

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 89.04.14

ASSESSMENT REPORT 17279

MINING DIVISION: Liard

PROPERTY: Secretariat-Still  
 LOCATION: LAT 56 30 52 LONG 130 59 12  
 UTM 09 6264893 377751  
 NTS 104B10W

CLAIM(S): Secretariat, Still  
 OPERATOR(S): Ashworth, C.  
 AUTHOR(S): Todoruk, S.L.; Ikona, C.K.  
 REPORT YEAR: 1988, 38 Pages

COMMODITIES  
 SEARCHED FOR: Gold, Silver

GEOLOGICAL  
 SUMMARY: The claims appear to be underlain by similar Lower Jurassic Unuk River Formation lithologies as those which host significant gold deposits on Skyline Exploration Ltd.'s and Cominco/Delaware Resource Corp.'s claims. Float samples of quartz veining with pyrite, galena and sphalerite assayed 15.4 and 18.2 grams per tonne gold.

WORK  
 DONE: Geochemical  
 HMIN 3 sample(s) ;ME  
 ROCK 22 sample(s) ;ME

LOG NO: 0419

RD.

ACTION:

FILE NO:

**GEOLOGICAL REPORT  
ON THE  
SECRETARIAT AND STILL MINERAL CLAIMS**

APR 14 1988

Located in the Iskut River Area  
Liard Mining Division  
NTS 104B/11E, 10W, 7W, 6E  
56°30' North Latitude  
131°02' West Longitude

- Prepared for -

**ZARA GOLD SYNDICATE**

- Prepared by -

**S.L. TODORUK, Geologist  
C.K. IKONA, P.Eng.**

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

17,279

SUB-RECORDER  
RECEIVED  
APR 14 1988  
M.R. # \_\_\_\_\_ \$ \_\_\_\_\_  
VANCOUVER, B.C.

March, 1988

# GEOLOGICAL REPORT on the SECRETARIAT and STILL MINERAL CLAIMS

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## 1.0 INTRODUCTION

The Secretariat and Still mineral claims (40 units) are situated in the Iskut River area of northwestern British Columbia 11 kilometres south of Skyline Explorations Ltd.'s Stonehouse Gold deposit and 15 kilometres south of Cominco/Delaware Resource Corp.'s Twin Zone gold deposit. Both deposits report reserves in excess of one million tons grading approximately 0.7 oz/ton gold.

Five kilometres to the north of the Secretariat and Still claims, Androne Resources Ltd.'s property also hosts several anomalous gold targets.

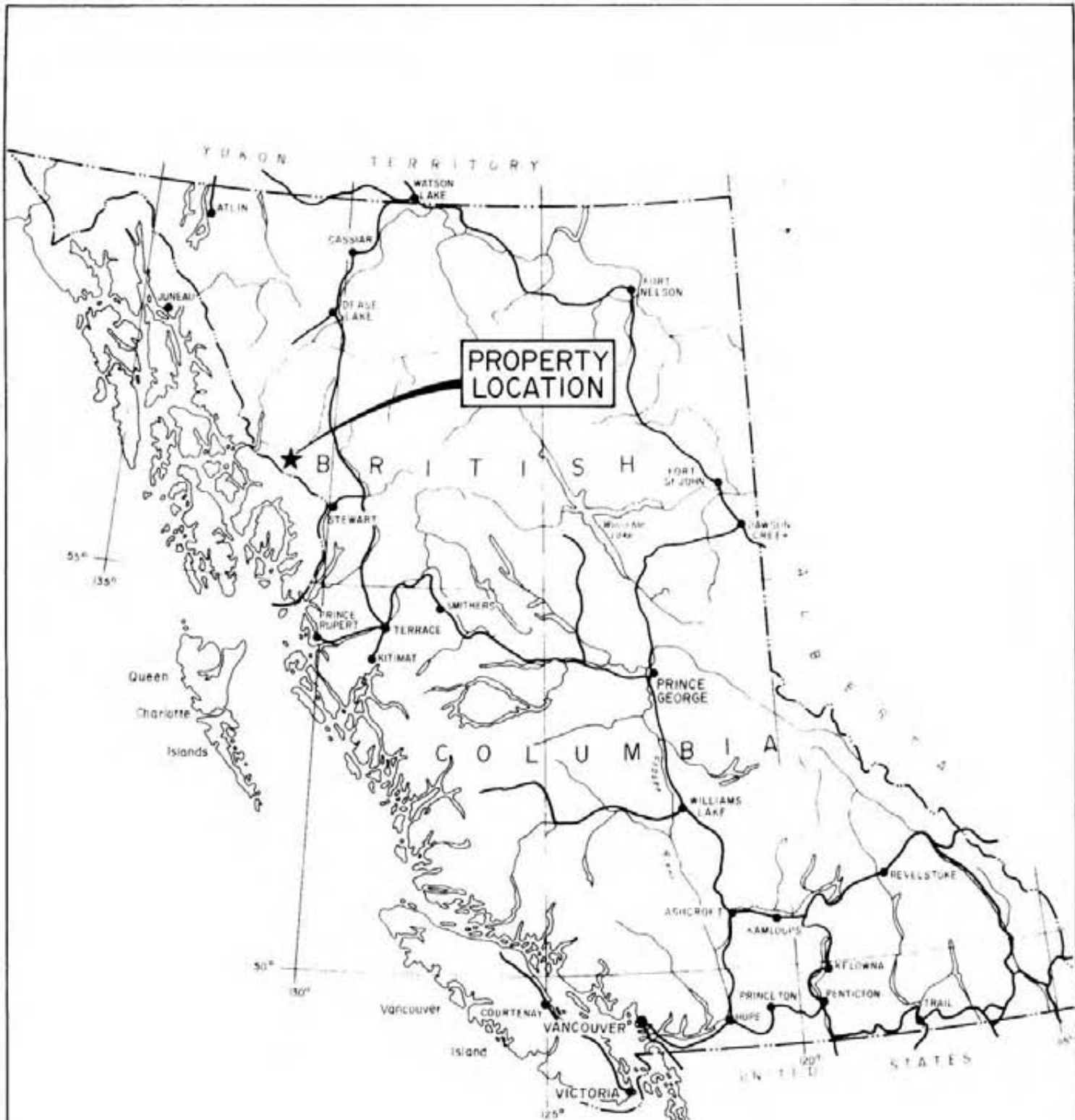
During the 1987 summer field season, a total of 12 man days were spent prospect rock chip and heavy mineral concentrate sampling the subject property.

Float samples collected from the claims returned anomalous values of 0.449 oz/ton Au and 0.532 oz/ton Au.

## 2.0 LIST OF CLAIMS

Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the following claims (Figure 2) are owned by Clive Ashworth.

<u>Claim Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Date</u>
Secretariat	20	4041	April 16, 1987	April 16, 1990
Still	20	4049	April 16, 1987	April 16, 1990



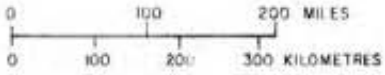
ZARA GOLD SYNDICATE

SECRETARIAT & STILL CLAIMS  
**PROPERTY LOCATION MAP**

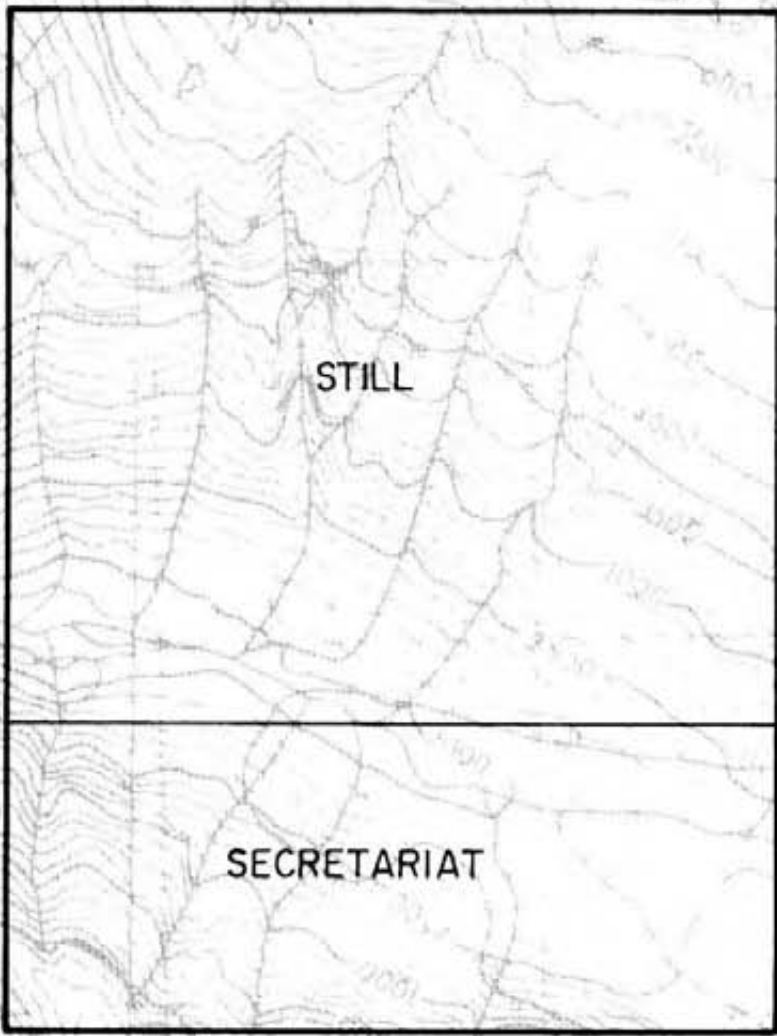
LIARD MINING DIVISION, B.C.

*PAMICON DEVELOPMENTS LTD.*

Drawn	J.W.	NTS 104B 11E/10W, 7W/6E	Date	March-1988	Figure	1.
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131°00' W.



STILL

SECRETARIAT

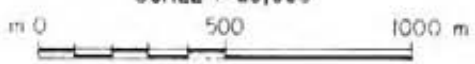


56°30' N

ZARA GOLD SYNDICATE  
 SECRETARIAT & STILL CLAIMS  
**CLAIM MAP**  
 LIARD MINING DIVISION, B.C.

PAMICON DEVELOPMENTS LTD.  
 Drawn J.W. NTS. 104 R. Date March - 1988 Fig. No. 2  
 11E/10W, 7W/6E

SCALE 1:20,000



### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The Secretariat and Still mineral claims are located approximately 80 kilometres east of Wrangell, Alaska, and 100 kilometres northwest of Stewart, British Columbia, on the eastern edge of the Coast Range Mountains (Figure 1). The Olatine Creek flows one kilometre to the west of the claim boundary. Coordinates of the claims area are 56°30' north latitude and 131°02' west longitude, and the property falls under the jurisdiction of the Liard Mining Division. The area is covered on NTS Map Sheets 104B/6E, 11E and 104B/7W, 10W.

Access to the property is via helicopter from the Bronson Creek gravel air strip, located approximately 18 kilometres to the north. Daily scheduled flights to the strip from Smithers, Terrace and Wrangell, Alaska have been available during the field season using a variety of fixed wing aircraft.

The construction of a road 65 kilometres long has been proposed by C.K. Ikona of Pamicon Developments Limited on behalf of Skyline Explorations Ltd. The road would be situated on the south side of the Iskut Valley to connect the Stewart-Cassiar Highway with a proposed BC Hydro dam site on the Iskut River and Skyline's Stonehouse Gold deposit on Bronson Creek.

Geographically, the area is typical of mountainous and glaciated terrain with the elevations ranging from a few hundred metres above sea level in the river valley bottoms to in excess of 1500 metres at the ridge tops. Major drainages are U-shaped, whereas smaller side creeks tend to be steeply cut due to the intense erosional environment. Active glaciation is prevalent above the 1200 metre contour, with the tree line existing at 1000 metres. The upper reaches of the area are covered with alpine vegetation. The lower slopes are predominantly timbered with a variety of conifers with an undergrowth of devil's club. More open areas and steeper slopes contain dense slide alder growth. Both summer and winter temperatures would be considered generally moderate and in excess of 200 centimetres of precipitation may be expected during any given year.

#### 4.0 AREA HISTORY

The first recorded work done in the Iskut Region occurred in 1907 when a prospecting party from Wrangell, Alaska staked nine claims north of Johnny Mountain. Iskut Mining Company subsequently worked crown granted claims along Bronson Creek and on the north slope of Johnny Mountain. Up to 1920, a 9 metre adit revealed a number of veins and stringers hosting galena and gold-silver mineralization.

In 1954, Hudsons Bay Mining & Smelting located the Pick Axe showing and high grade gold-silver-lead-zinc float on the open upper slopes of Johnny Mountain, which today is part of Skyline Explorations Ltd.'s Reg deposit. The claims were worked and subsequently allowed to lapse.

During the 1960s, several major mining companies conducted helicopter borne reconnaissance exploration programs in a search for porphyry-copper-molybdenum deposits. Several claims were staked on Johnny Mountain and on Sulphurets Creek.

Between 1965 and 1971, Silver Standard Mines, and later Sumitomo, worked the E + L prospect on Nickel Mountain at the headwaters of Sulphurets Creek. Work included trenching, drilling and 460 metres of underground development work. Reserves include 3.2 million tons of 0.80% nickel and 0.60% copper.

In 1969 Skyline staked the Inel property after discovering massive sulphide float originating from the head of the Bronson Creek glacier.

During 1972, Newmont Mining Corporation of Canada Limited carried out a field program west of Newmont Lake on the Dirk claim group. Skarn-type mineralization was the target of exploration. Work consisted of airborne and ground magnetic surveys, geological mapping and diamond drilling. One and one-half metres grading 0.220 ounces gold per ton and 15.2 metres of 1.5% copper was intersected on the Ken showing.



In 1980 Dupont Canada Explorations Ltd. staked the Warrior claims south of Newmont Lake on the basis of a regional stream sediment survey. In 1983, Skyline Explorations Ltd. and Placer Development Ltd. optioned the Warrior claims from Dupont. Efforts were directed at sampling and extending several narrow quartz-pyrite-chalcopyrite veins with values ranging from 0.1 to 3.0 oz/ton gold. Geophysics and coincident geochemical values indicated a significant strike length to the mineralized structure. The Warrior claims were allowed to lapse in 1986, at which time, Gulf International Minerals Ltd. acquired the McLymont claims covering much the same area.

Assays of interest from recent Gulf drilling are listed below (Gulf International Minerals Ltd., Annual Report, 1987):

<u>Drill Hole</u>	<u>Interval (feet)</u>	<u>Length (feet)</u>	<u>Copper (%)</u>	<u>Silver (oz/ton)</u>	<u>Gold (oz/ton)</u>
87-25	343.0 - 373.0	30.0	0.23	0.11	0.404
	409.3 - 412.0	2.7	0.55	0.35	0.250
	470.2 - 473.8	3.6	0.42	0.19	1.520
87-29	167.0 - 170.0	3.0	0.001	0.01	0.140
	205.0 - 241.5	36.5	0.97	39.73	1.605

After restaking the Reg property in 1980, Skyline carried out trenching and drilling for veined high-grade gold and polymetallic massive sulphide mineralization on the Reg and Inel deposits between 1981 and 1985.

In 1986, drilling and 460 metres of underground cross-cutting and drifting on the Stonehouse Gold Zone confirmed the presence of high grade gold mineralization with additional values in silver and copper over mineable widths with good lateral and depth continuity. As of January 1988, reserves on the Stonehouse Gold Zone were reported as:

	<u>Au</u> (oz/ton)	<u>Tons</u>
Total Measured	1.246	121,000
Total Drill-Indicated	0.556	236,875
Total Inferred	<u>0.570</u>	<u>700,000</u>
Subtotal	0.644	1,057,875
McFadden	<u>2.800</u>	<u>30,000</u>
Ore Reserve Total	0.704	1,087,875

On the Delaware Resources Ltd. - Cominco Snip claims immediately north of the Stonehouse Gold deposit, approximately 10,000 metres of diamond drilling was carried out, mainly delineating the Twin Zone. Drill hole S-71 intersected 10.2 metres of 2.59 oz/ton gold. An underground program is expected to begin in early 1988. As of December, 1987, reserves on the Twin Zone were reported as:

	<u>Au</u> (oz)	<u>Tons</u>
Total Inferred	0.700	1,100,000

Also, during 1987 Inel Resources Ltd. commenced an underground drifting and diamond drilling program along the main cross-cut intent on intersecting the Discovery Zone which hosts gold-bearing polymetallic massive sulphide mineralization.

Western Canadian Mining Corp. carried out an extensive diamond drilling program on their Gosson claims, concentrating on the Khyber Pass Gold Zone which is 45 metres thick. The best drill hole intersection in this zone to date is as follows:

<u>Hole</u>	<u>From</u>	<u>To</u>	<u>Length</u>		<u>Gold</u>	<u>Silver</u>	<u>Copper</u>
	(m)	(m)	(m)	(ft)	(oz/t)	(oz/t)	(%)
85-3	11.2	16.8	5.6	18.4	0.12	6.48	1.74
	30.2	44.2	5.2	17.1	0.17	2.66	0.90
	54.5	60.1	5.6	18.4	0.15	1.77	—
	66.0	69.0	3.0	9.8	0.28	1.54	—

Tungco Resources Corporation drill tested three main gold/copper quartz vein targets; the Bluff, No. 7 and Swamp Zones. The Bluff Zone has been delineated 70 metres along strike and 60 metres downdip with better intersections grading up to 0.243 oz/ton gold across 2.45 metres. The No. 7 Vein returned 1.12 metres of 0.651 oz/ton gold.

## 5.0 REGIONAL GEOLOGY

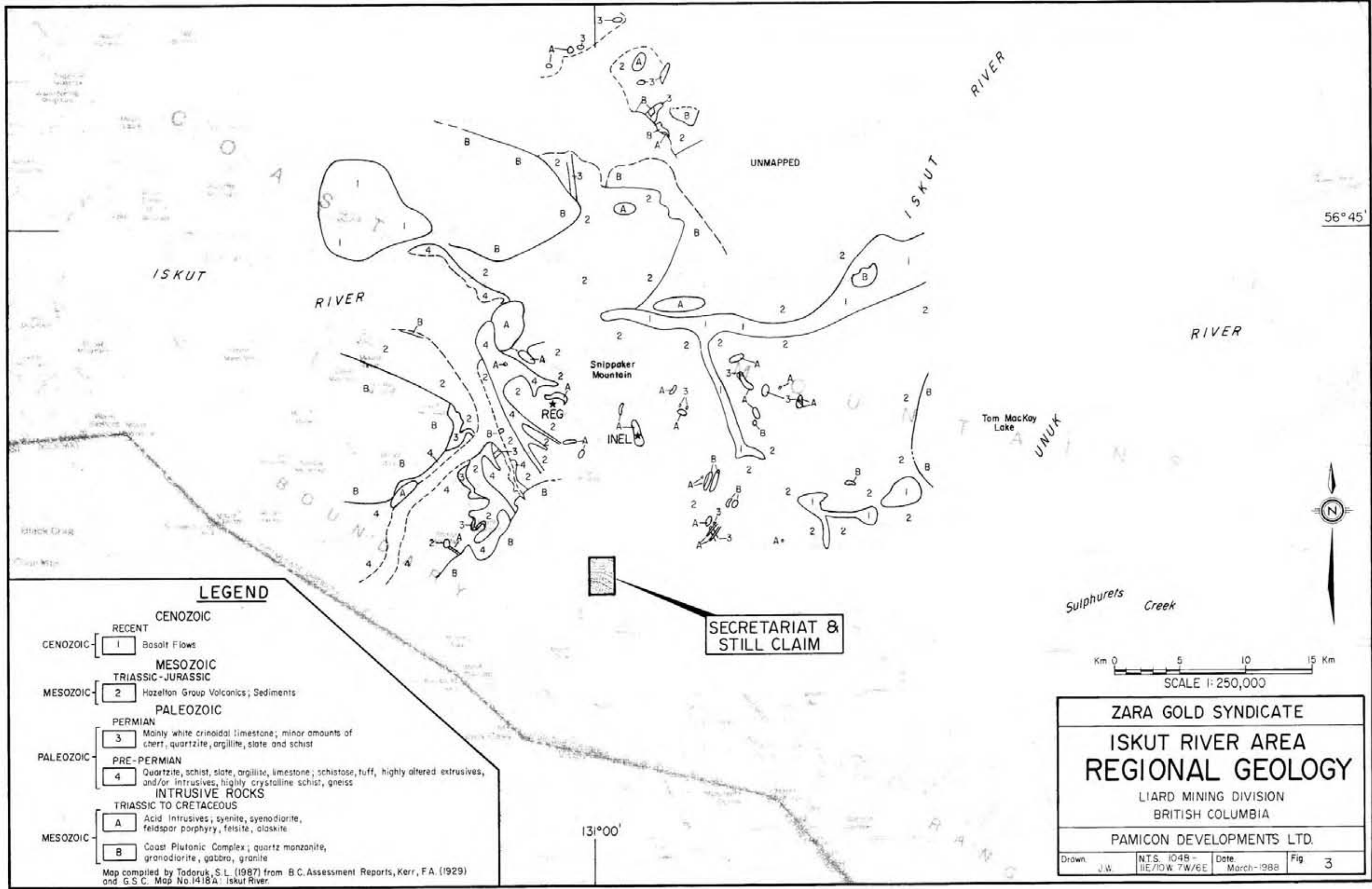
Government mapping of the general geology in the Iskut River area (Kerr, 1929, GSC Maps 9-1957 and 1418-1979) has proved to be incomplete and unreliable. Subsequent mineral exploration studies have greatly enhanced the lithological and stratigraphic knowledge of this geo-entity known as the Stewart Complex (Grove, 1986).

Grove (1986) defines the Stewart Complex in the following manner:

"The Stewart Complex lies along the contact between the Coast Plutonic Complex on the west, the Bowser Basin on the east, Alice Arm on the south and the Iskut River on the north."

Within the Stewart Complex the oldest rock unit consists of Paleozoic crinoidal limestone overlying metamorphosed sedimentary and volcanic members. This oceanic assemblage has been correlated with the Cache Creek Group.

Unconformably overlying the Paleozoic limestone unit are Upper Triassic Hazelton Group island arc volcanics and sediments. These rocks have informally



**LEGEND**

- CENOZOIC**
- RECENT
- CENOZOIC [1] Basalt Flows
- MESOZOIC**
- TRIASSIC-JURASSIC
- MESOZOIC [2] Hazelton Group Volcanics; Sediments
- PALEOZOIC**
- PERMIAN
- PALEOZOIC [3] Mainly white crinoidal limestone; minor amounts of chert, quartzite, argillite, slate and schist
- PRE-PERMIAN
- PALEOZOIC [4] Quartzite, schist, slate, argillite, limestone; schistose, tuff, highly altered extrusives, and/or intrusives, highly crystalline schist, gneiss
- INTRUSIVE ROCKS**
- TRIASSIC TO CRETACEOUS
- MESOZOIC [A] Acid Intrusives; syenite, syenodiorite, feldspar porphyry, felsite, alaskite
- MESOZOIC [B] Coast Plutonic Complex; quartz monzonite, granodiorite, gabbro, granite

Map compiled by Todoruk, S.L. (1987) from B.C. Assessment Reports, Kerr, F.A. (1929) and G.S.C. Map No. 1418A: Iskut River.

**SECRETARIAT & STILL CLAIM**

**ZARA GOLD SYNDICATE**

**ISKUT RIVER AREA**

**REGIONAL GEOLOGY**

LIARD MINING DIVISION  
BRITISH COLUMBIA

PAMICON DEVELOPMENTS LTD.

Drawn: J.W.	N.T.S. 104B - 11E/10W 7W/6E	Date: March-1988	Fig. 3
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been referred to as the "Snippaker Volcanics." Grove (1981) correlates this assemblage to the Unuk River Formation of the Stewart Complex whereas other writers match this group with the time equivalent Stuhini Volcanics. Monotis fossils have been recognized on the north slope of Snippaker Peak and west of Newmont Lake, 20 km to the north, giving an age Late Triassic. It is within these rocks that Skyline's Stonehouse Gold and Inel deposits occur (Figure 3).

Grove reports an unconformable contact between Carboniferous and Middle Jurassic strata on both sides of Snippaker Ridge, north of Snippaker Peak. The same unconformable relationship between these major rock units appears to extend from Forrest Kerr Creek west, along the Iskut River, to the Stikine River junction. Present interpretation suggests an east-west trending thrust along the axis of the Iskut River which, like the King Salmon Thrust Fault, pushed up and over to the south.

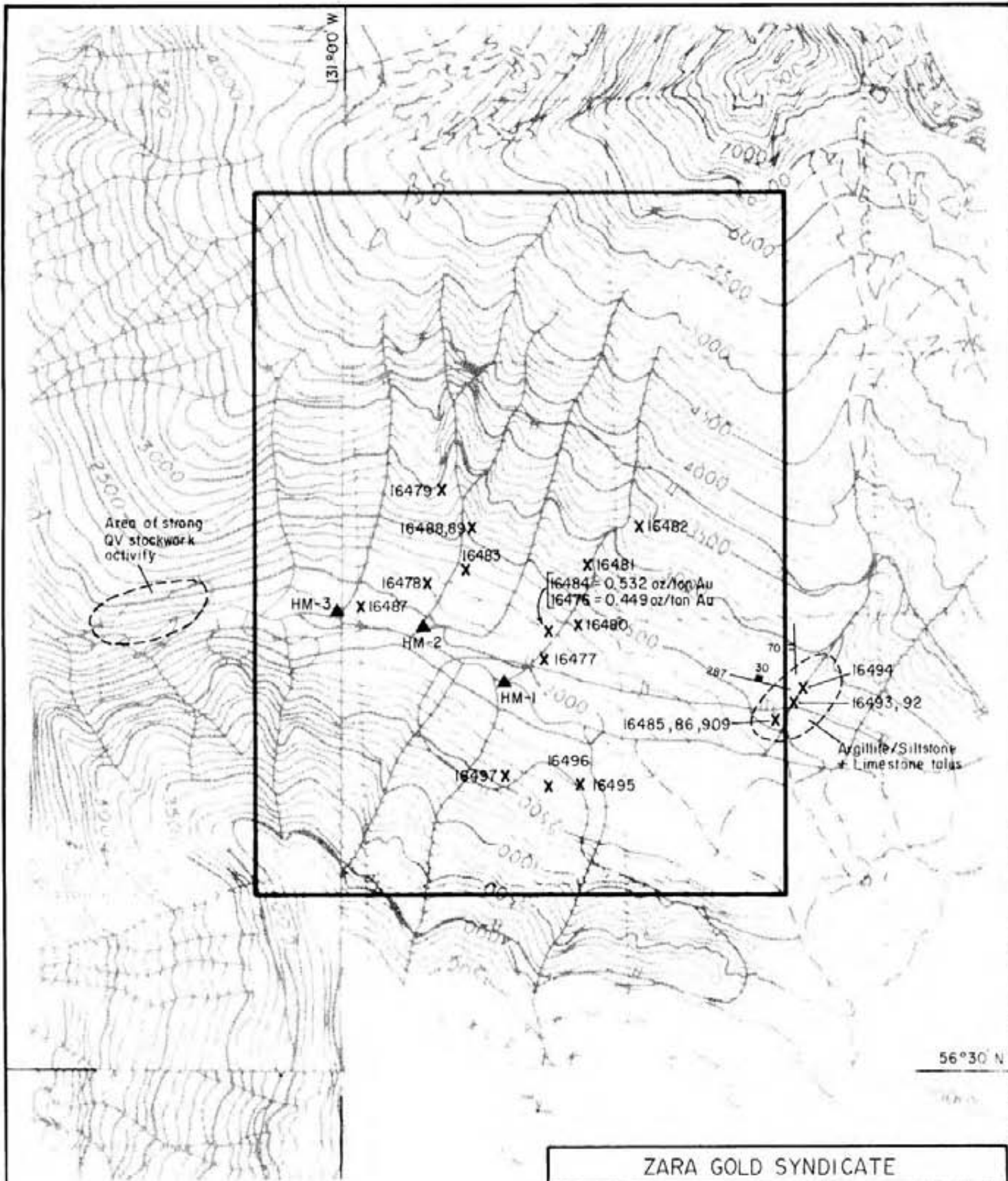
Following the Iskut River thrust faulting, the entire region was overlain by Middle Jurassic Hazelton Group volcanic-sedimentary rocks named the Betty Creek Formation by Grove (1986).

The batholithic Coast Plutonic Complex intrusions in the Iskut region are of Cretaceous and Tertiary age. Composition varies from quartz monzonite and granodiorite to granite. Satellitic subvolcanic acidic porphyries may be important in the localization of mineralization.

Quaternary and Tertiary volcanics occur to the east along the Iskut River near Forrest Kerr Creek and north at Hoodoo Mountain.

## 6.0 PROPERTY GEOLOGY AND MINERALIZATION

Geological mapping was carried out only at a minimal scale while prospecting. Near the east-central area of the claims, silicified argillite/greywacke/siltstone occurs outcropping along creek draws. A total of 22 rock chip and 3 heavy mineral concentrate samples were collected (Figure 4).

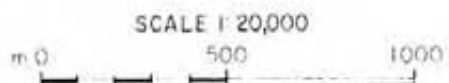


Area of strong QV stockwork activity

Argillite/Siltstone + Limestone talus

**LEGEND**

- ▲ HEAVY MINERAL CONCENTRATE SITE
- X ROCK CHIP SITE



<b>ZARA GOLD SYNDICATE</b>			
<b>SECRETARIAT &amp; STILL CLAIMS ROCK CHIP &amp; HEAVY MINERAL CONCENTRATE LOCATION MAP</b>			
<b>PAMICON DEVELOPMENTS LTD.</b>			
Drawn	NT S. 104 B- 11E/10W, 7W/6E	Date	Fig No
J W		March - 1988	<b>4</b>

Several quartz veins varying in width from 2 cm to in excess of 75 cm were sampled. Pyrite + pyrrhotite + chalcopyrite were present in amounts of 2% to 5%. Quartz vein orientations varied between 103/30-80 NE and 80-57 NW.

An anomalous float rock chip sample of quartz veining with galena, sphalerite and pyrite obtained near the centre of the claims assayed as follows:

<u>Sample Number</u>	<u>Pb (ppm)</u>	<u>Zn (ppm)</u>	<u>Ag (ppm)</u>	<u>Au (oz/ton)</u>
16476	8,875	2,159	22.2	0.449
16484	3,079	1,101	8.1	0.532

A swarm of quartz veins were seen to occur along a steep valley gorge on the main Creek. The veins were not investigated due to time constraints.

## 7.0 DISCUSSION AND CONCLUSIONS

The Secretariat and Still mineral claims appear to be underlain by similar geological lithologies as to those which host Skyline Explorations Ltd.'s Stonehouse Gold deposit and the Cominco/Delaware Resource Corp. Twin Zone gold deposit. Both deposits report reserves in excess of one million tons grading 0.7 ounces gold per ton.

Anomalous float samples collected from the Secretariat and Still claims returned assays of 0.449 and 0.532 oz/ton gold. A traverse up the easternmost creek identified numerous quartz-sulphide veins. Along the main east-west trending creek, a quartz vein swarm was found to occur within a valley gorge. Time and steepness did not permit an investigation into these veins.

## 8.0 RECOMMENDATIONS

For the 1988 field season, continued prospecting and geological mapping should be carried out on the Secretariat and Still claims. The program should be conducted during August and September when rain is at a minimum to allow safer climbing conditions.

Immediate emphasis should be placed on locating the source of the anomalous gold samples discovered in 1987.

Respectfully submitted,



Steve L. Todoruk, Geologist



Charles K. Ikona, P.Eng.





**APPENDIX I**

**BIBLIOGRAPHY**

## BIBLIOGRAPHY

Caulfield, D.A. and C.K. Ikona (1987): Geological Report on the GIM Mineral Claim.

Delaware Resources Corp.: Progress Report, Snip Prospect, November 19, 1987.

Grove, E.W. (1987): Exploration Proposal on the Still and Secretariat Claims.

Gulf International Minerals Ltd.: Annual Report, February 1988.

Ikona, C.K. (1987): Geological Report on the Dan 1-3 and Burnie 1-4 Mineral Claims.

Skyline Explorations Ltd.: Annual Report 1987.

Todoruk, S.L. and C.K. Ikona (1987): Geological Report on the Stu 1 & 2 Mineral Claims.

Todoruk, S.L. and C.K. Ikona (1987): Geological Report on the Gab 11 & 12 Mineral Claims and Stu 8 & 9 Mineral Claims.

Todoruk, S.L. and C.K. Ikona (1987): 1987 Summary Report on the Sky 4 & 5 and Spray 1 & 2 Claims.

Todoruk, S.L. and C.K. Ikona (1987): Geological Report on the Stu 4 & 5 Mineral Claims.

Tungco Resources Corporation: News release dated December 1, 1987.

Western Canadian Mining Corp.: News release dated November 12, 1987.

**APPENDIX II**

**COST STATEMENT**

## COST STATEMENT

### WAGES

S. Todoruk - 1 day @ \$350	\$	350.00
E. Debock - 1 day @ \$275		275.00
N. Debock - 3 days @ \$275		825.00
K. Gourley - 1 day @ \$225		225.00
R. Riedel - 2 days @ \$200		400.00
C. Vanderveen - 1 day @ \$200		200.00
C. Ikona - 1 day @ \$450		450.00
Management - 2 days @ \$250		<u>500.00</u>
<b>TOTAL WAGES</b>		<b>\$ 3,225.00</b>

### EXPENSES

<b>Man Day Support</b>		
Management - 3 days		
Crew - 9 days		
NMH - 3 days		
<u>15 days @ \$125/day</u>	\$	1,875.00
<b>Equipment and Expendible Field Supplies</b>		
9 days @ \$30		270.00
<b>Aviation</b>		
Helicopter	\$ 2,444.32	
Fixed Wing	1,241.45	
Airstrip User Fee	<u>500.00</u>	
		4,185.77
<b>Equipment Rental</b>		
Truck	\$ 250.00	
ATV	<u>250.00</u>	
		500.00
<b>Air Fare</b>		500.00
<b>Communication</b>		100.00
<b>Freight</b>		100.00
<b>Toodoggone Resources</b>		87.49
<b>Assays</b>		<u>391.00</u>
<b>TOTAL EXPENSES</b>		<b>8,099.26</b>
<b>Management Fee on Expenses @ 15%</b>		<u>1,201.39</u>
<b>TOTAL THIS PROGRAM</b>		<b><u>\$12,435.65</u></b>

APPENDIX III

ASSAY CERTIFICATES



## VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L8  
(604) 251-5656

December 23, 1987

TO: Steve Todoruk  
PAMICON DEVELOPMENTS  
711 - 675 W. Hastings St.  
Vancouver, B.C. V6B 1N4

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

SUBJECT: Analytical procedure used to determine Aqua Regia  
soluble gold in geochemical 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) 5.00 to 10.00 grams of the minus 80-mesh portion of the samples were used. Samples were weighed out using an electronic micro-balance and deposited into beakers.
- (b) Using a 20 ml solution of Aqua Regia (3:1 solution of HCl to HNO<sub>3</sub>), each sample was vigorously digested over a hot plate.
- (c) The digested samples were filtered and the washed pulps were discarded. The filtrate was then reduced in volume to about 5 ml.



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(604) 251-5656

(d) Au complex ions were then extracted into a di-isobutyl ketone and thiourea medium (Anion exchange liquids "Aliquot 336").



(e) Separatory funnels were used to separate the organic layer.

### 3. Method of Detection

The detection of Au was performed with a Techtron model AAS Atomic Absorption Spectrophotometer with a gold hollow cathode lamp. The results were read out onto a strip chart recorder. A hydrogen lamp was used to correct any background interferences. The gold values, in parts per billion, were calculated by comparing them with a set of gold standards.

### 4. Analysts

The analyses were supervised or determined by Mr. Conway Chun or Mr. Eddie Tang and his laboratory staff.

  
  
\_\_\_\_\_  
Eddie Tang  
VANGEOCHEM LAB LIMITED



# VANGEOCHEM LAB LIMITED

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December 23, 1987

TO: Steve Todoruk  
PAMICON DEVELOPMENTS  
711 - 675 W. Hastings St.  
Vancouver, B.C. V6B 1N4

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

SUBJECT: Analytical procedure used to determine gold by fire assay method and detect by atomic absorption spectrophotometry in geological samples.

## 1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" x 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

## 2. Method of Extraction

- (a) 20.0 to 30.0 grams of the pulp samples were used. Samples were weighed out using a top-loading balance and deposited into individual fusion pots.
- (b) A flux of litharge, soda ash, silica, borax, and, either flour or potassium nitrite is added. The samples are then fused at 1900 degrees Farenhiet to form a lead "button".
- (c) The gold is extracted by cupellation and parted with diluted nitric acid.





## VANGEOCHEM LAB LIMITED

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(604) 986-5211 TELEX: 04-352578

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

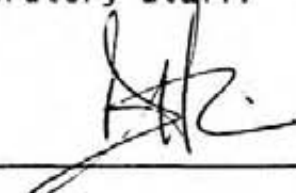
(d) The gold bead is retained for subsequent measurement.

### 3. Method of Detection

- (a) The gold bead is dissolved by boiling with aqua regia solution, then diluted with deionized water to 10 ml volume.
- (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



## VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
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1630 PANDORA ST.  
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(604) 251-5656

December 23, 1987

TO: Steve Todoruk  
PAMICON DEVELOPMENTS  
711 - 675 W. Hastings St.  
Vancouver, B.C. V6B 1N4

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

SUBJECT: Analytical procedure used to determine hot acid soluble  
for 28 element scan by Inductively Coupled Plasma  
Spectrophotometry in geochemical silt and soil samples.

### 1. Method of Sample Preparation

- (a) Geochemical soil, silt or rock samples were received at the laboratory in high wet-strength, 4" x 6", Kraft paper bags. Rock samples would be received in poly ore bags.
- (b) Dried soil and silt samples were sifted by hand using an 8" diameter, 80-mesh, stainless steel sieve. The plus 80-mesh fraction was rejected. The minus 80-mesh fraction was transferred into a new bag for subsequent analyses.
- (c) Dried rock samples were crushed using a jaw crusher and pulverized to 100-mesh or finer by using a disc mill. The pulverized samples were then put in a new bag for subsequent analyses.

### 2. Method of Digestion

- (a) 0.50 gram portions of the minus 80-mesh samples were used. Samples were weighed out using an electronic balance.
- (b) Samples were digested with a 5 ml solution of HCL:HN03:H2O in the ratio of 3:1:2 in a 95 degree Celsius water bath for 90 minutes.
- (c) The digested samples are then removed from the bath and bulked up to 10 ml total volume with dimineralized water and thoroughly mixed.



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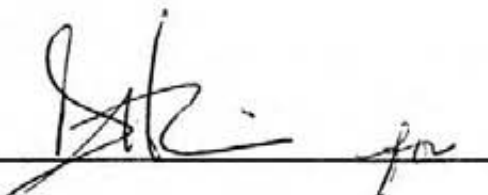
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### 3. Method of Analyses

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



# VANGEOCHEM LAB LIMITED

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BRANCH OFFICE  
1630 PANDORA ST.  
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(604) 251-5656

REPORT NUMBER: 871259 6A

JOB NUMBER: 871259

PANICON DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #

Au

ppb

16476

14430

16477

100

16478

nd

16479

nd

SE HM 1

nd

SE HM 2

30

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample



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

REPORT NUMBER: 871259 AA

JOB NUMBER: 871259

PAMICON DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #	Au oz/st
16476	.449

## DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.005

1 ppm = 0.0001%

ppm = parts per million

< = less than

signed: \_\_\_\_\_





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NORTH VANCOUVER, B.C. V7P 2S3  
(604) 966-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L8  
(604) 251-5656

REPORT NUMBER: 871480 GA

JOB NUMBER: 871480

PAMICON DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #

Au

SEC HM-3

ppb

nd

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 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

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAP SAMPLE IS DIESTERED WITH 5 ML OF 3:1:2 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR SN, NM, FE, CA, P, CE, MO, Rb, P, A, NA, S, W, PT AND SR. AU AND PD DETECTION IS 3 PPM.  
 IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, - = NOT ANALYZED

COMPANY: PANICON  
 ATTENTION:  
 PROJECT: SECRETERIAT

REPORT#: 871259RB  
 JOB#: 871259  
 INVOICE#: 871239NA

DATE RECEIVED: 87/09/04  
 DATE COMPLETED: 87/09/23  
 COPY SENT TO:

ANALYST *W. P. Jones*

PAGE 1 OF 1

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BE PPM	CA %	CO PPM	CO PPM	CP PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PE PPM	PD PPM	PT PPM	SF PPM	SA PPM	SR PPM	S PPM	W PPM	ZN PPM
16476	22.2	.72	18	4	24	4	.06	46.1	2	109	47	1.08	.02	.08	125	5	.03	7	.01	8875	ND	ND	9	ND	10	ND	ND	2155
16477	5.1	.54	16	ND	20	ND	1.39	35.9	15	28	230	5.48	.05	.44	717	2	1.41	6	.11	6066	ND	ND	ND	ND	38	ND	ND	3388
16478	.1	.64	11	ND	27	ND	1.79	.1	13	99	54	2.61	.05	.46	705	5	.08	14	.05	181	ND	ND	ND	ND	22	ND	ND	88
16479	.1	.30	11	ND	23	7	.64	.2	1	52	133	.83	.05	.10	272	1	.01	3	.01	73	ND	ND	ND	ND	27	3	4	51
DE NH 1	.1	2.50	9	ND	277	4	1.38	.1	15	47	88	3.75	.16	1.56	745	ND	.11	38	.15	6	ND	ND	ND	ND	62	ND	ND	88
DE NH 2	.1	3.02	7	ND	246	3	1.92	.1	16	71	62	3.75	.19	1.67	797	1	.10	31	.16	ND	ND	ND	ND	ND	113	ND	ND	78
DETECTION LIMIT*	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:2 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR SN, MN, FE, CA, P, CR, MG, BA, PD, AL, NA, K, V, PT AND SR. AU AND PD DETECTION IS 3 PPM.  
 IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, --= NOT ANALYZED

COMPANY: PAMICON  
 ATTENTION:  
 PROJECT: SECT

REPORT#: 871480PA  
 JOB#: 871480  
 INVOICE#: 871480NA

DATE RECEIVED: 87/10/07  
 DATE COMPLETED: 87/10/14  
 COPY SENT TO:

ANALYST W. Peters

SAMPLE NAME	AG PPH	AL I	AS PPH	AU PPH	BA PPH	BI PPH	CA I	CD PPH	CO PPH	CR PPH	CU PPH	FE I	K I	MG I	MN PPH	MO PPH	NA I	NI PPH	P I	PB PPH	PD PPH	PT PPH	SB PPH	SN PPH	SR PPH	U PPH	V PPH	ZN PPH
SEC NH-3	.1	2.46	ND	ND	213	ND	1.47	2.5	13	74	52	3.20	.14	1.45	645	2	.18	36	.12	60	ND	ND	ND	1	70	ND	ND	334
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1



YGC

YGC

VANDEO-CHEM LAB LTD.  
 Main Office  
 1521 Pemberton St.  
 North Vancouver, B.C. V7P 2G3  
 Tel: 604 262-5278

Branch Lab  
 1630 Percival St.  
 Vancouver, B.C.  
 Sample Preparation Facilities  
 Pasadena, Newfoundland  
 Thunder Bay, Ontario  
 Bathurst, New Brunswick  
 Park, Nevada

YGC

YGC

REPORT NUMBER: 871589 GA

JOB NUMBER: 871589

PANICOM DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #	Au ppb
16480	5
16481	nd
16482	45
16483	20
16484	21180
16485	30
16486	10
16487	200
16488	nd
16489	nd
16490	100
16491	15
16492	20
16493	15
16494	20
16495	30
16496	15
16497	75

DETECTION LIMIT  
nd = none detected

5  
-- = not analysed

is = insufficient sample



# VANGEOCHEM LAB LIMITED

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BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L8  
(604) 251-5656

REPORT NUMBER: 971589 AA

JOB NUMBER: 871589

PANICON DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #

Au  
oz/st

16484

.532

DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.005

1 ppm = 0.0001%

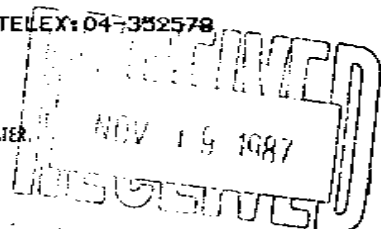
ppm = parts per million

< = less than

signed: \_\_\_\_\_

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:2 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR SM, MN, FE, CA, P, CR, Ni, BA, PD, AL, NA, K, W, PT AND SR. AU AND PD DETECTION IS 3 PPM.  
 IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, --= NOT ANALYZED



COMPANY: PAMICON  
 ATTENTION: STEVE TODORUK  
 PROJECT: SECT

REPORT#: 871589PA  
 JOB#: 871589  
 INVOICE#: 871589NA

DATE RECEIVED: 87/10/20  
 DATE COMPLETED: 87/10/26  
 COPY SENT TO:

ANALYST: *D. Kline*

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MM PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM	
16480	.9	.21	ND	ND	57	ND	.49	.1	3	97	25	.65	.04	.17	161	ND	.01	6	.01	38	ND	ND	ND	ND	1	30	ND	ND	23
16481	.2	.45	ND	ND	13	ND	3.77	.1	2	88	27	1.73	.07	.17	477	ND	.03	8	.01	14	ND	ND	ND	ND	ND	340	ND	ND	21
16482	.8	.39	ND	ND	12	4	.20	.3	4	114	31	1.01	.04	.23	145	1	.01	9	.01	10	10	ND	ND	ND	9	ND	ND	19	
16483	.9	.18	ND	ND	11	ND	.52	.1	3	136	31	.76	.05	.06	106	ND	.01	13	.01	19	ND	ND	ND	ND	26	ND	ND	8	
16484	8.1	.09	15	ND	8	ND	.03	26.2	2	122	60	.65	.05	.04	74	1	.52	6	.01	3079	ND	ND	8	ND	4	ND	ND	1101	
16485	1.2	.81	10	ND	55	ND	2.62	.1	13	96	273	5.04	.10	.66	553	1	.13	38	.01	58	ND	ND	ND	ND	387	ND	31	45	
16486	.1	.24	ND	ND	66	ND	5.79	.1	9	63	106	3.00	.08	.32	693	ND	.08	22	.01	28	ND	ND	ND	ND	629	ND	7	26	
16487	.5	.66	ND	ND	39	ND	3.56	.1	14	40	259	2.28	.08	.39	590	5	.06	18	.09	27	ND	ND	ND	ND	71	ND	ND	46	
16488	.9	.30	ND	ND	40	ND	.78	.3	3	50	106	.96	.05	.14	467	ND	.01	5	.01	39	ND	ND	ND	ND	40	3	ND	28	
16489	1.5	.27	7	ND	21	ND	.66	.1	42	74	299	8.12	.09	.15	247	1	.18	152	.04	19	ND	ND	6	ND	29	ND	ND	9	
16490	.1	.27	ND	ND	19	ND	3.41	.1	9	33	40	4.05	.08	1.49	889	ND	.14	10	.10	14	ND	ND	ND	ND	276	ND	ND	74	
16491	.1	1.13	ND	ND	27	ND	11.93	.1	7	24	45	2.90	.06	.78	1292	ND	.07	16	.05	35	ND	ND	ND	ND	514	ND	ND	24	
16492	.1	.27	ND	ND	14	ND	5.70	.1	3	70	26	.86	.06	.27	900	ND	.02	5	.04	13	ND	ND	ND	ND	490	ND	ND	15	
16493	.7	.90	ND	ND	95	ND	1.32	.1	11	115	109	2.68	.07	.50	350	3	.05	32	.06	15	ND	ND	ND	ND	63	ND	ND	25	
16494	.3	.58	ND	ND	53	ND	2.74	.1	6	91	45	1.64	.08	.35	468	2	.04	22	.03	40	ND	ND	ND	ND	175	ND	ND	18	
16495	1.4	1.18	ND	ND	132	ND	.56	.1	9	100	580	2.68	.08	.36	216	3	.03	4	.10	18	ND	ND	ND	2	48	ND	ND	23	
16496	.9	.56	6	ND	41	ND	.24	.1	3	99	59	1.19	.06	.27	342	ND	.01	4	.02	31	ND	ND	ND	1	2	14	ND	34	
16497	.8	.16	ND	ND	12	ND	.17	.4	1	56	41	.40	.04	.01	102	ND	.01	2	.01	26	ND	ND	ND	ND	6	14	ND	6	
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1	

**APPENDIX IV**

**STATEMENT OF QUALIFICATIONS**

STATEMENT OF QUALIFICATIONS

I, STEVE L. TODORUK, of Suite 129, 7451 Minoru Boulevard, Richmond, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employment of Pamicon Developments Limited, with offices at Suite 711, 675 West Hastings Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.
3. THAT my primary employment since 1979 has been in the field of mineral exploration.
4. THAT my experience has encompassed a wide range of geologic environments and has allowed considerable familiarization with prospecting, geophysical, geochemical and exploration drilling techniques.
5. THAT this report is based on data generated by myself, under the direction of Charles K. Ikona, Professional Engineer.
6. THAT I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to receive any such interest.
7. THAT I hereby grant permission to Zara Gold Syndicate for the use of this report in any prospectus or other documentation required by any regulatory authority.

DATED at Vancouver, B.C., this 7 day of April, 1988.

  
\_\_\_\_\_

Steve L. Todoruk, Geologist

**APPENDIX V**

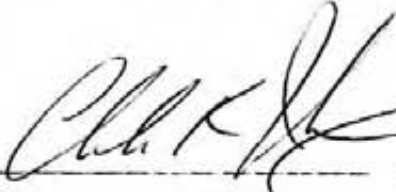
**ENGINEER'S CERTIFICATE**

**ENGINEER'S CERTIFICATE**

I, CHARLES K. IKONA, of 5 Cowley Court, Port Moody, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Consulting Mining Engineer with offices at Suite 711, 675 West Hastings Street, Vancouver, British Columbia.
2. THAT I am a graduate of the University of British Columbia with a degree in Mining Engineering.
3. THAT I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
4. THAT this report is based on work conducted on the property under my direction.
5. THAT I have no interest in the property described herein, nor in securities of any company associated with the property, nor do I expect to acquire any such interest.
6. THAT I consent to the use by Zara Gold Syndicate 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, B.C., this 7<sup>th</sup> day of Apr. 1, 1988.

  
\_\_\_\_\_  
Charles K. Ikona, P.Eng.

