (150 metres thick) overlain by



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30	CRETACEOUS
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	TRIASSIC
	PAVILION GROUP Tuff, volcanic arenite, volcanic flows and greywacke
3	CACHE CREEK GROUP
Ľ	3A+ Chert, argillite, minor tuff, limest lithic sandstone, volcanic flows
	3AS' same, sheared and attered 3C' Amphibalite, homfels, migmatite,
	minor marble
	From: Trettin, B.C. Dept.of Mines Bulletin 44, 1961
	PAVILION PROPERTY

PAVILION PROPERTY CLINTON-LILLOOET M.D.

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## REGIONAL GEOLOGY

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limestone-marble of the Marble Canyon Formation (400 metres thick). The "Central Belt" is stratigraphically overlain by the "Western Belt" and consists of argillite, siliceous argillite, ribbon chert, limestone and volcaniclastic sandstone (Trettin, 1961; Mortimer, 1987).

The Triassic age rocks (Pavilion Group) consist of tuff, volcanic arenite, graywacke, volcanic flows, chert, argillite and limestone (Trettin, 1961). This unit is found unconformably overlying or in fault contact with the Cache Creek group. Mortimer (1987) has noted lithological similarities between the Pavilion Beds and the "Western Belt" of the Cache Creek Group. These similarities suggest that the Pavilion Group is part of the "Western Belt" of the Cache Creek Group rather than a separate tectonostratigraphic unit.

The Permian-Trissic strata is intruded by Jurassic plutonic rocks. These rocks consist of hornblende diorite and hornblende-biotite granodiorite. Close to the Fraser River fault the hornblende diorite is weakly to moderately metamorphosed. Secondary metamorphic minerals include actinolite, prehnite, and chlorite.

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. Roof pendants of this basalt also occur approximately 4 kilometres east of the claim. The source of these recent volcanic rocks is probably also the heat source for mineralized quartz veins found on the Pavilion and Big Slide properties.

Structurally, the property lies within the Fraser River fault zone where a complex graben system downdropped large blocks and slices of rock during the Early Tertiary period (Mortimer, 1987). North to north-westerly trending faults

border this graben system, which is often offset by smaller crossfaults. The main Fraser River fault occurs trending north northwest, 500 metres west of the Pavilion property. Most of the faulting is normal, except for these crossfaults, where horizontal and vertical movements are varied.

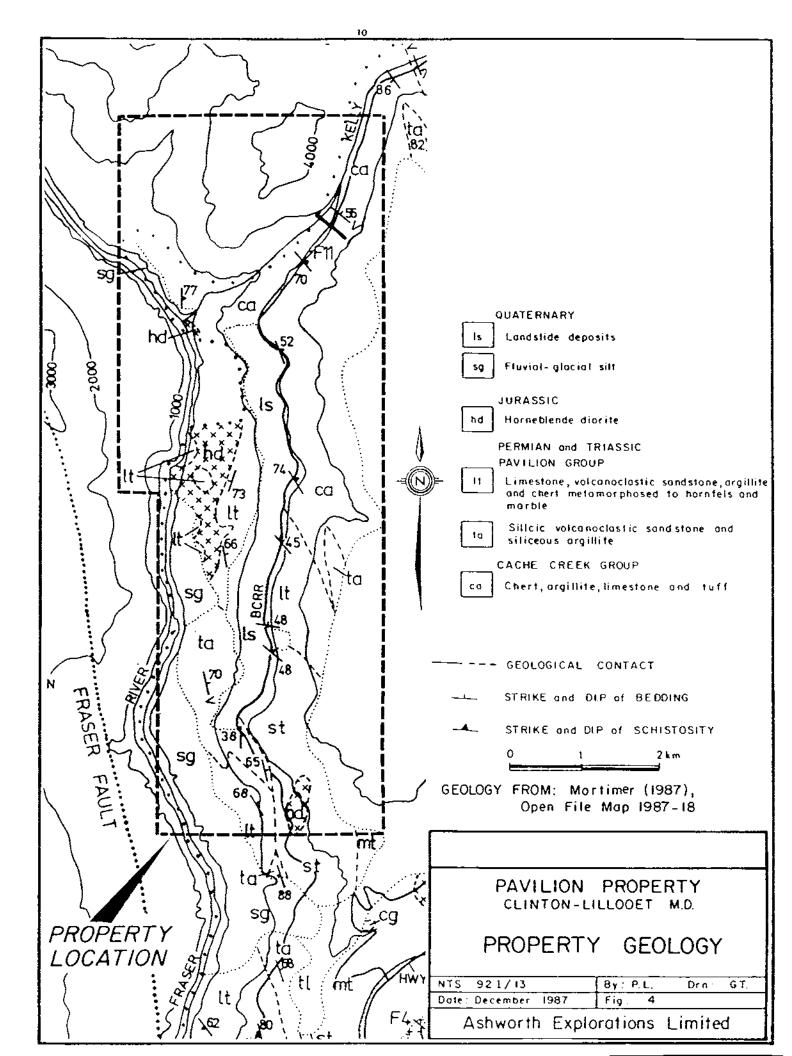
### 6. PROPERTY GEOLOGY

The property geology map (Figure 4) is taken from mapping performed by Mortimer in 1987. Recent prospecting work over a limited area by Ashworth Explorations Limited has found the 1987 mapping to be accurate.

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

The northern two-thirds of the property is underlain by rocks of the "western belt" of the Cache Creek Group (Unit ca, Mortimer, 1987). Unit ca consists of radiolarian chert, argillite, 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.

The Pavilion Group rocks (units ta and lt) occur in the southern one-third of the property in fault contact with the Cache Creek Group. Mortimer has mapped unit ta as light grey silicic volcaniclastic sandstone (tuff) and dark grey siliceous argillite. Unit lt as mapped by Mortimer (1987) occurs as a long north-south trending outcrop in the central part of the claims. It consists of hornfels, migmatite and minor marble adjacent to a large outcrop of hornblende diorite.



Three outcrops of diorite occur on the claims. This unit hosts the mineralized quartz veins at the Big Slide mine and at the Pavilion shaft. 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. 1988 PROGRAM

### 7.1 SCOPE AND PURPOSE

During April and November 1988, three geologists (including the writer) and three prospectors, performed geochemical rock sampling on the Pavilion property.

The purpose of the two programs was to:

a) follow-up and re-sample previous rock sample anomalies, and

b) cover the unexplored parts of the property by prospecting and rock sampling to evaluate its potential.

## 7.2 METHODS AND PROCEDURES

Control for the 1988 surveys was established using topographic features (river, creeks, ridges), railway tracks and roads. An altimeter, compass and hipchain were used for pinpointing locations.

Altogether, 43 rock samples were collected, analyzed for gold by fire assay and multi-element ICP by Vangeochem Lab Ltd. and Acme Analytical Labs. See Appendix B for analytical results and techniques and Appendix A for rock sample descriptions.

### 7.3 ROCK GEOCHEMISTRY

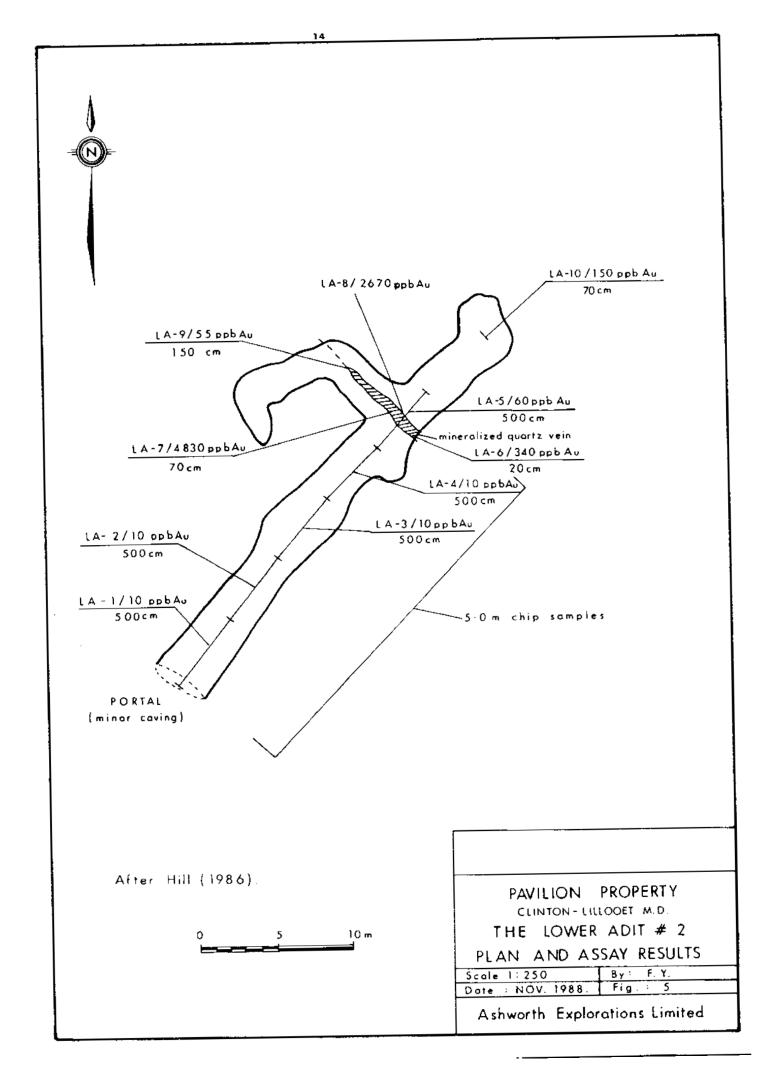
Gold analysis for samples from the April 1988 examination was done by fire assay and detected by atomic absorption. The data is presented in ppb and, for significant results, has been converted to oz/ton figures. The November 1988 analysis was done by fire assay and detected gravimetrically (oz/ton).

The following results are considered significant:

SAMPLE NO.	LOCATION AND DESCRIPTION	VALUE(S)
PV88-R4	Adit #1. Select sample. Sample from two milky quartz veins(50 cm wide) containing rotted out pyrite.	290 ppb Au 775 ppb As
PV88-R5	25 m north of Adit #1. Chip sample- width 0.4m, length 5.0m. Milky quartz vein, attitude 125/70N.	180 ppb Au 623 ppm As
PV88-R7	Adit #2. Chip sample-0.5m. Hanging wall sediments adjacent to 15cm quartz vein.	2260 ppb Au (.066 oz/ton Au) 26302 ppm As
PV88-R9	25 m north of Pavilion shaft. Select sample. From two Y-shaped 10-20 cm quartz veins. 1% disseminated chal- copyrite and malachite staining.	180 ppb Au 2388 ppm Cu

PV88-R10	18 m south of Pavilion shaft. Select sample. Two malachite stained quartz veins, each .16 m wide.	210 ppb Au 15.1 ppm Ag 11515 ppm Cu
PV88-R11	Pavilion shaft. Select Dump sample. Rusty milky quartz vein material with up to 5% chalcopyrite.	225 ppb Au 9.3 ppb Ag 6509 ppm Cu
039930	Adit #1. Composite grab sample from quartz vein swarm.	3267 ppb Au (.095 oz/ton Au) 29763 ppm As
039932	Pavilion shaft. Composite grab sample from quartz vein material containing patch of pyrite and minor chalcopy- rite.	2024 ppb Au (.059 oz/ton Au) 7944 ppm Cu
PV088-R1	Adit #2. Chip sample5m. Quartz vein with trace of pyrite in lower adit.	.022 oz/ton Au 980 ppm As
PV088-R2	Adit #2. Chip sample-1.0m. Silicified rusty argillite.	.099 oz/ton Au 23520 ppm As
PVV88-R1	Adit #2. Chip sample5m. Quartz vein with minor pyrite. Hosted by black argillite.	.024 oz/ton Au 8241 ppm As
PVV88-R3	Adit #1. Chip sample75m. Sample across three quartz veinlets 2-3cm wide. Minor pyrite.	.026 oz/ton Au 11535 ppm As
PVV88-R5	20 m north of Adit #1. Chip sample- .3m. Quartz vein .3 m wide.	.012 oz/ton Au 421 ppm As
PVV88-R17	Amos claim. Chip sample5m. Silici- fied black argillite.	.032 oz/ton Au 5178 ppm Pb 20.3 ppm Ag
PVF88-R1	Adit #2. Select dump sample. Silici- fied black argillite with 20-25% combined pyrite, chalcopyrite, sphaler- ite and limonite.	.092 oz/ton Au 4027 ppm As 80431 ppm Zn
Big Slide Ore Bin	Big Slide Mine. Select sample.	5860 ppb Au (.170 oz/ton) 2273 ppm As 1115 ppm Cu

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Ten of the anomalous rock samples were collected from the Adit #1 and 2 areas. Gold values range from 180 ppb (.005 oz/ton) to .099 oz/ton. Arsenic anomalies correlate 100% (value range of 421 to 29,763 ppm). One reference sample taken from the Big Slide Mine assayed 5860 ppb (.170 oz/ton) Au, 2273 ppm As and 1115 ppm Cu.

Four samples taken from the Pavilion mine area were anomalous in gold and copper, ranging from 180 to 2024 ppb Au (.059 oz/ton) and 2,388 to 11,515 ppm Cu (1.15%). Two samples were anomalous in silver (9.3 and 15.1 ppm).

One rock sample taken from the Amos claim (PVV88-R17) assayed .032 oz/ton Au, 20.3 ppm Ag and 5178 ppm Pb.

### 8. DISCUSSION

Previous work and the 1988 rock sampling program has outlined three target areas.

The first area is along the quartz vein(s) which strike through Adits 1 and 2. Grab and chip sampling from these adits yielded gold results ranging from .005 to .959 oz/ton gold. Along strike from the adits approximately 400 metres northwest, a ten centimetre quartz vein assayed .349 oz/ton gold. This vein or vein system appears to strike into the Big Slide Mine area, and could be the same system. This conclusion is supported by the fact that arsenic has a strong correlation with gold at both the Big Slide Mine and the Adit 1 and 2 area.

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. Samples taken recently

from the surface vein and mine dump have assayed up to .059 oz/ton gold and 1.15% copper.

The third area, discovered in 1988, is on the Amos claim in the southwest corner of the property. One chip sample across 0.50 metres assayed .032 oz/ton gold, 20.3 ppm silver and 5178 ppm lead.

The writer theorizes that mineralized quartz veins emplaced on the Pavilion Property are structurally related to the Fraser River fault system. North to northwest-trending faults, crossfaults and extensional fractures were probably formed during the Early Tertiary period. Hydrothermal solutions, possibly generated by Eocene or Miocene volcanism, migrated up the fracture systems and emplaced the mineralized quartz veins.

## 9. CONCLUSIONS

The Pavilion Property has the potential to host a vein-type precious metalcopper deposit for the following reasons:

- 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 pounds of copper.
- Geologically, the Fraser River Fault system has provided conduits for mineralizing solutions driven by recent basaltic volcanism. This environment is associated with many vein deposits in British Columbia and worldwide.
- Recent prospecting and rock geochemistry have outlined three target areas.

For these reasons, further exploration work is recommended.

## 10. RECOMMENDATIONS

Phase II

- 1) Layout grids over the three target areas.
- 2) Map the grids in detail to trace the veins along strike.
- Backhoe trench the Pavilion vein and Area #3 along strike. The existing roads to the Pavilion Mine and Area 3 will require minor rehabilitation.
- Blast and rock sample the vein along strike from Adits 1 and 2. Perform detailed mapping and systematic panel sampling in Adit 2.
- Perform 1500 feet of diamond drilling to test the continuity of the veins in Adits 1 and 2 at depth.
- 6) De-water the Pavilion shaft. Map and sample the underground workings to test the grades at depth and define the attitude of the vein.
- Perform reconnaissance mapping and rock sampling on the remainder of the property.

Phase III is contingent upon favourable results from Phase II and would consist of further diamond drilling of the mineralized structures.

#### 11. PROPOSED BUDGET

PHASE II

## (Project geologist, geotechnician; 20 field days Geologist; prospector, blaster, 2 geotechnicians; 10 field days)

Project Preparation		\$ 1,800
Mob/Demob (includes transportation, freight and wages)		4,940
Field Crew		22,650
Field Costs (includes helicopter support, food and		
accommodation, rentals, freight, supplies, two trucks)		34,425
Backhoe \$110/hr x 50 hrs		5,500
Diamond Drilling \$40/ft x 1500 ft (all inclusive)		60,000
Reclamation		3,000
Lab Analysis -Say 300 rock samples @ \$19/sample		5,700
Supervision and Report		7,450
Sub-total		\$ 145,465
Administration 15%		21,819
Total		\$ 167,284
	(Say	\$ <u>    167,000</u> )

Respectfully submitted,

Peter D. Leriche, B.Sc., F.G.A.C.

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Various newspaper clippings from 1932-1934.

## CERTIFICATE

I, PETER D. LERICHE, of 3126 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 am a Fellow in good standing with the Geological Association of Canada.
- 3. I have actively pursued my career as a geologist for ten years in British Columbia, Ontario, Yukon and Northwest Territories, Arizona, Nevada and California.
- 4. The information, opinions, and recommendations in this report are based on fieldwork carried out under my direction, and on published and unpublished literature. I examined the subject claims on April 22, 1988.

Peter D. Leriche, B.Sc., F.G.A.C.

Dated at Vancouver, January 30, 1989

ITEMIZED COST STATEMENTS (Consultant, Geologist, Prospector-April 22, 1988; 1 field day)

Project Preparation Mob/Demob (includes transportation, freight and	wages)		\$	180 1,305
<u>Field Crew</u> Geologist \$325/day x 1 day Consultant \$400/day x 1 day Prospector \$210/day x 1 day	\$	325 400 210		935
<u>Field Costs</u> Food and Accommodation \$70/day x 3 mandays Communications \$25/day x 1 day Supplies 1 4X4 Truck \$110/day x 1 day	\$	210 25 25 _110		370
Lab Analysis 16 rock samples @ \$18/sample Au by FA/AAS, Multi-element ICP				288
Report Costs Report Writing Map plotting and Drafting Word Processing, Copying, Binding	\$	325 250 200		775
Total			\$	3,853
(Geologist, 2 Geotechnicians, November	17-19,	1988; 3 fie	ld days)	
Project Preparation Mob/Demob (includes transportation, freight and	wages)		\$	150 1,050
<u>Field Crew</u> Project Geologist \$275/day x 3 days 3 Geotechnicians \$210/day x 6 mandays	\$	825 1,260		2,085
<u>Field Costs</u> Helicopter Support \$650/hr x 21 hrs Food and Accommodations \$70/day x 9 mandays Communications \$25/day x 3 days Supplies 1 4X4 Truck \$110/day x 3 days	\$	1,365 630 75 75 <u>330</u>		2,475
Lab Analysis 24 rock samples @ \$16.25/sample Fire Assay Au/AA, Multi-element ICP				390
Report Costs Report Writing Map plotting and Drafting Word Processing, Copying, Binding	\$	650 300 150		1,100
Total			\$	<u>7,250</u>

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APPENDIX A

ROCK SAMPLE DESCRIPTIONS

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## ROCK SAMPLE DESCRIPTIONS - PAVILION PROPERTY

SAMPLE NO.	DESCRIPTION	WIDTH(cm)
PVF88-R1	Dump sample; Rusty, silicified black argillite, 20-25% disseminated pyrite and chalcopyrite, minor fine-grained powdery galena and limonite.	
PVF88-R2	Chip sample; Silicified rusty black shale, light brown to yellow iron staining on weathered sur- faces.	200
PVF88-R3	Chip sample; Quartz vein striking 310 degrees hosted by black shale with rusty weathered sur- faces exhibiting limonite staining.	25
PVF88-R4	Chip sample; Rusty argillite with weak to moderate argillic alteration, 15-20% quartz. No sulphides.	100
PVF88-R5	Chip sample; Small rusty zone of andesite(?), 5-10% limonite staining on weathered surfaces.	100
PVF88-R6	Chip sample; Subcrop quartz vein intercalated with black argillite, sugary quartz, minor disseminated pyrite.	30
PVF88-R7	Chip sample; Rusty, altered, light to dark brown zone at contact between plagioclase volcanic por- phyry and black altered argillite.	100
PVF88-R8	Chip sample; Sheared zone striking north dipping 75 degrees east. Moderate argillic alteration, minor carbonate, 10% orange to light brown oxides, trace of pyrite.	400
PVF88-R9	Chip sample; Rusty altered zone of weathered, friable black argillite, striking north, dipping 65 degrees east. No visible mineralization.	30
PVF88-R15	Float; Angular massive quartz vein material, light brown, rusty cleavage, no obvious sulphides.	
PVF88-R16	Chip sample; Light to dark brown rusty zone with weak to moderate argillic alteration, 5% fine- grained pyrite hosted by black argillite.	40
PVF88-R17	Chip sample; Same zone as R16 but 30 m northwest. Rusty light to dark brown altered zone, 5% quartz, trace fine-grained pyrite. Zone hosted by black argillite.	200
PVV88-R01	Chip sample; Quartz vein with minor pyrite, hosted by black argillite.	50

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PVV88-R02	Chip sample; Quartz vein with 1-2% disseminated py- rite in rusty black argillite.	50
PVV88-R03	Chip sample; Three subparallel quartz veins, 2-3 cm wide, strike 310-350 degrees at entrance of upper adit. Minor disseminated pyrite.	75
PVV88-R04	Dump sample; Rusty quartz vein material at Adit 2.	
PVV88-R05	Chip sample; Quartz vein 340/70E, .3 metres wide, 20 metres north of Adit 1. Rusty quartz, no obvi- ous sulphides.	30
PVV88-R06	Chip sample; Rusty quartz vein striking 320 degrees, dip 65 degrees east located 65 m northwest of adit. Hosted by black argillite.	30
PVV88-R07	Chip sample; Silicified zone, moderate argillic alter- ation. Strike 340 degrees. Rusty red-yellow with abundant iron oxides.	200
PVV88-R08	Chip sample; Rusty yellow oxidized zone, 4 metres wide striking 360/75E along roadcut, 10 m north of Kelly Creek. Hosted by black argillite.	400
PVV88-R09	Chip sample; Moderate argillic alteration zone, 100 m north of Kelly Creek along roadcut. Rusty, yellow altered rocks, 1-2% fine-grained pyrite.	100
PVV88-R10	Chip sample; Four quartz veins 10-20 cm each, strik- ing 360/80E. Sample across veins and black argillite wallrock.	200
PVV88-R16	Float; Altered pyritic argillite boulder (approx. one cubed metre), hosting 1-2 mm quartz veinlets.	
PVV88-R17	Chip sample; Silicified black argillite, sheared, No obvious sulphides.	50
PVO88-R01	Chip sample; Quartz vein inside lower adit, minor chalcopyrite, trace pyrite.	50
PVO88-R02	Chip sample; Silicified rusty argillite, 10-15% quartz, minor pyrite, trace chalcopyrite.	100
PVO88-R03	Chip sample; Rusty pyritized argillite, minor sili- cification.	50
PVO88-R04	Chip sample; Rusty yellow oxidized zone by railway track, 5% pyrite.	200
PVO88-R05	Chip sample; Shear zone in argillite near north bank of Kelly Creek. Moderate argillic alteration with minor pyrite.	100

039929	Dump sample; Dump near No. 3 level adit, Big Slide Mine. Highly shattered and weakly limonitized white quartz.	
039930	Composite grab sample; Quartz vein swarm above #1 adit, Pavilion.	
039931	Grab sample; Highly sheared granodiorite, 300 m south of #2 adit, Pavilion.	
039932	Composite grab sample; From dump near shaft, Pavilion. Chlorite-ribboned white quartz vein with patches of pyrite and trace chalcopyrite.	
PV88-R1	Select sample; Small rusty quartz-carbonate veinlet within rusty carbonaceous sediments, chlorite, pos- sibly sphalerite.	
PV88-R2	Select sample; Quartz vein 15-20 cm wide, striking east-west, dipping slightly to north. Host rock is medium-dark gray, slightly chloritic argillite.	
PV88-R3	Select sample; Graphitic horizons 25 cm wide within displacement shear. P-direction of schistosity 85/25N.	
PV88-R4	Grab sample; Quartz vein material, rotted sulphides, hosted by black argillite.	
PV88-R5	Chip sample; Milky quartz vein 30-40 cm wide, 25/70N.	500 X35
PV88-R6	Select sample; Medium gray argillite with minor rust, few small quartz veinlets. From small shear NW of lower adit.	
PV88-R7	Chip sample; From hanging wall 15 cm wide quartz vein. Attitude 150/steeply dipping North.	50
PV88-R8	Select sample; Milky quartz-carbonate vein, 20 cm wide, 55/78N.	
PV88-R9	Select sample; Pavilion vein, 25 m north of shaft in wall cut. Strong malachite staining, 1% dissemi- nated chalcopyrite, small bands sphalerite(?), pro- pylitic alteration of host rock.	
PV88-R10	Chip sample; 18 metres south of shaft. Two malachite stained quartz veins 16 cm wide, 75 metres between veins, striking 135 degrees, propylitic alteration of quartz diorite.	1250
PV88-R11	Dump grab sample; Rusty milky quartz containing up to 5% chalcopyrite.	

## APPENDIX B

ANALYTICAL RESULTS AND TECHNIQUES

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## VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY 1988 Triumph Street Vancouver, B.C. V5L 1K5 (604)251-5656 FAX:254-5717 BRANCH OFFICE 1630 PANDORA ST. VANCOUVER, B.C. V5L 1L6 (604) 251-5656

## GEOCHEMICAL ANALYTICAL REPORT

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	ASHWORTH EXPLORATION LTD.	DATE:	Apr 28	1988
ADDRESS:	Mez. Fl., 744 W. Hastings St.			
:	Vancouver, B.C.	REPORT#:	880405	GA
:	V6C 1A5	JOB#:	880405	

PROJECT#:	170
SAMPLES ARRIVED:	Apr 26 1988
REPORT COMPLETED:	Apr 28 1988
ANALYSED FOR:	Au (FA/AAS)

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INVOICE#: 880405 NA TOTAL SAMPLES: 12 SAMPLE TYPE: 12 Rock REJECTS: SAVED

SAMPLES FROM: Vancouver office. COPY SENT TO: All copies sent to Vancouver office.

PREPARED FOR: Mr. Peter Leriche

ANALYSED BY: VGC Staff SIGNED:

GENERAL REMARK: Fire assay for Au > 2000 ppb.

# VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY 1988 Triumph Street Vancouver, B.C. VSL 1K5 (604)251-5656 FAX:254-5717 BRANCH OFFICE 1630 PANDORA ST. VANCOUVER, B.C. V5L 1L6 (604) 251-5656

PAGE 1 OF 1

			(007/101 0000	I BALLUT WILL
_	REPORT NUMBER: 88040	5 GA JOB	NUNBER: 880405	ASHWORTH EXPLORATION LTD.
	SAMPLE #	Au		
		ppb		
	PV88 - R1	nd		
	PV88 - R2	5		
	PV88 - R3	10		
	PV86 - <del>R</del> 4	290		
	PV88 - R5	180		
	PV88 - R6	30		
	PV88 - R7	2260		
	PV88 - R8	15		
	PV88 - R9	180		
	PV88 - R10	210		
	PV88 - R11	225		
	BIG SLIDE ORE BIN	5860		

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VGC

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## VANGEOCHEM LAB LIMITED

NAIN OFFICE AND LABORATORY 1988 Triumph Street Vancouver, B.C. V5L 1K5 (604)251-5656 FAX:254-5717 BRANCH OFFICE 1630 PANDORA ST. VANCOUVER, B.C. VSL 1L6 (604) 251-5656

## ASSAY ANALYTICAL REPORT

CLIENT:	ASHWORTH EXPLORATION LTD.	DATE:	Apr 28	1988
ADDRESS:	Mez. Fl., 744 W. Hastings St.			
:	Vancouver, B.C.	REPORT#:	880405	AA
:	V6C 1A5	JOB#:	880405	

PROJECT#: 170 SAMPLES ARRIVED: Apr 26 1988 REPORT COMPLETED: Apr 28 1988 ANALYSED FOR: Au INVOICE#: 880405 NA TOTAL SAMPLES: 2 REJECTS/PULPS: 90 DAYS/1 YR SAMPLE TYPE: 2 Rock

SAMPLES FROM: Vancouver office. COPY SENT TO: All copies sent to Vancouver office.

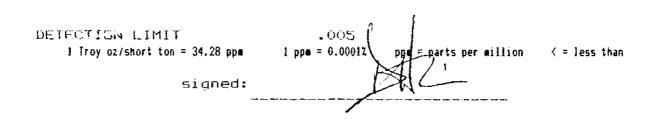
PREPARED FOR: Mr. Peter Leriche

ANALYSED BY: David Chiu SIGNED: Registered Provincial Assayer

GENERAL REMARK: Fire assay for Au > 2000 ppb.

VGC	MAIN OFFICE AND 1988 Triumph Vancouvey, B.C	LABORATORY Street	LAB LIMITI BRANCH OFFIC 1630 PANDORA S VANCOUVER, B.C. V5 (604) 251-5656	<b>E</b> T.		
REPORT NUMBER: 880405 AA	JOB NUMBER: 880405	ASHWORTH EXPL	LORATION LTD.	PAGE	1 OF	1
SAMPLE #	Au oz/st					

PV88 - F	27		.064
BIG SLI	E ORE	BIN	.179



#### VANGEOCHEM LAB LIMITED

MAIN DFFICE: 1521 PEMBERTON AVE. N.VANCOUVER B.C. V7P 2S3 PH: (604)986-5211 TELEX:04-352578 BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V5L 1L6 PH: (604)251-5656

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#### ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 NL OF 3:1:2 NCL TO HNO3 TO H2D AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR SH,MH,FE,CA,P,CR,MG,8A,PD,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM. IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: ATTENTION PROJECT:	N 2	атн (	EXPL					REPOR JOB#: INVDI	880	0405						E CO	MPLE	ED: 8 TED: 0: P	8674	04/27	,				ANAL	YST_	2	<u>li</u>
																						PAG	SE 1 OF	F I				
SAMPLE MARE	ag PPN	AL I	AS PPM	AU Ppm	8A PPN	8I PPN	CA 1	CD PPN	CO PPM	CR PPM	CU PPN	FE X	X	MG X	ММ Ррн	MŨ PPN	NA I	NI PPH	Р Х	PB PPM	PO PPN	PT PPM	S8 Pph	SN PPN	SR PPM	U PPM	и Рря	ZN PPR
PV88 - R1 PV88 - R2 PV88 - R3 PV88 - R4 PV88 - R4 PV88 - R5	.6 .5 .8 1.5	. 44 . 46 . 99 . 39 . 19		K0 112 112 112 112 112	67 70 84 55 35	3 3 ND ND ND	.81 .03 1.18 .08 .02	.5 .5 1.6 6.1 .5	10 8 7 2 8	86 148 56 113 179	66 62 67 169 46	1.08 .98 2.56 2.02 2.03	.05 .03 .09 .04 .02	.17 .31 .47 .11 .02	214 514 165 110 187	3 1 24 1 9	.01 .01 .01 .01	30 35 82 16 26	.01 .01 .17 .01	8 6 12 4 4	ND ND ND ND	ND ND ND ND	ND ND ND ND ND	NŬ ND ND ND	20 6 26 8 3	ND ND ND ND	ND ND ND ND	67 56 219 253 61
PV88 - R6 PV88 - R7 PV88 - R8 PV88 - R9 PV88 - R9 PV88 - R10	.7 1.1 .3 2.2 15.1	.21 .78 1.89 .35 .07	294 26302 212 29 18	ND ND ND ND	41 60 19 25 5	4 ND ND ND	1.88 1.91 14.26 2.35 2.04	.6 10.3 1.1 .3 .6	10 9 12 22 12	56 80 32 76 138	63 74 25 2388 11515	1.46 4.64 2.63 1.65 2.51	,08 .09 .08 .07 .07	.47 .11 1.37 .31 .24	813 679 1553 913 1537	5 4 3 18 13	.01 .01 .01 .01	37 52 33 24 33	.02 .01 .01 .02 .01	10 9 5 13	ND ND ND ND ND	ND NO ND ND	ND ND ND ND	ND ND ND ND	58 75 677 32 21	ND ND ND ND	ND N0 ND 641 236	68 465 36 22 59
PY88 - RLI Digslidedrebin Defection linet	9.3 6.5	. 10 . 72 . 01	22 2273	NØ 4 3	8 29 1	ND ND 3	1.11 3.56 .01	1.7 1.5	159 20	119 137	6509 1115	12.95 5.57	.09 .10 .01	.35 .44 .01	571 544	7 5	.01 .01	83 36 1	.01 .02 .01	25 13 2	ND ND 3	ND ND 5	ND ND 2	MD 1 2	22 37	ND ND S	155 ND 3	44 53

#### GEOCHEMICAL/ASSAY CERTIFICATE

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ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3NL 3-1-2 HCL-HH03-H20 AT 95 DEG.C FOR ONE HOUR AND IS DILUTED TO 10 KL WITH WATER. THIS LEACH IS PARTIAL FOR MW FE SE CA P LA CR MG BA 71 B W AND LIMITED FOR WA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: ROCK AUP\* BT FIRE ASSAT FROM 1/2 A.T.

#### ASHWORTH EXPLORATION LTD. PROJECT 253 File # 88-5954

SAMPLES	NO 29k	Cu P?N	Pb PPN	20 PPN	ÅĢ PPK	N1 PPM	Co 7PM	XO PPN	le 3	λ6 998	Ŭ PPN	AU PPK	75 PPN	SC PPN	Cd ?PK	SD PP <b>k</b>	Bi PPM	V ??X	Ca t		La PPN	CT 2PM	¥Ş Ş	Sa Pex	71 3	B 22%	A1 1	Na ł	۲ ۲		10"" 01/7
PVO-88-2-01	1	115	2	90	3.3	2	1	58	1.17	980	5	ND	1	13	2	2	3	1	. 17	.003	2	2	. 02	16	.01	ó	.07	.01	.02	1	.922
PV0-69-2-02	i	256	7	409	2.4	12	1	124		23520 /	5	Ĩ	5	24	ŝ	30	ž	28	.01	.021	5	29	.18	79	.01	i.	.75	.01	.23	i	.099
PV0-88-1-02		36	3	34	.1	10	1		2,07	61	5	ND	j	965	1	2	2		17.92		6	18	.96	22	.01	7	.98	.02	.63	ż	.001
200-38-2-04	37	13	7	42	.1	6	2	42		168	5	ND	ź	41	i	1	1		1.11		6	11	. 08	132	.01	11	. 29	. 32	.13	ī	. 301
PV0-35-2-05	I	10	2	31	.1	3	2		.94	10	5	NC	1	126	i	2	2		3.03		2	3	, Q B	17	.01	5	. 22	.01	.04	:	.001
PV0-88-2-06	1	279	,	15	.1	-	14	1011	1 51	18	ç	SD.	1	151	1	2	,	12	6.79	. 002	2	15	.9	515	.01	1	. 66	. G1	.04	1	.001
PVV-68-8-01	,	59	3	264	.5	22	B	\$13	-		ś	ND GK	i	69	2	ŵ	ž	28	2.43		3	30	1.17	50	.01	2	.71	.01	.0E		.024
PVV-98-8-02	1	104	;	341	.2	31	4		3.00	465	Ę.	NC	i	103	2	2	ż		2.23		R	29	1.59	52	. 91	-	1.20	.01	.15		.003
PVV-88-2-03	2	43	2	56	.1	12	3			11535 2	ß	NC	i		1	19	2	2	.05	.002	2	11	.03	!6	.01	7	.07	.01	.04		.025
PVV-38-8-04	į	56	2	53	.2	ži	6		1.55		Š	ND	i	11	÷	ĩ	2	ģ	.24		ŝ	14	. 16	172	- 51	ŝ	.1)	. 21	.11		. 904
•••••••	•		•			••	•				•		•	••	•	•	-	•	•••		•	••				•	•••			•	
PVV-88-R-03	3	39	2	73	1.5	22	10	642	3.95	421	5	ND	2	63	1	2	2	52	1.55	.020	f	36	. 98	76	. 91	1	1.22	.03	.13	1	.012
PVV-38-R-06	12	40	1	51	.3	11	3	90	1.73	5	5	ND	3	28	1	2	ž	26	.11	.026	9	10	.16	51	. 91	9	.44	.01	.20		.001
PVV-88-8-07	1	54	1	50	.1	3	8	1218	6.25	12	5	ND.	1	51	1	2	2	132	.77	.080	2 .	14	1.38	52	.32	1	1.97	.12		2	.001
PVV-88-R-08	16	90	10	252	.3	0	11	463	3.75	1	5	80	3	80	2	2	2	<b>{</b> 8	.75	.042	15	32	.78	255	.01		1.27	.04	. 29	1	.001
PVV-28-8-39	17	124	22	142	.1	29	1		6.09	17	5	XC	5	81	1	2	2	44	. 26	.036	36	21	. 24	157	.01	4	. 90	. 02	. 20		.001
PVV-38-R-:0	2	20	7	14	.1	6	3	220	.86	10	5	NC	1	22	1	,	,	10	. 81	.004	,	11	н	24	.01	3	.19	.01	.02	7	. 9G1
PVV-63-3-15	40	65	, i	21	.1	ì	12		4.37	26	ś	ND	1	70	1	;	2		2.92	.095	5	8	. 32	-	,09	•	1.64	.03	.13		.001
PV7-38-2-17	5	÷	5178		20.3	19	12		1.15	211	5	ŇD	1	9	t t	Â	ż	ź	.06	.003	3	Ð	.02	30	.01	6	.11	.01	.04		.032
277-55-2-01	á	768	13	30431 -		23	10			(02)	5	3	í	B	1252		ż	é	.17	. 005	2	13	.12	15	.01	3	.31	.01	.16		.092
PV7-98-9-01	ŷ	127	10	121	.2	38	9		6.98	312	5	ND	ļ	38	5	ŝ	ż	50	. 15	.065	9	15	.05	52	.01	í	. 58	.01	.17		. 001
			_																												
PVF-98-2-03	10	51	6	75	.5	20		1963		424	S	ЯQ	3	65	1	1	2		2.73	.015	5	11	. 67	52	.01	11	. 30	.02	. 19		.001
PV2-83-R-04	10	93	10	152	. 6	40	1		3.53	78	5	ND	6	21	1		2	13	.21	.019	19	26	.43	188	.02	3	1.11	. 91	. 52		.001
P78-88-R-05	9	59	11	11		14	3		2.25	21	5	ND	5	н	1	7	2	11	.04	.010	16	5	.10	136	.91	- 1	.55	.01	. 32		.D01
PV7-38-R-36	4	45	4	92	2,1	12	3		1.05	76	5	ХD	3	13		2	3		1.18	.031	5	9	.13	25	.01	12	. 22	.01	. 12		.001
PVI-86-2-08		35	14	88	.4	25	5	264	1.66	258	5	ND	3	23	1	6	2	6	1.56	.017	5	5	. 26	47	.01	9	. 28	.01	. 15	1	.001
PVF-38-R-13	1	36	3	29	.1	5	5	366	1.88	6	5	ND	1	13	1	2	2	27	1.29	.023	2	10	.68	16	.01	4	. 67	. 02	. 08	1	.001
PVF-88-2-16	2	62	16	124	.4	1	11		4.01	20	5	ND	1	39	1	ż	2		1.07	.024	2	-	1.53	59	.10	19		.05	.14		. 201
PV7-98-2-17	1	63	7	62	.1	3	ï		4.46	2	5	¥D.	1	21	i	2	ž	20	.09	.927	ż		. 85	24	.01	9		.01	.18		. 201
STD C/AU-1	17	59	41	132	6.7	63	29		3.88	43	20	8	37	47	17	18	18	57		. 990	36	55	. 66	175	.06	34		.26	.16	12	

Assay required for correct result



## NTS 92 I-13W

## 'AVILION area

ACHE ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. VOA 1R6 PHONE(604)253-3158 FAX(604)253-1716

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GAAN SAMPLE IS DIGISTED WITH BML 3-1-2 BCL-EN03-820 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 KL WITH WATER. THIS LEACH IS FARTILL FOR ME FE CA F LA CR NG BA TH B Y AND LIMITED FOR MA I AND AL. AD CETECTION LIMIT BE FOR 15 3 PPM. - SAMPLE TIPE: ROCE ADP ANALISIS BY AA FROM 10 GRAM SAMPLE. HE ANALISIS BY FRAMILISS AA.

SAMPLES		CT PPX		ZX PPN	XG PPH	11 11!	00 295	ыт Ш	л 1	15 PPX	7 ??K	XU PPM	73 ??K	SZ PPX					2		۲٦ ۲5٩	C1 299	XC L	Βλ Ρ?¥	TI t	3 768	۸L ۱	кк 1	1	¥ 875	20' 795	35 958
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11 033929	1	211	2	14	. 6	•	- 1	110	. 15		5	3D	1	10	1	2	2	15	1.55	.013	2	13	.27	21	.01	2	. 31	. \$2	. 21	L	35	15
11 035530	1	78	1	55	1.3	3	2	н	2.15	23763	5	3		ſ	2	(2	2	5	.05	.005	2	6	. 02	<b>£</b> 1	. 01	11	.17	. 31	.11	1	2757	
21 039931	1	22	2	- 14	.1	5	4	656	1.25	2	5	50	2	142	i	2	2	22	6.04	.111	10	5	. 51	13							1	
LT 239932	2	7914	2	56	10.0	21	37	1150	3.58	117	5	2	1																		2024	
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MAIN OFFICE 1988 TRIUMPH ST. VANCOUVER, B.C. V5L 1K5 • (604) 251-5656 • FAX (604) 254-5717 BRANCH OFFICES PASADENA, NFLD, BATHURST, N.B. MISSISSAUGA, ONT RENO, NEVADA, U.S.A.

## January 16 1989

- TO: Peter Leriche ASHWORTH EXPLORATION LTD. 718 - 789 West Pender St. Vancouver, B.C. V6C 1H2
- FROM: Vangeochem Lab Limited 1988 Triumph Street Vancouver, British Columbia V5L 1K5
- 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. <u>Method of Extraction</u>

- (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".
- (c) The gold is extracted by cupellation and parted with diluted nitric acid.



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- (d) The gold bead is retained for subsequent measurement.
- 3. <u>Method of Detection</u>
  - (a) The gold bead is dissolved by boiling with conentrated 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. Conway Chun or Mr. David Chiu and his laboratory staff.

David Chiu VANGEOCHEM LAB LIMITED



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January 16 1989

- TO: Peter Leriche ASHWORTH EXPLORATION LTD. 718 - 789 West Pender St. Vancouver, B.C. V6C 1H2
- FROM: Vangeochem Lab Limited 1988 Triumph Street Vancouver, British Columbia V5L 1K5
- 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:H20 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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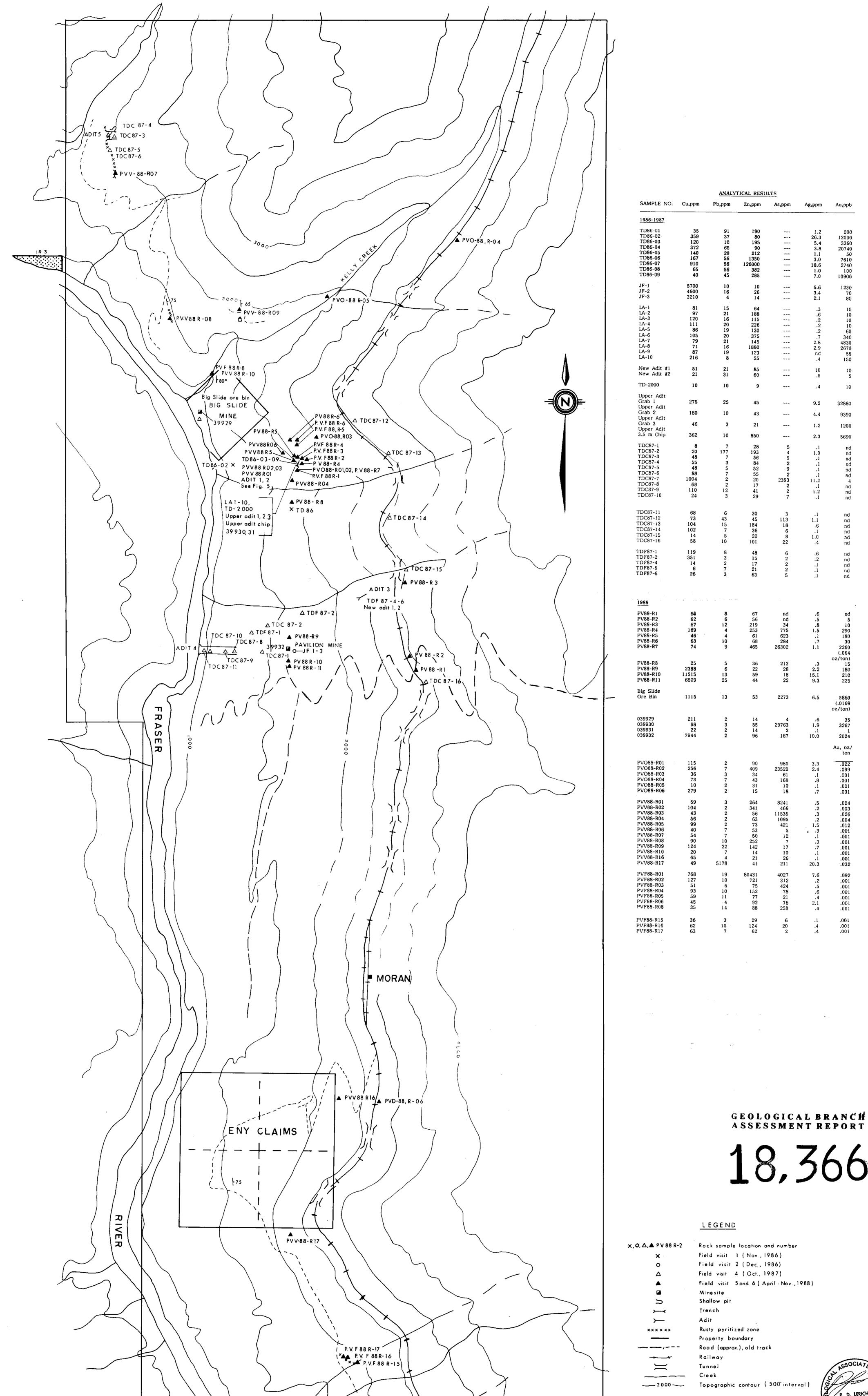
3. Method of Analyses

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.

Eddie Tang VANGEOCHEM LAB LIMITED



		ANALY	TICAL RESU	LTS		
SAMPLE NO.	Cu,ppm	Pb,ppm	Zn,ppm	As,ppm	Ag,ppm	Au,ppb
1986-1987						
TD86-01	35	91	190		1.2	200
TD86-02	359	37	80		26.3	12000
TD86-03	120	10	195		5.4	3360
TD86-04	372	65	90		3.8	20740
TD86-05	140	20	212		1.1	50
TD86-06	167	56	1350		3.0	7610
TD86-07	910	56	126000		10.6	2740
TD86-08	65	56	382		1.0	100
TD86-09	40	45	285		7.0	10900
JF-1	5700	10	10		6.6	1230
JF-2	4600	16	26		3.4	70
IF-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	01
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
A-10	216	8	55	**-	.4	150
New Adit #1	51	21	85		10	10
New Adit #2	21	31	60		.5	5
D-2000	10	10	9		.4	10
Upper Adit						
Grab 1 Upper Adit	275	25	45		9.2	32880
Grab 2	180	10	43		4.4	9390

18,366

X, Ο, Δ, Δ PV 88 R-2 X Δ Δ Δ Σ XX X XX 	Rock sample location and number Field visit 1 { Nov., 1986} Field visit 2 (Dec., 1986) Field visit 2 (Dec., 1987) Field visit 3 and 6 (April-Nov., 1988) Minesite Shallow pit Trench Adit Rusty pyritized zone Property boundary Road (approx.), old track Railway Tunnel Creek Topographic contour ( 500' interval ) SCALE 1: 10,000 0 100 200 400 500 BOO METRES N.T.S. 92 1/13
	PAVILION PROPERTY CLINTON-LILLÓGET M.D. SAMPLE LOCATIONS AND GEOCHEMISTRY Scale: 1: 10000 By: Drn: Date: NOV. 1988. Fig. 6 Ashworth Explorations Limited