

GEOLOGICAL REPORT AND WORK PROPOSAL

ON BRISTOL RESOURCES CORPORATION'S

BEAVER II AND IV CLAIMS

IN THE

KEMANO AREA

NORTHWESTERN BRITISH COLUMBIA

SKEENA M.D.

N.T.S. 93E/5 & 93E/12

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

BY

**10,747**

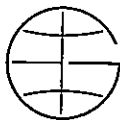
EDWARD W. GROVE, Ph.D., P.Eng.

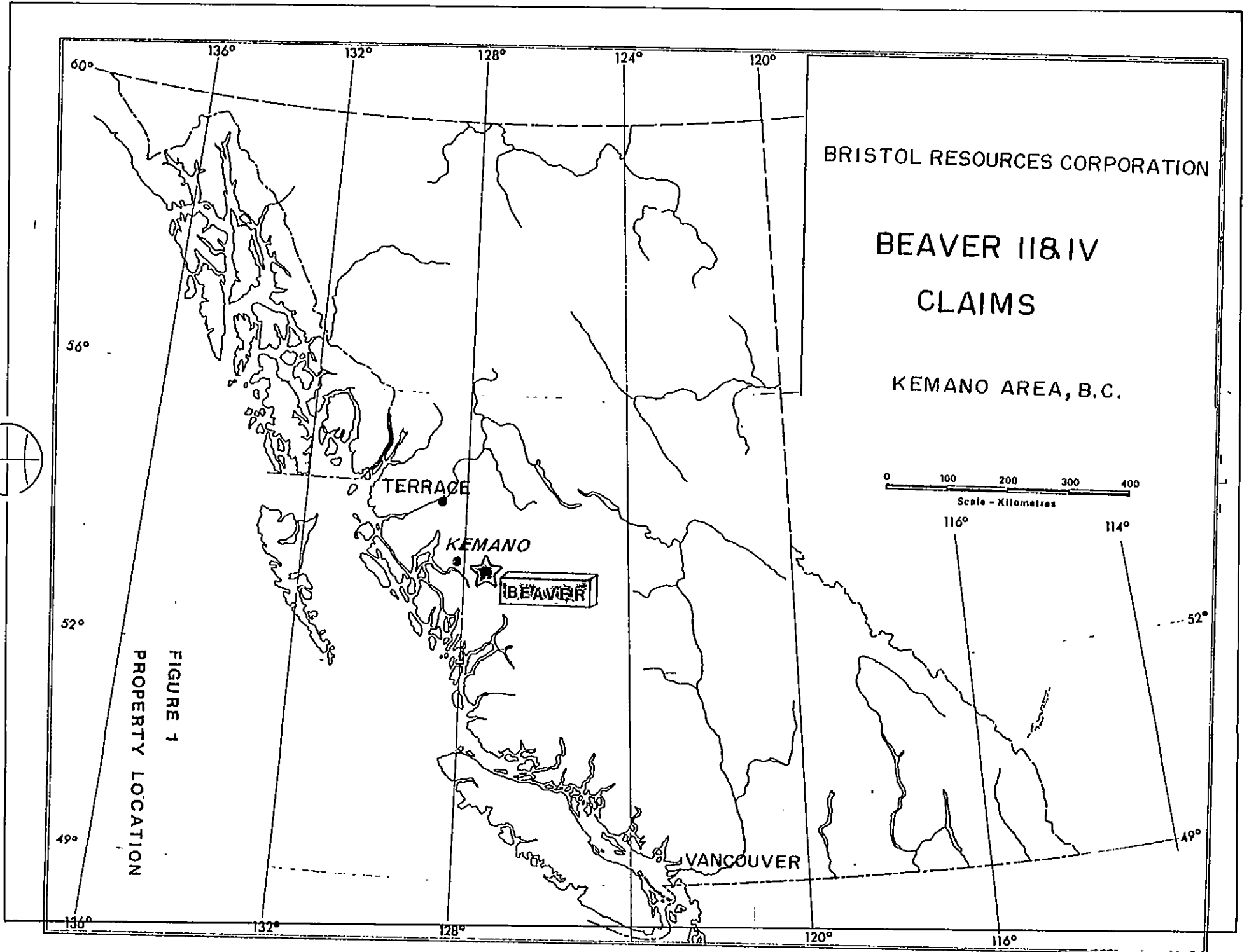
APRIL 8, 1982

VICTORIA, B.C.

## TABLE OF CONTENTS

	PAGE
SUMMARY	2
INTRODUCTION	3
LOCATION AND ACCESS	5
BEAVER CLAIMS	7
GEOLOGY	9
MINERALIZATION	11
CONCLUSION	17
RECOMMENDATION	18
REFERENCES	19
MINERAL EXPLORATION PROPOSAL - BEAVER II & IV, 1982	20
CERTIFICATE	21
FIGURES	
1. Property Location	1
2. Claim Map	6
3. Areal Geology	8
4. Sketch of Prospect	16
APPENDIX I	

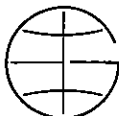




SUMMARY

The BEAVER II and BEAVER IV mineral claims are situated on Sandifer Ridge about 14 kilometers southeast of Kemano, British Columbia. The two adjacent claims comprise 40 units. Portions of the two claims have been overstaked, in contravention, with more recent claim blocks. Work on the known mineralization dates to 1952 when George Smith and Fred Nash were reported to have first sighted and staked the quartz veins. Published records concerning work on the veins are scanty but indicate that only one large quartz vein was sampled. Examination of the vein during 1981 suggested that little or no work has been done on the main vein since 1952.

The main vein or Smith-Nash vein has now been sampled several times by different groups showing the presence of significant gold values. The vein is completely exposed on the steep bluff where it outcrops between elevations 1,430 meters and 1,500 meters and swells to widths of up to 6.5 m (15 feet). Further surface sampling of the vein entails hazards and would not provide any further information on size and grade. Diamond core drilling from cut-out platforms is required to evaluate the prospect. The cost of a drill program in this location is expected to be high and is estimated at about \$160,000.

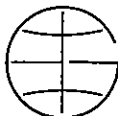


INTRODUCTION

The BEAVER II and BEAVER IV claims lie about fourteen kilometers southeast of Kemano on the steep southerly facing slope of Sandifer Ridge above a tributary of Seekwyakin Creek. The main mineral showings on the two adjacent claims consist of at least three large quartz veins that stand out as light coloured vertical gashes on the steep grey bluffs. Only one of these veins has been accessed (with difficulty) for surface sampling.

The veins were first located and staked in 1952 by George Smith and Fred Nash who were able to land nearby with a helicopter. They took several samples which reportedly returned assays as high as 6 ounces gold per ton (Duffell, 1959). Stuart (1959) visited the property for the B.C. Department of Mines and reported that the vein (one sample) assayed 0.39 ounces per ton gold. No further work has been reported in the public literature regarding the Smith-Nash prospect.

At the request of Mr. W. Heyman of Bristol Resources Corporation the writer visited the BEAVER claims on July 27, 1981 and again on August 26, 1981 in order to sample the one auriferous quartz vein and to make a preliminary appraisal. The writer has worked as a field geologist in the general area and has considerable experience with gold deposits.





Heliport above vein  
Looking south across valley

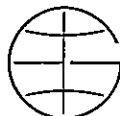


LOCATION AND ACCESS

The BEAVER II and BEAVER IV claims lie astride a steep ridge dominated by Sandifer Peak at the east boundary of BEAVER II. The claims are about fourteen kilometers east-southeast of Kemano, and about 123 kilometers southeast of Terrace, the main supply center for the area.

Sandifer Ridge is fairly representative of this portion of the Coast Mountains with steep walled valley morphology typical. On the two claims the elevations range from about 900 meters at the southwest to about 2,065 meters near Sandifer Peak. The steep bluffs and most of the ridge above about 1,350 meters are treeless with widespread patchy alpine fir and dwarf alder. Patches of permanent snow and ice cover the ridge and northerly slopes and small ice remnants survive in the high southerly facing cirques. Because of the lack of forest cover and the steepness of the slopes, the scattered streams on the south slopes are intermittent and dependent in summer on the small ice patches. As evidenced by the numbers of bedding sites and tracks, the ridge is well populated by Mountain Goat.

The easiest access to the claims is by helicopter from Terrace and is therefore a very weather dependent journey. A good access road currently linking Kemano to Tahtsa Lake passes along the creek below the quartz veins. The road



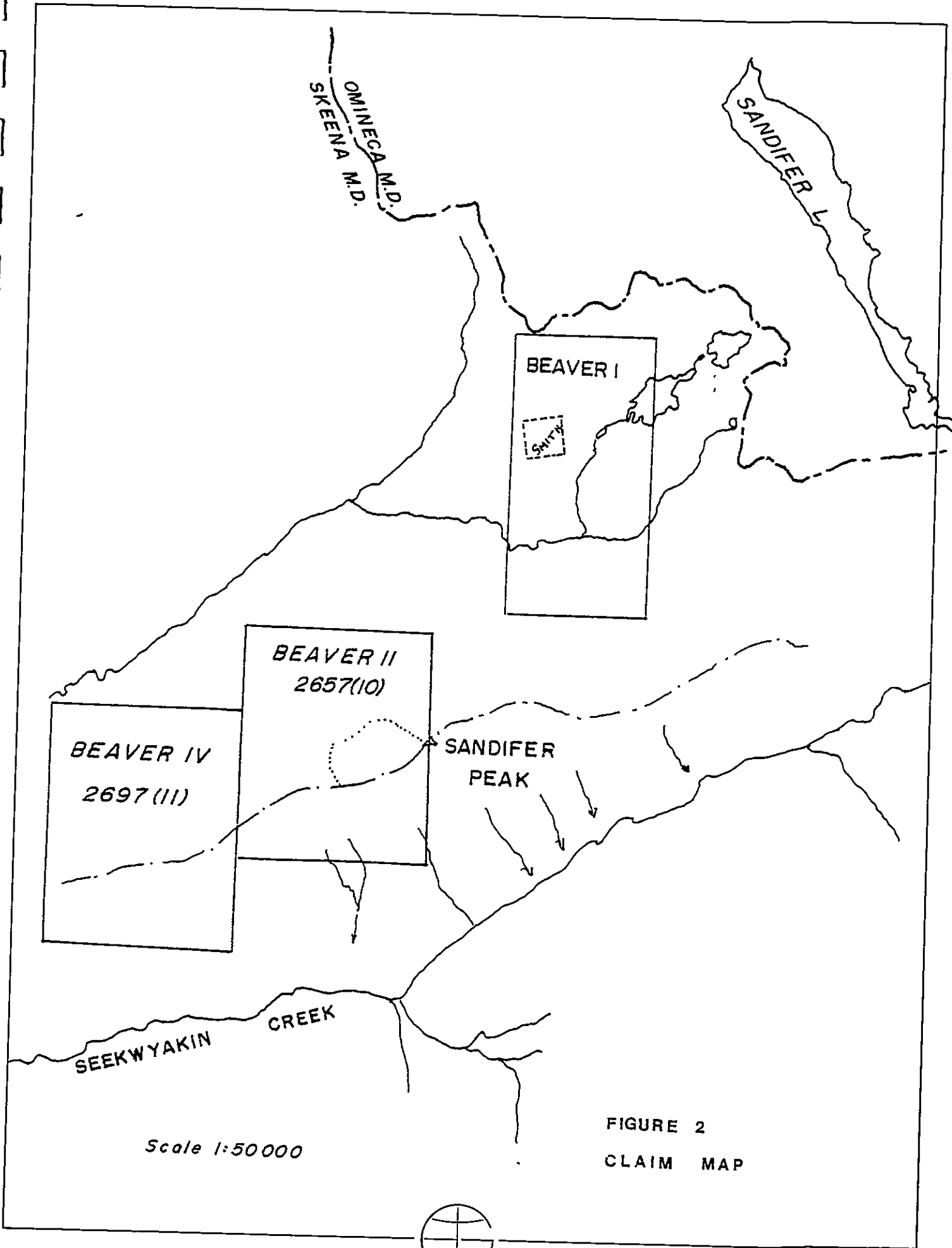


FIGURE 2  
CLAIM MAP



distance to Kemano from the main vein is only about twenty-two kilometers. If access could be arranged through Kemano work costs could be reduced and safety increased.

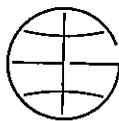
BEAVER CLAIMS

The property consists of two staked mineral claims, the BEAVER II and BEAVER IV, comprising forty units (Figure 2).








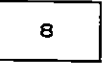
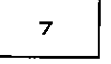
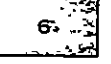
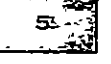
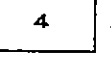



	<u>Units</u>	<u>Record No.</u>	<u>Recorded</u>
BEAVER II	20	2657	October 20, 1980
BEAVER IV	<u>20</u>	2697	December 11, 1980
	40		

As shown on the accompanying mineral claim map the BEAVER II and IV have been contravened by other claims. The location of the SMITH claim (M14762) is shown west of Sandifer Lake surrounded by the BEAVER I (Bristol Resources Corporation). The exact location of the SMITH claim was not determined in the time available to the writer, but it is probably misplotted. The official record indicates that the SMITH claim lies about one mile west of Sandifer Peak on the main ridge. The exact location is therefore not known to this writer at this time.

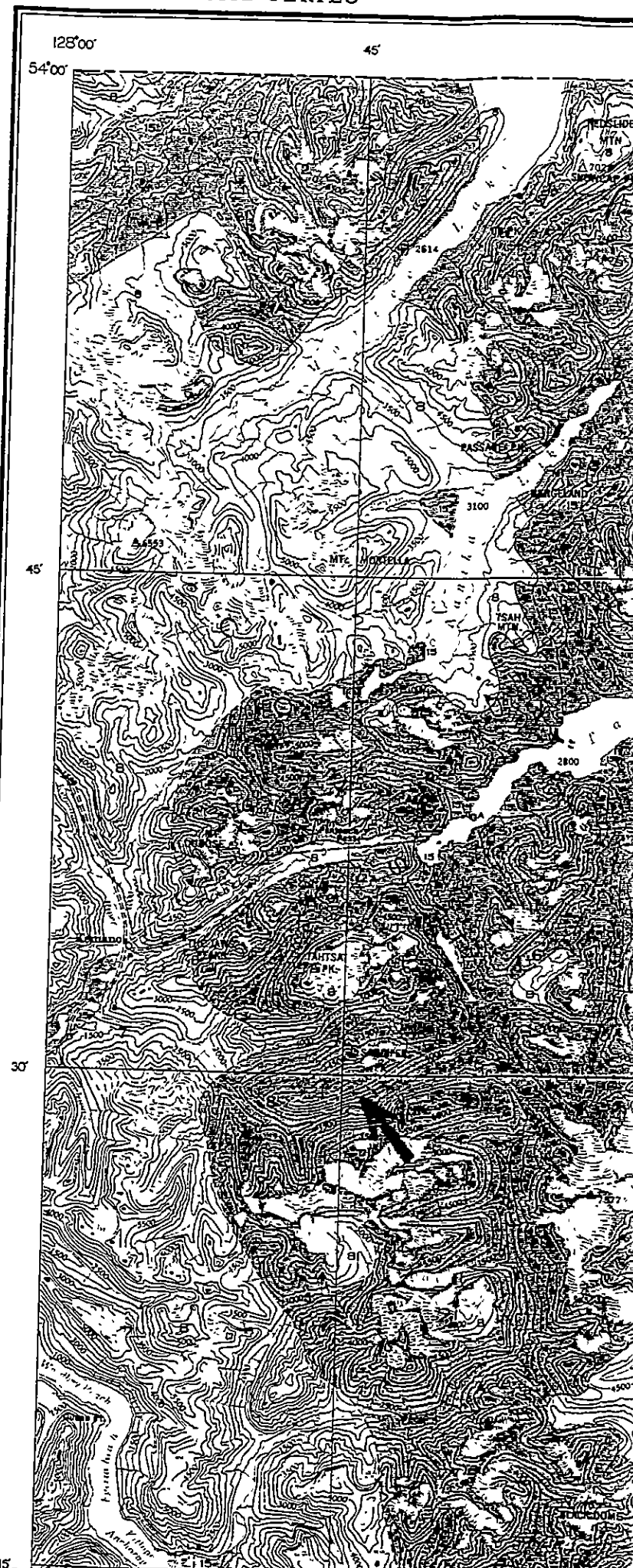
\* NOTE: READ EW GROVE LETTER  
DATED 16 APR 82 CLARIFYING  
CLAIM LOCATION



LEGEND

- QUATERNARY**  
**PLEISTOCENE AND RECENT**
-  15 Till, gravel, sand, clay, alluvium
- CENOZOIC**
- TERTIARY**  
**OLIGOCENE OR LATER**
-  13 Basalt, tuff
-  12 Gabbro
- CRETACEOUS TO OLIGOCENE**  
**UPPER CRETACEOUS TO OLIGOCENE**  
**GOTSA LAKE GROUP**
-  11 Rhyolite, dacite, andesite, basalt, associated tuffs and breccias, minor conglomerate
- CRETACEOUS**  
**LOWER CRETACEOUS**
-  10 Argillite, arkose, breccia, tuff, andesite, basalt
- JURASSIC (?) AND LATER**  
**UPPER JURASSIC (?) AND LATER**  
**COAST INTRUSIONS**
-  10 MOUNT BOLOM STOCK granite, in part porphyritic
-  9 SWING PEAK STOCK fine-grained porphyritic diorite
-  8 Granodiorite, quartz diorite, diorite, granite
-  7 QUANCHUS INTRUSIONS granite, quartz monzonite, quartz diorite
-  6 Red granite
- MESOZOIC**
-  5 Red syenite, granite, monzonite
-  4 Diorite
-  3 Gabbro
- JURASSIC**  
**MIDDLE JURASSIC (Mainly)**  
**HAZELTON GROUP**  
 Breccia, tuff, andesite, dacite, rhyolite, basalt, argillite, greywacke, chert, conglomerate, minor limestone.  
 May include some undifferentiated 1 and 11
- TRIASSIC AND JURASSIC**  
**UPPER TRIASSIC AND LOWER JURASSIC**  
**TAKLA GROUP**
-  2 Breccia, tuff, andesite, minor argillite, and limestone
-  1 Metamorphic rocks, greenstone, amphibolite, phyllite, schist, gneiss, crystalline limestone, undifferentiated minor diorite and granite, Mesozoic and (?) Palaeozoic

NOTE: Age of 3 to 8 relative to 2 uncertain, 9, 10 younger than 2; sequence of Coast intrusions uncertain

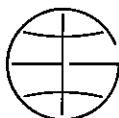


GEOLOGY

The basic regional geology was compiled by Duffell (1959); and the detailed geology of a portion of the area between Kemano and Tahtsa Lake, north of Sandifer Peak, was completed by Stuart (1960).

The Sandifer Ridge area lies just east of the main exposures of the extensive Coast Plutonic Complex in a succession of variably layered metavolcanic and metasedimentary country rocks. These have been assigned to the Hazelton Group but both Duffell and Stuart suggested these units could be pre-Middle Jurassic or older - possibly Triassic or Paleozoic. These layered rocks have been intruded by a number of granitic to dioritic plutons once called the Coast Intrusions and are probably Tertiary in age.

In the BEAVER claims area on Sandifer Ridge the meta-sediment/volcanic sequence forms a thick succession of generally thinly layered strata having an apparently overall undulating to flat structure. This corresponds to Stuart's structural interpretation which suggests broad, open, northerly trending folds. In detail, structural complexities such as faults, shears, and recumbent folds abound. On the basis of the writer's two quick field trips to the ridge, the writer suggests that the country rock succession may include two separable units. A lower unit, mainly fairly uniform cherty





Aerial view of main quartz vein.

Heliport at upper right.

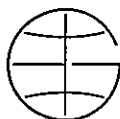


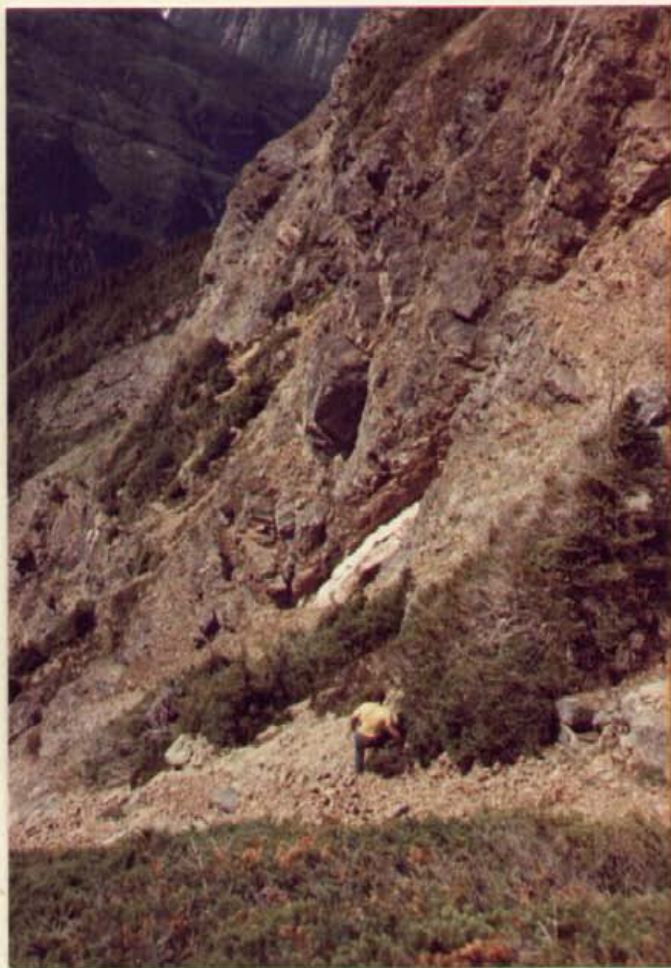
metasediments, extending to about 1,500 meters, and an upper unit forming the ridge crest and comprising a mixed meta-volcanic sequence marked by numerous thin porphyritic sills, pegmatic lenses and layers, and thin quartz lenses. At the base of the south side of the ridge the metasedimentary sequence appears to have been intruded by a dioritic pluton only recently exposed by the Kemano-Tahtsa road. If extensive, this low level diorite may be a parallel feature to the Horetzky Dyke mapped by Stuart. Obviously with better access and more mineral exploration in the area the geology of the area will become much better understood.

#### MINERALIZATION

The only known mineralization on the BEAVER II and BEAVER IV claims consists of quartz veins of which one has been shown to be auriferous. This has generally been reported at the Smith-Nash Group located in 1952 by prospectors George Smith and Fred Nash. Stuart (1952, p. 97-98) reported that assays on pyritic material taken from the main vein by the prospectors showed a gold content as high as 6 ounces in one sample. Stuart's 1952 report on the vein deposit follows:

"This group of fourteen claims and one fractional claim was located by G. Smith and F. Nash, of Vancouver, in September, 1952. It is on the steep south slope of a ridge extending southwest from Sandifer Peak. The ground is 10 miles east of Kemano and can most easily be reached from Sandifer Lake.





Looking down towards  
lower central portion of vein.



"Several limonite-stained quartz veins have been seen on the claims from the air, but only one has been examined. The veins are near the eastern contact of the Coast Range batholith on an anticlinal structure. The country rock on the east side of the group consists of interbedded greenstone and gneissic quartzite; on the west, nearer the batholith, it consists of granitic gneisses containing numerous pegmatite bands and dykes and occasional barren quartz veins.

"The only vein examined occupies a shear zone striking northwest and dipping steeply southwest. It outcrops continuously between elevations of 4,500 feet and 5,000 feet in a steep shear-controlled gully on the northeasternmost claim of the group. At the top of the gully, the vein, which is here about 4 feet wide, disappears beneath talus on a small bench and could not be located in the bluffs above. At the 4,500-foot elevation, the only place where the vein is accessible, it swells to a width of about 15 feet, then pinches out abruptly. The sheared zone, about 8 feet in width, continues below the pinch-out of the quartz, but flattens in dip and swings to a more easterly strike.

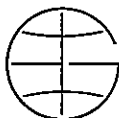
"The only visible metallic mineral is pyrite, which occurs as disseminated blebs and stringers in the quartz. Several stringers of massive granular pyrite from 2 to 6 inches wide occur at the hangingwall and footwall of the lowest seen part of the vein, and in the sheared zone below the quartz pinch-out. The sheared wallrock is only slightly mineralized.

"The following type samples were taken:

	Gold (Oz. per Ton)	Silver (Oz. per Ton)
1. Mineralized vein quartz.....	0.39	0.2
2. Massive pyrite from 5-inch stringer...	2.9	1.5
3. Sheared rock from footwall.....	0.09	0.1"

While sampling the vein the writer found one corroded rock piton rusted into the steep face of the vein near the bottom. This and the remnants of camp gear on a small flat to the east appear to confirm work by Smith and Nash in 1952.

The vein is located in a deep cut on the steep slope of Sandifer Ridge between elevations 1,430 meters and 1,500 meters. It is a lens-like body swelling to a width of at least





Upper portion of vein, lower center, in gully.





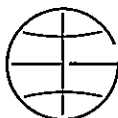
12.5 meters and appears to average about 2 meters. The attitude of the vein is somewhat variable because of faulting within the vein and along the footwall. The general vein attitude appears to be about  $110-120^{\circ}/65-70^{\circ}\text{SW}$  within the deformed metasediments, but does not appear to extend upwards across the overlying metavolcanic unit. The vein has a slightly rusty to creamy appearance from a distance. Massive coarse grained white quartz and some calcite form the bulk of the vein with coarsely crystalline pyrite as discrete cubes and streaks comprising from two to three per cent overall and somewhat higher in the footwall zone.

Assay results from face chip samples at various levels of the vein are as follows (see Appendix I):

SMITH-NASH VEIN

<u>Sample No.</u>	<u>Site</u>	<u>Gold (oz/ton)</u>	<u>Silver (oz/ton)</u>
7984	H.W. 2 m -4730'	0.004	0.02
7985	F.W. 4.5 m-4730'	0.58	0.30
7986	F.W. 4.5 m-4750'	0.50	0.21
7987	H.W. 2 m -4750'	0.056	0.06
UV-1	H.W. 2 m 4730'	0.001	0.01
UV-2	" 2 m 4730	0.001	0.01
V-1	6 m 4720'	0.045	0.02
V-2	6 m 4710'	0.083	0.02
V-3	4 m 4700'	0.140	0.04

The above assay results on the accessible lower portion of the vein essentially confirm the one assay result



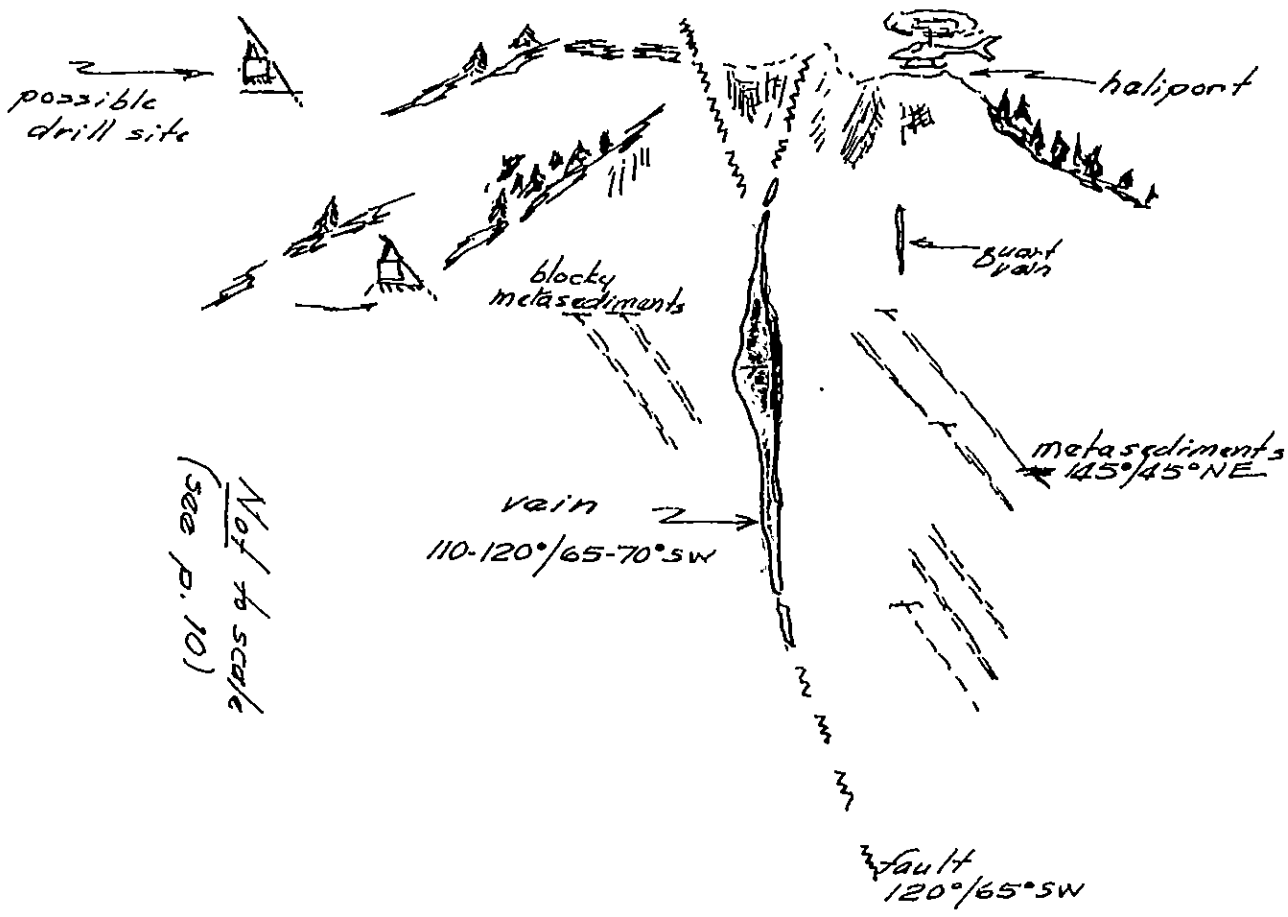


FIG 4  
SKETCH OF VEIN

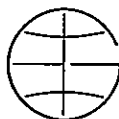
reported by Stuart (0.39 ounces gold per ton). It is possible that if selected samples of the pyritic footwall portion of the vein were assayed results approaching the 6 ounces gold per ton reported by prospectors Smith and Nash could be attained.

As indicated, the assay results so far suggest a variable but significant gold content in the vein, particularly in the pyritic footwall portion. The apparent large size of the vein combined with the reasonably significant gold values together indicate that the vein should be sampled in more detail. The attitude of the vein and its location in the gully on the steep cliff face and the hazards associated with surface sampling indicate a limited drill program.

#### CONCLUSION

Work on the main gold bearing vein on the BEAVER property has so far indicated the potential for a deposit of reasonable grade. A potential tonnage based on the available information is difficult to estimate. The continuity of the vein over a vertical distance of about one hundred meters and an average width of about two meters indicate a minimum of about 20,000 tonnes.

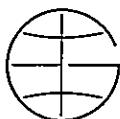
Confirmation of the continuity of the vein and the grade to allow consideration of an underground exploration



and development program will involve surface diamond core drilling. A limited drilling program to test the extent and grade of the northwesterly extension of the upper and lower portions of the vein would require two cut-out platforms. Water would have to be piped to the drill sites. Servicing of the project would probably be from Terrace and radio communication would be required. It would also be advisable to make a foot trail from the vein area to the nearby road for safety. A good trail would also allow camp set up near the road rather than on the cramped bluffs and road access to Kemano.

#### RECOMMENDATION

Evaluation of the auriferous quartz vein on the BEAVER II claim has proceeded to the point where further surface sampling which entails rock fall hazards because of the steep face will probably be redundant. The next stage in the exploration of this prospect should consist of diamond core drilling from two platforms to determine continuity of gold mineralization and of the vein. The drill program is estimated to cost about \$160,000.00.

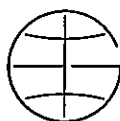


REFERENCES

Duffell, S. (1959): Whitesail Lake Map-Area, British Columbia,  
Geol. Surv. Can., Memoir 299.

Stuart, R.A. (1952): Smith-Nash, in B.C. Dept. of Mines Annual  
Rept. 1952, p. A97-98.

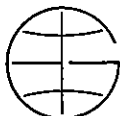
(1960): Geology of the Kemano-Tahtsa Area, B.C.  
Dept. of Mines & Petroleum Resources, Bull. No. 42.



MINERAL EXPLORATION PROPOSAL - BEAVER II & IV, 1982

Core Drilling Program

1. Diamond Drill Site Preparation:	
2 sites, contract blasting, etc.	\$12,000
2. Diamond Core Drilling:	
(fully loaded cost including helicopter, camp, etc.)	
600 meters NQ core @ \$180/m	120,000
Core Sample Analysis	1,500
3. Engineering & Supervision:	
1 geologist	7,000
transportation	2,000
4. Documentation:	2,500
5. Contingencies:	<u>14,500</u>
	TOTAL     \$159,500
	<u>PROPOSED 1982 CORE DRILLING BUDGET     \$160,000</u>



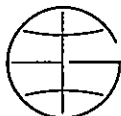
CERTIFICATE

I Edward Willis Grove, of the Municipality of Central Saanich, do hereby certify that:

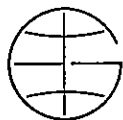
1. I am a consulting geologist with an office at 6751 Barbara Drive, Victoria, British Columbia.
2. I am a graduate of the University of British Columbia (1955) with a Master's degree, Honours Geology (M.Sc. Hon. Geol.) and a graduate of McGill University (1973) with a doctorate in Geology (Ph.D.).
3. I have practiced my profession continuously since graduation while being employed by such companies as The Consolidated Mining & Smelting Company of Canada Ltd., British Yukon Exploration Ltd., Quebec Department of Natural Resources, and British Columbia Ministry of Energy, Mines & Petroleum Resources. I have been in private corporate practice since January 1981.
4. I have no interest, either direct or indirect, in Bristol Resources Corporation, or any of its properties, nor do I expect to acquire any such interest.
5. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

April 8, 1982  
Victoria, British Columbia

  
Edward W. Grove Ph.D., P.Eng.  
E. W. GROVE CONSULTANTS LTD.



APPENDIX I





To: E. W. Groves Consultants Ltd.

REPORT NO. A21 990

PAGE No. 1

**BONDAR-CLEGG & COMPANY LTD.**

DATE: August 12, 1981

6751 Barbara Drive  
Victoria, B. C.  
V8Z 5T4

**CERTIFICATE OF ASSAY**

Samples submitted: July 28, 1981  
Results completed: August 12, 1981

PROJECT: H - 1

*I hereby certify* that the following are the results of assays made by us upon the herein described rock samples.

MARKED	GOLD		SILVER		Cu	Pb	Zn	Mo			
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent
7982	<0.002		<0.02		<0.01	-	-	0.001			
7983	<0.002		0.02		<0.01	-	-	0.001			
7984	0.004		0.02		<0.01	-	-	-			
7985	0.58		0.30		0.02	-	-	-			
7986	0.50		0.21		0.01	-	-	-			
7987	0.056		0.06		<0.01	-	-	-			
7988	0.005		0.07		<0.01	<0.01	<0.01	-			

NOTE:  
Rejects retained three weeks  
Pulps retained three months  
unless otherwise arranged.

  
Registered Assayer, Province of British Columbia



ENVIRONMENTAL TESTING  
GEOCHEMISTRY  
ANALYTICAL CHEMISTRY

LABORATORIES LTD. 783 Notre Dame Drive, Kamloops, B.C. V2C 5N8 — Telephone (604) 372-9700

September 7, 1981

ASSAY REPORT

CLIENT: E.W. Grove, Victoria, B.C.

ATTENTION: E.W. Grove

SAMPLE IDENTIFICATION: Samples received September 1, 1981

CERTIFICATE NUMBER: ET - 23

<u>DESCRIPTION</u>	<u>oz/T Au</u>	<u>oz/T Ag</u>	<u>% Cu</u>
1	∟.001	∟.01	∟.01
S2	∟.001	∟.01	∟.01
3	.001	∟.01	∟.01
4	.001	∟.01	∟.01
5	.001	∟.01	∟.01
6	.001	∟.01	∟.01
7	∟.001	∟.01	∟.01
8	∟.001	∟.01	∟.01
9	∟.001	∟.01	∟.01
UV-1	∟.001	∟.01	∟.01
UV-2	∟.001	∟.01	∟.01
V-1	.045	.02	.01
V-2	.083	.02	.01
V-3	.140	.04	.01

NOTE: ∟ = Less Than.

ECO-TECH LABORATORIES LTD.

Ken Swanson

Chief Assayer

KS/te

KAMLOOPS — CALGARY — BURNABY