SUMMARY REPORT

ON THE

10/85

JOSH, JOSH 2-4 MINERAL CLAIMS

LIARD MINING DIVISION

NTS 104 B/10

56°38' NORTH LATITUDE
130°48' WEST LONGITUDE

FOR

GULF INTERNATIONAL MINERALS LTD.

BY

D.A. CAULFIELD, Geologist C.K. IKONA, P.Eng.

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,321

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1.0 Introduction

The Josh mineral claims (80 units) were staked in the fall of 1982 on the east side of Snippaker Creek, approximately 6 km southeast of its confluence with the Iskut River in northwestern British Columbia (Figure 1). The Josh Group represents half of the Josh and May project held by Gulf International Minerals Ltd. The Josh claims cover several known copper-zinc occurrences; however, recent discoveries of precious metals in the area suggest that this geological environment may be a favourable host for gold and silver mineralization.

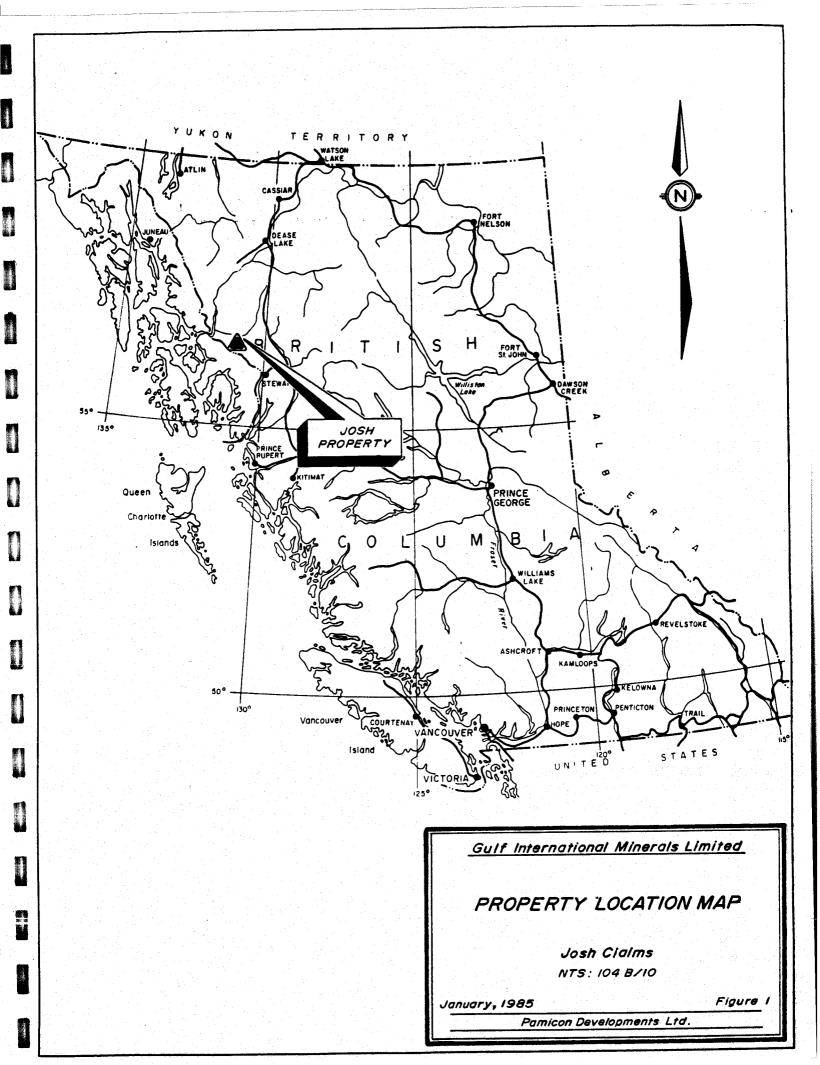
The 1984 field program concentrated on examining, in closer detail, the two auriferous occurrences discovered during the 1983 reconnaissance program conducted by Gulf International Minerals Ltd. under the direction of T.C. Scott, geologist. Introductory material such as claim status, geography, access, regional geology, and in part, local geology has been abridged from Scott's "Geological, Geochemical and Prospecting Report" dated September 19, 1983.

2.0 Property Definition and History

General mineral exploration activity in the region dates back to the turn of the century and continued on into the 1930's with interest in precious metals centering on the Stewart camp. A revival of activity was seen in the 1950's and 1960's as active exploration progressed throughout the Stikine River area in search for porphyry copper deposits.

In recent years, the marked increase in precious metal prices has prompted renewed interest and exploration activity in the Stewart Camp as well as in adjacent areas of similar geologic setting, namely Lower to Middle Jurassic volcanic and volcanoclastic accumulations with rhyolitic and intrusive components. In addition, current research and documentation, and the geology surrounding other historial precious metal camps, has led to a greater understanding and recognition of the characteristics of precious metal systems which many of the past producers and present prospects of the Stewart and Iskut camps typify.

As a result of these events, Skyline Explorations in 1981 resumed field investigations of its REG and INEL properties located 8 km to the west of the Josh and



May claims. Their discovery of significant gold values associated with pyritic structures within the volcanic units has led to the revival of the Iskut River Gold Camp.

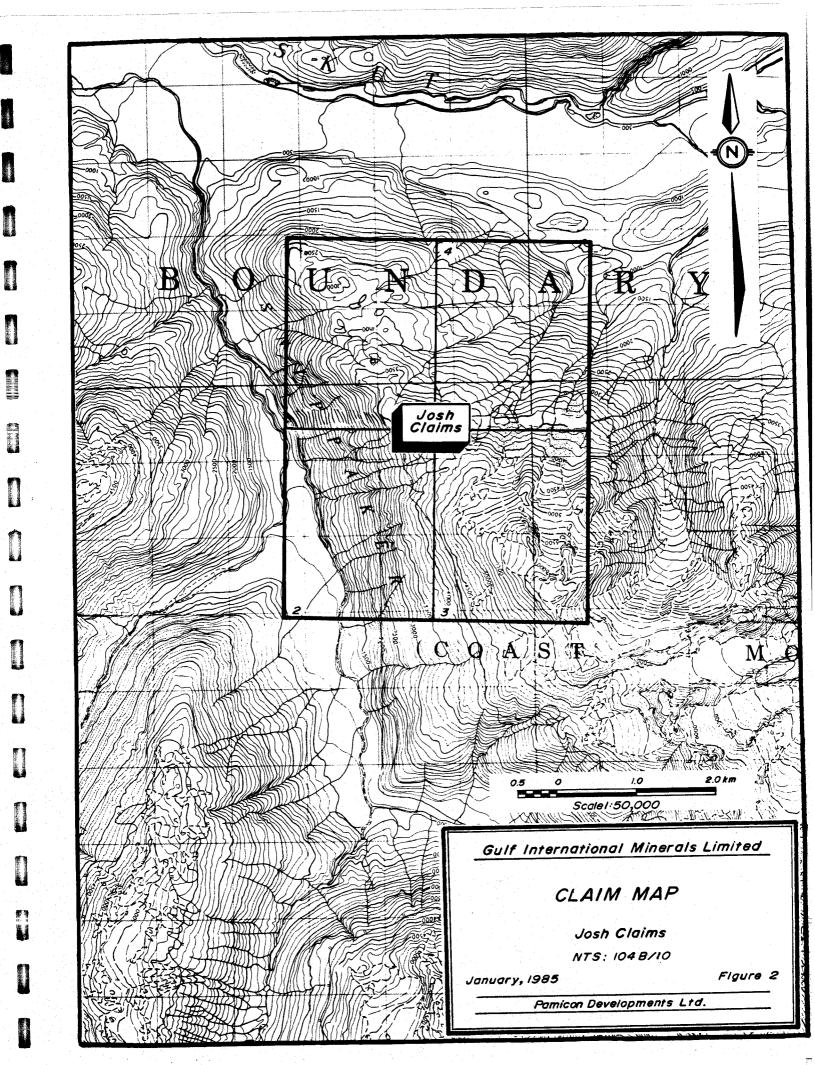
The Josh and May mineral claims were staked in 1982 and 1983 on behalf of Gulf International Minerals Ltd. and cover previously discovered sulphide occurrences in a geologic setting similar to the REG and INEL properties. These were originally located and staked by Newmont Mining Corporation of Canada in 1963. Newmont carried out an airborne magnetometer survey and limited ground exploration in 1964. The claims were subsequently allowed to lapse.

In the past, little emphasis was put on the possible precious metal content of the original Newmont showings or on the possible precious metal potential of the volcanic rocks and related sediments found on the property. The work undertaken by Gulf International Minerals Ltd. on these Josh and May claims has concentrated on these possibilities.

The following Table lists the mineral claims which make up this property. Gulf Intenational Minerals Ltd. is the recorded owner of all claims. (Figure 2)

LIST OF JOSH MINERAL CLAIMS

CLAIM NAME	NO. UNITS	RECORD NO.	DATE OF RECORD
Josh	20	2581 (9)	13 September 1983
Josh 2	20	2551 (10)	13 October 1983
Josh 3	20	2552 (10)	13 October 1983
Josh 4	20	2553 (10)	13 October 1983
	80		
	1949 <u>- La</u> uri 1949		



3.0 General Geography and Physiographic Position

The Josh mineral claims are located on the east flank of the Coast Range mountains 6 kilometers (4 miles) southeast of the confluence of Snippaker Creek and the Iskut River. Telegraph Creek is 137 kilometers (85 miles) to the north, and Stewart is 96 kilometers (60 miles) to the southeast.

Co-ordinates of the property are 56° 38'North Latitude and 130° 48'West Longitude. The property falls under the authority of the Liard Mining Division (NTS Reference: 104B/10).

A gravel airstrip suitable for Beaver or Otter fixed wing aircraft is located 8 kilometers (5 miles) to the south in the Snippaker Valley. There is another gravel airstrip at Bob Quinn Lake 50 kilometers (30 miles) to the northeast of the property. The nearest road is the Stewart-Cassiar Highway that passes just to the east of Bob Quinn Lake.

The claims cover a series of northerly-trending ridges which are separated by steep walled "U" shaped valleys. The valley walls rise precipitously, from elevations of approximately 350 meters (1,150 feet) to the ridge crest at 1,200 meters (4,000 feet) where the slopes flatten considerably. Glacier encrusted mountain peaks rise above the ridges to an elevation in excess of 1,000 meters (6,000 feet).

The ridges are a series of rolling hummocks traversed by numerous northeasterly trending draws. Areas underlain by limestone have typical karst topographic features.

The valleys occupied by Snippaker Creek and the Iskut River are heavily timbered with fir and spruce on the more gentle slopes. Steeper areas are covered with dense 'slide' alder and devils club. Thick stands of fir, spruce and balsam, with a scattering of pine, give way at about the 90 meter (3,000 foot) elevation to

stunted balsam and alpine flora typical of the Coast Range Mountains. Treeline is approximately 1,200 meters (4,000 feet) in elevation.

The property is located in the transition area between West Coast Marine and Interior dry belt climate divisions. There would be an estimated 200 centimeters (80 inches) of rain and up to 80 centimeters (6 feet) of compacted snow at the higher elevations during the year.

Summer temperatures would range from 0° to 16° (+32°F to 60°F) and winter temperatures from -35°C to 0°C (-32°F to +32°F). The coast weather system has a modifying effect on this area and severe cold temperatures do not prevail for long.

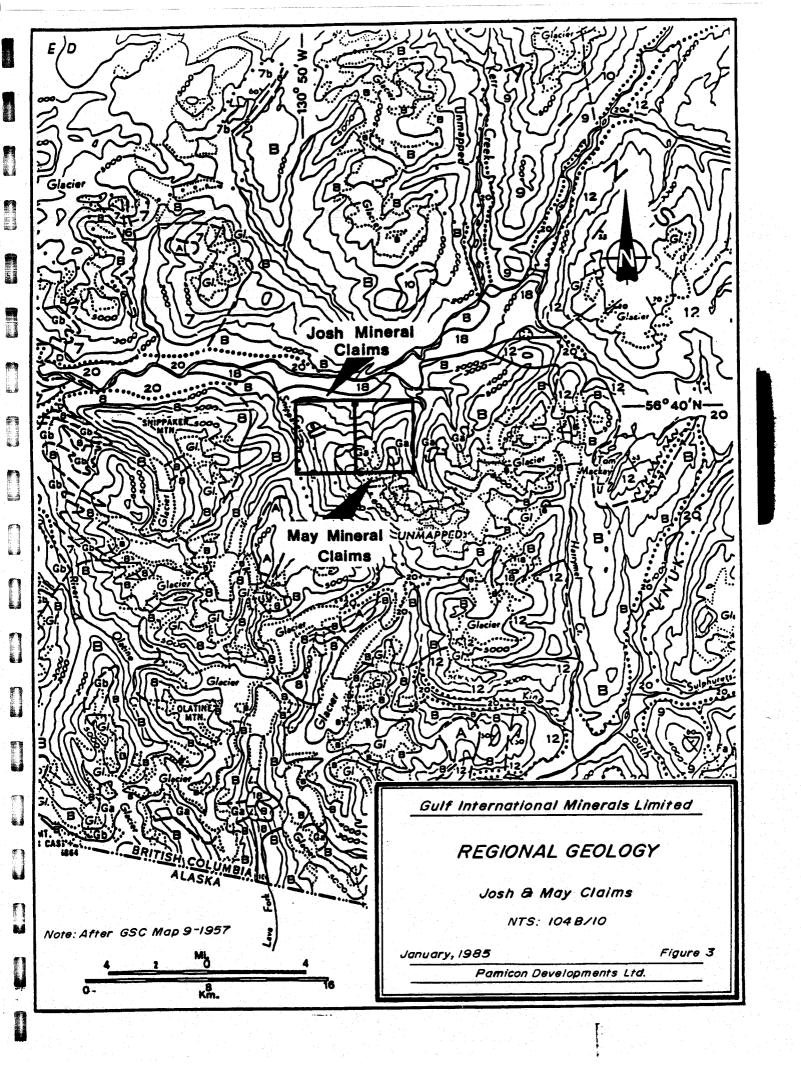
4.0 Regional Geology

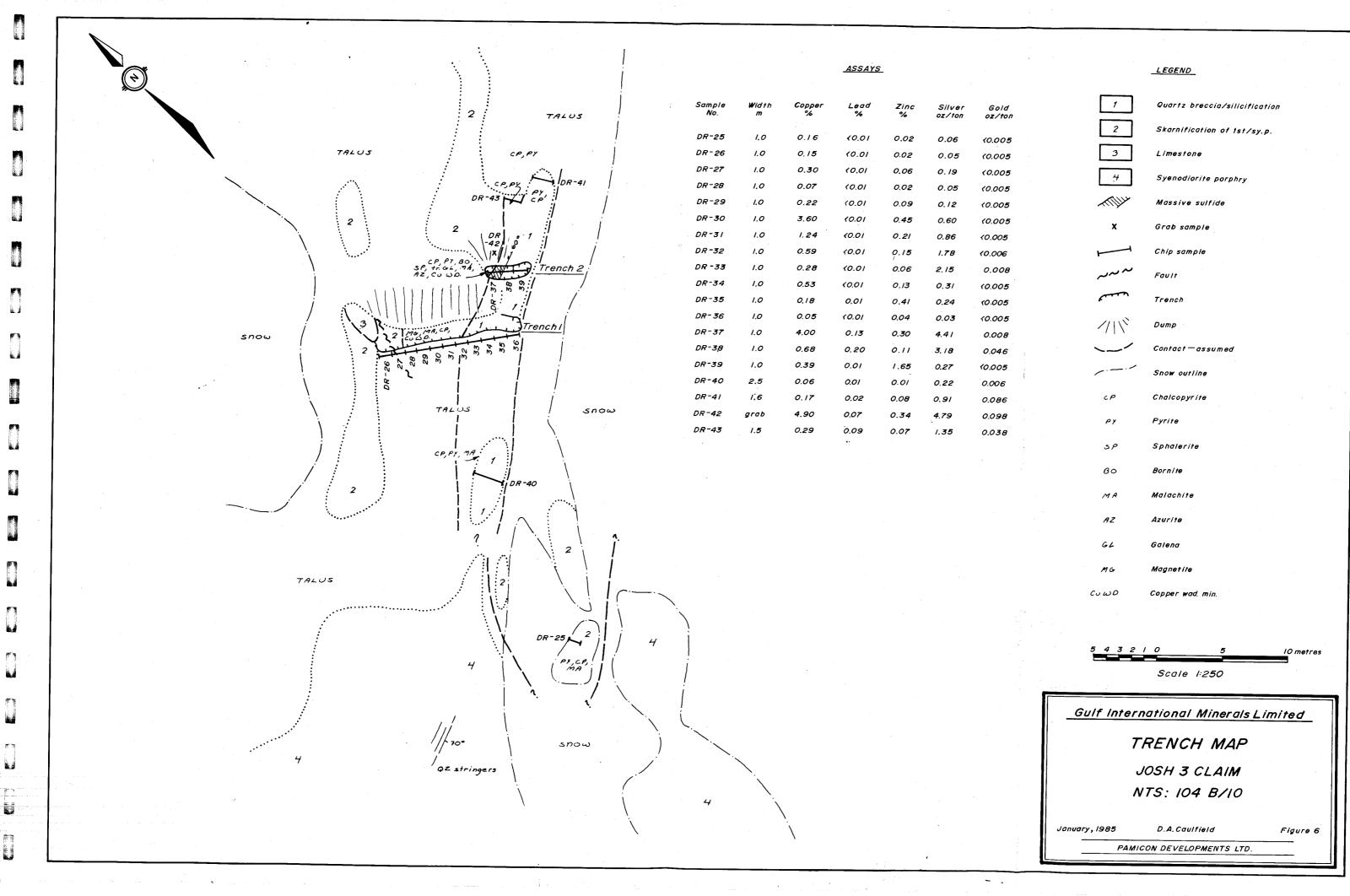
The Josh mineral claims lie on the east flank of the Coast Plutonic Complex which, in this area, consists mainly of quartz-monzonite stocks with satellitic bodies of syenite and diorite. The area is underlain by mid-Mesozoic and older rocks consisting of shales, limestones and acid, to intermediate volcanic and volcanoclastics which have been intruded by elements of the Coast Intrusions (Figure 3). This has resulted in the development of several roof pendants. A number of northwest-striking felsite dykes cut the above assemblage. The lower portion of the Iskut River Valley, 2 km to the north of the property, contains Tertiary basalt flows and related pyroclastics of the Stikine Volcanic Belt. These probably originated from a vent 13 kilomters to the northwest on the south side of the river.

5.0 Local Geology

The Josh mineral claims are underlain by a succession of limestone, volcanics and related sediments of probable Paleozoic and Mesozoic age which have undergone numerous periods of deformation and intrusion (Figure 4 - Geology by T.C. Scott, September 1983).

Segmented fossiliferous limestone units occur on the property and





LEGEND

	SEDIMENTARY AND VOLCANIC R	OCKS
21	[기술 12] 공학기업의 회학 학자가 기관된 생각하다.	
CENOZOI	18 Olivine basalt, ash, cinders	
04		
Z		
ပ		
	JURASSIC AND CRETACEOUS	
Ö	UPPER JURASSIC AND LOWER CRETACEOUS Argillite, greywacke, conglomerate, coal; 12a,	
01	andesite, chert, tull, conglomerate, shale,	
1020	greywacke	
SO	JURASSIC	
ME	LOWER AND MIDDLE JURASSIC	
2	Confew merate, greywacke, grit, siltstone, shale, ila, may include younger rocks	JURASSIC AND /OR EARLIER
		PRE UPPER JURASSIC 9. Mainly volcanic rocks;
		9 10 minor conglomerate; grey- wacke, argillite
	TRIASSIC	10. Mainly sedimentary rocks
	B Tuff, siltstone, limestone, conglomerate, breccia	
	PERMIAN AND/OR TRIASSIC	
	7, Volcanic and sedimentary rocks undivided; 7 a, mainly andesitic and basaltic volcanic rocks;	
	flows, breccia, tuff breccia, tuff; 7b, mainly	
ပ္	greywacke, siltstone, conglomerate; 7c, mainly limestone	
10		
20	PERMIAN AND (7) EARLIER	
의	6 Limestone, greenstone, chert, argillite, phyllitic quartzite, greywacke; meta-andesite and meta-	
∢	diorite locally abundant near ultramatic bodies. May include younger greenstone; 6a, Carboniferous	
AL	or Permian, mainly andesitic flows, breccia, tuff; minor sedimentary rocks	
Q,		
. !	INTRUSIVE ROCKS	
•		
	A Felsite, felsite porphyry	
	B Mainly quarte monsonite, granodiorite, granite	
	B Mainly quarte monsonite, granodiorite, granite	
	METAMORPHIC ROCKS	

Ga, Gneiss; Gb, phyllite, quartzite, minor crystalline limestone, highly altered and sheared greywacke and volcanic rock

PERMIAN AND/OR EARLIER
PRE MIDDLE PERMIAN

specimens are presently being examined by the Geological Association of Canada for identification and dating. The degree of fault dislocation of the various rock units and the contact metasomatism inflicted by intrusive activity have produced a confused picture of the stratigraphic succession on the property.

The oldest rocks (lowermost) appear to belong to a thick sequence of andesitic volcanic breccia (Unit 2), which is characterized, in part, by clasts of limestone up to 10 cm in length. This unit also contains minor tuff and argillite beds as well as very minor acidic members. The latter may be a result of intense silicification due to close proximity to intrusive elements. A conspicious rhyolitic unit (Unit 1) was encountered on the western boundary of Josh 3. It may be a sill or flow representing a differentiated phase of the andesitic volcanism.

A thick unit of light grey, banded, fossiliferous (crinoidal) limestone (Unit 3) is intercalated with the andesitic breccias. It provides a marker horizon from the northwest to the southeast across the property. Carbonaceous andesitic volcanics comprise a minor portion of this unit.

The above units are intruded by elements of the Coast Batholith in the form of a syenodiorite porphyry (Unit 4) and a later granodiorite. The syenodiorite is characterized by 1.0 to 1.5 cm hornblende phenocrysts and 1 to 5.0 cm pink orthoclase phenocrysts in medium-grained subhedral matrix distinctly lacking in quartz. The main body strikes northeasterly across the Josh and Josh 4 claims. Both the north and south contacts are obscured by overburden. However, it does appear a crosscutting relationship with the stratified rock exists. Locally, the syenodiorite porphyry occurs as both sills and dykes within the layered units.

The granodiorite (Unit 5; Figure 4 only) occurs as near vertical northeasterly-trending dykes within the syenodiorite porphyry. It is characterized by a leucocratic fine-grained matrix which contains minor 1 to 3 mm biotite grains. The 3.0 to 30.0 meter wide dykes form conspicuous resistant ridges.

The youngest rocks appear to be narrow, fine-grained, gabbro dykes which

also strike northeasterly across the stratified rocks. It is possible that these may represent feeders for the Tertiary valley basalts of the region.

Rock alteration consists of propylization, silicification, serpentinization and contact metasomatism. Contact metasomatism has resulted in the formation of actinolite - epidote skarns within the limestone and carbonaceous volcanics in close proximity to the syenodiorite porphyry. Serpentinization is minor and is occasionally observed on faults which cut across the limestone units. It may, in part, be related to the late gabbroic intrusions. Occasionally zones of silicification are observed within the finer grained volcanics. It appears to be related to the intensity of the late quartz veining with epidote and the alteration mafic minerals to epidote and chlorite in all rocks.

Structurally, the property is complex. The main trend of the layered rocks changes from an easterly strike with 2 moderate northerly dips in the northwest portion of the property to the southerly strike with moderate easterly dips in the southern and southeastern portions. These rocks appear to have been truncated by periodic movements along a major northeasterly structure which has allowed the subsequent intrusion of batholithic rocks. While the main mass of syenodiorite porphyry follows this trend, sills and dykes are observed parallel to bedding and crosscutting the layered rocks. The later granodiorite dykes, and most quartz veins, parallel this direction. All display relatively steep dips. Subsequent structural adjustment (occurring contemporaneous of the granodiorite) has seen the development of 2 northerly striking fracture directions, which allowed the development of a weak quartz stockwork within the syenodiorite and the segmentation of some of the granodiorite dykes. The strong northeasterly structures appear to have come into play again with the emplacement of the gabbro dykes.

The dominant linear features observed on air photographs are the southerly strike of the layered rocks and the strong northeasterly structural fabric. On the ground many of the northeasterly trends are topographic lows (draws) and often contain numerous pieces of frost-heaved sugary quartz float. The contacts between most rock units are faulted.

5.1 Mineral Occurrences

Mineral occurrences on the property can be classified into three categories, namely: chalcopyrite-magnetite-sphalerite skarns, weak quartz stockworks and silicified pyrite-chalcopyrite limestone replacements directly related to syenodiorite porphyry intrusions. The first type of occurrence is found in the old trenches on the Josh claim excavated by Newmont Mining Corp. in 1964. These zones are mineralized with pyrite, chalcopyrite, sphalerite and magnetite within an actinolite-epidote-garnet skarn. Although selected sections sampled by Scott in 1983 assayed very well in zinc and copper, they are characterized by low silver values, negligible lead and gold values, and are invariably irregular and discontinuous in nature. The second category is a weak stockwork development throughout the main mass of syenodiorite porphyry. Narrow quartz stringers contain minor pyrite and trace amounts of chalcopyrite and molybdenite associated with propylitic alteration assemblages. At this time, these two styles of mineralization appear to be of little economic importance.

Economically, the third category of mineralization represents the most attractive target. During 1983, two separate occurrences of this type were discovered through prospecting. It was these two areas within the Josh 3 claim boundaries in which the 1984 field program was concentrated. Massive pyrite and chalcopyrite with minor amounts of sphalerite, bornite and magnetite occur in quartz vein breccia replacements of limestone horizons. Syenodiorite intrusions are intimately associated with these mineralized zones.

6.0 Summary of 1984 Field Program

The thrust of the 1984 work program was aimed at detailing the two gold occurrences discovered by T. Bell on the Josh 3 claim the previous year. The examination was completed over an 11 day period from August 4 through 14, 1984. The field crew consisted of Merle Cloutier, blaster/prospector, Chris Davis, sampler, and the author, geologist. Camp was established at the Snippaker airstrip and

daily transportation to the property was provided by a chartered helicopter based on the gravel strip. The two areas of the Josh 3 mineral claim examined were:

- 1) The north end of the claim where a grab sample from a 4 m wide quartz vein reported 23.3 ppm Ag and 2430 ppb Au.
- 2) The southwest corner of the claim where the best geochemical values of the 1983 program were obtained (1.70% Cu, 118.3 ppm Ag, and 8250 ppb Au).

Geological mapping at a scale of 1:5,000 (Figure 5) and prospecting programs were accomplished in both areas. In addition, the work included trenching of the northern showing and contour soil geochemistry of the second area. A total of 59 rock samples were collected for assay and 66 soil samples were submitted for geochemical analysis. One silt sample was collected from a creek draining the southern end of the claim area. All samples were analyzed at Vangeochem Lab Ltd. in Vancouver.

6.1 Geological Mapping, Prospecting, and Trenching Results

Geological mapping and prospecting results are illustrated in Figure 5. Detailed descriptions of each rock sample are appended. Generally, the mapping completed in 1984 correlates reasonably well with last year's work (Figure 4). However, with the greater emphasis on detail this year, some inconsistencies were located in the 1983 mapping. All the geologic units, as a rule, are easily identified except in places where extreme alteration, skarnification, and intrusive border zones exist.

Two zones within the northern claim area contain significant gold mineralization. The most southerly occurrence which was discovered during mapping this year is situated along a northeasterly trending draw marking a limestone-volcanic contact. A chip sample, DR-13, across 1.20 m assayed 4.20% Cu and 0.108 oz/ton Au. Sulphide mineralization consisted of pyrite and chalcopyrite hosted within an epidote-quartz-garnet skarn. The zone may be up to 2.0 m wide but both

strike and width dimensions are obscured by talus debris. Further north, another northeasterly-trending structure sits within a large skarnified zone wedged between two syenodiorite masses. To the southwest, the mineralized vein is cut off by the syenodiorite porphyry and the northeastern extension is masked by talus cover (Figure 6). Two trenches (11.0 m x 1.0 m x 1.0 m, 3.0 m x 1.0 m x 1.0 m) were blasted across the zone. The main zone consists of a 2.5 to 5.0 m wide, resistant quartz vein with breccia fragments. Drusy and coarse crystalline lined cavities are commonly found throughout the vein breccia. Chalcopyrite and pyrite are normally in equal proportions with smaller amounts of sphalerite, bornite and galena. A selected grab sample of blasted trench material assayed 4.90% Cu, 4.79 oz/ton Ag and 0.098 oz/ton Au. The quartz breccia and encompassing skarn zone occur in very close proximity to the syenodiorite porphyry. Due to this close spatial relationship, it is assumed that the silicification and skarnification of a of a chemically receptive limestone resulted from the emplacement of the intrusive body. To the northeast, a similar but wider (7.0 m) vein breccia occurs. It is conceivable that this zone represents a displaced extension of the vein described above. Samples DR-46 through 51 from the vein returned very low metal values.

In the southwest corner of the claim block, geological mapping and prospecting uncovered no new gold occurrences. Furthermore, a closer examination of the showing discovered during 1983 has shown that the possibility of finding any significant strike potential is limited. The style and type of mineralization is identical to that of the more northern areas. A grab sample (DR-61) from outcrop reported values of 1.42% Cu, 2.28 oz/ton Ag and 0.082 oz/ton Au.

6.2 Results of Soil Geochemistry

Four soil lines were placed along the 1400 m, 1500 m, 1600 m and 1700 m elevation contours with sample spacing of 25 m (Figure 7) except in areas of snow and talus cover. At each sample site, the station was flagged and soil was collected in brown kraft bags for analysis. The majority of soil type selected was taken at a very shallow depth from a locally derived talus fines horizon.

The geochemical results were not subjected to statistical analysis; however, from a preliminary observation it appears three anomalous areas exist. One of the areas is coincident with a skarn showing (as noted in Section 6.1) containing copper, silver and gold mineralization. This area is centered at 260 m N on the 1500 m contour. The other two areas occur on the north and south ends of the 1600 m and 1700 m contour lines. Ground observations and sampling in these areas reveal no reason for these anomalies. The area is underlain by altered syenodiorite porphyry which has not responded to sampling. It is more likely that these anomalies are derived from volcanic units upslope.

The only silt sample taken returned low metal values (Figure 5).

7.0 Conclusions

A geological mapping, trenching and geochemical program was completed on the Josh 3 mineral claim over an 11 day period in August 1984. The emphasis of the work program was in examining the two gold occurrences discovered through prospecting in 1983.

The property is underlain by Paleozoic to Mesozoic volcanics and sediments which have been intruded by syenodiorite porphyries and granodiorite dykes. Silicified and skarnified limey horizons contain the only significant gold mineralization found to date. Three of these such occurrences exist on the Josh 3 mineral claim:

- 1. North End 2.0 m wide epidote, quartz, garnet skarn
- 2. North End 2.5-5.0 m wide quartz vein breccia
- 3. Southwest Corner ? width, quartz vein breccia

All zones have appreciable copper and silver values associated with the gold mineralization.

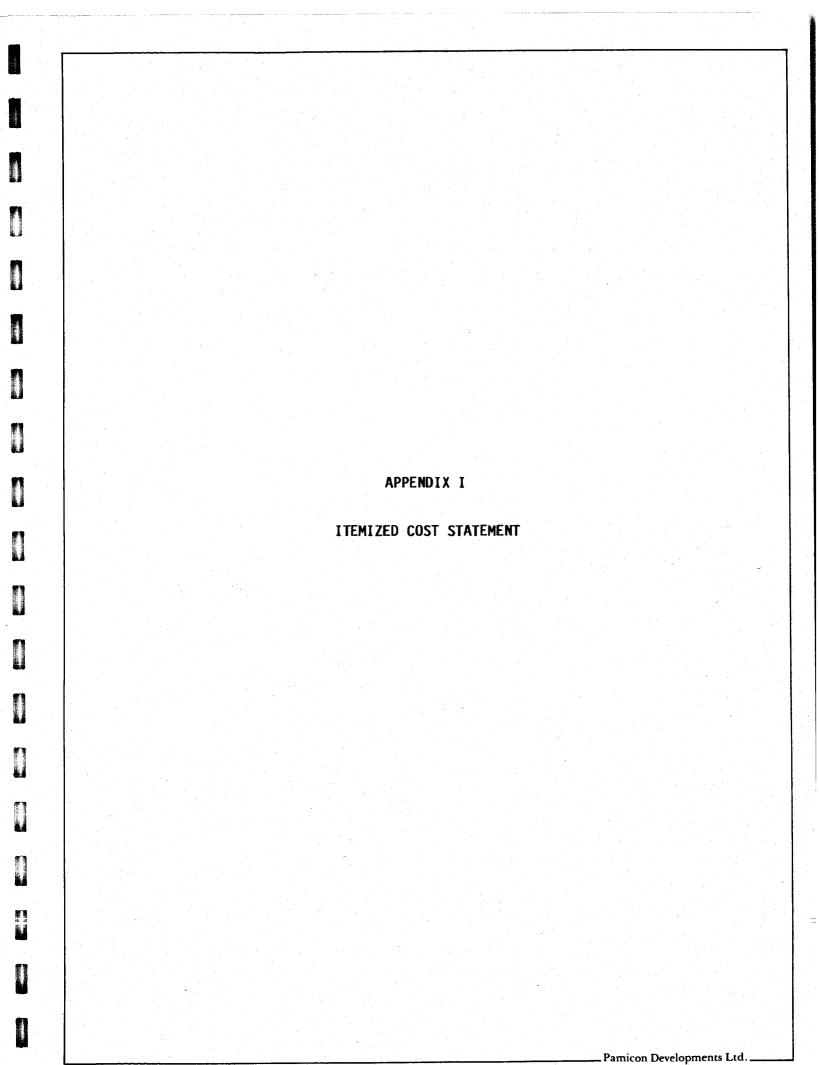
Four geochemical lines were located along different contour elevations. Clusters of anomalous elements can be found in three areas. One area occurs over a known gold showing whereas the other two anomalous zones are likely derived from a volcanic source higher in elevation. The single silt sample taken contained very low metal values.

CHARLES K. IK

Respectfully submitted,

David A. Caulfield, Geologist.

Charles K. Ikona, P.Eng.



APPENDIX I

ITEMIZED COST STATEMENT

W	٩G	E	S

Dave Caulfield (Geologist) 215 - 583 Granville Street Vancouver, B.C. August 4-14 \$ 2,200.00 11 days @ \$200/day Merle Cloutier (Blaster, Prospector) 200-675 West Hastings Street Vancouver, B.C. August 4th-7th 600.00 4 days @ \$150/day Chris Davis (Labourer) 200-675 West Hastings Street Vancouver, B.C. August 6th - 14th 1,035.00 9 days @ \$115/day ACCOMMODATIONS & MEALS 2,400.00 24 man days @ \$100/day EQUIPMENT RENTAL Cobra Drill Rental 240.00 4 days @ \$60/day EXPENDIBLE EQUIPMENT 200.00 Powder, Caps, Sample Bags, etc. HELICOPTER COST Northern Mountain Helicopter Ltd. 3,570.00 8.4 hours @ \$425/hour

ASSAYS

Vangeochem Lab Ltd.

59 rock samples (Cu,Pb, Zn, Ag, Au)
59 samples @ \$37.75 each \$ 2,227.25

66 soils (Cu, Pb, Zn, Ag, Au)
66 samples @\$9.35 each 650.10

1 silt (Cu, Pb, Zn, Ag, Au)
1 sample @ \$ 9.85 9.85 9.85

REPORT, MAPS, ETC. 1,500.00 \$14,632.20

 MANAGEMENT FEE @ 15%
 2,194.83

 TOTAL:
 \$16,827.03

APPENDIX II

ROCK SAMPLE DESCRIPTIONS

ABBREVIATIONS

Qz	-	quartz	Py	_	pyrite
Ga	-	garnet	Ср	_	chalcopyrite
Ep	-	epidote	Mg	-, -	magnetite
C1		chlorite	Sp	-	sphalerite
Se	-	sericite	Bo	-	bornite
Ka	-	kaolinite	Pr	_	pyrrhotite
Ca	_	calcite	Ma	-	malachite
Ac	_	actinolite	Az	-	azurite
			He	_	hematite
			Ge	• •	geothite

OC - outcrop FL - float TR - trench area

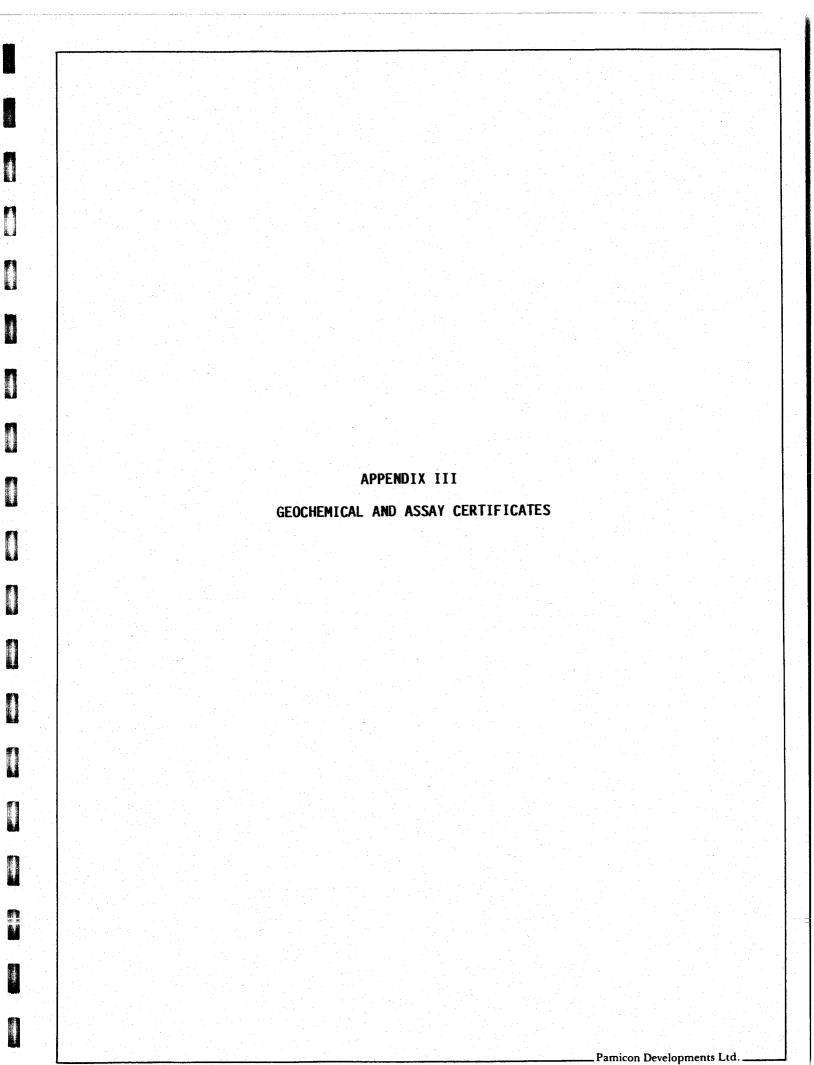
NORTHERN JOSH 3

SAMPLE NO.	LAB. NO.	SAMPLE TYPE	SAMPLE WIDTH	SAMPLE DESCRIPTION/MINERALIZATION
DR-11	10355	Chip-OC	1.26 m	Rusty, silicified shear zone in mafic volc.
DR-12	10339	Grab FL		Rusty pyritic float taken down slope from DR-11
DR-13	10347	Chip-OC	1.20 m	Qz, Ga, Ep skarn along lst./volc. contact - Py, Cp, Ma, Az
DR-14	10351,10360	Grab - OC		Qz veining along lst./syenod Py, Ma
DR-15	10338	Grab- OC		Qz gash - Py
DR-16	10352	Grab- OC	30 cm	Qz veining - Py, tr. Cp.
DR-17	10348	Chip - OC	1.45 m	Ep, Qz, Ga skarn - Py, Ma, Az
DR-18	10354	Grab - OC		Ep, Qz, Ga skarn - Py
DR-19	10353	Grab - OC		Sample of fresh syenodiorite porphyry, weak Ep, Cl, Se, Ka alteration - Py
DR-20	10349	Chip - OC	1.52 m	Same zone as DR-17, 18 - Py, Cp, Ma
DR-21	10341,10350	Chip - OC	10.40 m	Siliceous blow-out in syenod - Cp, Py, Ma
DR-22	10321,10330	Chip - OC	1.20 m	Ep, Qz, Ca, C1 skarn zone- Py

SAMPLE NO.	LAB. NO.	SAMPLE TYPE	SAMPLE WIDTH	SAMPLE DESCRIPTION/MINERALIZATION
DR-23	10322	Grab - OC		Unaltered gabbro
DR-24	10329	Grab - OC		Siliceous interbed in 1stPy
DR-25	10335	Chip - TR	1.00 m	Contact of syenod. and 1st., Qz Ep, C1, Ca skarn- Py, Cp, Ma
DR-26	10319	Chip - TR	1.00 m	Contact - Py, Cp, Mg, Bo, Ma, Az, He, Ge
DR-27	10334	a a	$\mathbf{u} = \mathbf{u} + \mathbf{u}$	$\mathbf{u} = \mathbf{u} \cdot \mathbf{u} + \mathbf{u} \cdot \mathbf{u} + \mathbf{u} \cdot \mathbf{u} + \mathbf{u} \cdot \mathbf{u} \cdot \mathbf{u} + \mathbf{u} \cdot \mathbf{u} + \mathbf{u} \cdot \mathbf{u} \cdot \mathbf{u} + $
DR-28	10346	a a		\mathbf{u}
DR-29	10331,10340	n n	The state of the s	
DR-30	10323	n • • • • • •		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
DR-31	10318		H	
DR-32	10333	H H	ii	quartz breccia- "
DR-33	10328			H H
DR-34	10336	in the second se	$\mathbf{u}_{i,j} = \mathbf{u}_{i,j} + \mathbf{u}_{i,j}^{(i)} + \mathbf{u}_{i,j}^{(i)}$	H
DR-35	10332	n n	.	
DR-36	10342	n n	u	
DR-37	10325	n n	and the second s	u u u

SAMPLE NO.	LAB. NO.	SAMPLE TYPE	SAMPLE WIDTH	SAMPLE DESCRIPTION/MINERALIZATION
DR-38	10324		u	
DR-39	10326	n au	u	
DR -40	10345	u u	2.50 m	" location of TB-46 "
DR -41	10327	H H	1.60 m	
DR -42	10317	Grab - TR		" selected sample
DR-43	10344	Chip - TR	1.50 m	
DR -44	10516	Grab - OC		Qz, C1, Ep skarn zone - Py
DR-45	10544	Chip - OC	80 cm	quartz breccia - Py, tr. Cp, Ma, Az
DR-46	10526	Grab - OC		
DR -47	10518	Chip - OC	50 cm	
DR -48	10531,10540	Chip - OC	1.90 m	
DR-49	10530,10521	Chip - OC	1.90 m	
DR - 50	10539	Chip - OC	1.35 m	
DR-51	10524	Chip - OC	12.00 m	n n
DR-52	10535	Grab - OC		Siliceously altered syenod. Ep, Qz, Cl alteration - Py

SAMPLE NO.	LAB. NO.	SAMPLE TYPE SAMPLE WIDTH	SAMPLE DESCRIPTION/MINERALIZATION
DR-53	10522		
DR-54	10525	\mathbf{H}_{i}	
DR-55	10519		
DR-56	10523		
DR-57	10537	\mathbf{u}	
DR-58	10542		Altered mafic volc Py
DR-59	10536	Chip - 0C 9.00 m	Ep, Ga, Qz skarn in volc Mg, Py
DR-60	10533	Chip - OC 19.00 m	
DR-61	10528	Grab - OC	Quartz breccia replace- ment of lst/volc Cp, Py, Ma, Az
DR - 62	10538	Grab - OC	Ep, Ga skarn - Py
DR-63	10534	Grab - OC	Altered syenod Py
DR - 64	10532	Grab - OC	Shear zone in volc Py, Pr
DR-65	10527	Grab - OC	Qz, Ep, Cl, Ca skarn in volc Py
DR-66	10529	Grab - OC	Altered syenod Py



JOSH 1984 ROCK ASSAY RESULTS

FIELD NO.	LAB. NO.	COPPER %	LEAD %	ZINC %	SILVER Oz/st	GOLD Oz/st
DR-11 DR-12 DR-13 DR-14 DR-15	10335 10339 10347 10351 10338	.05 .06 4.20 .04 .13	<.01 .01 <.01 .01 <.01	.04 .06 .16 .02	.04 .08 .87 .05	<.005 <.005 .108 <.005 <.005
DR-16 DR-17 DR-18 DR-19 DR-20	10352 10348 10354 10353 10349	.09 .32 .07 .05	.01 .01 .01 <.01	.05 .10 .05 .02 .04	.56 .16 .24 .03 .66	<.005 <.005 .006 <.005 .006
DR-21 duplicate	10350 10341	.17	.01 .01	.53 .56	.32	<.005 <.005
DR-22 duplicate	10321 10330	.07 .04	<.01 <.01	.21	.06 .02	<.005 <.005
DR -23 DR -24 DR -25 DR -26 DR -27 DR -28	10322 10329 10335 10319 10334 10346	.04 .07 .16 .15 .30	.02 <.01 <.01 <.01 <.01 <.01	.01 .03 .02 .02 .06	.02 .27 .06 .05 .19	<.005<.005<.005<.005<.005<.005<.005
DR-29 duplicate	10331 10340	.22 .23	<.01 <.01	.09 .13	.12	<.005 <.005
DR-30 DR-31 DR-32 DR-33 DR-34	10323 10318 10333 10328 10336	3.60 1.24 .59 .28	<.01 <.01 <.01 <.01 <.01	.45 .21 .15 .06	.60 .86 1.78 2.15	<.005<.005<.006<.008<.005
DR - 35 DR - 36 DR - 37 DR - 38 DR - 39	10332 10342 10325 10324 10326	.18 .05 4.00 .68 .39	.01 <.01 .13 .20	.41 .04 .30 .11	.24 .03 4.41 3.18 .27	<.005<.005<.008 .046
DR -40 DR -41 DR -42 DR -43 DR -44	10345 10327 10317 10344 10516	.06 .17 4.90 .29	.01 .02 .07 .09	.01 .08 .34 .07	.22 .91 4.79 1.35 .03	.006 .086 .098 .038 <.005
DR -45 DR -46 DR -47	10544 10526 10518	.11 .08 .07	.01 <.01 .01	.16 <.01 .03	.08 .01 .02	<.005 <.005 <.005
the state of the s						U

Pamicon Developments Ltd.

DR-48 duplicate	10531 10540	.06 .11	<.01 <.01	<.01 .01	.01 .02	<.005 <.005
DR-49 duplicate	10521 10530	.09 .06	<.01 <.01	.01 <.01	.03	<.005 <.005
DR-50 DR-51 DR-52 DR-53 DR=54	10539 10524 10535 10522 10525	.10 .08 .05 .06	<.01 <.01 <.01 <.01 <.01	.03 .01 <.01 <.01	.11 .02 .01 .02	<.005<.005<.005<.005<.005
DR-55 DR-56 DR-57 DR-58 DR-59	10519 10523 10537 10542 10536	.10 .08 .05 .05	.01 .01 .01 <.01 <.01	.01 .01 <.01 .01	.03 .02 .02 .03	<.005 <.005 <.005 <.005 <.005
DR-60 DR-61 DR-62 DR-63 DR-64	10533 10528 10538 10534 10532	.07 1.42 .06 .06	<.01 .05 .01 <.01	.01 .16 .01 .01	.02 2.28 .03 .02	<.005 .082 <.005 <.005 <.005
DR -65 DR -66 DR -67 DR -68 DR -69	10527 10529 10543 10517 10541	.10 .08 .44 .09	<.01 .01 <.01 .01	.02 .01 <.01 .01	.06 .05 .11 .03	<.005 <.005 <.005 <.005 <.005

SAMPLE NO.	LAB. NO.	SAMPLE TYPE SAMPLE WIDTH	SAMPLE DESCRIPTION/MINERALIZATION
DR-67	10543	Grab - FL	quartz breccia replace- ment of lst Cp, Py, Ma, He
DR-68	10517	Grab - FL	altered syenod - Py
DR-69	10541	Grab - OC	Qz, Se, Ep, Ac. Skarn- Mg, Py

VANGEOCHEM LAB LIMITED ___________________

MAIN OFFICE 1521 Pemberton Ave. North Vancouver B.C. V7P 2S3 (604)985-5211 Telex: 04-352578

BRANCH OFFICE 1630 Pandora St. 1630 Pandora St.
Vancouver B.C. V5L 1L6 (604)251-5656

GEOCHEMICAL ANALYTICAL REPORT

CLIENT: SKYLINE EXPLORATIONS LTD.

DATE: August 28 1984

ADDRESS: Suite 200-675 W. Hastings St.

: Vancouver B.C.

REPORT#: 84-84-018

JOB#: 84405 -: V6B 1N2

PROJECT#: JOSH & INEL INVOICE#: 8198
SAMPLES ARRIVED: August 22 1984 TOTAL SAMPLES: 71
REPORT COMPLETED: August 28 1984 SAMPLE TYPE: 71 PULP
ANALYSED FOR: Cu Pb Zn Ag Au REJECTS: DISCARDED

SAMPLES FROM: EM & CD - SKYLINE EXPLORATIONS

COPY SENT TO: SKYLINE - VANCOUVER & TERRACE

PREPARED FOR: SKYLINE EXPLORATIONS LTD.

ANALYSED BY: VGC Staff

SIGNED:

VANCEDCHEM LAS LIMITED

1521 Pemberton Avenue

North Vancouver B.C. V7P 2S3

(604) 986-5211 Telex: 04-352578

PREPARED FOR: SKYLINE EXPLORATIONS LTD.

NOTES: nd = none detected

: - = not analysed

is = insufficient sample

REPORT NUMBER: 84-84-014 JOB NUMBER: 84383

PAGE 2 OF 6

SAMPLE #	Cu	Pb	Zn	Αg	Au
	*	*	*	oz/st	oz/st
10300R	. 09	<. Ø1	.01	.02	(.005
10317R	4.90	. 07	. 34	4.79	. 098
10318R	1.24	(.01	.21	. 86	<.005
10319R	. 15	(.01	.02	. 05	<.005
10320R	. 08	<.01	.02	.02	(.005
			A Company of the second	المارين ويعرضن الهيجار وعلو	- Telegraph (
10321R	. 07	<.01	.21	. 06	(.005
10322R	. 04	.02	.01	.02	<.005
10323R	3.60	<.01	. 45	. 60	⟨.005
10324R	. 68	. 20	.11	3.18	. 046
10325R	4.00	.13	. 30	4.41	.008
10326R	. 39	.01	1.65	.27	<.0 05
10327R	.17	.02	.08	. 91	. 086
10328R	.23	(.01	. 06	2.15	. 008
10329R	. 07	⟨.01	.03	. 27	⟨.005
10330R	. 04	⟨. Ø1	.20	.02	<.005
10331R	.22	⟨. Ø1	. 09	.12	<.005
10332R	. 18	.01	. 41	. 24	<.005
10333R	. 59	⟨.01	. 15	1.78	. 006
10334R	. 30	(.01	. 06	. 19	⟨.005
10335R	. 16	<. @1	.02	. 06	⟨.005

DITECTION LIMIT

. 2/1 1 pes = 0.0001% .01 .01

.01

.005

signed:

pom = parts per million

VANGEOCHEN LAB LIMITED

PREPARED FOR: SKYLINE EXPLORATIONS LTD.

1521 Pemberton Avenue

NOTES: nd = none detected

North Vancouver B.C. V7P 2S3 (604) 986-5211 Telex: 04-352578

: — = not analysed : is = insufficient sample

REPORT NUMBER: 84-84-014

JOB NUMBER: 84383

PAGE 3 OF 6

SAMPLE #	Cu	РЬ	Zn	Яg	Au
	*	*	*	oz/st	oz/st
10336R	.53	(.01	. 13	.31	<.005
10337R	. Ø8	.02	. 16	. 06	<.005
10338R	.13	<.01	.01	.21	<.005
10339R	. 06	.01	. 06	.08	<.005
1034 0 R	.23	<.01	. 10	. 10	<.005
			ing with a subject.	and the second s	
10341R	.16	. 01	. 56	. 15	<.00 5
10342R	. 05	<.01	. 04	. 03	(.005
10343R	1.06	.01	. 04	1.28	.008
10344R	. 29	. 09	.07	1.35	. 038
10345R	. 06	.01	. 01	. 22	. 006
10346R	. 07	(.01	.02	. 05	<.005
10347R	4.20	(.01	. 16	. 87	. 108
10348R	.32	.01	. 10	. 16	(.005
10349R	. 14	.02	. 04	. 66	. 006
10350R	.17	.01	. 53	. 32	⟨. ୧୧5
10351R	. 04	.01	.02	. 05	(.005
10352R	.09	. 01	. 05	. 56	(.005
10353R	.05	(.01	.02	. 03	⟨.005
10354R	. 07	.01	. 05	. 24	. 006
10355R	.05	⟨.01	. 04	. 04	<. ØØ5
					and the second second second second

DETECTION LIMIT
1 Troy oz/short ton = 34.28 ppm

1 000 = 2.82.

signed:

VANGEDCHEN LAB LINITED

1521 Pemberton Avenue

North Vancouver B.C. V7P 253

(684) 986-5211 Telex: 04-352578

PREPARED FOR: SKYLINE EXPLORATIONS LTD.

NOTES: nd = none detected

-- = not analysed

is = insufficient sample

REPORT NUMBER: 84-84-015 JOB NUMBER: 84388 PAGE 1 OF 2

SAMPLE #	Cu	РЬ	Zm	Ao	Au
	*	%	%	oz/st	oz/st
10516 R	.09	⟨.01	.07	.03	(.005
10517 R	. 09	.01	.01	. 03	(.005
10518 R	. 07	.01	.03	.02	(.005
10519 R	. 10	.01	.01	. 03	(.005
10521 R	. 09	<.01	.01	.03	<.005
					age of the second
10522 R	. Ø6	(. Øi	(.01	.02	4.005
10523 R	. 08	.01	.01	.02	⟨ . ∞05
10524 R	. Ø8	(.01	.01	.02	4.005
10525 R	. 08	<.01	(.01	.01	4.005
10526 R	. 08	(.01	(.01	.01	4.005
10527 R	. 10	<. Ø1	.02	. 06	(.005
10528 R	1.42	.05	.16	2.28	.082
10529 R	.08	.01	.01	. 05	<.005
10530 R	.06	(.01	(.Ø1	.02	4.005
10531 R	.06	⟨.Ø1	⟨. Ø1	.01	<.005
10532 R	. 09	.01	.01	.01	⟨.005
10533 R	. 07	<.01	.01	. 02	(.005
10534 R	. 06	(.01	.01	.02	(.005
10535 R	. 05	(.01	⟨.01	.01	(.005
1 053 6 R	. 06	<.Q1	.01	.02	<.0 0 5

1 Trow caysgond some Dalak or

signed:

.005

. 21

VANGEDCHEM LAB LIMITED

1521 Pemberton Avenue

North Vancouver B.C. V7P 2S3

(604) 986-5211 Telex: 04-352578

PREPARED FOR: SKYLINE EXPLORATIONS LTD.

NOTES: nd = none detected

-- = not analysed

is = insufficient sample

JOB NUMBER: 84388 REPORT NUMBER: 84-84-016

PAGE 2 OF 2

SAMPLE #	Cu %	Pb %	Zrı %	Ap oz/st	Au oz/st
10537 R	. 05	.01	(. Ø1	.02	⟨ . ØØ5
10538 R	.06	. 01	.01	.03	⟨.005
10539 R	. 10	<. Ø1	.03	.11	⟨.005
10540 R	. 11	<.01	.01	.02	4.005
10541 R	.13	. 01	.08	.10	<.005
10542 R	. 05	(.0 1	. Ø1	. 03	⟨. 005
10543 R	. 44	<.01	⟨. 01	.11	⟨.005
10544 R	. 11	.01	. 16	. 08	(.005
10545 R	.13	.01	.01	.11	⟨.005
10546 R	.12	⟨.01	<. Ø1	.12	<.0 0 5
				<u>.</u>	
10547 R	.05	.01	.01	.02	(.0 0 5
10548 R	. 05	.01	.01	.02	(.005
10549 R	. 06	(.01	.02	.02	(.005
10550 R	. 09	<. 0 1	.02	.15	(.005
10557 R	. 34	.03	. 05	.17	(.0 05
10558 R	. 09	⟨.01	. 01	. 05	(.005
1 0559 R	. 07	(.01	(.01	.02	⟨.005

DETECTION LIMIT 1 Troy oz/short ton = 34.28 pom

. Ø1 . 01 pom = parts per million

signed:

VANGEOCHEN LAB LIKITED

1521 Pemberton Avenue

North Vancouver B.C. V7P 2S3 (604) 986-5211 Telex: 04-352578

PREPARED FOR: SKYLINE EXPLORATIONS LTD.

nd = none detected NOTES:

- = not analysed

is = insufficient sample

REPORT NUMBER:	84-84-018	JOB NUMBER: 84	105	AHDE I NL C

SAMPLE #	Cu	ЬP	Zn	Ag	Au
	302	DOM	מסם	מממ	קמֹם
					
JS - 1 L	72	56	202	1.5	25
J - #1 5 /700 + 0 m N	292	45	488	1.7	25
J - #2 5 +25mN	197	24	88	. 8	<u> 78</u>
J - #3 5 +50 mN	116	32	174	.8	35
J-# 5 +75mN	66	14	85	.1	25
J - #5 S + 100mN	129	27	123	.5	25
J - #6 5 +125mN	146	28	138	.5	<u>ක</u> කි
J - #7 S +150mN	160	50	344	1.1	
J - #8 5 + 200 m N	52	18	73	.4	30
J-#9 5 + 300mN	80	48	139	.B	20
J - #10 S + 325mN	88	57	152	.8	<u>50</u>
J - #11 S + 350mN	145	70	156	.2	35
J - #11 S + 350mN J - #12 S + 375mN	115	55	147	1.0	20
J - #13 S + 400m N	75	48	101	1.5	35
J - #145 + 425mN	87	40	125	1.0	20
J - #15 S + 475mN	217	67	143	.9	30
i de la companya de La companya de la co			(Pr		20
J - #165 +500mN	383	45 22	156	1.5	26 25
J - \$17 \$ 1600 + 50 m5	42	23	129 134	.6 .5	10
J - #18 S + 25 m5	66 550	31 35	134	1.2	<u>60</u>
J - #19 S + 0 mN	<u>550</u>	33 48	134	1.2	<u>95</u>
J - #20 5 + 25mN	<u>365</u>	40	104	1.6	, 188
J - #21 5 +50mN	738	76	106	.7	<u>50</u>
J - #22 5 + 75mN	460	70	99	1.0	<u>55</u>
J - #23 S +100mN	156	52	161	. 4	20
J - #24 5 + 125 mN	116	89	134	1.3	35
J - #25 S + 275mN	114	53	162	.8	15
J - #26 5 + 300 mN	59	30	95	.7	25
J - #27 5 + 350mN	103	74	146	1.0	20
J - \$28 5 + 375m N	470	70	314	.8	49
J - #29 5 + 400m N		49	182	.8	<u>75</u>
J - #30 S + 425ml		49	189	.5	<u>65</u>
J - #31 S + 450mN	75R	47	267	1.0	25
J - #32 S + 475 m		59	610	1.1	45
J - #33 S + 500mA		50	658	1.6	nd
J - #34 S 1500+ OmN	299	21	100	1.3	. 30
	7200		7300		750
DETECTION LIMIT	1	2	1	0.1	5

VANGEDCHEM LAB LIMITED

1521 Pemberton Avenue

North Vancouver B.C. V7P 2S3 (604) 986-5211 Telex: 04-352578

PREPARED FOR: SKYLINE EXPLORATIONS LTD.

NOTES: nd = none detected

- = not analysed :

is = insufficient sample

REPORT NUMBER: 84-84-018	109 MA	MBER: 844	Q 5			PAGE 2 OF 2
SAMPLE #	Cu	РЬ	Zn	Ag	Au	
	mםם	001	00#	سمو	מפס	
J - #35 S 1500 + 25mN	103	25	72	. 4	10	
1 - #35 5 + 50 mN	44	51	60	.8	<u>65</u>	
J - #37 S +150mN	60	28	99	.5	10	
J - \$38 S + 175 m N		35	98	.7	35	
J - #39 S + 200ml	•	28	81	.7	15	
, 200,,,,	.					
J - #48 5 + 225ml		35	116	1.0	85	
JO - #1 5 + 250mh	ا <u>245</u>	40	530	.7	120	
JO - #2 S + 260m N	2560	122	219	3.5	155	
JO - #3 5 +275mN		33	130	- 5	10	
JO - #4 5 +300m N		35	138	. 4	15	
JO - #3 5 + 325mN	113	27	85	.5	35	
JO - #5 5 + 350mN	138	35	89	.8	25	
JO - #7 5 +375mN	153	25	89	.5	30	
JO - #8 S +400m N	80	30	75	.3	20	
10 - #9 5 +525m	J 389	45	214	1.3	45	
JO - #10 5 +550mN	Market.	54	400	1.5	35	
JO - #11 5 1400 + 50mN		80	398	1.8	70	
Ju - #125 + 75mN		86	173	.8	30	
JO - #13 5 + 100m N	ر 75	40	90	.3	15	
JO - #14 5 + 125m)	7 60	28	81	.5	5	
	٠.	:				
JO - #15 S +150mh		25	80	. 4	25	
JO - \$16 5 + 175 m h		21	61	. 4	10	
30 - #17 5 + 200m1		25	70	. 4	15	
JO - #18 S + 225ml		39	75	.7	5	
JO - #19 5 + 250ml	J 173	41	269	.4	15	
10 400 C ()	car				150	
JO - #20 S +275mN		44	163	.4	150	
JO - #21 5 +300mh		20	64	-3	5	
JO - #22 S + 325m N	118	45	86	.5	45	
JO - #23 S + 475m N	1 1650	44	196	1.1	<u>85</u>	
JU - #24 S + 500m N	640	26	113	.9	10	
JO - #25 S + 525ml) 990	27	133	.4	20	
JO - #26 S + 550ml		35	226	.3	25	
JU - #CD 3 # 7 7 0 M /	100	27	ECD.		د ا	
DETECTION LIMIT	1	2	1	0.1	5	
was and said f						
	7200	* 1 miles	7300		750	

APPENDIX IV

STATEMENT OF QUALIFICATIONS

- I, DAVID A. CAULFIELD, of 3433 West 12th Avenue, Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY THAT:
- 1. I am a geologist in the employment of Pamicon Developments Ltd. with offices at 215, 543 Granville Street, Vancouver, British Columbia.
- 2. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.
- 3. My primary employment since 1978 has been in the field of mineral exploration.
- 4. My experience has encompassed a wide range of geological environments and has allowed considerable familiarization with geophysical, geochemical and diamond drilling techniques.
- 5. I visited the property during the month of August 1984.
- 6. I have no interest in the property described herein, nor in the securities of Gulf International Minerals Ltd., nor do I expect to acquire any such interests.
- 7. I consent to the use by Gulf International Minerals Ltd. of this report in a Prospectus or Statement of Material Facts or any other such document as may be required by the Vancouver Stock Exchange or the Office of the Superintendent of Brokers.

DATED AT	VANCOUVER, BRITISH COLUMBIA,	, this	14	day of	JAN.	1985

David A. Caulfield Geologist.

APPENDIX V

ENGINEER'S CERTIFICATE

- I, CHARLES K. IKONA, of 5 Cowley Court, Port Moody, in the Province of British Columbia, DO HEREBY CERTIFY:
- 1. I am a Consulting Mining Engineer with offices at 215, 543 Granville 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 in the Province of British Columbia.
- 4. I have not examined the property reported on. The examination was carried out by David Caulfield, a geologist whom I have known and worked closely with for a number of years and in whom I have every confidence.
- 5. I have no interest in the property reported on or in the securities of any company associated with the property nor do I expect to acquire any such interest.
- 6. I consent to the use by Gulf International Minerals Ltd. of this report in a Prospectus or Statement of Material Facts or any other such document as may be required by the Vancouver Stock Exchange or the office of the Superintendent of Brokers.

DATED AT VANCOUVER, BRITISH COLUMBIA, this 14th day of Jan 1985.

Charles K. Ikona, P.Eng.

CHARLES K. IKONA

BRITISH

COLUMN

C

