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**GEOLOGICAL REPORT  
ON THE  
MON 1, 2, WEI AND ZEL MINERAL CLAIMS**

Located in the Iskut River Area  
Liard Mining Division  
NTS 104B/14E

**FILMED**

56°50' North Latitude, 130°56' West Longitude

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

- Prepared for -  
**17,533**  
CONSOLIDATED SILVER-GOLD CORP.

- Prepared by -  
S.L. TODORUK, Geologist

**SUB-RECORDER  
RECEIVED**  
JUN 25 1988  
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VANCOUVER, B.C.

June, 1988

**GEOLOGICAL REPORT on the MON 1, 2, WEI and ZEL MINERAL CLAIMS**

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## 1.0 INTRODUCTION

Consolidated Sea-Gold Corp.'s Mon 1 & 2, WEI and ZEL mineral claims (80 units) are located four kilometres west of Newmont Lake which is approximately 20 kilometres north of the Iskut River in northwestern British Columbia. The subject property adjoins Sea-Gold's Gab 11 & 12 mineral claims which host several interesting gold mineralization targets. The eastern claim boundary of the Gab 12 claim is also within close proximity to Gulf International Minerals Ltd.'s "Northwest" Zone.

A total of 8 man days were spent prospecting, mapping, rock chip, silt and heavy mineral concentrate sampling the Sea-Gold subject property during 1987.

Two zones of interest were identified on the claims. Within the Mon 1 claim, a skarn zone consisting of massive magnetite with appreciable malachite, azurite, chalcopyrite and bornite was located. Newmont Mining Corp. drilled three holes in 1972 on this outcrop which produced 1.5 metres of 0.200 oz/ton gold and 15.2 metres of 1.5% copper. The zone is exposed as an island measuring approximately 100 metres by 200 metres within snowfields on McLymont Glacier. At the present time, definition of claim boundaries is not sufficient to determine the location of the Ken showing with respect to Consolidated Sea-Gold Corp. and the Gab 10 claim to the east.

A second zone of mineralization was discovered near the southern boundary of the WEI claim block. Skarned sediments hosting pyrite mineralization assayed up to 0.082 oz/ton gold.

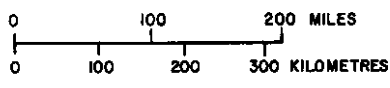
Introductory material for this report has been abridged from the February, 1988 Geological Report on the Gab 11 & 12 Mineral Claims and Stu 8 & 9 Mineral Claims written by the author.



CONSOLIDATED SEA GOLD CORP.  
 MON 1 & 2, WEI, ZEL CLAIMS  
**PROPERTY LOCATION MAP**  
 LIARD MINING DIVISION, B.C.

**PAMICON DEVELOPMENTS LTD.**

Drawn J.W.	N.T.S. 104B/14E	Date June, 1988	Figure 1.
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## 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 I. Hagemoen. Separate documents indicate the claims are under option to Consolidated Sea-Gold Corp.

<u>Claim Name</u>	<u>Record Number</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Mon 1	3940	20	March 20, 1988	March 20, 1989
Mon 2	3941	20	March 20, 1988	March 20, 1989

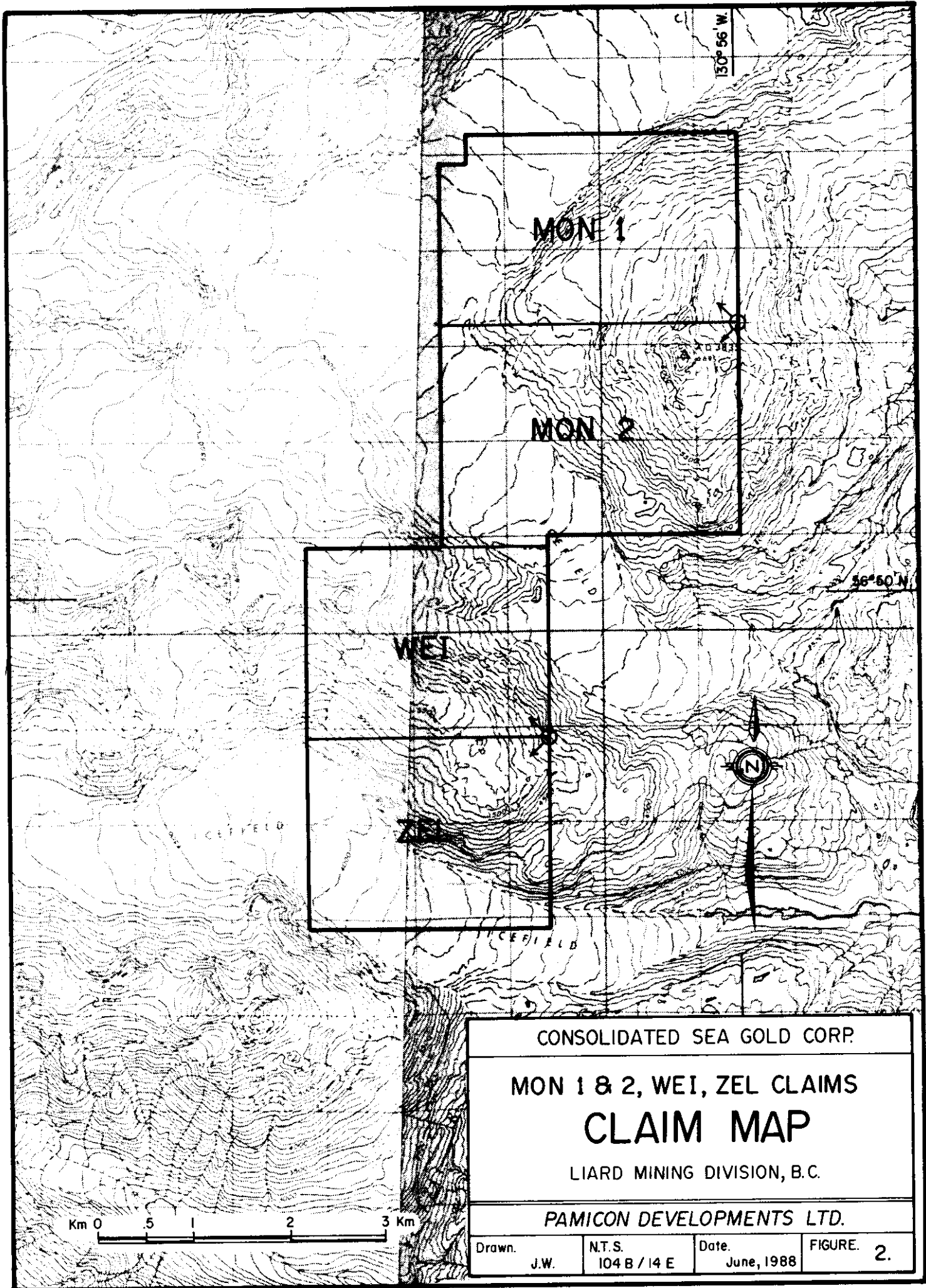
## 3.0 LOCATION, ACCESS AND GEOGRAPHY

The Mon 1, 2, WEI and ZEL claims are located approximately 80 kilometres east of Wrangell, Alaska, and 110 kilometres northwest of Stewart, British Columbia, on the eastern edge of the Coast Range Mountains (Figure 1). Newmont Lake is situated approximately four kilometres to the east and the Iskut River 12 kilometres to the south of the subject property.

Coordinates of the claims area are 56°50' north latitude and 130°56' west longitude, and the property falls under the jurisdiction of the Liard Mining Division.

Access to the property would either be via float-equipped fixed wing aircraft to Newmont Lake from Wrangell, Alaska or Stewart, British Columbia, or fixed wing aircraft from Wrangell or Stewart to the Bronson Creek gravel airstrip, located approximately 20 kilometres south of the property on the Iskut River and then using a helicopter to the property.

C.K. Ikona of Pamicon Developments Ltd., on behalf of Skyline Explorations Ltd., has proposed the construction of a 65 kilometre long road. The road would be situated on the south side of the Iskut Valley to connect the



MON 1

MON 2

WEI

130° 56' W.

56° 50' N.



CONSOLIDATED SEA GOLD CORP.			
MON 1 & 2, WEI, ZEL CLAIMS			
<b>CLAIM MAP</b>			
LIARD MINING DIVISION, B.C.			
PAMICON DEVELOPMENTS LTD.			
Drawn. J.W.	N.T.S. 104 B / 14 E	Date. June, 1988	FIGURE. 2.

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 Snippaker 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.

Gulf has recently released the results of some of their 1987 drilling in the McLymont area. Highlights of this program include:

<u>Hole Number</u>	<u>Width (metres)</u>	<u>Gold (oz/ton)</u>
87-25	9.1	0.404
	1.1	1.520
87-29	11.1	1.605
87-31	3.8	0.156

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.

Gulf International Minerals Ltd. drill intersected 11.1 metres grading 1.605 oz/ton Au in the "Northwest" Zone on their McLymont claims.

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:

Hole	From	To	Length		Gold	Silver	Copper
	(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.

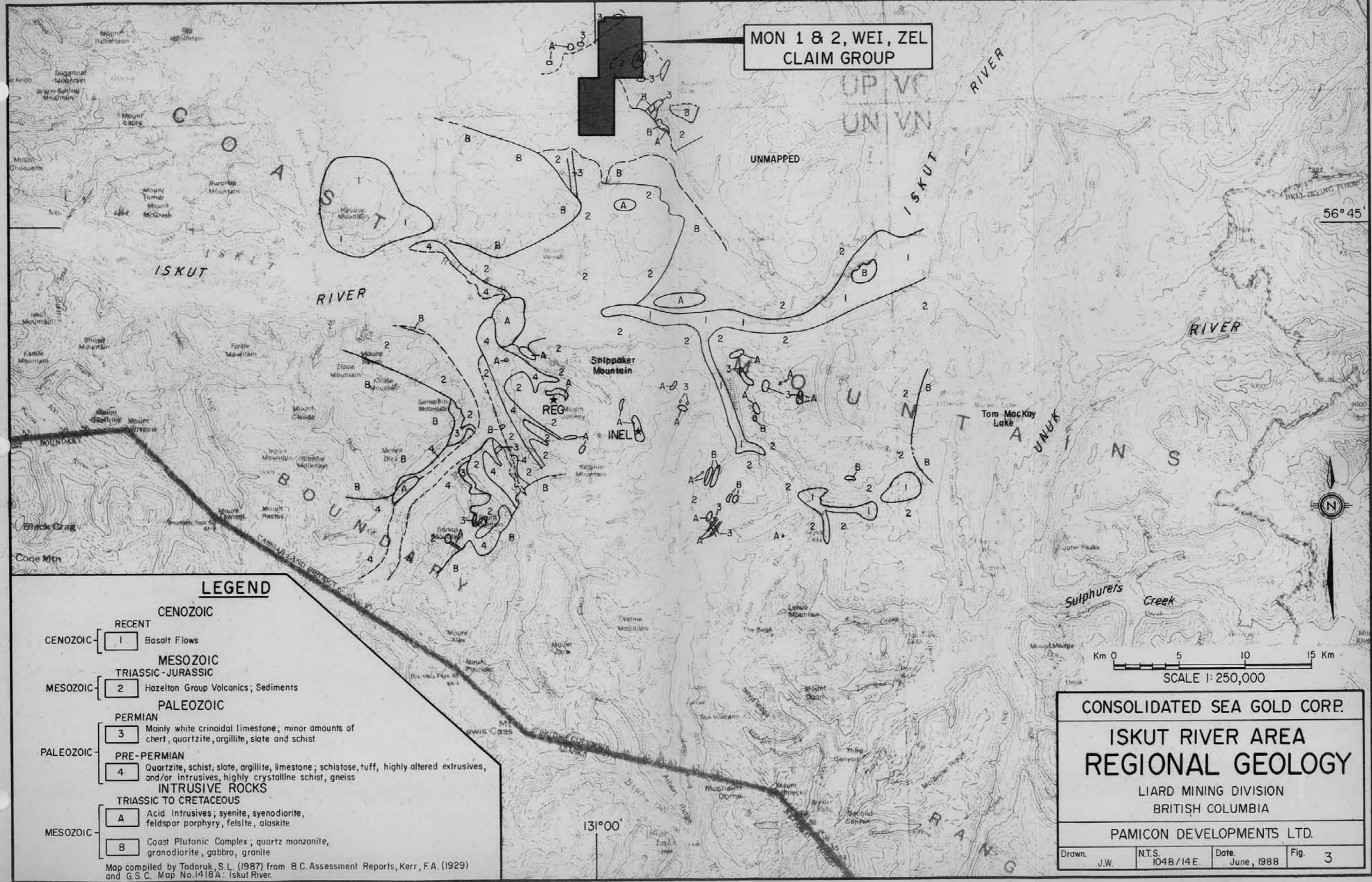
#### 5.0 REGIONAL GEOLOGY

Government mapping of the general geology in the Iskut River area (Kerr, 1948. GSC Memoir 246, "Operation Stikine", GSC Maps 9-1957 and 1418-1979, "Iskut River") 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) (Figure 4).

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

"The Stewart Complex lies within the Intermontane tectonic belt 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, Paleozoic crinoidal limestone overlying metamorphosed sedimentary and volcanic members are the oldest rock group. Correlation has been made between this oceanic assemblage and the Cache Creek Group.



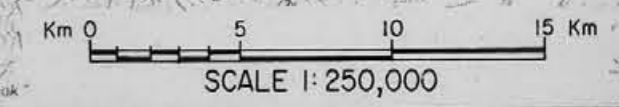
MON 1 & 2, WEI, ZEL CLAIM GROUP

UNMAPPED

**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.



**CONSOLIDATED SEA GOLD CORP.**

**ISKUT RIVER AREA REGIONAL GEOLOGY**

LIARD MINING DIVISION  
BRITISH COLUMBIA

**PAMICON DEVELOPMENTS LTD.**

Drawn: J.W.	N.T.S. 104B/14E.	Date: June, 1988.	Fig. 3
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Unconformably overlying the Paleozoic limestone unit are Upper Triassic Hazelton Group island arc volcanics and sediments. These rocks have informally 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 Reg and Inel gold deposits occur.

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 (1973, 1982). It is believed that the Betty Creek rocks act as a mineralizing trap and as such are useful in delineating underlying older units such as the Unuk River Formation.

Intrusion of the batholithic Coast Plutonic Complex in the Iskut region of Cretaceous and Tertiary age followed. Composition varies from quartz monzonite, granodiorite to granite. Important in many instances to the localization of mineralization are satellite facies of epizonal or subvolcanic acidic porphyries.

Quaternary and Tertiary volcanics occur at Hoodoo Mountain, along the Iskut River near Forrest Kerr Creek, and in several localities along Snippaker Creek.

## 6.0 LOCAL GEOLOGY

The oldest rocks mapped on the property are Triassic-Jurassic silicified argillite/sandstone/greywacke sediments found along the western margin of the Mon 1 & 2 claims and locally within the WEI and ZEL claim blocks. Overlying these sedimentary lithologies are younger Hazelton Group andesite agglomerate volcanics occurring mainly on the Mon 2 and ZEL claims.

A jasperoid-rich sedimentary horizon occurs near the contact of a thin argillite sequence and the andesite agglomerate unit on the ZEL claim.

A feldspar porphyritic dyke appears spatially related to skarn mineralization found on the WEI claim block. Similar compositional but much larger dykes are found just east of the subject property.

Orthophotographic maps at a scale of 1:10,000 were produced during early 1988 and should aid substantially in a structural and geological interpretation of the property.

## 7.0 MINERALIZATION

Two zones of interest occur on the subject property to date. A skarn zone measuring approximately 100 metres by 200 metres was located and sampled in 1987. Mineralization consists of massive magnetite with chalcopyrite, malachite, azurite and bornite. A grab rock chip sample collected of this mineralization assayed as follows:

<u>Sample Number</u>	<u>Copper</u> (ppm)	<u>Gold</u> (oz/ton)
16004	13,670	0.082

In 1972, Newmont Mining Exploration of Canada drilled three short holes on this zone and intersected 1.5 metres grading 0.200 oz/ton gold and 11.5 metres grading 1.5% copper. This area was flown for airborne magnetic geophysics by Newmont (Assessment Report 4150). Results indicate several northeast trending anomalies with the Ken showing appearing related to the westernmost of these.

A second zone of skarn mineralization was discovered near the southern boundary of the WEI claim block. A skarned band of sediments trends approximately 130° and appears spatially related to a 1 to 2 metre wide feldspar porphyry dyke. Mineralization mainly consists of disseminated pyrite. Assays from this zone are listed below:

<u>Sample Number</u>	<u>Gold</u>	
	(ppb)	(oz/ton)
15439	--	0.086
15440	290	--
15441	75	--
15442	1,950	--
15443	200	--
15444	125	--
15448	-10	--
15449	545	--
15450	130	--

## 8.0 DISCUSSION AND CONCLUSIONS

The Mon 1, 2, WEI and ZEL mineral claims host auriferous skarn mineralization similar in characteristics to that found on Gulf International Minerals Ltd.'s "Northwest" Zone four kilometres to the southeast. In late 1987 Gulf drill intersected 11.1 metres (36.5 feet) grading 1.605 oz/ton gold and 9.1 metres (30.0 feet) grading 0.404 oz/ton gold.

At the present time definition of claim boundaries is not sufficient to determine the Ken showing with respect to the Gab 10 or Consolidated Sea-Gold's claims to the west.

A second zone of skarn mineralization is located near the southern boundary of the WEI claim block.

During early 1988, orthophotographic maps were produced and an airborne geophysical survey carried out over the claims area. Interpretation of these maps should be extremely useful in helping to localize ground exploration efforts in the 1988 summer field season.

Respectfully submitted.



Steve L. Todoruk, Geologist

**APPENDIX I**

**BIBLIOGRAPHY**



## BIBLIOGRAPHY

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Costin, C.P. (1973): B.C. Assessment Report 4150, Report on Geological, Geophysical and Physical Work on the Dirk Claim Group.

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

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Skyline Explorations Ltd.: Annual Report 1987.

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Todoruk, S.L. and C.K. Ikona (1987): 1987 Summary Report on the Sky 4 & 5 and Spray 1 & 2 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**  
**MON 1 AND 2 MINERAL CLAIMS**  
**OCTOBER 15, 1987 - MARCH 20, 1988**

**WAGES**

S. Todoruk - 4 days @ \$350	\$ 1,400.00	
C. Ikona - 1 day @ \$400	400.00	
C. Scott - 2 days @ \$350	700.00	
K. Kaye - 1 day @ \$250	250.00	
R. Gibson - 1 day @ \$200	<u>200.00</u>	
		\$ 2,950.00

**EXPENSES**

Man Day Support - 9 man days @ \$125/man day	\$ 1,125.00	
Helicopter - 2 hours @ \$550/hour	1,100.00	
Assays	52.50	
Orthophotos	1,247.50	
Report Costs	<u>1,500.00</u>	
		5,025.00
Management Fee on Expenses		<u>753.75</u>
<b>TOTAL COST THIS PROGRAM</b>		<u><b>\$ 8,728.75</b></u>

**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 1L6  
(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) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(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 AA5 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.



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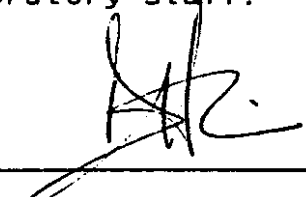
(d) The gold bead is retained for subsequent measurement.

### 3. Method of Detection

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

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December 23, 1987

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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:HNO3: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 demineralized water and thoroughly mixed.



## 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 1L6  
(604) 251-5656

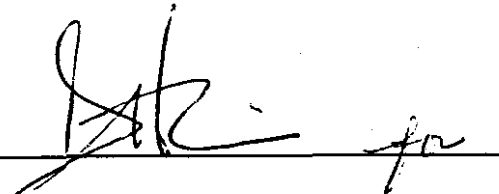
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### 3. Method of Analyses

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

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 1L6  
(604) 251-5656

REPORT #: 880164 DA PAMICON DEV. INC. CSG Page 5 of 9

Sample Number	Job Num	Au ppb	Au oz/st	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm
15132	871212	5	--	2	12	21	0.1	<2
15133	871212	<5	--	234	13	22	0.2	<2
15134	871212	<5	--	315	14	9	2.0	3
15135	871212	<5	--	1196	16	14	0.5	7
15136	871212	<5	--	291	14	19	0.3	<2
15137	871212	50	--	15	16	12	0.4	22
15138	871212	<5	--	941	13	14	0.5	<2
15139	871212	3000	0.086	722	32	20	0.1	103
15440	871212	290	--	1566	38	20	0.1	136
15441	871212	75	--	524	35	35	0.1	78
15442	871212	1950	--	878	34	16	5.9	64
15443	871212	200	--	681	29	8	0.1	193
15444	871212	125	--	248	33	150	0.1	577
15448	871315	10	--	123	7	16	0.1	170
15449	871315	545	--	2383	25	106	7.6	238
15450	871231	130	--	40428	16	64	5.1	16
16004	871490	2810	0.082	13670	29	114	3.7	28
16276	871315	1440	--	3045	9	63	0.1	49
16277	871315	3360	0.114	8247	8	81	4.3	67
CSG Si-12	871256	10	--	57	25	114	0.1	23
CSG Si-13	871256	10	--	102	44	201	0.1	50
CSG Si-14	871256	10	--	87	7	67	0.1	13
CSG Si-15	871256	5	--	42	17	133	0.1	23
CSG Si-16	871256	<5	--	59	20	169	0.1	41
CSG Si-17	871256	15	--	35	14	79	0.1	14
HM 7	871231	5	--	37	24	101	0.5	22
HM 8	871231	10	--	63	12	70	0.1	12
HM 9	871231	5	--	37	22	123	0.4	28

Minimum Detection 1 5 0.005 1 2 1 0.1 2  
 Maximum Detection 99999 10000 99.999 10000 10000 10000 9999.0 10000  
 < = Less than Minimum IS = Insufficient Sample NS = No sample

**APPENDIX IV**

**AIRBORNE GEOPHYSICAL SURVEY PROCEDURE**

LOGISTICS REPORT ON  
COMBINED HELICOPTER BORNE  
MAGNETIC, ELECTROMAGNETIC AND VLF  
SURVEY  
ISKUT RIVER PROPERTIES  
LIARD MINING DIVISION  
BRITISH COLUMBIA

FOR  
PAMICON DEVELOPMENTS LIMITED  
BY  
AERODAT LIMITED  
February 17, 1988

J87100

R.J. de Carle  
Consulting Geophysicist

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1. INTRODUCTION

This report describes an airborne geophysical survey carried out on behalf of Pamicon Developments Limited by Aerodat Limited.

Equipment operated included a three frequency electromagnetic system, a high sensitivity cesium vapour magnetometer, a two frequency VLF-EM system, a film tracking camera, and an altimeter. Electromagnetic, magnetic and altimeter data were recorded both in digital and analog form.

The survey area which is comprised of several blocks of ground in the Iskut River area, is located approximately 120 kilometres northwest of Stewart, British Columbia. All of the survey blocks are within what is known as the Liard Mining Division. Several flights, which were flown during the month of February, were required to complete the survey with flight lines oriented at an Azimuth of 000-180 degrees and flown with a nominal line spacing of 250 metres. Coverage and data quality were considered to be well within the specifications described in the contract.

The survey objective is the detection and location of mineralized zones which can be directly or indirectly related to precious metal exploration targets. Of importance, therefore, are poorly

mineralized conductors, displaying weak conductivity, which may represent structural features which can sometimes play an essential role in the eventual location of primary minerals.

In regard to base metal targets, short, isolated or flanking conductors displaying good conductivity and having either magnetic or no magnetic correlation, are all considered to be areas of extreme interest.

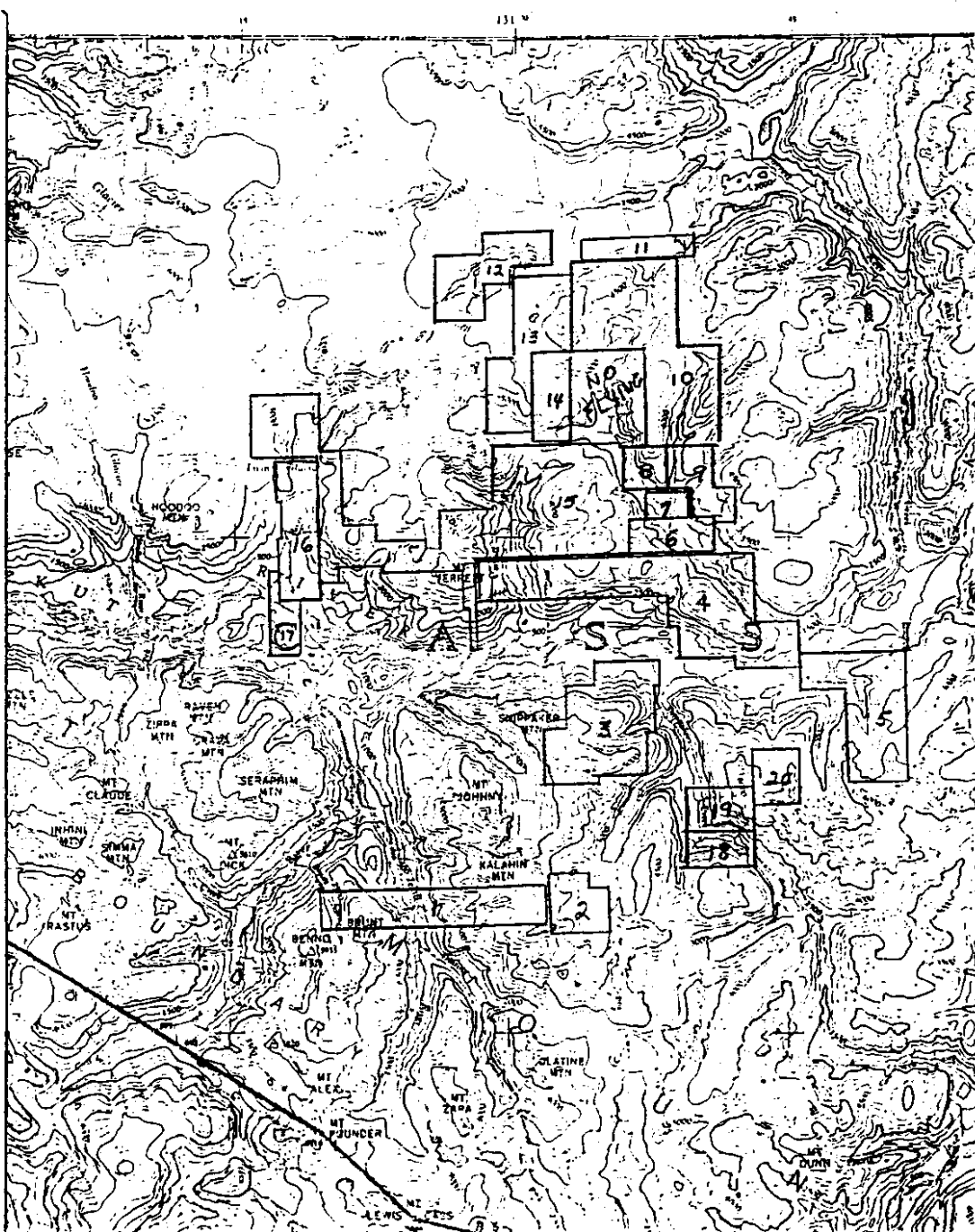
A total of 1760 kilometres of the recorded data were compiled in map form and are presented as part of this report according to specifications outlined by Pamicon Developments Limited.



## 2. SURVEY AREA LOCATION

The survey area is depicted on the index map shown. They are centred at Latitude 56 degrees 43 minutes north, Longitude 130 degrees 57 minutes west, in the Iskut River area of northern British Columbia (NTS Reference Map No. 104B/10, 104B/11, 104B/14 and 104B/15). The survey area is located in extremely rugged country, with many mountain ranges as high as 6,000 feet above sea level. The major physiographical feature in the area, besides the mountain ranges, is the Iskut River. It is quite a wide river which traverses through the middle of the survey area in an east-west direction with its outlet to the west, flowing into the Pacific Ocean.

Because of the extreme ruggedness of the country, transportation means is by helicopter only. There are no roads into the area. Travelling to the area can be made by bush plane from either Telegraph Creek which is approximately 165 kilometres north of the survey area, or from Stewart, B.C. which is approximately 120 kilometres to the southeast of the survey area. There are three gravel airstrips in close proximity to the survey blocks, one at the base of Mount Johnny, one near Bronson Creek and the third at the head of Snippuker Creek. The writer is not aware of the conditions for any of these airstrips.



### 3. AIRCRAFT AND EQUIPMENT

#### 3.1 Aircraft

An Aerospatiale A-Star 350D helicopter, (C-GBBX), owned and operated by Ranger Helicopters Limited, was used for the survey. Installation of the geophysical and ancillary equipment was carried out by Aerodat. The survey aircraft was flown at a mean terrain clearance of 60 metres.

#### 3.2 Equipment

##### 3.2.1 Electromagnetic System

The electromagnetic system was an Aerodat 3-frequency system. Two vertical coaxial coil pairs were operated at 935 Hz and 4600 Hz and a horizontal coplanar coil pair at 4175 Hz. The transmitter-receiver separation was 7 metres. Inphase and quadrature signals were measured simultaneously for the 3 frequencies with a time constant of 0.1 seconds. The electromagnetic bird was towed 30 metres below the transmitter.

##### 3.2.2 VLF-EM System

The VLF-EM System was a Herz Totem 2A. This instrument measures the total field and quadrature components of two selected transmitters, preferably oriented at right angles to one another. The sensor was

towed in a bird 12 metres below the helicopter. The transmitters monitored were NLK, Jim Creek, Washington, broadcasting at 24.8 kHz for the Line station and NAA, Cutler, Maine broadcasting at 24.0 kHz for the Orthogonal station.

### 3.2.3 Magnetometer

The magnetometer employed a Scintrex Model VIW-2321 H8 cesium, optically pumped magnetometer sensor. The sensitivity of this instrument was 0.1 nanoTeslas at a 0.2 second sampling rate. The sensor was towed in a bird 12 metres below the helicopter.

### 3.2.4 Magnetic Base Station

An IFG-2 proton precession magnetometer was operated at the base of operations to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to facilitate later correlation.

### 3.2.5 Radar Altimeter

A King Air HRA-100 radar altimeter was used to record terrain clearance. The output from the instrument is a linear function of altitude for maximum accuracy.

### 3.2.6 Tracking Camera

A Panasonic video tracking camera was used to record flight path on VHS video tape. The camera was operated in continuous mode and the fiducial numbers and time marks for cross reference to the analog and digital data were encoded on the video tape.

### 3.2.7 Analog Recorder

An RMS dot-matrix recorder was used to display the data during the survey. In addition to manual and time fiducials, the following data were recorded:

Channel	Input	Scale
CXI1	Low Frequency Coaxial Inphase	2 ppm/mm
CXQ1	Low Frequency Coaxial Quadrature	2 ppm/mm
CXI2	High Frequency Coaxial Inphase	2 ppm/mm
CXQ2	High Frequency Coaxial Quadrature	2 ppm/mm
CPI1	Mid Frequency Coplanar Inphase	8 ppm/mm
CPQ1	Mid Frequency Coplanar Quadrature	8 ppm/mm
PWRL	Power Line	60 Hz
VLT	VLF-EM Total Field, Line	2.5%/mm

Channel	Input	Scale
VLQ	VLF-EM Quadrature, Line	2.5%/mm
VOT	VLF-EM Total Field, Ortho	2.5%/mm
VOQ	VLF-EM Quadrature, Ortho	2.5%/mm
ALT	Altimeter	10 ft./mm
MAGF	Magnetometer, Fine	2.5 nT/mm
MAGC	Magnetometer, Coarse	25 nT/mm

### 3.2.8 Digital Recorder

A DGR 33 data system recorded the survey on magnetic tape. Information recorded was as follows:

<u>Equipment</u>	<u>Recording Interval</u>
EM system	0.1 seconds
VLF-EM	0.4 seconds
Magnetometer	0.2 seconds
Altimeter	0.4 seconds

#### 4. DATA PRESENTATION

##### 4.1 Base Map

A photomosaic base at a scale of 1:20,000 was prepared from a photo lay down map, supplied by Aerodat, on a screened mylar base.

##### 4.2 Flight Path Map

The flight path was manually recovered onto the photomosaic base using the VHS video tape. The recovered points were then digitized, transformed to a local metric grid and merged with the data base. The flight path map showing all flight lines, is presented on a Cronaflex copy of the base map, with camera frame and navigator's manual fiducials for cross reference to both the analog and digital data.

##### 4.3 Airborne Electromagnetic Survey Interpretation Map

The electromagnetic data were recorded digitally at a sample rate of 10 per second with a time constant of 0.1 seconds. A two stage digital filtering process was carried out to reject major spheric events and to reduce system noise.

Local spheric activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major spheric events.

The signal to noise ratio was further enhanced by the application of a low pass digital filter. It has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 0.25 seconds. This low effective time constant permits maximum profile shape resolution.

Following the filtering process, a base level correction was made. The correction applied is a linear function of time that ensures the corrected amplitude of the various inphase and quadrature components is zero when no conductive or permeable source is present. The filtered and levelled data were used in the interpretation of the electromagnetics.



An interpretation map was prepared showing peak locations of anomalies and conductivity thickness ranges along with the Inphase amplitudes (computed from the 4600 Hz coaxial response) and conductor axes. The anomalous responses of the three coil configurations along with the interpreted conductor axes were plotted on a Cronaflex copy of the photo base map.

#### 4.4 Total Field Magnetic Contours

The aeromagnetic data were corrected for diurnal variations by adjustment with the digitally recorded base station magnetic values. No correction for regional variation was applied. The corrected profile data were interpolated onto a regular grid at a 20 metre true scale interval using an Akima spline technique. The grid provided the basis for threading the presented contours at a 2 nanoTesla interval.

The contoured aeromagnetic data have been presented on a Cronaflex copy of the photomosaic base map.

#### 4.5 Vertical Magnetic Gradient Contours

The vertical magnetic gradient was calculated from the gridded total field magnetic data. Contoured at a 0.2 nT/m interval, the gradient data were presented on a Cronaflex copy of the photomosaic base map.

#### 4.6 Apparent Resistivity Contours

The electromagnetic information was processed to yield a map of the apparent resistivity of the ground.

The approach taken in computing apparent resistivity was to assume a model of a 200 metre thick conductive layer (i.e., effectively a half space) over a resistive bedrock. The computer then generated, from nomograms for this model, the resistivity that would be consistent with the bird elevation and recorded amplitude for the coaxial frequency pair used. The apparent resistivity profile data were interpolated onto a regular grid at a 20 metres true scale interval using an Akima spline technique.

The contoured apparent resistivity data were presented on a Cronaflex copy of the photomosaic base map with the flight path.

bodies in close association can be, and often are, graphite and magnetite. It is often very difficult to distinguish between these cases. If the conductor is also magnetic, it will usually produce an EM anomaly whose general pattern resembles that of the magnetics. Depending on the magnetic permeability of the conducting body, the amplitude of the inphase EM anomaly will be weakened, and if the conductivity is also weak, the inphase EM anomaly may even be reversed in sign.

#### VLF Electromagnetics

The VLF-EM method employs the radiation from powerful military radio transmitters as the primary signals. The magnetic field associated with the primary field is elliptically polarized in the vicinity of electrical conductors. The Herz Totem uses three coils in the X, Y, Z configuration to measure the total field and vertical quadrature component of the polarization ellipse.

The relatively high frequency of VLF (15-25) kHz provides high response factors for bodies of low conductance. Relatively "disconnected" sulphide ores have been found to produce measureable VLF signals. For the same reason, poor conductors such as sheared contacts, breccia zones, narrow faults, alteration zones and porous flow tops normally produce VLF anomalies. The method can therefore be used effectively for geological mapping. The only

relative disadvantage of the method lies in its sensitivity to conductive overburden. In conductive ground the depth of exploration is severely limited.

The effect of strike direction is important in the sense of the relation of the conductor axis relative to the energizing electromagnetic field. A conductor aligned along a radius drawn from a transmitting station will be in a maximum coupled orientation and thereby produce a stronger response than a similar conductor at a different strike angle. Theoretically, it would be possible for a conductor, oriented tangentially to the transmitter to produce no signal. The most obvious effect of the strike angle consideration is that conductors favourably oriented with respect to the transmitter location and also near perpendicular to the flight direction are most clearly rendered and usually dominate the map presentation.

The total field response is an indicator of the existence and position of a conductivity anomaly. The response will be a maximum over the conductor, without any special filtering, and strongly favour the upper edge of the conductor even in the case of a relatively shallow dip.

The vertical quadrature component over steeply dipping sheet-like

conductor will be a cross-over type response with the cross-over closely associated with the upper edge of the conductor.

The response is a cross-over type due to the fact that it is the vertical rather than total field quadrature component that is measured. The response shape is due largely to geometrical rather than conductivity considerations and the distance between the maximum and minimum on either side of the cross-over is related to target depth. For a given target geometry, the larger this distance the greater the depth.

The amplitude of the quadrature response, as opposed to shape is function of target conductance and depth as well as the conductivity of the overburden and host rock. As the primary field travels down to the conductor through conductive material it is both attenuated and phase shifted in a negative sense. The secondary field produced by this altered field at the target also has an associated phase shift. This phase shift is positive and is larger for relatively poor conductors. This secondary field is attenuated and phase shifted in a negative sense during return travel to the surface. The net effect of these 3 phase shifts determine the phase of the secondary field sensed at the receiver.

A relatively poor conductor in resistive ground will yield a net positive phase shift. A relatively good conductor in more conductive ground will yield a net negative phase shift. A combination is possible whereby the net phase shift is zero and the response is purely in-phase with no quadrature component.

A net positive phase shift combined with the geometrical crossover shape will lead to a positive quadrature response on the side of approach and a negative on the side of departure. A net negative phase shift would produce the reverse. A further sign reversal occurs with a 180 degree change in instrument orientation as occurs on reciprocal line headings. During digital processing of the quadrature data for map presentation this is corrected for by normalizing the sign to one of the flight line headings.

APPENDIX II

CERTIFICATE OF QUALIFICATIONS

I, ROBERT J. DE CARLE, certify that: -

1. I hold a B. A. Sc. in Applied Geophysics with a minor in geology from Michigan Technological University, having graduated in 1970.
2. I reside at 28 Westview Crescent in the town of Palgrave, Ontario.
3. I have been continuously engaged in both professional and managerial roles in the minerals industry in Canada and abroad for the past eighteen years.
4. I have been an active member of the Society of Exploration Geophysicists since 1967 and hold memberships on other professional societies involved in the minerals extraction and exploration industry.
5. The accompanying report was prepared from information published by government agencies, materials supplied by Pamicon Developments Limited and from a review of the proprietary airborne geophysical survey flown by Aerodat Limited for Pamicon Developments Limited. I have not personally visited the property.
6. I have no interest, direct or indirect, in the property described nor do I hold securities in Pamicon Developments Limited.
7. I hereby consent to the use of this report in a Statement of Material Facts of the Company and for the preparation of a prospectus for submission to the British Columbia Securities Commission and/or other regulatory authorities.

Signed,

*Robert J. de Carle*

Robert J. de Carle  
Consulting Geophysicist

Palgrave, Ontario  
February 17, 1988

4.7 VLF-EM Total Field Contours

The VLF-EM signals from NLK, Jim Creek, Washington broadcasting at 24.8 kHz. for the Line Station were compiled in contour map form and presented on a Cronaflex copy of the photomosaic base map.

*Robert J. de Carle*

Robert J. de Carle  
Consulting Geophysicist

for

AERODAT LIMITED

February 17, 1988

J87100



## APPENDIX I

### GENERAL INTERPRETIVE CONSIDERATIONS

#### Electromagnetic

The Aerodat three frequency system utilizes two different transmitter-receiver coil geometries. The traditional coaxial coil configuration is operated at two widely separated frequencies and the horizontal coplanar coil pair is operated at a frequency approximately aligned with one of the coaxial frequencies.

The electromagnetic response measured by the helicopter system is a function of the "electrical" and "geometrical" properties of the conductor. The "electrical" property of a conductor is determined largely by its electrical conductivity, magnetic susceptibility and its size and shape; the "geometrical" property of the response is largely a function of the conductor's shape and orientation with respect to the measuring transmitter and receiver.

#### Electrical Considerations

For a given conductive body the measure of its conductivity or conductance is closely related to the measured phase shift between the received and transmitted electromagnetic field. A small phase shift indicates a relatively high conductance, a large phase shift lower conductance. A small phase shift results

in a large inphase to quadrature ratio and a large phase shift a low ratio. This relationship is shown quantitatively for a non-magnetic vertical half-plane model on the accompanying phasor diagram. Other physical models will show the same trend but different quantitative relationships.

The phasor diagram for the vertical half-plane model, as presented, is for the coaxial coil configuration with the amplitudes in parts per million (ppm) of the primary field as measured at the response peak over the conductor. To assist the interpretation of the survey results the computer is used to identify the apparent conductance and depth at selected anomalies. The results of this calculation are presented in table form in Appendix II and the conductance and inphase amplitude are presented in symbolized form on the map presentation.

The conductance and depth values as presented are correct only as far as the model approximates the real geological situation. The actual geological source may be of limited length, have significant dip, may be strongly magnetic, its conductivity and thickness may vary with depth and/or strike and adjacent bodies and overburden may have modified the response. In general the conductance estimate is less affected by these limitations than is the

depth estimate, but both should be considered as relative rather than absolute guides to the anomaly's properties.

Conductance in mhos is the reciprocal of resistance in ohms and in the case of narrow slab-like bodies is the product of electrical conductivity and thickness.

Most overburden will have an indicated conductance of less than 2 mhos; however, more conductive clays may have an apparent conductance of say 2 to 4 mhos. Also in the low conductance range will be electrolytic conductors in faults and shears.

The higher ranges of conductance, greater than 4 mhos, indicate that a significant fraction of the electrical conduction is electronic rather than electrolytic in nature. Materials that conduct electronically are limited to certain metallic sulphides and to graphite. High conductance anomalies, roughly 10 mhos or greater, are generally limited to sulphide or graphite bearing rocks.

Sulphide minerals, with the exception of such ore minerals as sphalerite, cinnabar and stibnite, are good conductors; sulphides may occur in a disseminated manner that inhibits electrical

conduction through the rock mass. In this case the apparent conductance can seriously underrate the quality of the conductor in geological terms. In a similar sense the relatively non-conducting sulphide minerals noted above may be present in significant consideration in association with minor conductive sulphides, and the electromagnetic response only relate to the minor associated mineralization. Indicated conductance is also of little direct significance for the identification of gold mineralization. Although gold is highly conductive, it would not be expected to exist in sufficient quantity to create a recognizable anomaly, but minor accessory sulphide mineralization could provide a useful indirect indication.

In summary, the estimated conductance of a conductor can provide a relatively positive identification of significant sulphide or graphite mineralization; however, a moderate to low conductance value does not rule out the possibility of significant economic mineralization.

#### Geometrical Considerations

Geometrical information about the geologic conductor can often be interpreted from the profile shape of the anomaly. The change in shape is primarily related to the change in inductive coupling among the transmitter, the target, and the receiver.

In the case of a thin, steeply dipping, sheet-like conductor, the coaxial coil pair will yield a near symmetric peak over the conductor. On the other hand, the coplanar coil pair will pass through a null couple relationship and yield a minimum over the conductor, flanked by positive side lobes. As the dip of the conductor decreased from vertical, the coaxial anomaly shape changes only slightly, but in the case of the coplanar coil pair the side lobe on the down dip side strengthens relative to that on the up dip side.

As the thickness of the conductor increases, induced current flow across the thickness of the conductor becomes relatively significant and complete null coupling with the coplanar coils is no longer possible. As a result, the apparent minimum of the coplanar response over the conductor diminishes with increasing thickness, and in the limiting case of a fully 3 dimensional body or a horizontal layer or half-space, the minimum disappears completely.

A horizontal conducting layer such as overburden will produce a response in the coaxial and coplanar coils that is a function of altitude (and conductivity if not uniform). The profile shape will be similar in both coil configurations with an amplitude ratio (coplanar:coaxial) of about 4:1\*.

In the case of a spherical conductor, the induced currents are confined to the volume of the sphere, but not relatively restricted to any arbitrary plane as in the case of a sheet-like form. The response of the coplanar coil pair directly over the sphere may be up to 8\* times greater than that of the coaxial pair.

In summary, a steeply dipping, sheet-like conductor will display a decrease in the coplanar response coincident with the peak of the coaxial response. The relative strength of this coplanar null is related inversely to the thickness of the conductor; a pronounced null indicates a relatively thin conductor. The dip of such a conductor can be inferred from the relative amplitudes of the side-lobes.

Massive conductors that could be approximated by a conducting sphere will display a simple single peak profile form on both coaxial and coplanar coils, with a ratio between the coplanar to coaxial response amplitudes as high as 8\*.

Overburden anomalies often produce broad poorly defined anomaly profiles. In most cases, the response of the coplanar coils closely follows that of the coaxial coils with a relative amplitude ratio of 4\*.

Occasionally, if the edge of an overburden zone is sharply defined with some significant depth extent, an edge effect will occur in the coaxial coils. In the case of a horizontal conductive ring or ribbon, the coaxial response will consist of two peaks, one over each edge; whereas the coplanar coil will yield a single peak.

\* It should be noted at this point that Aerodat's definition of the measured ppm unit is related to the primary field sensed in the receiving coil without normalization to the maximum coupled (coaxial configuration). If such normalization were applied to the Aerodat units, the amplitude of the coplanar coil pair would be halved.

### Magnetics

The Total Field Magnetic Map shows contours of the total magnetic field, uncorrected for regional variation. Whether an EM anomaly with a magnetic correlation is more likely to be caused by a sulphide deposit than one without depends on the type of mineralization. An apparent coincidence between an EM and a magnetic anomaly may be caused by a conductor which is also magnetic, or by a conductor which lies in close proximity to a magnetic body. The majority of conductors which are also magnetic are sulphides containing pyrrhotite and/or magnetite. Conductive and magnetic

**APPENDIX V**

**STATEMENT OF QUALIFICATIONS**



STATEMENT OF QUALIFICATIONS

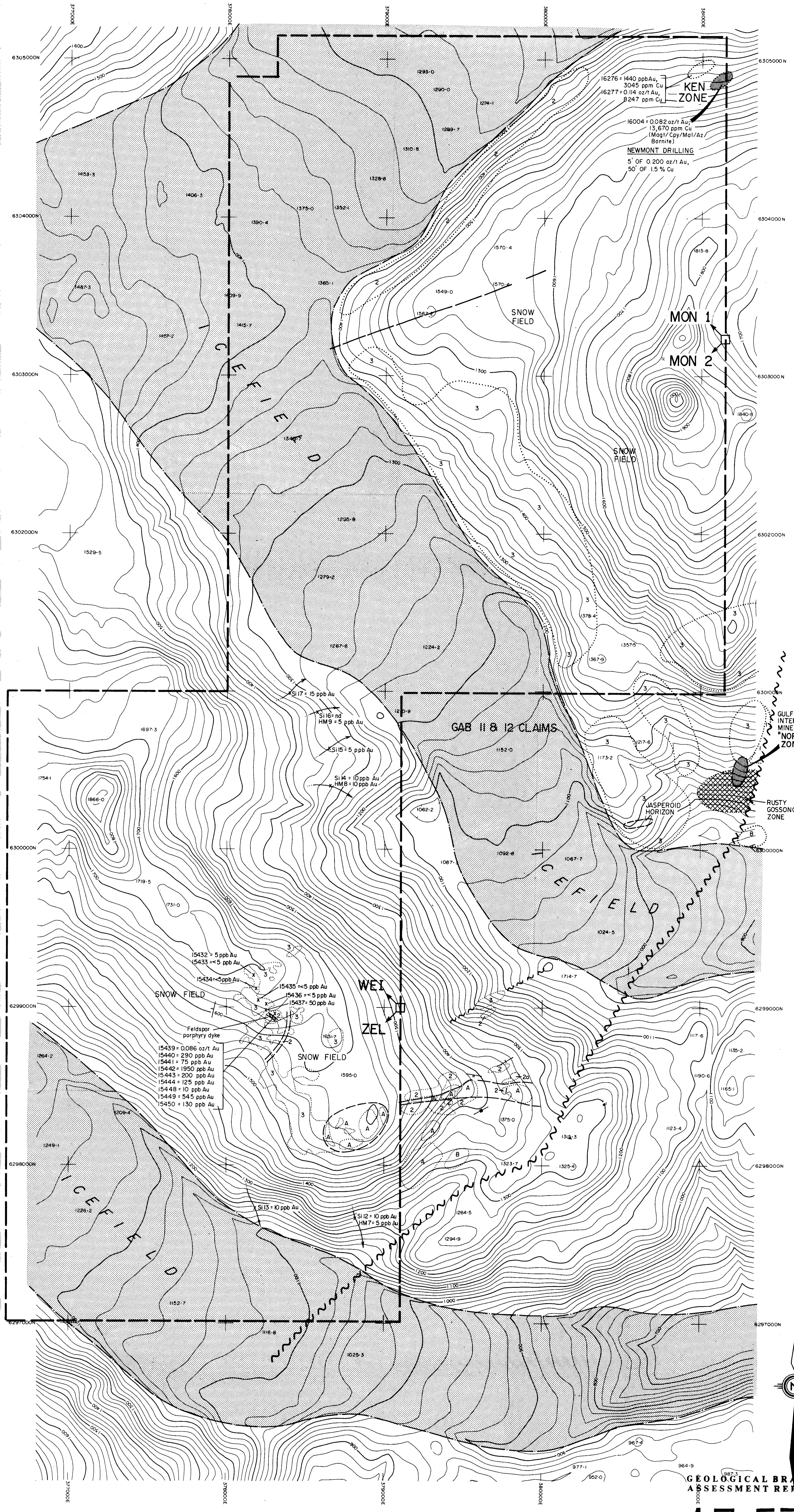
I, STEVE L. TODORUK, of Suite 129, 7451 Minoru Boulevard, Richmond, in the Province of British Columbia, DO HEREBY CERTIFY:

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 Consolidated Sea-Gold Corp. for the use of this report in any prospectus or other documentation required by any regulatory authority.

DATED at Vancouver, B.C., this 23 day of June, 1988.



Steve L. Todoruk, Geologist



**KEN ZONE**  
 16276 = 1440 ppb Au,  
 3045 ppm Cu  
 16277 = 0.114 oz/1 Au,  
 8247 ppm Cu  
 16004 = 0.082 oz/1 Au,  
 13,670 ppm Cu  
 (Mag/Cpy/Mal/Az/  
 Barnite)  
**NEWMONT DRILLING**  
 5' OF 0.200 oz/1 Au,  
 50' OF 1.5% Cu

15439 = 0.086 oz/1 Au  
 15440 = 230 ppb Au  
 15441 = 75 ppb Au  
 15442 = 1950 ppb Au  
 15443 = 200 ppb Au  
 15444 = 125 ppb Au  
 15448 = 10 ppb Au  
 15449 = 545 ppb Au  
 15450 = 130 ppb Au

SI17 = 15 ppb Au  
 SI16 = nd  
 HM9 = 5 ppb Au  
 SI15 = 5 ppb Au  
 SI14 = 10 ppb Au  
 HM8 = 10 ppb Au

SI13 = 10 ppb Au  
 SI12 = 10 ppb Au  
 HM7 = 5 ppb Au



**GEOLOGICAL BRANCH  
 ASSESSMENT REPORT**

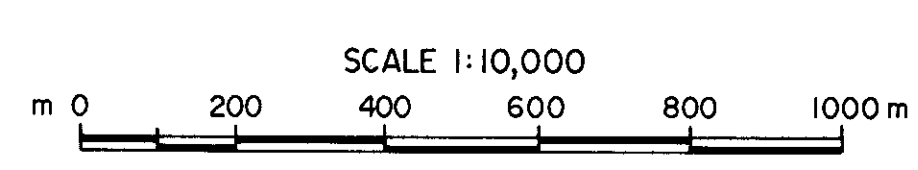
**17,533**

CONSOLIDATED SEA GOLD CORP.

**MON 1 & 2, WEI, ZEL CLAIMS  
 LOCAL GEOLOGY, ROCK CHIP  
 SILT & HEAVY MINERAL  
 SAMPLES**  
 LIARD MINING DIVISION, B.C.

**PAMICON DEVELOPMENTS LTD.**

DRAWN: J.W. BY: S. TODORUK DATE: JUNE, 1988 FIGURE: **4**



- MESOZOIC**
- TRIASSIC-JURASSIC**
- 3 Andesite Agglomerate
  - 2 Argillite    2a Argillite/Chert/Sandstone/  
Limestone Conglomerate
- PALEOZOIC**
- PERMIAN**
- 1 Limestone, Tuff, Chert, Conglomerates
- INTRUSIVE ROCKS**
- TRIASSIC TO CRETACEOUS**
- A Acid Intrusives; syenite, syenodiorite,  
feldspar porphyry, felsic, alaskite
- MESOZOIC**
- B Coast Plutonic Complex; quartz monzonite,  
granodiorite, gabbro, granite