Geological & Jeophysical

## REPORT ON THE ICE AND YALAKUM MINERAL CLAIMS

N.T.S. 92G-14 49° 58' N 123° 25' W

FOR

MAR-GOLD RESOURCES LTD.

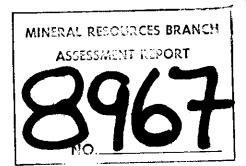
BY

DAVID A. YEAGER, GEOLOGIST

T. CAMERON SCOTT, GEOLOGIST

CHARLES K. IKONA, P.ENG.

Port 1



Pamicon Developments Ltd.

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\_Pamicon Developments Ltd. \_

#### 1.0 INTRODUCTION

The ICE and YALAKUM mineral claims were located in early spring of 1977 by Mr. E. Hansen of Squamish on gold-silver-copper showings first located in the 1920's. These claims have subsequently been acquired by Mr. F. Marehard of Mar-Gold Resources Ltd., a Vancouver based resource company.

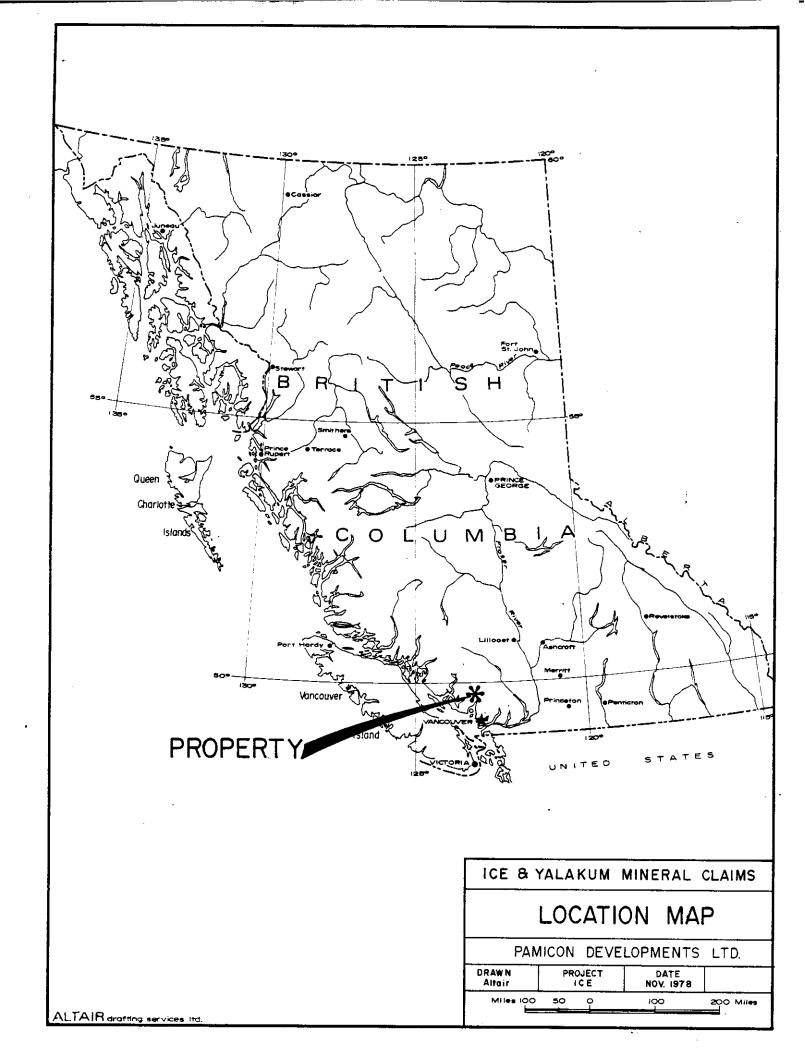
A property examination carried out by Pamicon Developments Ltd. in November of 1979 resulted in recommendations being made for a two stage exploration. The first stage was to consist of exploration of old adits, trenching and assay sampling, and some pilot geophysical testing; the second stage was to carry out 300 metres of diamond drilling.

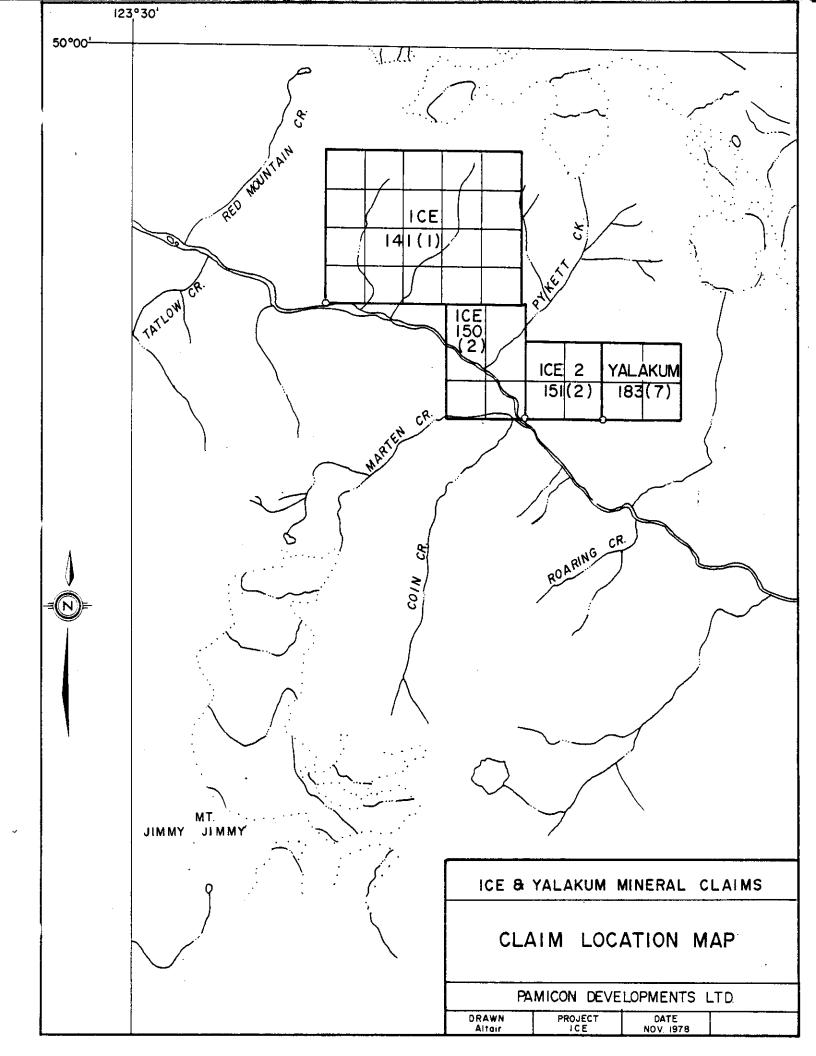
During the period May 1, 1980 to May 30, 1980 the first stage program was carried out under the supervision of T.C. Scott of Pamicon.

#### 2.0 LIST OF CLAIMS

Name of Claim	Record No.	No. of Units	Expiry Date
ICE	141	20	January 18, 1981
ICE 1	150	6	February 1, 1981
ICE 2	151	4	February 1, 1981
YALAKUM MINES	183	4	July 4, 1981

The author examined claim posts on the ground and has inspected the records of the British Columbia Department of Mines. This inspection indicates that the claims as recorded by Mr. Hansen are in good standing. The author has also examined documents which transfer sole ownership of these claims to Mr. Marehard.





#### 3.0 LOCATION, ACCESS, AND TOPOGRAPHY

The property is located on the north side of the Ashlu River, some 12 kilometres above its confluence with the Squamish River. Approximate coordinates of the claim group are 49° 58' N latitude and 123° 25' W longitude.

Access is by well maintained logging road, a distance of 29 miles from the Town of Squamish, which is located at the head of Howe Sound, 50 kilometres north of Vancouver.

Topography over the claim group comprises a south facing slope averaging 25 to 30 degrees in steepness and is of an irregular nature with alternating bluffs and draws.

Logging is proceeding in the area at present with first growth timber being harvested. The main showings are located in a recent logging slash.

#### 4.0 HISTORY

The area first received attention in the early 1920's with the discovery of gold in quartz veins on the south side of the Ashlu River. In subsequent years a horse trail was constructed into the area and several hundred feet of underground workings developed. Some hand-sorted material was shipped out on packhorses.

During the same period mineralization was located on what are now the ICE claims. Limited surface and underground work resulted in the shipping of 2 tons of hand-sorted ore which reportedly ran over 5 oz. per ton Au. (1)

<sup>(1)</sup> Personal communication

#### 5.0 GEOLOGY

The area has been mapped by the Geological Survey of Canada at a scale of 1 inch = 4 miles, and the geology is presented in Map 42-1963 (Squamish: Vancouver, West Half).

Detailed geologic mapping was carried out by the author at a scale of 1 cm = 10 m using a 20 m x 20 m picket grid for location. An altimeter survey was completed at the same time to establish topographic control. This information is presented in Figure 3.

The claim group is underlain by plutonic rocks of Cretaceous age composed of variably textured granodiorites. The granodiorites are presumed to represent different phases of the same intrusive event as there is no marked alteration at the intrusive contacts.

#### 5.1 LITHOLOGY

Two main rock types are predominant in the area. Unit 2 is a finely crystalline, equigranular, hornblende granodiorite. There is little variation in the unit with the exception that in many areas, up to 20 cm inclusions of very finely crystalline granodiorite forms up to 80% of the rock (Unit 2a). These masses are interpreted as stoped fragments of an original country rock, presumably of andesitic composition.

Unit 3 is a coarsely crystalline, hornblende and/or biotite granodiorite. The biotite and hornblende occur in large (up to 4 mm) crystal aggregates as well as in small disseminated crystals. The unit is variable in texture throughout the map area, the notable variations being crystal size and relative amounts of biotite and hornblende. These variations often occur on a very local scale at times giving the rock a gneissic banded appearance. Unit 3 also contains up to 20 cm

inclusions of very finely crystalline material (Unit 3a). In one locality these fragments are relatively unaltered and were identified as andesites of volcanic origin. Again, these are presumably stoped fragments of intruded country rocks.

Unit I was encountered in a single float occurrence at the eastern edge of the map area and consists of a breccia zone with fragments of hornblendite and granodiorite in a quartz matrix. The breccia in places gives way to massive hornblendite No sense of orientation was apparent due to the lack of outcrop. However, the occurrence was approximately four metres wide.

#### 5.2 STRUCTURE

Regionally, the Ashlu River Valley appears to represent a structural trend at N  $60^{\rm O}$  W with cross structures represented by secondary drainages trending at N  $30^{\rm O}$  E.

In the map area, a number of fracture and vein attitudes were measured and several fairly consistent sets were recognized. The most predominant fracture set on the property averaged  $081/60^{\circ}$  N and was associated with shearing and sulphide mineralization. A second set at  $020/70^{\circ}$  E consisted of barren hairline fractures. Three groups of veins were measured:  $124/39^{\circ}$  NE,  $116/72^{\circ}$  N, and  $130/80^{\circ}$  SW. Veins in the latter two sets carry gold mineralization.

#### 5.3 MINERALIZATION

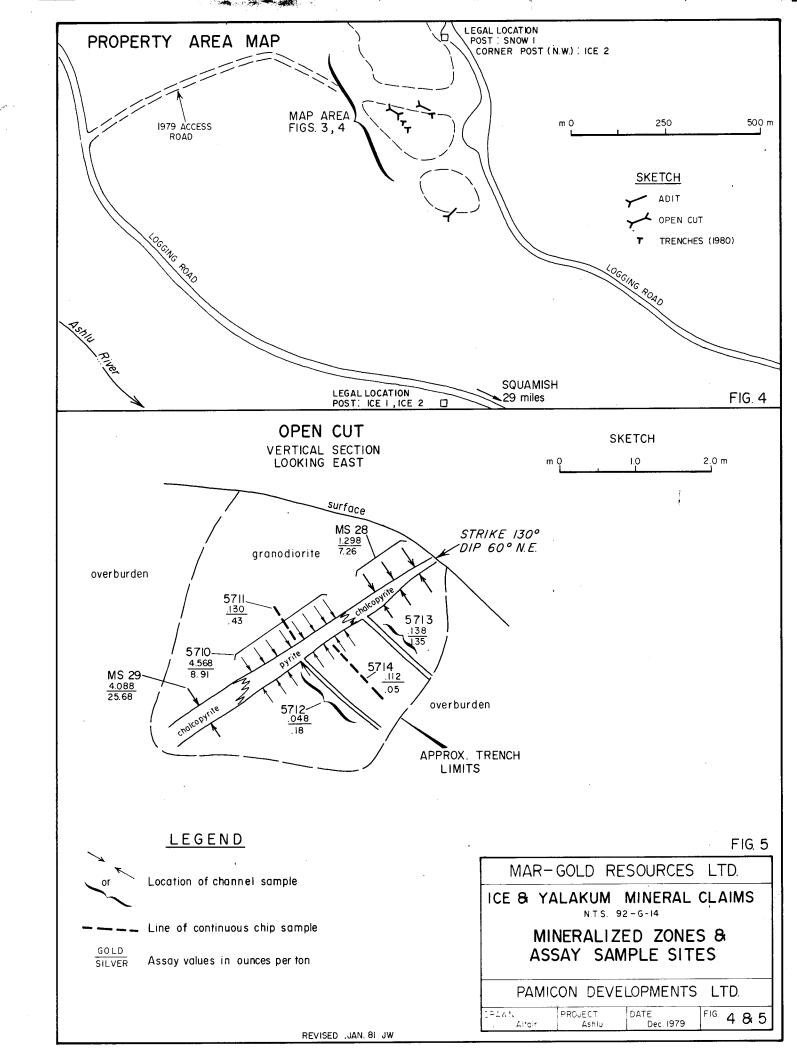
Encouraging values in gold and silver were obtained at many locations on the property. This mineralization occurs both in sheared fractures and in several types of veins.

The most spectacular mineralized vein is exposed in the open cut at approximately 0+20 N, 1+20 W (Figures 4, 5, and 6). Here, a 17 cm wide sulphide vein containing massive pyrite and massive chalcopyrite contains values up to 4.568 oz. per ton gold and 8.91 oz. per ton silver in the pyrite portion of the vein. Values up to .130 oz. per ton gold were obtained from chip samples taken from the granodiorite in the footwall and hanging wall of the vein (Figure 5). A weighted average of samples 5710, 5711, and 5714 gives values of 0.571 oz. per ton gold and 1.066 oz. per ton silver across a width of 1.67 metres.

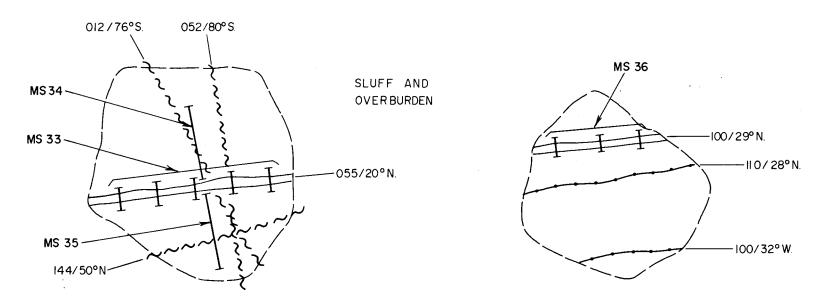
#### 5.3.1 Open Cut Vein

Results of the 1979 program indicated that the best mineralization was to be found in a pyrite/chalcopyrite vein in the open cut at approximately the 0+20 N, 1+20 W area. More sampling was done in 1980 in order to more fully delineate the distribution of gold and silver values in the vein and wallrock. Samples MS 28 to MS 31 were taken and the results are plotted on Figure 5. Samples MS 30 and MS 31 essentially duplicated the 1979 results so were not plotted. Samples MS 28 and MS 29 contained significant gold values which considerably increases the attractiveness of the vein.

Two trenches were blasted on strike extensions of the vein in the 0+00 N, 1+20 W area (see Figure 6). Here the vein was essentially pure quartz with minor pyrite and chalcopyrite rather than pure sulphides as in the open cut. Although the gold and silver values were significantly reduced, it should be noted that sample MS 33 shows the vein still contains 0.436 oz. per ton gold and 0.52 oz. per ton silver. Sample MS 32, taken between the open cut and the two trenches (Figure 3), also assayed 2.34 oz. per ton silver and 0.402 oz. per ton gold.



# "OPEN CUT VEIN" TRENCHING VERTICAL SECTION LOOKING EAST





#### LEGEND

VEIN

FRACTURE

SAMPLE	Ag(oz/T.)	Au(oz/T.)
MS 33	0.52	0.436
MS 34	0.04	0.026
MS 35	0.02	0.005
MS 36	0.74	0.003

#### MAR-GOLD RESOURCES LTD.

ICE MINERAL CLAIM
N.T.S. 92-G-14

### OPEN CUT VEIN AT 120W/ON.

DRAWN. JW Drafting	PROJECT. ASHLU	DATE. DEC. 1980	FIG.	6

#### 5.3.2 No. 2 Adit

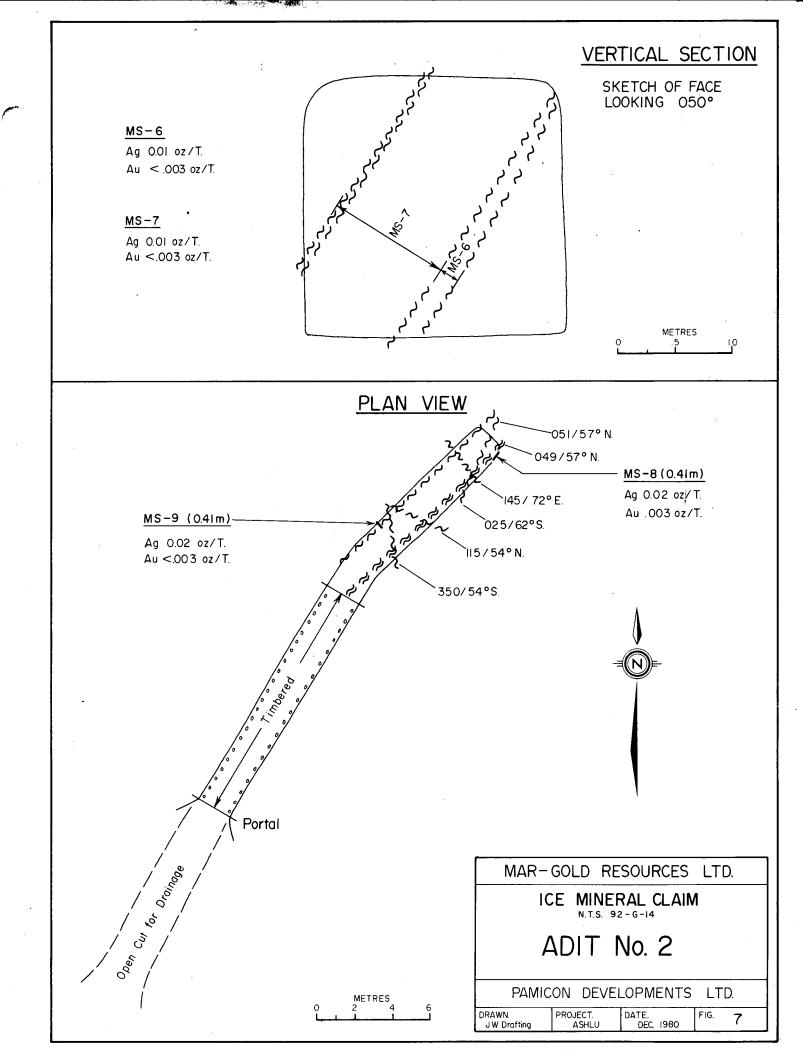
No. 2 adit is located approximately 400 metres southeast of No. 1 adit. The entrance was inspected during the 1979 program but as it was partially blocked by logging slash and debris and the adit partially water filled, no attempt was made to enter. During the May 1980 program, an eleven metre long open cut was dug to a depth of 0.5 m to 1.0 m in order to drain the adit (see Figure 7). This was successful and the adit may be entered, however, it should be noted that the timbering is in poor condition and caution should be exercised.

The first 15 m of the adit was closely timbered and no geologic information was obtainable. For the last 12 metres, the adit followed two parallel fracture sets with attitudes  $051/57^{\circ}$  N and  $049/57^{\circ}$  N. Four assays taken in the adit gave no appreciable values in gold or silver.

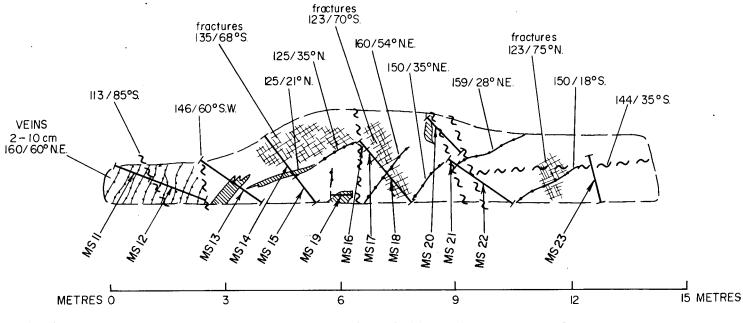
#### 5.3.3 No. 1 Adit Area

No. 1 adit was re-entered and one assay sample MS 27, was taken from wallrock material adjacent to the alaskite vein referred to in the 1979 report. There were no significant precious metal values.

A large trench was blasted on surface adjacent to and south of No. 1 adit located from 0+80 W, 0+00 N to 0+95 W, 0+05 S. This trench was approximately 14.0 m long by 3.0 m high on the back wall (see Figure 8). Thirteen assay samples were taken, two of which, MS 17 and MS 19 contained better than trace amounts of gold and silver. The trench was blasted to better expose a quartz vein swarm and adjacent wallrocks referred to in the 1979 report.



NUMBER	WIDTH	oz/T. Ag-	oz/T Au	NUMBER	WIDTH	oz/T.Ag	oz/T. A
MS II	0.86 m	0.04	<.003	MS 18	l. 22 m	0.05	<.003
MS 12	2.13 m	0.04	<.003	MS 19	0.81 m	0.57	.110
MS 13	2.13 m	0.04	<.003	MS 20	0.69 m	0.02	.028
MS 14	1.14 m	- 0.05	<.003	MS 21	GRAB	0.08	.010
MS 15	1, 22 m	0.02	.030	MS 22	1.45 m	0.02	<.003
MS 16	1.07 m	0.01	<.003	MS 23	1.27 m	0.01	<.003
MS 17	0.38 m	0.40	114				



#### LEGEND

#### VERTICAL SECTION LOOKING 170°

QUARTZ VEINLET OR STRINGER

QUARTZ VEIN

FRACTURE ZONE

FAULT OR SHEAR ZONE

ASSAY SAMPLE SITE

MAR-GOLD RESOURCES LTD.

ICE MINERAL CLAIM

N.T.S. 92-G-14

No. I ADIT TRENCH

PAMICON DEVELOPMENTS LTD.

DRAWN.
J W Drafting PROJECT.
ASHLU DEC. 1980 FIG. 8

#### 5.3.4 Other Sampling

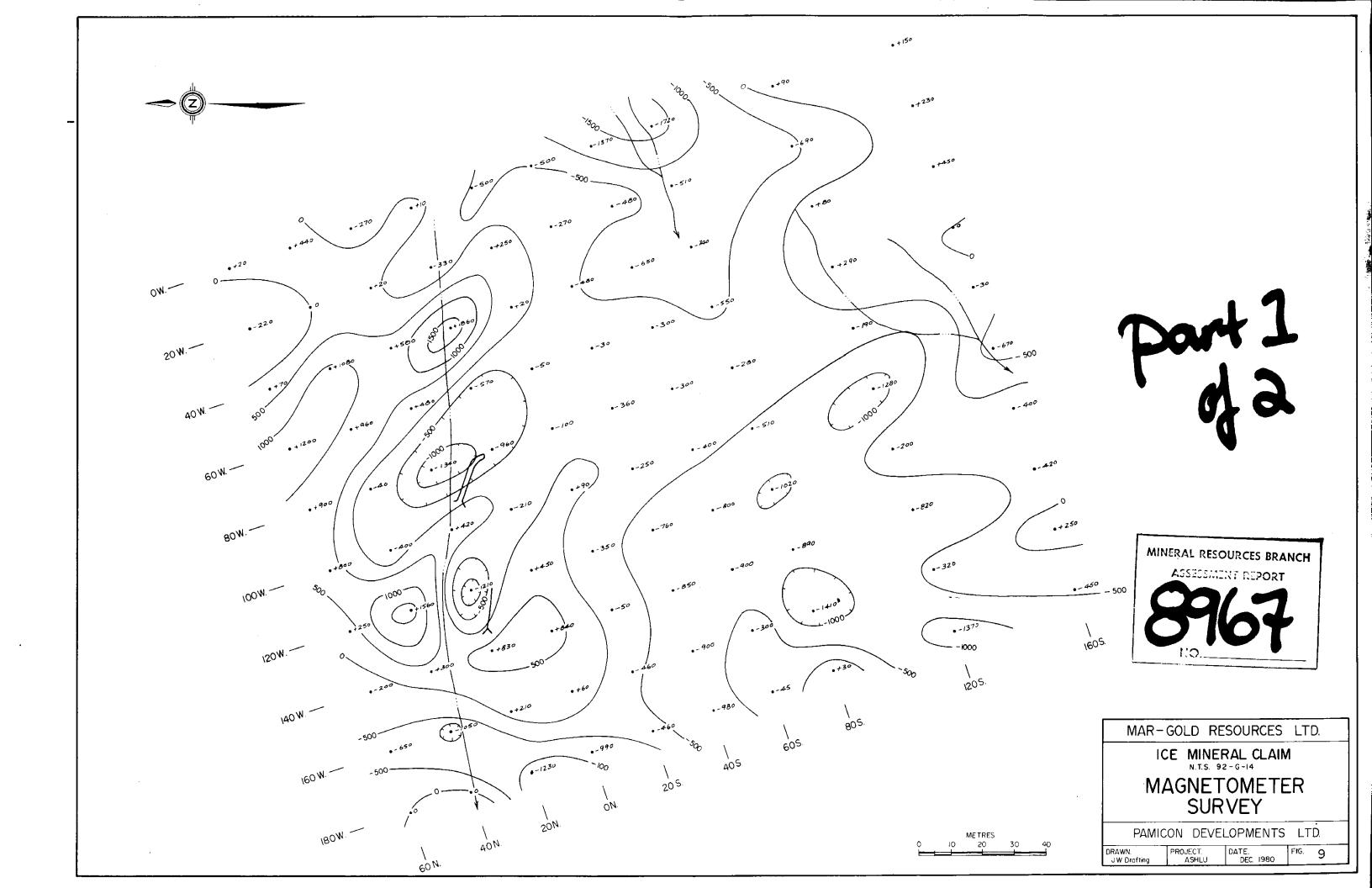
Two other areas were sampled as a follow-up from the 1979 work in the vicinities of 1979 samples 64519 and 64520 (see Figure 3). Samples MS 24 to MS 26 were taken on a quartz, epidote, magnetite, pyrite vein system located approximately 20 metres north of No. 1 adit. Sample MS 25 contained 1.242 oz. per ton gold and 0.60 oz. per ton silver.

Samples MS 1 to MS 3 were taken on a pyritic shear zone cutting an alaskite dyke approximately 5 metres south of 0+60 W, 0+40 S. All three samples contained only trace amounts of precious metals.

#### 6.0 GEOPHYSICS

A magnetometer survey was conducted over the grid area using the 20 metre grid established during the 1979 season for location control and a McPhar Fluxgate 700 portable magnetometer for the instrument. The readings are plotted on Figure 9. The data was contoured using a 500 gamma contour interval with contours ranging from -1500 gammas to +1500 gammas.

It can be readily seen that the stream gully associated with No. 1 adit and the high grade open cut vein has a definite magnetic signature marked by a series of "high-low pairs" of anomalous readings. Although these anomalous features are apparently not exactly coincident with precious metal veins on surface, they are certainly physically near enough to the known showings to be considered important. A second noticeable feature is a northwest-southeast linear trend to most of the contours. This is felt to reflect the orientation of the local rock foliation which can readily be seen in outcrop.



#### 7.0 DISCUSSION AND CONCLUSIONS

The 1980 program was designed to test a number of targets and methods suggested by the 1979 program. Two of the targets, the No. 1 adit vein swarm and the No. 2 adit veins, did not appear to contain significant amounts of precious metals. This leaves a question as to what targets were being pursued by the driving of the adits. It is possible that lenses of gold bearing material pinched out and the adits were abandoned however, this should not be accepted as fact until a better understanding of the gold bearing structures is achieved.

Further sampling of the open cut vein increased estimates of the precious metal values and by using the assay results to date some rough estimations can be made. Using a gold value of 600 dollars per ounce and a silver value of 15 dollars per ounce, the open cut sulphide vein as exposed could yield approximately 1,300 dollars per linear foot of advance while drifting along the vein. Although bulk sampling would be required to confirm these figures it is obvious that the vein is a significant precious metal host.

The magnetometer survey was successful in delineating the westerly trending draw that is associated with the showings on the property. It should be possible to follow the surface trace of the draw structure under the soil covered areas to the east and west of the grid area using the same type of magnetic survey. This will be a valuable tool in outlining areas for prospecting and trenching during future work on the property. As the nature of the structures forming this draw are still unknown, any future diamond drill work should include several holes to be drilled beneath this feature.

#### 8.0 RECOMMENDATIONS

The next stage of ground work on the property should consist of prospecting, mapping, and assay sampling along new road cuts being made on the claims by local logging contractors. Particular attention should be paid to the areas along strike from the main draw. Magnetometer surveys will be required to trace this draw structure in overburden covered areas.

Respectfully submitted,

D.A. Yeager, Geologist

T.C. Scott, Geologist

C.K. Ikona, P.Eng.

#### APPENDIX I

#### ENGINEER'S CERTIFICATE

I, Charles K. Ikona, of 5 Cowley Court, Port Moody, in the Province of British Columbia DO HEREBY CERTIFY that:

- I am a consulting Mining Engineer with offices at 208, 850 West Hastings Street, Vancouver, B.C.
- 2. I am a graduate of the University of British Columbia with a degree in Mining Engineering.
- 3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
- 4. I examined the property reported on herein October 25, 1978; and that the work outlined in this report was carried out under my supervision by geologists whom I have known for several years and whose work I have every confidence in.
- 5. I have no interest in the property reported on nor in any securities which may be associated with this property, nor do I expect to acquire any.

DATED this /2 day of January, (1981) S. HONA



### CHEMEX LABS LTD.

212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1 TELEPHONE: 985-0648 AREA CODE: 604

TELEX:

043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO.

68245

TO:

Pamicon Developments Ltd. 208 - 850 W. Hastings St.

INVOICE NO.

36128

Vancouver, B.C.

RECEIVED

May 26/80

V6B 1P1 ATTN:

ANALYSED

June 10/80

		TECT MARGOLD	
SAMPLE NO. :	oz/ton	oz/ton	
1	Ag	Au	 
MS - 1	0.01	<0.003	
2	0.01	< 0.003	
3	0.01	< 0.003	
6	0.01	<0.003	
7	0.01	< 0.003	 
8	0.02	0.003	
9	0.02	<0.003	
11	0.04	<0.003	
12	0.04	<0.003	
13	0.04	<0.003	 
14	0.05	<0.003	;
15	0.02	0.030	,
16	0.01	<0.003	
17	0.40	0.114	
18	0.05	≺0.003	
19	0.57	0.110	
20	0.02	0.028	
21	0.08	0.010	
22	0.02	<0.003	
23	0.01	<0.003	
24	0.14	0.058	
25	0.60	1.242	
26	0.01	<0.003	
27	0.01	<0.003	
28	7.26	1.298	
29	25.68	4.088	 
30	0.02	<0.003	
31	0.12	0.020	
32	2.34	0.402	
33	0.52	0.436	
34	0.04	0.026	 
35	0.02	0.005	•
36	0.74	0.003	
MS - 37	0.16	0.010	

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

#### APPENDIX IV

#### STATEMENT OF COSTS AND PERSONNEL

#### Wages

David Yeager, Geologist 208-850 W. Hastings St. Vancouver, B.C.

April 1.0 day @ \$100.00/day = \$100.00 Oct. 2.5 day @ \$150.00/day = 375.00 Nov. 5.25 day @ \$150.00/day = 787.50 \$ 1,262.50

T.C. Scott, Geologist 208-850 W. Hastings St. Vancouver, B.C.

April 4.8 day @ \$150.00/day = \$ 720.00 May 14.3 day @ \$150.00/day = 2,145.00 June .8 day @ \$150.00/day = 120.00 2,985.00

Dave Caulfield, Helper 208-850 W. Hastings St. Vancouver, B.C.

May 10.00 day @ \$ 75.00/day + burden \$ 829.78 829.78

Stan Seney, Helper 208-850 W. Hastings St. Vancouver, B.C.

May 16.00 day @ \$ 50.00/day + burden \$ 908.26 908.26

Robert Darney, Geologist 208-850 W. Hastings St. Vancouver, B.C.

Oct. 1.50 day @ \$150.00/day = \$ 225.00 225.00

......cont.

APPENDIX	T 1/	cont.

#### Wages

Kevin Milledge, 208-850 W. Hastings St. Vancouver, B.C.

Oct. 1.00 day @ \$75.00/day = \$75.00

\$ 75.00

M. Cloutier, 208-850 West Hastings St. Vancouver, B.C.

May 14.00 day @ \$250.00/day = \$3,500.00

3,500.00

#### Communication and Telephone

Billings to Project May 1 to November 30

10.05

#### Travel and Accomodation

T.C. Scott, Expense Account \$ 118.87 Kevin Milledge, Expense Account 5.00

123.87

#### Automobile Expense

#### Truck Rental

#### Red Hawk

April	30	#647	=	\$ 143.57
May	9	#651	=	318.87
Oct.	6	#719	=	72.24
Oct.	17	#727	=	123.42

#### Econo Car

Nov. 1 = 111.75

#### Pamicon

11 days 225.00

#### Fuel

T.C. Scott, Expense Account 126.90
D. Yeager, Expense Account 28.00 1,149.75

.....cont.

ADD:	ENDIX	TV	cont

Misc.		,
T.C. Scott, Expense Account		\$ 25.00
Technical Information		
Topographic Map, Weldwood of Ca	nada	100.00
Outside Reproduction		
Western Reproducers Teeds Secretarial Service Westwords	\$ 38.00 6.60 45.00	89.60
Camp Equipment and Supplies		
T.C. Scott, Expense Account Irly Bird Lumber #43532	\$ 56.58 168.53	225.11
Food		
T.C. Scott, Expense Account		315.20
Materials and Supplies Expendab	<u>le</u>	
May 15 Deakin Equipment #37624 - 37625 #37150 - 37363	\$ 116.76 249.37	
Irly Bird Lumber	271.09	637.22
Equipment Rental		
B.C. Rental #42640 Sovereign Metals T.C. Scott, Expense Account	\$ 514.00 110.00 150.00	774.00
Assay		
Chemex Labs Ltd. 65 Assays for Ag, Au, Cu.		490.53
·	Sub Total	\$ 13,725.87

Pamicon Developments Ltd.

......cont.

APPENDIX IV cont.

#### Management Fee

Pamicon Developments Ltd. 15% of \$13,725.87

2,058.88

#### Drilling

Asmith Diamond Drilling

Hole #1 317 feet @ \$25.00/foot \$7,925.00 plus materials

Hole # 2 350 feet @ \$25.00/foot 8,750.00 plus material 287.65

Hole # 3 367 feet @ \$25.00/foot

9,175.00

322.30

26,459.95

TOTAL COST

42,244.70

