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GEOLOGICAL REPORT  
ON THE  
MYSTERY 1 & 2 AND CHANCE 2 & 4  
MINERAL CLAIMS

SUB-RECORDER  
RECEIVED  
DEC 29 1988  
M.R. # ..... \$ .....  
VANCOUVER, B.C.

Located in the Iskut River Area  
Liard Mining Division  
NTS 104B/10E  
56°40' North Latitude  
130°41' West Longitude

- Prepared for -

BARYTEX RESOURCES CORP.

- Prepared by -

E.A. SCROGGINS, Geologist  
C.K. IKONA, P.Eng.

November, 1988

18,198

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# GEOLOGICAL REPORT on the MYSTERY 1 & 2 and CHANCE 2 & 4 MINERAL CLAIMS

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## 1.0 INTRODUCTION

The Mystery 1 & 2 and Chance 2 & 4 mineral claims (80 units) were staked in the fall of 1987 to cover favourable geology similar to the high-grade Stonehouse Gold (Skyline Explorations Ltd.) and Twin Zone (Cominco/Delaware Resource Corp.) gold deposits in the Iskut River area of northwestern British Columbia in the Liard Mining Division (Figure 1). Both deposits report reserves in excess of one million tons grading approximately 0.7 oz/ton gold. Several other significant gold discoveries have been reported throughout the Iskut River area, making this region one of the more exciting and promising gold areas currently under exploration in British Columbia.

During 1987 prospecting and geological mapping identified favourable geological units. Gold-bearing quartz/sulphide vein float which assayed 4,355 ppb Au (0.118 oz/ton Au) was found toward the north end of East Creek. Two other samples in that area returned values of 2,160 ppb Au and 1,540 ppb Au (0.032 oz/ton Au).

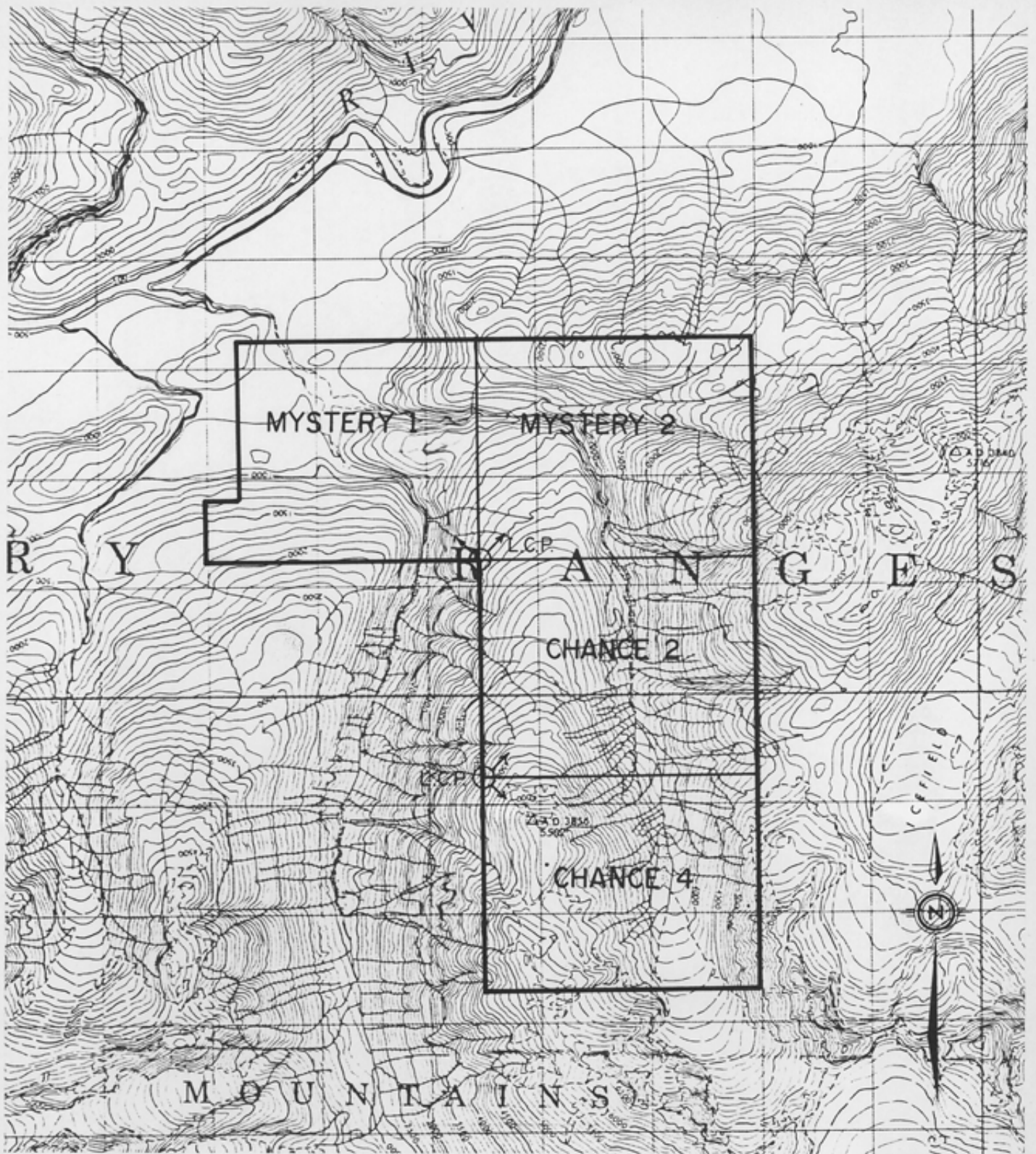
During July and August, 1988 a total of 24 man days were spent prospecting, mapping, silt sampling and heavy mineral concentrate sampling on the Mystery and Chance claims. In addition to this ground work, an airborne geophysical survey was carried out by Aerodat Limited between November 16, 1987 and June 6, 1988. The survey covered 23 separate blocks of ground in the Iskut River area. The Barytex Mystery and Chance claims are covered by Area 5 and results from this survey are included in Appendix III.

## 2.0 LIST OF CLAIMS

Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources show that the following claims (Figure 2) are owned by Steve I. Todoruk. Barytex Resources Corp. has entered into an option agreement to earn an interest in the property.



<b>BARYTEX RESOURCES CORP.</b>			
MYSTERY 1 & 2, CHANCE 2 & 4 CLAIM GROUP.			
<b>PROPERTY LOCATION MAP</b>			
<b>PAMICON DEVELOPMENTS LTD.</b>			
Drawn	N.T.S.	Date	Fig. No.
J.W.	104 B/10E.	Nov. 1988	1



BARYTEX RESOURCES CORP.

MYSTERY 1 & 2, CHANCE 2 & 4  
CLAIM GROUP  
CLAIM MAP

PAMICON DEVELOPMENTS LTD.



Drawn J.W.	N.T.S. 104 B/10E	Date. Nov. 1988	Fig. No. 2
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<u>Claim Name</u>	<u>Record Number</u>	<u>No. of Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Mystery 1	4649	20	June 14, 1988	June 14, 1989
Mystery 2	4650	20	June 14, 1988	June 14, 1989
Chance 2	4256	20	October 16, 1987	October 16, 1990
Chance 4	4648	20	June 14, 1988	June 14, 1989

### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The Mystery 1 & 2 and Chance 2 & 4 mineral claims are located on the eastern edge of the Coast Range Mountains approximately 140 kilometres northwest of Stewart, British Columbia (Figure 1). The claims lie within the Liard Mining Division centred at 56°40' north latitude and 130°41' west longitude (NTS Sheet 104B/10E).

Access to the property is by helicopter from the Bronson Creek gravel air strip, located approximately 22 kilometres to the west. Daily scheduled flights to the strip from Terrace and Smithers have been available during the field season using fixed wing aircraft. Alternate access may be possible from the airstrip constructed by Skyline Explorations Ltd. on Johnny Flats, about 23 kilometres west of the property or from the Snippaker gravel air strip located approximately 11 kilometres to the south-southwest.

A proposal by C.K. Ikona of Pamicon Developments Ltd., on behalf of Skyline Explorations Ltd., addresses the construction of a road approximately 65 kilometres long, on the south side of the Iskut Valley to connect the Stewart-Cassiar Highway with Skyline's Stonehouse Gold deposit and the Cominco/Delaware Resource Corp. Snip gold deposit located near Bronson Creek.

The terrain within the property is quite rugged. Elevations range from under 215 metres (700 feet) in the Iskut River valley to a 1677 metre (5,502 feet) peak in the northwest corner of the Chance 4 mineral claim. The claims cover the tributaries and the junction of the northerly and easterly trending branches of a creek which empties into the Iskut River. The northerly trending creek is a steep walled U-shaped valley typical of a glaciated terrain.

Lower slopes are covered with a dense growth of hemlock and spruce with an undergrowth of devil's club and huckleberry. Steeper open slopes are covered by dense slide alder growth with treeline at approximately 1200 metres (4,000 feet). Both summer and winter temperatures are moderate although annual rainfall may exceed 200 centimetres and over 180 centimetres (6 feet) of compacted snow will occur at higher elevations.

Rugged topography, climate and vegetation all inhibit traversing throughout the claim group. Therefore, operating with local helicopter support appears to be the most practical and cost effective means of exploring the Mystery/Chance property during reconnaissance-style programs.

#### 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 Stonehouse Gold 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.

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 Developments 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 and news releases):

<u>Drill Hole</u>	<u>Interval</u> (feet)	<u>Length</u> (feet)	<u>Copper</u> (%)	<u>Silver</u> (oz/ton)	<u>Gold</u> (oz/ton)
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
88-28	213.9-229.0	15.1			0.810
	260.5-276.6	16.1			0.645
	354.0-363.2	9.2			0.319

(average grade = 149.0 feet of 0.290 oz/ton gold)

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 Cominco/Delaware Snip claims immediately north of the Stonehouse Gold deposit, approximately 20,000 metres of diamond drilling has been carried out defining the Twin Zone gold deposit. Three thousand metres of underground development work has also been completed as the project readies for production. 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. Underground drilling on the centre section of workings has returned in US8-3 a grade of 0.769 oz/ton gold for 4.1 metres (September, 1988). As of November, 1988, 730 metres of underground development has been completed in the area of the Discovery zone.

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>Drill Hole</u>	<u>From</u> (m)	<u>To</u> (m)	<u>Length</u>		<u>Gold</u> (oz/t)	<u>Silver</u> (oz/t)	<u>Copper</u> (%)
			(m)	(ft)			
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 has drill tested four main gold/copper quartz vein targets: the Bluff, No. 7, Swamp and Gold Bug 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. Drill testing was also carried out near the western edge of the claims on the Boot Zone lead/zinc/copper/silver/gold prospect.

During 1988 Pezgold Resource Corp./International Prism Exploration drill tested their Ken Zone magnetite/chalcopyrite/gold skarn zone north of Gulf International Minerals' Northwest Gold Zone. High grade silver-lead-zinc was also found on the property.

In late 1988, Calpine Resources Incorporated/Consolidated Stikine Silver announced several exciting drill holes on their Eskay Creek Project at Tom McKay Lake. Drill hole CA88-6 reported values of 0.730 oz/ton gold across 96.5 feet.

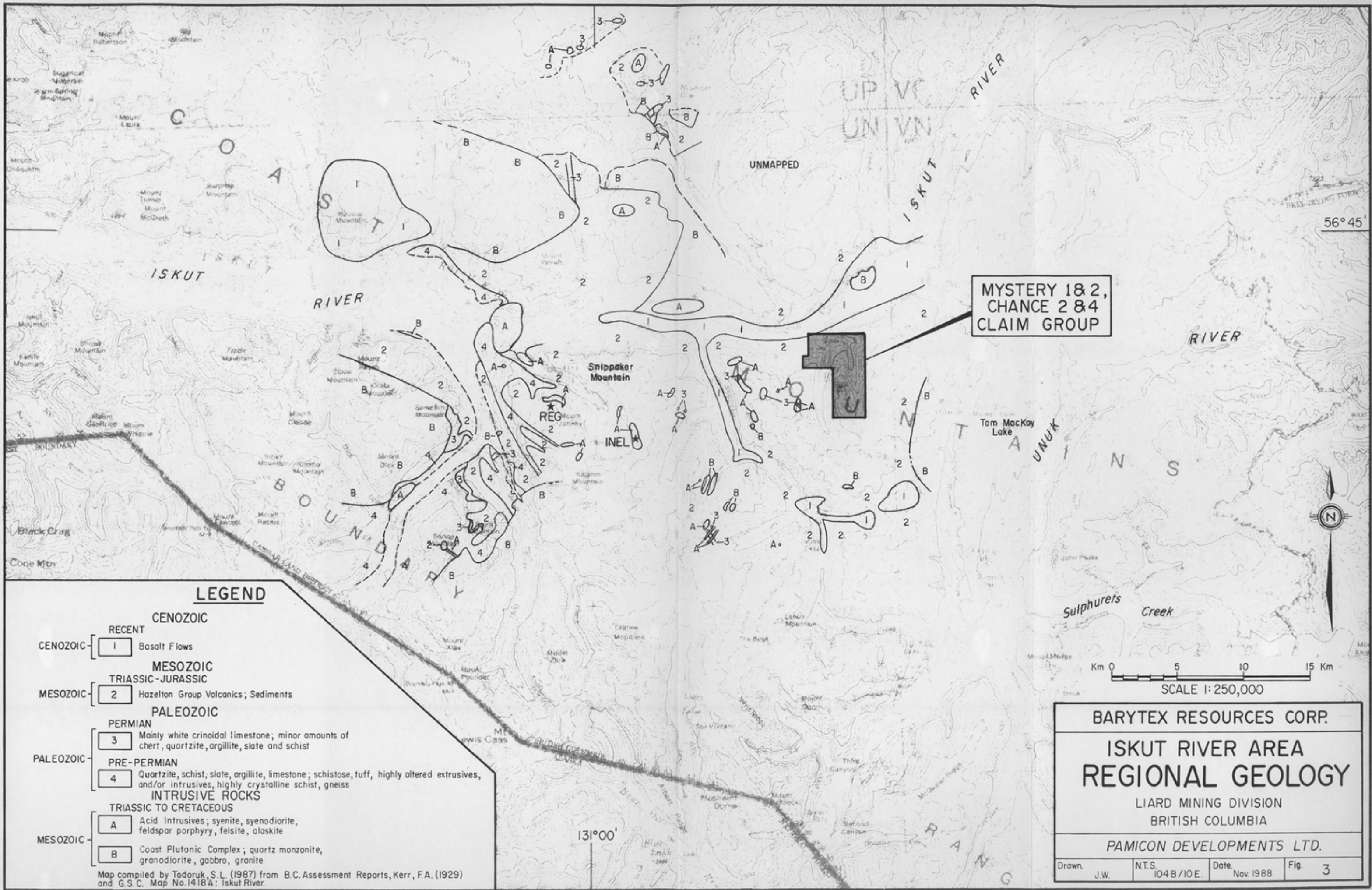
Magenta Development Corp. also discovered an exciting gold/silver/copper/lead quartz vein in 1988 on the Rob claims in the Skyline area.

## 5.0 REGIONAL GEOLOGY

Regional geology is depicted in Figure 3.

The following regional geological interpretation is taken from B.C. Geological Survey Branch publication, in press, Exploration in British Columbia 1987 by D.V. Lafebure and M.H. Gunning.

A northwest-trending belt of Permian to Lower Jurassic volcanic and sedimentary rocks and their metamorphic equivalents trends northward from Alice Arm to Telegraph Creek and forms part of Stikinia. It is bounded to the west by the Coast Complex and is overlapped to the east by the clastic sediments of the Bowser Basin.



**LEGEND**

- |                        |  |
|------------------------|--|
| CENOZOIC               |  |
| RECENT                 |  |
| CENOZOIC               | 1 Basalt Flows   |
| MESOZOIC               |  |
| TRIASSIC-JURASSIC      |  |
| MESOZOIC               | 2 Hazelton Group Volcanics; Sediments  |
| PALEOZOIC              |  |
| PERMIAN                |  |
|                        | 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 |  |
|                        | 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.

MYSTERY 182,  
CHANCE 2 & 4  
CLAIM GROUP

Km 0 5 10 15 Km  
SCALE 1:250,000

**BARYTEX RESOURCES CORP.**

**ISKUT RIVER AREA  
REGIONAL GEOLOGY**

LIARD MINING DIVISION  
BRITISH COLUMBIA

**PAMICON DEVELOPMENTS LTD.**

Drawn. J.W.	N.T.S. 104B/10E.	Date. Nov. 1988	Fig. 3
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The dominant lithologies in the Bronson Creek area are clastic sediments and volcanics with minor carbonate lenses which are intruded by a diverse suite of intrusive rocks, most commonly granitic and syenitic. The sedimentary rocks are sandstones (typically greywackes), siltstones, shales, argillites, conglomerates and minor limestones. Volcanic rocks vary in composition from mafic to felsic and display a wide variety of igneous, pyroclastic and volcanoclastic textures.

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

Kerr (1948) correlated most of the rocks along Bronson Creek with Triassic volcanics that he had seen farther to the north and northwest. These volcanics consist of intensely folded and sheared tuffs, agglomerates, lavas, rare pillow lavas and bedded sediments. He believed that the volcanics are overlain by Triassic argillites with lenses of limestone. The lower northern and western slopes of Johnny Mountain are underlain by pre-Permian metamorphosed shale, sandstone and limestone.

Exploration geologists have defined stratigraphic columns for specific properties (Birkeland and Gifford, 1972; Sevensma, 1981) and for the area as a whole (Parsons, 1965; Bending, 1983). Bending defined a stratigraphic column with black argillite conformably overlain by banded siltstone which underlies a green volcanic unit composed principally of intermediate to felsic rocks. The green volcanic unit has an irregular upper contact with the "Upper Tuffaceous Sedimentary Unit," a sequence of limestones, tuffaceous sandstones, argillites and siltstones with lenses of conglomerate near the upper contact. At the top of Bending's sequence is hornblende-biotite andesite tuff and subordinate breccia. Based on descriptions by Kerr (1930, 1948), Bending correlated the basal argillite and siltstone with the upper Paleozoic, the green volcanic unit with the Triassic and the upper tuffaceous sediments with the lower Jurassic. Fossils collected from 350 metres southwest of Snippaker Peak have been determined as Lower Jurassic, probably Toarcian age, by H.W. Tipper of the Geological Survey of Canada (Graf, 1985).

Grove (1986b) subdivided the sedimentary and volcanic rocks on the top of Mount Johnny into the Unuk River and Betty Creek formations of the Hazelton Group, based on correlations with his work to the east.

## 6.0 LOCAL GEOLOGY AND MINERALIZATION

During July and August, 1988, a total of 24 man days were spent on the property. The work program was designed to follow up anomalous float samples collected in 1987 and to prospect and sample the drainages flowing into the main creek (East Creek) which drains the property. A total of 32 rock chip, 17 heavy mineral concentrate, 11 silt and 8 soil samples were collected during this survey.

The government mapping indicates that the property is underlain almost entirely by intrusive rocks of the Coast Plutonic Complex. Caulfield (1987) has shown that this is largely incorrect. A large granite-granodiorite body does lie toward the south and west of the property. However, along the East and West Creeks, highly fractured, fine to coarse-grained clastic sediments and mafic volcanic flows/coarse fragmental units are found. Reconnaissance type mapping/prospecting was done along the drainages and outcrops are outlined on Figure 4. Caulfield (1987) also noted that limestone interbeds were present along West Creek. This geological setting is similar to that around the Snip-Stonehouse Gold deposits which would date the volcano-sedimentary package from Permian to Upper Triassic in age.

The airborne geophysical survey results were reported by de Carle (1988). The magnetics survey has outlined three individual magnetic horizons which would indicate three unique rock classifications. The Total Field Magnetic Contours map (Map No. 4, Appendix III) shows a magnetically active area toward the northwest and a second active area toward the east central to southeastern portion. The Northwest zone suggests a mafic to ultramafic unit while the other zone suggests a more basic unit. The northern region of the Mystery 2 claim displays a magnetically low intensity which could be related to sedi-

ments. These interpretations are general and require follow up work in the field to determine contact relationships between the various units.

The electromagnetic survey reports that there were a few poorly defined conductors within the property boundary. The broad electromagnetic responses suggest surficial conductivity which in some cases may be attributed to conductive creek bottom silts. Several zones have been outlined on the Interpretation Map (Map No. 3), in particular zones 5A, 5D, 5G and 5E. None of these areas were investigated during the 1988 field season and warrant further investigation during the next field program.

The VLF-EM data did not produce any significant results.

No gold occurrences have been located in outcrop to date. The 1987 program located three highly anomalous gold float samples of quartz-sulphide vein material. This area along the east side of the north end of East Creek (Figure 5) was further investigated by prospecting and heavy mineral sampling. One encouraging result from this sampling was a heavy mineral sample, #22326, which returned 685 ppb Au and 90 ppm Cu. A line of contour soil sampling was run just to the south of this tributary. Results were generally low except for the sample (MC88-1) closest to the creek which assayed 80 ppb Au. Approximately 500 metres up the same creek a rock grab sample #22358 of greywacke with quartz blebs and 1% to 2% pyrite assayed 410 ppb Au. A limonitic, clay-rich fault gouge traced for 15.0 metres, was located 50 metres upstream from sample #22358. The gouge material is 0.5 metres wide and a chip sample #22359 was taken for 1.0 metre which assayed 135 ppb Au.

Locations of all rock samples are shown on Figure 5 and soil, silt and heavy mineral samples are shown on Figure 6.

*Soil samples collected on average of 25-35 centimetres in depth from "B" horizon*

## 7.0 DISCUSSION AND CONCLUSIONS

Sampling of the Mystery and Chance claims has located an anomalous zone at the northern end of East Creek and along a drainage which flows into the East Creek. A heavy mineral sample, highly anomalous in gold, was located along this westerly flowing tributary which drains the ridges along the eastern boundary of the Mystery 2 claim. Two slightly anomalous rock samples from the same creek provide some encouragement and follow up work in this area is warranted. This area is underlain by volcano/sedimentary units which are known to host the Stonehouse and Snip Gold deposits as well as a score of new gold discoveries made throughout the Iskut River area in 1987 and 1988. Work in the higher elevations of the property was not completed due to snow coverage during the time of investigation and these areas should be studied. Several target areas were outlined by the airborne survey and should also be followed up.

## 8.0 RECOMMENDATIONS

A two phase exploration program is recommended on the Mystery and Chance property. Advancement to the second phase will proceed only if warranted by favourable results from Phase I.

### PHASE I

Geological mapping and prospecting should be done over the remainder of the property using an orthophoto contour map (1:5,000) as a base. Follow up work on the northerly drainage flowing into East Creek should also be considered.

Heavy concentrate sampling should be performed on the drainages which flow into the West Creek.



Soil geochemistry contour lines should be attempted in areas covering the anomalous drainages, however accessibility may pose a problem on the steep, dense slopes.

The ridge which lies between the East and West Creeks may be suitable for the construction of a helicopter pad which would provide better access to that portion of the claim which has not yet been investigated.

#### PHASE II

Contingent upon favourable results from the first phase, the second phase of exploration will consist of trenching of mineralized zones and expansion of soil geochemical coverage to be followed by a 350 metre diamond drill program to test any mineralized zones.

### 9.0 BUDGET

#### PHASE I

##### WAGES

Project Geologist - 20 days @ \$300/day	\$ 6,000	
Prospector - 20 days @ \$250/day	5,000	
Sampler - 20 days @ \$225/day	<u>4,500</u>	
		\$ 15,500

Carried Forward \$ 15,500

CHEMICAL ANALYSES

Heavy Mineral - 30 @ \$33.25/sample	\$ 998	
Soil - 100 @ \$19.25/sample	1,925	
Rock - 125 @ \$21.75/sample	<u>2,719</u>	
		5,642

SUPPORT

Mob/Demob	\$ 2,500	
Accommodation - 60 man days @ \$125/man day	7,500	
Freight	500	
Communications	700	
Helicopter - 20 hours @ \$600/hour	<u>12,000</u>	
		23,200

MATERIALS AND SUPPLIES

Geochemical Supplies	\$ 500	
General	<u>500</u>	
		1,000

REPORT PREPARATION 3,000

RECORDING FEES

Assessment Credits - 5% on \$60,000		<u>3,000</u>
-------------------------------------	--	--------------

51,342

CONTINGENCY @ 10%		<u>5,134</u>
-------------------	--	--------------

56,476

MANAGEMENT FEE @ 15% ON EXPENSES		<u>5,376</u>
----------------------------------	--	--------------

\$ 61,852

The first phase exploration program will cost approximately \$60,000 to implement.

PHASE II

The second phase budget will depend on the results of the Phase I exploration program. However, \$140,000 should be made available to cover Phase II expenditures.

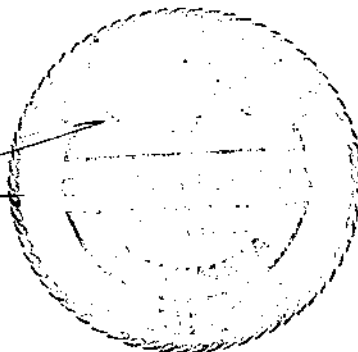
Respectfully submitted,

Elizabeth A. Scroggins

Elizabeth A. Scroggins, Geologist

Charles K. Ikona

Charles K. Ikona, P.Eng.



**APPENDIX I**

**BIBLIOGRAPHY**

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**APPENDIX II**

**ASSAY CERTIFICATES**



# VANGEOCHEM LAB LIMITED

MAIN OFFICE AND LABORATORY  
1988 Triumph Street  
Vancouver, B.C. V5L 1K5  
(604) 251-5656 FAX: 254-5717

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

REPORT NUMBER: 881013 6A

JOB NUMBER: 881013

PANICON DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #	Au
22256	nd
22257	is
22258	is
22259	nd
22260	is
22261	nd

DETECTION LIMIT

S

nd = none detected

-- = not analysed

is = insufficient sample

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH: (604)251-5656 TELEX: 04-352578  
 BRANCH OFFICE: 1630 PANDORA STREET, VANCOUVER B.C. V5L 1L6 PH: (604)251-7282 FAX: (604)254-5717

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 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 SR, MN, FE, CA, P, CR, MG, BA, PD, AL, NA, K, W, PT AND SR. AU AND PD DETECTION IS 3 PPM.  
 (S= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED)

COMPANY: PAMICON  
 ATTENTION: MR. S. TODORUK  
 PROJECT: BARYTEX

REPORT#: 881013PA  
 JOB#: 881013  
 INVOICE#: 881013NA

DATE RECEIVED: 88/08/17  
 DATE COMPLETED: 88/09/02  
 COPY SENT TO:

ANALYST *[Signature]*

PAGE 1 OF 1

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 %	MN 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
22256	.1	.25	8	ND	225	ND	2.94	.6	7	83	12	2.75	.37	1.09	1496	3	.01	12	.03	18	ND	ND	ND	2	30	ND	ND	28
22257	.1	.22	ND	ND	80	ND	.05	.1	3	191	8	2.24	.03	.02	90	1	.01	6	.01	8	ND	ND	ND	1	37	ND	ND	7
22258	.1	1.10	13	ND	25	ND	.08	.5	5	38	9	3.16	.05	.95	130	2	.01	4	.07	12	ND	ND	ND	2	8	ND	ND	36
22259	.1	.57	5	ND	65	ND	.40	.6	4	92	7	3.50	.10	.24	485	3	.02	3	.03	10	ND	ND	ND	2	6	ND	ND	15
22260	.1	.99	73	ND	14	3	.02	1.4	3	111	15	6.43	.04	.72	314	3	.02	4	.02	20	ND	ND	ND	4	3	ND	AC	28
22261	.1	.29	11	ND	25	ND	.01	.1	4	184	9	2.51	.02	.25	116	8	.01	5	.01	16	ND	ND	ND	2	2	ND	ND	20
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





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(604) 251-5656

REPORT NUMBER: 880904 GA

JOB NUMBER: 880904

PANICON DEVELOPMENT LTD.

PAGE 1 OF 1

	Au
	ppb
MC 88 #1	80
MC 88 #2	15
MC 88 #3	20
MC 88 #4	15
MC 88 #5	15
MC 88 #6	10
MC 88 #7	5
MC 88 #8	10

DETECTION LIMIT

5

nd = none detected

-- = not analysed

15 = insufficient sample

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH: (604)251-5656 TELEX: 04-352578  
 BRANCH OFFICE: 1630 PANDORA STREET, VANCOUVER B.C. V5L 1L6 PH: (604)251-7282 FAX: (604)254-5717


ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 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, MG, 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: FAMICON DEVELOPMENTS  
 ATTENTION: MR. S. TODORUK  
 PROJECT:

REPORT#: 880904PA  
 JOB#: 880904  
 INVOICE#: 880904NA

DATE RECEIVED: 88/08/04  
 DATE COMPLETED: 88/08/13  
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PAGE 1 OF 1

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BE PPM	CA %	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SM PPM	SR PPM	U PPM	W PPM	ZN PPM	
MC 88 81	.1	1.26	15	ND	51	ND	.07	.9	6	5	25	3.45	.02	.64	735	1	.01	7	.04	9	ND	ND	ND	ND	5	ND	ND	61
MC 88 82	.1	1.90	4	ND	158	ND	.27	1.3	9	12	26	4.46	.07	.54	1224	3	.02	8	.11	11	ND	ND	ND	1	22	ND	ND	82
MC 88 83	.1	2.35	ND	ND	67	ND	.08	1.1	6	16	28	4.40	.02	.61	525	1	.01	11	.10	11	ND	ND	ND	ND	7	ND	ND	74
MC 88 84	.1	2.22	6	ND	33	ND	.03	.9	4	10	27	4.14	.02	.29	466	2	.01	5	.16	11	ND	ND	ND	ND	4	ND	ND	46
MC 88 85	.1	2.77	ND	ND	59	ND	.04	.9	5	15	25	4.35	.01	.68	477	1	.01	6	.08	8	ND	ND	ND	ND	5	ND	ND	59
MC 88 86	1.6	1.98	ND	ND	80	3	.07	1.1	11	18	39	4.73	.02	.24	159	2	.02	6	.08	15	ND	ND	ND	5	7	ND	ND	40
MC 88 87	.1	1.63	10	ND	50	ND	.09	.9	9	16	24	3.05	.03	.83	916	1	.01	16	.10	11	ND	ND	ND	ND	6	ND	ND	67
MC 88 88	.1	1.24	10	ND	62	ND	.13	.5	6	10	20	2.55	.03	.65	335	ND	.01	10	.05	6	ND	ND	ND	ND	8	ND	ND	44
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



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(604) 251 5656

REPORT NUMBER: B80867 6A

JOB NUMBER: 880867

PAMICOM DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #	Au ppb
22301	5
22302	5
22303	5
22304	30
22305	20
22306	15
22307	10
22308	10
22309	10
22310	5
22311	5
22312	15
22313	10
22314	nd
22315	30
22316	15
22317	15
22318	20
22319	20
22320	25
22321	15
22322	15
22323	15
22324	25
22325	20
22326	685
22327	45
22328	20

DETECTION LIMIT

5

nd = none detected

-- = not analysed

15 = insufficient sample

VANGEOCHEM LAB LIMITED

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 BRANCH OFFICE: 1630 PANDORA STREET, VANCOUVER B.C. V5L 1L6 PH: (604)251-7282 FAX: (604)254-5717


ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:3 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, CP, AG, 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 DEVELOPMENT  
 ATTENTION: S TODORUK  
 PROJECT: MYSTERY

REPORT#: 880867 PA  
 JOB#: 880867  
 INVOICE#: 880867 NA

DATE RECEIVED: 88/08/04  
 DATE COMPLETED: 88/08/19  
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PAGE 1 OF 1

SAMPLE NAME	AG PPM	AL I	AS PPM	AU PPM	BA PPM	BI PPM	CA I	CO PPM	CG PPM	CR PPM	CU PPM	FE I	K I	MG I	NH PPM	NO PPM	NA I	NI PPM	P I	PB PPM	PD PPM	PF PPM	SB PPM	SM PPM	SR PPM	U PPM	W PPM	ZN PPM
22301	.5	1.60	6	ND	412	3	.25	2.8	15	15	64	4.43	.09	1.13	1134	3	.02	16	.10	60	ND	ND	ND	2	27	ND	ND	115
22302	.1	1.73	10	ND	387	ND	.24	1.8	11	29	47	3.78	.08	1.23	820	3	.02	10	.09	21	ND	ND	ND	1	14	ND	ND	68
22303	.1	1.74	ND	ND	556	ND	.21	2.1	11	31	43	3.81	.07	1.20	993	3	.02	14	.08	20	ND	ND	ND	1	34	ND	ND	71
22304	.1	1.76	9	ND	225	5	.30	2.5	21	19	103	5.02	.09	1.33	972	5	.02	16	.07	29	ND	ND	ND	2	30	ND	ND	81
22305	.1	1.51	25	ND	89	5	.41	2.8	23	8	77	5.92	.10	1.33	545	3	.02	9	.10	24	ND	ND	ND	3	38	ND	ND	73
22306	.1	1.42	17	ND	78	ND	.35	2.1	16	7	63	3.80	.09	1.25	555	1	.02	9	.10	21	ND	ND	ND	2	33	ND	ND	85
22307	.1	2.00	19	ND	233	ND	.28	2.2	17	14	79	4.21	.08	1.57	831	2	.02	14	.08	27	ND	ND	ND	1	25	ND	ND	97
22308	.1	1.56	9	ND	248	ND	.32	4.4	11	7	63	3.74	.09	1.03	1114	2	.03	9	.09	34	ND	ND	ND	1	23	ND	ND	322
22309	.1	1.22	7	ND	114	ND	.14	1.8	11	8	36	3.45	.05	.92	483	1	.02	8	.06	18	ND	ND	ND	2	11	ND	ND	48
22310	.1	2.10	10	ND	119	5	.34	2.7	21	15	51	5.76	.10	1.62	895	2	.03	16	.11	29	ND	ND	ND	2	20	ND	ND	78
22311	.1	1.05	12	ND	144	ND	.19	1.2	8	3	20	2.66	.05	.69	815	1	.01	6	.07	15	ND	ND	ND	1	19	ND	ND	69
22312	.1	.95	8	ND	187	ND	.19	1.1	6	2	19	2.10	.04	.60	596	1	.01	4	.05	14	ND	ND	ND	1	25	ND	ND	71
22313	.1	.89	10	ND	126	ND	.37	1.1	8	7	27	2.44	.09	.66	385	1	.01	5	.06	16	ND	ND	ND	1	18	ND	ND	44
22314	.3	1.35	3	ND	228	ND	.89	1.6	9	7	45	3.35	.18	.50	518	2	.02	7	.16	20	ND	ND	ND	3	68	ND	ND	58
22315	.1	1.27	14	ND	290	ND	.28	2.2	18	20	70	4.16	.08	.91	814	4	.02	17	.07	42	ND	ND	ND	16	28	ND	ND	62
22316	.1	1.36	14	ND	129	ND	.22	1.9	15	10	47	3.84	.07	.92	618	2	.02	10	.07	21	ND	ND	ND	2	22	ND	ND	55
22317	.1	1.68	10	ND	209	ND	.41	1.9	12	10	42	3.32	.10	.98	1121	2	.02	11	.09	22	ND	ND	ND	2	37	ND	ND	165
22318	.3	1.83	41	ND	43	6	.27	3.5	23	17	98	5.92	.08	1.54	815	8	.03	18	.07	49	ND	ND	ND	3	34	ND	ND	142
22319	.1	1.05	10	ND	100	ND	.29	1.5	9	5	30	2.60	.07	.76	614	1	.02	7	.07	17	ND	ND	ND	2	21	ND	ND	84
22320	.1	1.04	15	ND	287	ND	.17	1.7	14	14	58	3.69	.05	.58	1151	4	.02	10	.04	24	ND	ND	ND	6	22	ND	ND	55
22321	.1	1.59	7	ND	616	3	.25	2.2	16	8	78	4.52	.08	.91	1946	4	.02	14	.06	30	ND	ND	ND	3	45	ND	ND	64
22322	.1	1.14	8	ND	470	ND	.25	1.6	14	16	66	3.33	.08	.68	1573	4	.02	16	.04	22	ND	ND	ND	1	25	ND	ND	57
22323	.1	1.38	11	ND	250	ND	.20	1.5	10	8	32	2.95	.05	.86	1169	2	.02	10	.05	20	ND	ND	ND	2	18	ND	ND	109
22324	.1	.98	16	ND	99	ND	.55	1.4	7	6	23	2.35	.11	.71	549	1	.01	8	.08	17	ND	ND	ND	2	18	ND	ND	65
22325	.1	.98	17	ND	112	ND	.45	1.4	8	11	41	2.60	.10	.74	469	2	.01	11	.06	18	ND	ND	ND	2	17	ND	ND	49
22326	.1	1.50	27	ND	180	ND	.23	2.3	22	23	90	4.66	.08	1.10	1534	4	.02	21	.06	28	ND	ND	ND	2	15	ND	ND	73
22327	.1	1.06	11	ND	251	ND	.23	1.6	10	15	99	2.93	.07	.78	1041	2	.02	15	.06	22	ND	ND	ND	3	18	ND	ND	63
22328	.2	2.11	25	ND	193	4	.31	3.1	18	8	87	4.95	.09	1.60	1465	6	.03	12	.08	47	ND	ND	ND	2	43	ND	ND	196
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



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REPORT NUMBER: 880866 6A

JOB NUMBER: 880866

PANICON DEVELOPMENT LTD.

PAGE 1 OF 1

SAMPLE #	Au ppb
22251	nd
22252	nd
22253	nd
22254	140
22255	10
22351	nd
22352	45
22353	30
22354	30
22355	nd
22356	nd
22357	50
22358	410
22359	135
22360	20
22361	nd
22362	nd
22363	30
22364	nd
22365	100
22366	60
22367	70
22368	10
22369	30
22370	nd
22371	10

DETECTION LIMIT

5

nd = none detected

-- = not analysed

is = insufficient sample

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1988 TRIUMPH STREET, VANCOUVER B.C. V5L 1K5 PH: (604)251-5656 TELEX: 04-352578  
 BRANCH OFFICE: 1630 PANDORA STREET, VANCOUVER B.C. V5L 1L6 PH: (604)251-7282 FAX: (604)254-5717

ICAP GEOCHEMICAL ANALYSIS

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 THIS LEACH IS PARTIAL FOR SM, MN, FE, CA, P, CR, NG, 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 DEVELOPMENT LTD.  
 ATTENTION: STEVE TODORUK  
 PROJECT: MYSTERY

REPORT#: 880866PA  
 JOB#: 880866  
 INVOICE#: 880866NA

DATE RECEIVED: 88/08/03  
 DATE COMPLETED: 88/08/11  
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PAGE 1 OF 1

SAMPLE NAME	AG	AL	AS	AU	BA	B1	CA	CD	CO	CR	CU	FE	K	MG	MN	MO	NA	NI	P	PB	PD	PT	SB	SM	SR	U	W	ZN
	PPM	I	PPM	PPM	PPM	PPM	I	PPM	PPM	PPM	PPM	I	I	I	PPM	PPM	I	PPM	I	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
22251	.2	.09	14	ND	37	ND	1.15	.5	2	204	18	1.13	.10	.40	688	8	.01	5	.01	4	ND	ND	ND	ND	15	ND	ND	18
22252	.1	.12	11	ND	94	ND	1.38	.3	13	147	31	1.03	.20	.79	386	2	.01	6	.03	3	ND	ND	ND	ND	18	ND	ND	10
22253	.5	.91	21	ND	67	ND	.35	.7	10	29	112	2.34	.09	.44	196	3	.01	32	.05	14	ND	ND	ND	ND	7	ND	ND	60
22254	.5	.29	122	ND	28	ND	.31	.2	4	87	43	4.44	.08	.06	198	3	.01	3	.01	23	ND	ND	ND	ND	10	ND	ND	15
22255	.1	1.04	25	ND	30	4	5.93	1.1	79	96	11	8.22	.51	.85	2408	5	.01	2	.04	2	ND	ND	ND	ND	156	ND	ND	24
22351	.1	1.65	11	ND	35	ND	.08	.6	4	53	11	2.29	.03	1.96	232	3	.01	15	.02	15	ND	ND	ND	ND	3	ND	ND	50
22352	.1	.81	29	ND	110	ND	1.59	.3	6	129	782	1.66	.24	.82	363	2	.01	22	.01	30	ND	ND	ND	ND	38	ND	ND	58
22353	.1	.31	51	ND	41	ND	.03	.7	11	149	31	5.49	.03	.16	114	2	.02	4	.01	9	ND	ND	ND	ND	2	ND	ND	10
22354	.1	.43	ND	ND	67	ND	24.21	.1	44	27	35	2.15	.69	.44	2122	ND	.01	16	.01	2	ND	ND	ND	ND	137	ND	ND	9
22355	.1	3.98	9	ND	21	13	1.28	2.2	51	57	51	11.53	.22	2.69	538	35	.02	38	.04	6	ND	ND	ND	ND	32	ND	ND	36
22356	.1	1.97	ND	ND	87	4	15.01	1.5	4	29	14	7.80	.64	3.19	2908	2	.01	9	.01	3	ND	ND	ND	ND	527	ND	ND	39
22357	.1	.19	9	ND	14	3	.17	1.2	28	115	14	6.96	.06	.05	108	18	.02	2	.01	9	ND	ND	ND	ND	7	ND	ND	4
22358	.1	.25	ND	ND	14	12	1.77	2.3	59	89	284	14.79	.28	.66	1016	12	.03	1	.01	6	ND	ND	ND	ND	25	ND	ND	21
22359	.2	.30	95	ND	47	ND	.23	.2	13	39	14	3.72	.07	.06	232	1	.02	2	.03	9	ND	ND	ND	ND	9	ND	ND	7
22360	.1	.31	11	ND	31	ND	7.23	.9	33	59	6	6.23	.54	.80	2606	2	.01	3	.01	2	ND	ND	ND	ND	134	ND	ND	17
22361	.1	.13	14	ND	78	ND	.28	.1	2	225	7	.68	.06	.04	273	8	.01	7	.01	5	ND	ND	ND	ND	6	ND	ND	6
22362	.1	.14	10	ND	14	ND	2.50	1.1	48	97	22	7.23	.32	.71	1564	4	.01	10	.01	2	ND	ND	ND	ND	32	ND	ND	26
22363	.1	.22	ND	ND	101	ND	46.36	.1	3	16	6	2.08	.54	.34	4086	ND	.01	4	.01	3	ND	ND	ND	ND	327	ND	ND	11
22364	.2	.15	37	ND	165	ND	.14	.3	8	204	7	2.98	.05	.02	94	17	.01	4	.01	6	ND	ND	ND	ND	6	ND	ND	4
22365	.2	.19	36	ND	29	ND	.07	.8	12	76	24	3.82	.03	.05	170	3	.01	3	.01	13	ND	ND	ND	ND	2	ND	ND	10
22366	.1	.52	50	ND	26	6	1.09	1.8	23	74	17	12.09	.19	.25	737	36	.02	5	.01	7	ND	ND	ND	ND	15	ND	ND	25
22367	.4	.36	24	ND	29	ND	.23	.6	8	124	8	4.51	.07	.08	300	9	.01	2	.01	23	ND	ND	ND	ND	8	ND	ND	11
22368	.2	.19	59	ND	77	ND	.05	.1	3	139	6	1.40	.02	.01	54	1	.01	4	.01	10	ND	ND	ND	ND	4	ND	ND	5
22369	.3	.11	23	ND	30	ND	.01	.8	39	120	6	4.36	.03	.01	34	4	.01	5	.01	7	ND	ND	ND	ND	2	ND	ND	3
22370	.3	.12	10	ND	456	ND	.16	.3	6	159	6	1.10	.05	.07	179	1	.01	5	.01	6	ND	ND	ND	ND	26	ND	ND	8
22371	.1	1.52	10	ND	168	12	.07	2.3	22	26	11	14.41	.08	.98	449	18	.05	2	.01	11	ND	ND	ND	ND	11	ND	ND	37
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

ANOMALOUS RESULTS:  
 FURTHER ANALYSES  
 BY ALTERNATE  
 METHODS SUGGESTED

APPENDIX III

AIRBORNE GEOPHYSICAL REPORT

REPORT ON A  
COMBINED HELICOPTER-BORNE  
MAGNETIC, ELECTROMAGNETIC AND VLF  
SURVEY  
ISKUT RIVER AREA  
LIARD MINING DIVISION  
BRITISH COLUMBIA

FOR  
PAMICON DEVELOPMENTS LIMITED  
BY  
AERODAT LIMITED  
September 23, 1988

J87100

R.J. de Carle  
Consulting Geophysicist



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APPENDIX III	- General Interpretive Considerations
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LIST OF MAPS

(Scale 1:20,000)

MAPS: (As listed under Appendix "B" of the Agreement)

1. PHOTOMOSAIC BASE MAP;  
prepared from a photomosaic base using an uncontrolled photomosaic laydown provided by Aerodat.
2. FLIGHT LINE MAP;  
showing all flight lines and fiducials with the photomosaic base map.
3. AIRBORNE ELECTROMAGNETIC SURVEY INTERPRETATION MAP;  
showing flight lines, fiducials, conductor axes and anomaly peaks along with inphase amplitudes and conductivity thickness ranges for the 4600 Hz coaxial coil system with the photomosaic base map.
4. TOTAL FIELD MAGNETIC CONTOURS;  
showing magnetic values contoured at 5 nanoTesla intervals, flight lines and fiducials with the photomosaic base map.
5. VERTICAL MAGNETIC GRADIENT CONTOURS;  
showing magnetic gradient values contoured at 0.5 nanoTeslas per metre with the photomosaic base map.
6. APPARENT RESISTIVITY CONTOURS;  
showing contoured resistivity values, flight lines and fiducials with the photomosaic base map.
7. VLF-EM TOTAL FIELD CONTOURS;  
showing VLF-EM values contoured at 2% intervals, flight lines and fiducials with the photomosaic base map.
8. ELECTROMAGNETIC PROFILES;  
showing flight lines, fiducials, inphase and quadrature responses for the:
  - a) 935 Hz coaxial system
  - b) 4175 Hz coplanar system
  - c) 4600 Hz coaxial system

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, a radar positioning system, and an altimeter. Electromagnetic, magnetic and altimeter data were recorded both in digital and analog form. Positioning data were stored in digital form and recorded on VHS video cassette film, as well as being marked on the flight path mosaic by the operator while in flight.

The survey, comprised of twenty-three separate blocks of ground in the Iskut River area of northern British Columbia, are located approximately 120 kilometres northwest of Stewart. Twenty-nine (29) flights, which were flown between November 16, 1987 and June 6, 1988, were required to complete the survey with flight lines oriented at an Azimuth of 000-180 degrees and flown at 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, for precious metals, 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.

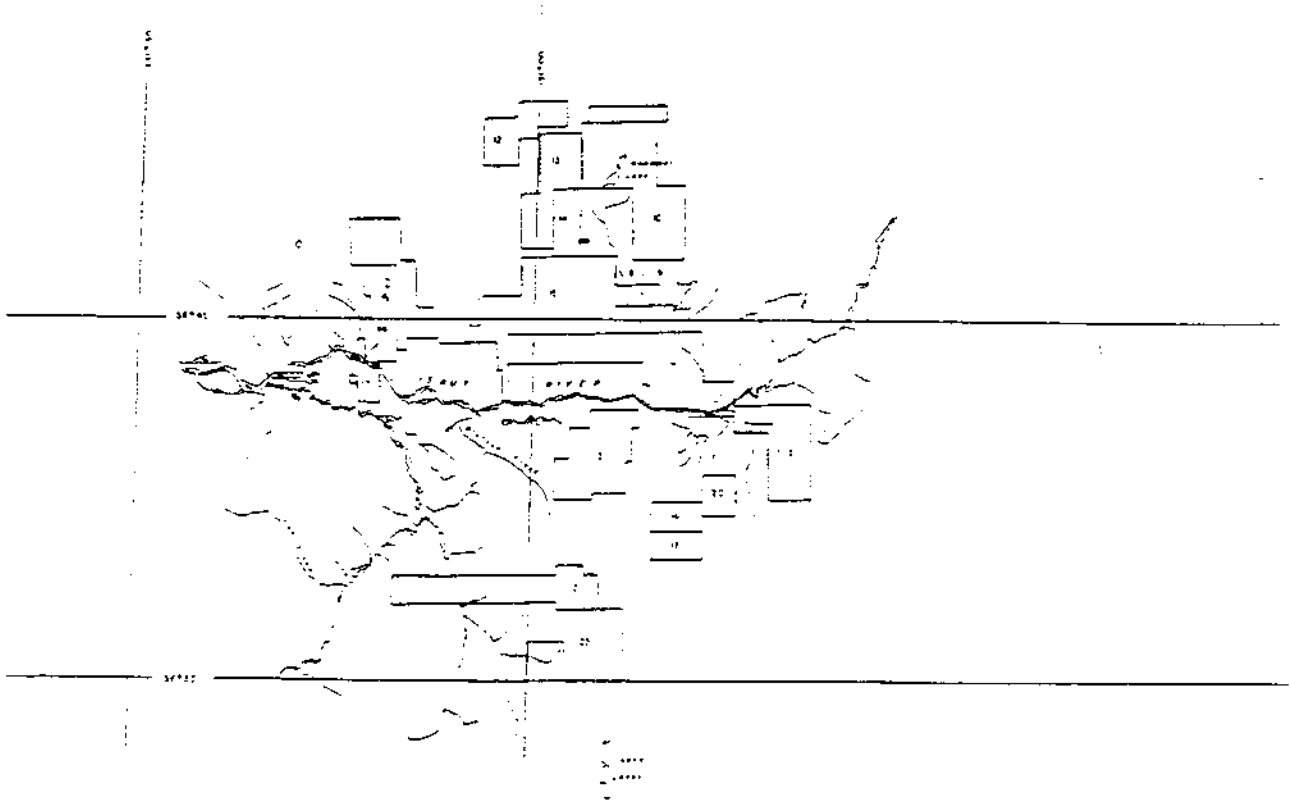
Also of considerable interest is the recent precious metal activity in the immediate Iskut River area which Cominco Limited and Delaware Resources Corp. have located the exciting SNIP discovery. The zone is apparently related to two sets of mineralized structures containing approximately 1.2 million tons grading 0.75 oz./ton gold. To the south, Skyline Explorations Ltd. carried out an extensive exploration program on its Johnny Mountain prospect. There are a number of vein systems currently being worked on. The newly discovered Zephrin zone consists of feldspathic and siliceous alteration in the brecciated zone containing 10 to 15 percent sulphides and carrying high gold values.

A total of 2000 kilometres of 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 areas are depicted on the index maps shown. They are centred approximately at Latitude 56 degrees 42 minutes north, Longitude 131 degrees 5 minutes west, approximately 120 kilometres northwest of Stewart, British Columbia in the Liard Mining District (NTS Reference Map No. 104B). The survey blocks straddle the Iskut River with Area 1 being located approximately 10 kilometres northeast of the State of Alaska boundary. The only means of access to any of the survey blocks is by fixed-wing aircraft or helicopter from such bases as Stewart or from Telegraph Creek which is located approximately 135 kilometres north of the survey areas.

The terrain is extremely rough with elevations ranging from 500 feet near Iskut River to as high as 6000 feet near Areas 19 and 20. Transportation within the immediate areas of the survey blocks is by helicopter only.



### 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 NSS, Annapolis, Maryland, NLK, Jim Creek, Washington, NAA, Cutler, Maine and NPM, Laulualei, Hawaii broadcasting at 21.4 kHz., 24.8 kHz., 24.0 kHz. and 23.4 kHz respectively.

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	935 Hz Coaxial Inphase	2 ppm/mm
CXQ1	935 Hz Coaxial Quadrature	2 ppm/mm
CXI2	4600 Hz Coaxial Inphase	2 ppm/mm
CXQ2	4600 Hz Coaxial Quadrature	2 ppm/mm
CPI1	4175 Hz Coplanar Inphase	8 ppm/mm

Channel	Input	Scale
CPQ1	4175 Hz Coplanar Quadrature	8 ppm/mm
PWRL	Power Line	60 Hz
VLT	VLF-EM Total Field, Line	2.5%/mm
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	0.5 seconds
Magnetometer	0.2 seconds
Altimeter	1.0 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 tapes. The recovered points were then digitized, transformed to the standard UTM 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 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 photomosaic 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 50 metre true scale interval using a cubic spline technique. The grid provided the basis for threading the presented contours at a 5 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 gradient was computed from the total field magnetic data to obtain values in nanoteslas/metre.

The gridded data were compiled at a 50 metre true scale interval and contoured at an interval of 0.5 nanoTesla per

metre and presented with flight path 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 4600 hz coaxial frequency pair used. The apparent resistivity profile data were interpolated onto a regular grid at a 50 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.

#### 4.7 VLF-EM Total Field Contours

The VLF-EM signals from NSS, Annapolis, Maryland, NAA, Cutler, Maine and NLK, Jim Creek, Washington broadcasting at 21.4 kHz., 24.0 kHz., and 24.8 kHz. respectively were compiled in contour map form, as the Line Station, and presented on a Cronaflex copy of the photomosaic base map.

5. INTERPRETATION

5.1 Geology

The writer did not have access to any detailed geology maps for any of the survey blocks. The only available information to the writer was a summary of exploration taken from Exploration in British Columbia 1986.

A description of the Johnny Mountain property of Skyline Explorations Limited suggests that the property is underlain by Upper Triassic andesitic tuff, breccia and associated sedimentary units which probably correlates to the Unuk River Formation of the Stewart complex to the southeast. Three showings located to date indicate pyrite, chalcopyrite, arsenopyrite and pyrrhotite mineralization in quartz-carbonate veins and veinlets. No deep-seated or moderate conductors located by pulse electromagnetic survey.

The SNIP claims of Delaware Resources and Cominco Limited are underlain by Triassic to Lower Jurassic volcanic and sedimentary rocks with related high level subvolcanic felsite and quartz-feldspar porphyry bodies. Intermediate volcanic breccias, tuff breccias and siliceous pyroclastic rocks are

common. Mineralization is comprised of auriferous quartz veins, chalcopyrite-galena-sphalerite blebs and veins, and molybdenite in an altered quartz-feldspar porphyry plug.

Structural features seem to have played an important role either as being host to auriferous mineralization or as the controlling element in the formation of the deposits.

## 5.2 Magnetics

### Area 1

Strike direction of the basement lithology is generally east-west, with some areas showing a northeast-southwest direction. There is not a great deal of contrast in the magnetics which would indicate unique rock types. There is a general trending indicating bedding but the types of rock units are difficult to interpret.

### Area 2

Only one magnetic feature exists within this small block and is centred approximately in the middle of the block. It strikes in an east to northeast direction. The dip of the bedding of the basement rock unit seems to be near vertical.



Area 3

The main magnetic feature within this block shows an approximate east-west strike direction with a sudden fold towards the east end to a more southwest-northeast direction. Apparent direction of dip is towards the south although one feature towards the extreme northeast corner of the block seems to be dipping towards the northeast.

The large expanse of magnetic low may be associated with sedimentary rock types.

Area 4

A great deal of terrain relief within this survey block seems to have resulted in rather inaccurate data. If one refers to the southeastern portion of the block, the long linear magnetic low seems to correlate with the Iskut River. It is suggested that the helicopter may have been somewhat high over this area and thus farther away from the source. The magnetic highs seem to correlate, for the most part, with topographical highs. It is suggested that the client pay particular attention to this phenomena when utilizing this data set in any future ground program.

Area 5

There seems to be three individual magnetic horizons which, no doubt, would indicate three unique rock classifications. The magnetically active area towards the northwest portion suggests a mafic to ultramafic unit while a second active area towards the east central to southeastern portion perhaps suggests a more basic unit. The area showing a magnetically low intensity could be related to sediments. The magnetic profile shapes seem to indicate a rather steeply dipping to vertical attitude for the stratigraphy.

Area 6

The western and eastern extremities of the block display relatively active magnetics suggesting a completely different rock type than what possibly exists within the middle of the block. The centre portion has much lower magnetic intensity indicating a possible sedimentary rock unit. There is a considerable amount of folding so that strike directions change abruptly. It changes from north-south to east-west.

Area 7

Within this small block, it would seem that there are only two

very weak magnetic features. The main one seems to traverse through the northern third of the block, with evidence of a great deal of folding. A second, smaller trend just catches the southwestern corner of the block. Dips are near vertical.

#### Area 8

Strike direction within this small block is generally north-south with some areas exhibiting small variations from this horizon. A stronger magnetic trend located in roughly the north central portion of the block may be related to a mafic rock unit. Its southern extent is definitely cut off. The rather large magnetic low towards the southwestern corner of the block may suggest the proximity to a contact with a mafic plug.

#### Area 9

The large magnetically low area towards the western portion of the block could possibly be related to sedimentary rock types. The outer margins of this zone, to the north as well as to the east, display a somewhat weak but magnetically active region which may be related to a basic volcanic rock unit. There is a definite fold in the structure towards the northeast and this may indicate a possible synclinal structure.

Area 10

There seems to be four unique horizons indicated by the magnetics within this block. Each display magnetic intensities indicative of mafic type rock units, but may be altered basic volcanics as well. Each of the units appear to be approximately two kilometres apart. Between each of these horizons, there is generally a rather magnetically low region with a few weaker magnetic trends which tend to be short and isolated. Strike direction is generally in a northeast-southwest direction, although in some areas, because of folding, the strike direction does change. Dips are generally vertical to near vertical.

Area 11

Two of the magnetic features mentioned in Area 10 extend into and traverse through this block. Otherwise, the magnetics are much similar to the previous block.

Area 12

Two large units within this block display reasonably active magnetics, both of which may be related to mafic rock units. Dips vary from near vertical to westerly for the most western unit.

Area 13

There would appear to be two magnetically active areas within this block, one to the north, which is an extension of one that was mentioned in Area 10 and a second unit towards the south end of the block. It would seem that because of the amount of folding and faulting that has taken place in both of these areas, strike direction of the bedding changes drastically. Probable thrust faults have seemingly resulted in a doubling up or overlapping of magnetic features.

Area 14

This smaller block contains magnetic features which are similar to the regions of Area 13. Sedimentary rocks or perhaps volcanic tuffs are the rock types towards the southern edges of this block, as well as within the northern third portion.

Areas 15, 16 and 17

After close examination of the magnetic data for all three areas, it became rather clear that the data correlated, to a great degree, with the topography. That is, the magnetic highs correlated with the topographic highs while the magnetic lows

correlated with the topographic lows or rivers and creeks. This phenomena may be just a coincidence, in that, the rock units correlating with the higher areas may be magnetically active. Not having access to any geology for the region, it is impossible to deliberate any further on the comparisons.

#### Areas 18, 19 and 20

It will be noted that a great deal of folding has taken place within these three areas, as well as several areas of probable thrust faulting. The stronger trend towards the northwest swings around to the east and seems to become associated with the magnetic horizon towards the southeast. Faulting seems to have displaced this trend, in a few areas, along strike. Amount of dip and direction of dip seems to vary within the region.

#### Area 23

This area presents several unique magnetic features, some of which may reflect the lithology of the basement rocks. It is also suggested that the rough terrain effects may have affected the acquiring of the data. Note the magnetic low in the

area towards the west, that coincides with a creek. The helicopter may have been high at these points, thus acquiring data further away from the source resulting in lower intensity values. The other alternative to this suggestion is that the magnetic low is caused by a fault or major shear zone.

It would seem that the magnetically active areas towards the western half of the area are related to the same basement source. The eastern half displays somewhat lower levels of intensity and seemingly has more smaller, isolated magnetic features.

### 5.3 Vertical Magnetic Gradient

The areas of high intensity magnetics have been clearly broken up into unique trends as a result of the computation of the vertical gradient. This interpretation is not as readily obvious when one refers to the magnetic total field maps.

It should also be noted that the zero contour interval coincides directly or very close to geological contacts. It is because of this phenomenon that the calculated vertical

gradient map can be compared to a pseudo-geological map. This is true for vertical bedding. However, with the bedding dipping at a steep to moderate angle, it will be found that the geological contacts will be closer to the magnetic peaks by a small distance.

By using known or accurate geological information and combining this data with vertical gradient data, one can use the presented maps as pseudo-geological maps. Obviously, the more that is known about an area geologically, the closer this type of presentation is to what the rock types are.

This type of presentation is an invaluable tool in helping to define complex geology, especially in drift covered areas, as well as in areas of extremely rugged terrain. Not only in areas of complex geology, but in areas of closely spaced geologic formations, has the calculated vertical gradient computation been of exceptional value. Since a good portion of the survey areas are either overlain with till and boulders or contain extremely rugged terrain, this particular presentation will be very useful.



The writer has indicated a few fault zones on the interpretation maps for each of the survey blocks. Because of the nature of the computation of the vertical gradient data, magnetic anomalies produced by near surface features are emphasized with respect to those resulting from more deeply buried rock formations. As a result, much more detail is obtained, providing a better opportunity to recognize faults. As mentioned, some fault structures have been interpreted by the writer. However, it will become more apparent to the client as more field geological information is obtained, that other fault zones do exist.

It is suggested that the development of these structural features through a more intensive interpretation of the magnetic data will greatly enhance the exploration potential, as it seems to be these geological structures that play host to some of the important discovery zones in the immediate area.

#### 5.4 Electromagnetics

The electromagnetic data was first checked by a line-by-line examination of the analog records. Record quality was good

on all frequencies. Instrument noise was well within specifications. Geologic noise, in the form of surficial conductors, is present on the higher frequency responses and to a minor extent, on both the low frequency inphase and quadrature response.

Anomalies were picked off the analog traces of the low and high frequency coaxial responses and then validated on the coplanar profile data. These selections were then checked with a proprietary computerized selection program which can be adjusted for ambient and instrumental noise. The data were then edited and re-plotted on a copy of the profile map. This procedure ensured that every anomalous response spotted on the analog data was plotted on the final map and allowed for the rejection - or inclusion if warranted - of obvious surficial conductors. Each conductor or group of conductors was evaluated on the basis of magnetic (and lithologic, where applicable) correlations apparent on the analog data and man-made or surficial features not obvious on the analog charts.

RESULTS

As a result of carrying out an airborne survey over the ground covered by Area 1, it is very clear that most of the area is extremely resistive with no indications of surficial or bedrock related conductivity. In one area, however, near Brunt Creek, there is evidence of a slightly conductive source, probably related to the creek bottom sediments. Four bedrock conductors have been outlined within this block. Zone 1A is definitely due to a bedrock source and seems to be associated with a geological contact. It is dipping to the south. A fault may have cut off the trend towards the east end so this should be kept in mind when investigating in the field. Zones 1B and 1C are extremely poor conductors that may be related to bedrock sources. Because of the proximity of these two anomalies to both Zones 1A and 1D, it is felt that both responses 1B and 1C should be looked at further while in the field. Zone 1D is definitely due to a bedrock source which could be dipping to the south. This conductor too, may be associated with a geological contact.

Regions where the three frequency inphase responses deflect in

a negative direction, are areas which can be related to the magnetite content within the underlying basement rocks. The larger the negative amplitudes, the higher the magnetite content.

Area 2 as well has shown a totally resistive environment. Only one bedrock conductor was intercepted during the course of flying this block i.e., Zone 2A. It is a well defined anomaly which seems to be located very close to a vertical gradient zero contour interval suggesting a relationship with a geological contact. A dip to the south is interpreted. Referring to the base map, it will be noted that the intercept is located very close to the edge of a glacier, hopefully making a follow-up somewhat easier.

There were no bedrock conductors intercepted within Area 3. Only one area shows any signs of surficial conductivity and that is towards the northern portion of line 5211. Other areas that show negative responses are related to magnetite content.

Ten zones have been outlined within Area 4. Most are located towards the northeast corner of the survey block, in close

proximity to a creek or river which flows into the Iskut River. Zone 4A to 4G display rather weak amplitude responses and certainly at this point in time are questionable responses. Zone 4K may be caused by conductive surficial effects. The only conductive trends that seem to be caused by bedrock sources are Zones 4H and 4J. They both display reasonable EM responses and seem to be associated with the flanks of magnetic features. Zone 4F could also be given further attention while in the field.

There were a few conductors intercepted within Area 5, none of which appears to be that well defined. Most display rather broad electromagnetic responses suggesting perhaps surficial conductivity. In some cases, conductive creek bottom silts may be the reason. Zones 5B and 5C display sharp responses but this is due, it is felt, to the slowing down of the helicopter. It is recommended, however, that each of these outlined areas should be considered in any future ground reconnaissance survey. In particular, Zones 5A, 5D, 5G and 5E are possible prospects.

The broad electromagnetic responses located within the middle

of Area 6 are believed to be caused by conductive creek bottom silts. The thicker portion of this horizon would be towards the south and then seems to thin out towards the north. Other weaker responses within the remainder of the block are also felt to be caused by conductive surficial effects. Much the same reasons can be given for those weak EM responses within Area 7.

There were no bedrock conductors intercepted within either Areas 8 or 9.

Four conductors have been intercepted within Area 10, each being related to a bedrock source. With the exception of possibly Zone 10D, the conductive trends tend to be associated with the zero contour interval of the vertical gradient. This suggests a possible relationship with geological contacts. Follow-up work in the field is definitely warranted. Towards the northern section of this block, it will be noted that there are a number of broad EM responses. These are believed to be related to conductive silts beneath a glacial lake. No further work is warranted in this area. Generally speaking, there seems to be a somewhat more conductive nature to the

surficial environment for the northern regions compared to other areas of this block.

With the exception of some surficial conductivity, there were no bedrock conductors intercepted within Area 11. The same scenario can be said for Area 12. In areas where the inphase responses deflect negatively, magnetite is the cause.

Zones 13A and 13B, within Area 13, could, in fact, be just one conductor with the two intercepts related to a flat lying source. The EM responses are certainly indicative of a bedrock source and because of this, a follow-up survey is definitely warranted. Note the magnetic enclosure for Zone 13A. Pyrrhotite may be the conductive source. Areas of weak quadrature expression would seem to be related to surficial effects.

Zone 14A was selected because of its possible association with a contact between a magnetic feature to the south and a non-magnetic source to the north. The conductivity is extremely poor although amplitudes are reasonably strong compared to

most areas. It should, however, be considered as a low priority target.

There were a few conductors intercepted within Area 15, most however, are questionable as to their source. Zone 15A is a low amplitude response with no magnetic association. However, the low amplitude may be due to a deep seated source or perhaps it is related to the helicopter being a bit too high.

A further look at Zone 15A, while in the field, is warranted. Zone 15B may be caused by sulphides within a high magnetite content zone. Note the extreme negative deflection of the inphase responses. All of the higher amplitude EM responses towards the southeastern extremities of Area 15 are related to the conductive nature of the river bottom silts of the Iskut River. Zones 15C and 15D are believed to be caused by bedrock conductors. In each case, they seem to be correlating with geological contacts. It would seem that their locations are near the slope of a high plateau. A dip to the south is possible for each conductor. Just to the north of Zones 15C and 15D, there are EM responses that the writer felt were due to overburden related sources. However, the client should be



well aware of their existence and perhaps, upon investigating 15C and 15D, a reconnaissance survey could be made for these other two areas. Zones 15E is extremely weak.

Only surficial conductivity seems to prevail within Areas 16 and 17. Note the higher EM responses over the Iskut River.

There were no bedrock conductors intercepted in either Area 18 or Area 20. Only one extremely weak anomaly was outlined in Area 19 and has been indicated as Zone 19A. It is a quadrature response that is located at the northern edge of a horizon that exhibits a high magnetite content. A low priority.

A number of conductors were intercepted within Area 23 but whether or not they are bedrock related is something that will have to be verified on the ground. The locations of Zones 23A and 23B to 23G and 23H to 23L, all seem to be at the base of a glacier, just up from creeks and contained within talus or rubble environments. Prospecting crews are advised to carry out reconnaissance geological surveys in each of these areas. Particular attention should be paid towards the type of rocks

in the immediate area as well as the existence of sulphide mineralization.

5.5 Apparent Resistivity

This presentation has clearly shown the four intercepted bedrock conductors within Area 1, as well as possibly indicating some further strike direction to each. Other areas outlined on this map are believed to be related to either surficial conductivity or high background levels. These are areas outlined on lines 3450, 3460, 3500 and 3600.

Within Area 2, the lower resistivity region to the north is believed to be associated with underlying surficial sediments beneath a glacier. As well, to the south of Zone 2A, the apparent resistivity anomaly is probably related to high background levels.

Because of the extremely resistive nature within Area 3, there were no contrasting conductive horizons intercepted.

Not only were the previously mentioned zones outlined within Area 4, but there may have been one or two other new areas

outlined as a result of this data presentation. In particular, one should refer to the region just to the south of Zone 4H. However, one should keep in mind that all of these areas are rather close to a large creek that flows into the Iskut River.

The only intercepted conductive areas within Area 5 are those that were mentioned in the previous section in Electromagnetics. The remainder of the block, as is evident, is extremely resistive.

The apparent resistivity low traversing through Areas 6,7 and 8 are believed to be related to the conductive nature of the creek bottom sediments. All other outlined apparent resistivity regions within each of these areas can be attributed to conductive surficial effects. There were no bedrock conductors intercepted within any of these blocks. As is evident from this data presentation, for the most part, the basement rocks are extremely resistive.

The apparent resistivity data presentation for Area 10 has outlined the previously mentioned bedrock conductors. It has also indicated the areas of surficial conductivity as well as

the conductive silts of the glacial lake bottoms. For the most part, the basement rock types are extremely resistive.

Only the surficial environment has been outlined within Area 11. There are no bedrock conductors. The same can be said for Area 12.

It will be noted that Zones 13A and 13B have been outlined as one conductor on the apparent resistivity map. This is to be expected as this data presentation does not have the same resolution as the frequency EM data. And, of course, as mentioned previously, there is the possibility of only one flat lying conductor. All other outlined areas of lower resistivity within Area 13 are believed to be related to conductive surficial effects.

Zone 14A has been outlined and all other areas within Area 14 are related to conductive surficial environments.

There were only a few new conductive areas that were indicated on the apparent resistivity presentation, compared to the 3 frequency EM map. However, most, if not all, are probably due to conductive surficial effects.

The large relatively low resistive areas within Areas 16 and 17 are due to conductive surficial effects, as well as conductive river bottom silts of the Iskut River. Zone 17A may also be due to conductive overburden.

The outlined low resistive areas in Areas 18, 19 and 20 are interpreted to be caused by conductive creek or river bottom silts. Because Zone 19A was not indicated through this process, one wonders then of its existence as a possible bedrock source.

Most of the indicated conductors within Area 23 have been outlined on the apparent resistivity presentation. As well, a few of the other areas outlined can be attributed to creek bottom silts.

#### 5.6 VLF-EM Total Field

The VLF data within each of the survey blocks, in general, do not conform with the magnetic data at all. It is quite clear after examining the comparison of the two sets of data, VLF and the magnetics, that there are no similarities whatsoever.

In regards to the 3 frequency EM data, only where the conductors are reasonably strong is there any indications of a VLF response.

It is suggested that the VLF-EM system has been sensitive to the rather rough terrain in all areas. It will be noted that in a good many of the areas where there are sharp valleys or gorges, that a VLF low exists. These particular signatures are thought to be related to a weakening of the VLF transmitted signal when the helicopter has been hidden behind a hill. In areas of higher elevation, a VLF high or background reading seem to prevail.

In general then, the VLF-EM has not produced data of any significance.

#### 5.7 Recommendations

It is strongly recommended to the client that a complete and comprehensive evaluation be made of the magnetic data and especially the calculated vertical gradient magnetic data. All available geological information should be obtained, either through geological maps, diamond drill holes or through the

assessment files. Once such information is obtained, a broad scale geological map should be compiled and then, in reference to the calculated vertical gradient magnetic map, a reasonable pseudo-geological map can then be prepared.

The magnetics, however, certainly seem to have been affected by the extremely rugged terrain. In effect, the altitude changes of the helicopter (or magnetic sensor) may have affected the intensity but probably not the actual trending. It is this phenomena that will have to be sorted out before any serious exploring can take place in most of the survey blocks.

Structural information should be obtained through a more comprehensive evaluation of the magnetic data and possibly through an overview of the VLF data. Cross cutting faults are evident throughout the survey areas and are extremely important with respect to any mineralogical controls and as such, the development of these structural events through interpreting the magnetic data, will be strongly advised.

Local prospecting and till sampling should be carried out in the proximity of the selected targets. If results are

encouraging, then ground geophysical surveys are definitely warranted. Electromagnetic surveys are perhaps more conducive in the search for the targets in this area, as opposed to magnetics, because of the nature of the sulphides and the lack of any magnetic susceptibility related to the targets. Magnetic lows and/or fault structures are important horizons, especially if there are conductors associated.

Because known zones in this area have somewhat short strike lengths, it is imperative that one use the correct mode of ground geophysics so that interception is made without difficulty. It is suggested that a vertical mode vertical loop EM survey be carried out initially before any further surveying is done. This could be done, in fact, before any traverse lines are set up. Once a conductor is located by this method, then either a horizontal loop EM survey or an induced polarization (IP) survey could be carried out. The writer prefers the former because of the logistical and operational constraints of an IP survey, especially in an area such as this. With either the Vertical mode or Horizontal mode EM surveys, the highest frequencies available are advised.



The writer has given brief comments on most conductors and it is within this area of the report where the client will establish some feeling for the type of conductor referred to. There is no question of the existence of bedrock conductors within some of the survey blocks. It is a matter of using all resources, including geophysics, drill information and the compilation of a pseudo-geological map. Geochemical soil sampling may render additional information, for some areas, that will lead to an exciting exploration program.

Respectfully submitted,

*R. J. de Carle*

Robert J. de Carle

Consulting Geophysicist

For

AERODAT LIMITED

September 23, 1988

J87100

APPENDIX I

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.

Signed,

*R. J. de Carle*

Palgrave, Ontario  
September 23, 1988

Robert J. de Carle  
Consulting Geophysicist

APPENDIX II

PERSONNEL

FIELD

Flown - November, 1987 to June, 1988

Pilot - K. Miller

Operator - Joe Mercier

OFFICE

Processing - Diana Bradley

Report - Robert de Carle, Consulting Geophysicist

APPENDIX IV

ANOMALY LIST

J87100

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM)		CONDUCTOR		BIRD
				INPHASE	QUAD.	CTP MHOS	DEPTH MTRS	HEIGHT MTRS
2	80	A	0	3.0	4.6	0.3	0	87
2	80	B	0	3.7	5.1	0.4	0	94
2	80	C	0	3.6	6.2	0.2	0	69
2	100	A	0	4.3	0.6	11.6	10	87
2	100	B	2	2.9	1.1	2.4	10	94
2	110	A	0	1.0	2.4	0.0	1	71
2	110	B	0	3.8	4.3	0.5	0	97
2	120	A	1	5.3	3.1	1.6	0	90
2	130	A	1	8.1	5.5	1.5	0	89
2	130	B	4	6.3	1.1	9.6	16	68
2	140	A	0	1.0	2.8	0.0	9	57
2	140	B	1	7.0	4.5	1.6	0	108
2	150	A	2	17.7	10.3	2.5	0	53
2	150	B	0	8.6	9.2	0.8	12	42
1	160	A	1	4.2	2.6	1.4	7	77
19	1170	A	0	-2.2	3.6	0.0	0	28
6	1440	A	0	0.3	4.2	0.0	0	47
6	1440	B	0	0.7	5.3	0.0	0	57
6	1451	A	0	0.2	4.6	0.0	0	62
6	1451	B	0	2.8	6.5	0.1	0	72
6	1460	A	0	7.4	7.5	0.8	0	70
6	1471	A	0	4.7	6.3	0.4	0	65
10	2010	A	1	6.3	4.7	1.2	0	76
10	2020	A	2	5.4	1.9	3.4	0	109
10	2030	A	0	5.3	1.0	8.1	0	89
10	2040	A	0	5.3	4.6	0.9	0	86
10	2050	A	0	-1.6	2.3	0.0	0	54

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J87100

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM)		CONDUCTOR		BIRD HEIGHT MTRS
				INPHASE	QUAD.	CTP MHOS	DEPTH MTRS	
11	2090	A	1	10.7	7.9	1.5	0	69
11	2101	A	1	4.9	3.2	1.3	0	79
11	2130	A	0	1.4	4.6	0.0	0	53
22	2540	A	2	11.8	6.6	2.3	0	70
22	2550	A	0	1.4	3.7	0.0	5	56
22	2560	A	0	9.5	16.8	0.4	0	42
22	2570	A	0	3.2	8.0	0.1	0	53
22	2570	B	0	1.9	6.3	0.0	0	63
22	2580	A	0	2.9	8.7	0.1	0	59
22	2580	B	0	2.0	12.1	0.0	0	52
23	2760	A	0	2.4	8.5	0.0	0	1192
23	2770	A	0	5.9	15.0	0.2	0	847
23	2770	B	0	4.8	11.4	0.2	0	846
26	2840	A	0	2.1	6.7	0.0	3	44
27	2860	A	0	3.7	3.2	0.8	10	69
27	2900	A	0	-166.8	8.4	0.0	0	23
14	3580	A	0	2.5	4.2	0.2	0	1221
14	3580	B	0	0.2	4.5	0.0	0	1212
14	3580	C	0	1.3	8.2	0.0	0	1199
14	3600	A	0	0.3	4.4	0.0	0	63
14	3610	A	0	3.4	12.9	0.0	0	40
14	3620	A	0	1.6	8.5	0.0	0	56
14	3630	A	0	0.8	4.3	0.0	0	103
32	5040	A	3	13.8	3.5	7.3	0	78
32	5040	B	4	19.7	4.5	9.3	0	80
31	5060	A	1	5.9	3.9	1.4	0	75

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

J87100

FLIGHT	LINE	ANOMALY	CATEGORY	AMPLITUDE (PPM)		CONDUCTOR		BIRD
				INPHASE	QUAD.	CTP DEPTH	HEIGHT	
-----	-----	-----	-----	-----	-----	-----	-----	-----
31	5060	B	5	16.0	2.3	16.5	0	79
30	5100	A	0	6.1	8.6	0.5	1	52
30	5100	B	1	12.6	9.1	1.7	0	60
34	5101	A	1	8.6	7.2	1.2	0	64
30	5110	A	0	4.0	7.7	0.2	20	30
30	5110	B	0	10.8	12.8	0.8	18	29
9	5180	A	1	8.7	6.1	1.5	0	62
39	5320	A	1	13.5	10.2	1.6	0	74
39	5320	B	1	21.8	19.6	1.5	0	61
39	5320	C	1	19.7	16.4	1.6	0	56
39	5320	D	0	9.3	9.3	0.9	0	66
39	5320	E	0	5.5	6.2	0.6	0	62
39	5330	A	0	3.7	3.4	0.7	0	90
39	5340	A	1	12.2	10.1	1.4	0	64
39	5340	B	2	17.5	11.3	2.2	0	65
39	5350	A	2	4.6	1.4	3.9	0	117
39	5360	A	2	6.7	3.5	2.1	8	65
39	5370	A	2	5.0	1.7	3.5	0	1211
39	5380	A	0	2.3	4.9	0.1	0	69
39	5380	B	1	3.2	2.1	1.1	0	1209
39	5380	C	2	4.3	1.8	2.4	9	81
39	5390	A	0	3.2	-0.2	0.0	0	416
39	5400	A	2	4.8	1.7	3.2	26	62
21	7690	A	0	0.8	12.7	0.0	0	28
41	8450	A	1	9.4	7.9	1.2	0	66
41	8450	B	1	15.0	15.2	1.1	0	52
41	8450	C	1	14.2	10.1	1.8	0	59
41	8460	A	0	2.1	0.6	3.3	31	89
40	8480	A	1	5.6	3.8	1.3	0	81

Estimated depth may be unreliable because the stronger part of the conductor may be deeper or to one side of the flight line, or because of a shallow dip or overburden effects.

### APPENDIX III

#### 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

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 IV**

**STATEMENT OF QUALIFICATIONS**

### STATEMENT OF QUALIFICATIONS

I, ELIZABETH A. SCROGGINS, of 2141 Yukon Street, Vancouver, 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 Western Ontario, Bachelor of Science Degree in Geology (Honours).
3. THAT my primary employment since 1986 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 Barytex Resources 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 November, 1988.

Elizabeth A. Scroggins

Elizabeth A. Scroggins, Geologist

APPENDIX V

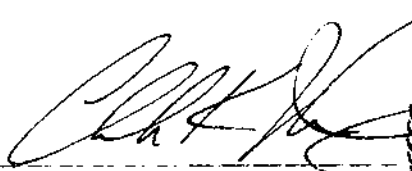
ENGINEER'S CERTIFICATE

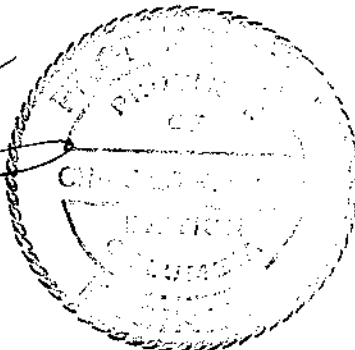
ENGINEER'S CERTIFICATE

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 under my supervision.
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 Barytex Resources Corp. 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 22 day of Dec, 1988.

  
Charles K. Ikona, P.Eng.



**APPENDIX I**

**COST STATEMENT**

**COST STATEMENT**  
**MYSTERY 1 & 2 and CHANCE 2 & 4 MINERAL CLAIMS**  
**LIARD MINING DIVISION**

**AIRBORNE SURVEY**

80 line kilometres @ \$150/km \$12,000.00

**GROUND WORK SUPPORT**

**WAGES**

S. Todoruk - 3 days @ \$350/day	\$1,050.00	
K. Gourley - 3 days @ \$200/day	600.00	
E. Debock - 1 day @ \$250/day	250.00	
R. Gibson - 3 days @ \$200/day	<u>600.00</u>	
		2,500.00

**MAN DAY SUPPORT COST**

10 days @ \$50/day 500.00

**HELICOPTER SUPPORT**

1.8 hours @ \$530/hour 954.00

**ASSAYS**

424.95

**TOTAL THIS PROGRAM**

\$16,378.95



**PAMICON  
DEVELOPMENTS LIMITED**

PAMICON DEVELOPMENTS LIMITED  
#711-675 WEST HASTINGS ST. VANCOUVER, BC  
CANADA V6B 1N4  
TELEPHONE: (604) 684-5988

**INVOICE**

To: Barytex Resource Corp.  
305, 535 Thurlow Street  
Vancouver, B.C. V6E 3C2

Date: October 20, 1988  
Amount: \$17,892.27  
Invoice No.: 1250

Re: Mystery and Chance Claims  
1988 Field Season

Wages

Geologist - 5 days @ \$300	\$1,500.00	
Prospectors - 11 days @ \$250	2,750.00	
Samplers - 3 days @ \$225	675.00	
Field Support Crew	<u>1,820.00</u>	\$ 6,745.00
Man Day Support Cost		3,875.00
Equipment		475.00
Helicopter - 5.2 hours @ \$568.78		2,957.66
Fixed Wing		446.86
Maps and Reproduction		534.48
Communications		258.77
Assays		1,048.00
Freight		203.72
Travel and Accommodation		589.78
Project Supervision		<u>758.00</u>
Total This Invoice		<u>\$17,892.27</u>

Balances outstanding over 30 days subject to  
interest charges calculated at 1.5% per month (18% per annum)

**PAMICON  
DEVELOPMENTS LIMITED**

---

PAMICON DEVELOPMENTS LIMITED  
#711-875 WEST HASTINGS ST. VANCOUVER, B.C.  
CANADA V8B 1N4  
TELEPHONE: (604) 684-5901

**INVOICE**

To: Barytex Resource Corp.  
305, 535 Thurlow Street  
Vancouver, B.C. V6E 3C2

Date: December 12, 1988  
Amount: \$3,450.00  
Invoice No.: 1300

---

Re: Mystery and Chance Claims  
1988 Field Season

**WAGES**

D. Fuicher - 1 day @ \$250 \$ 250.00

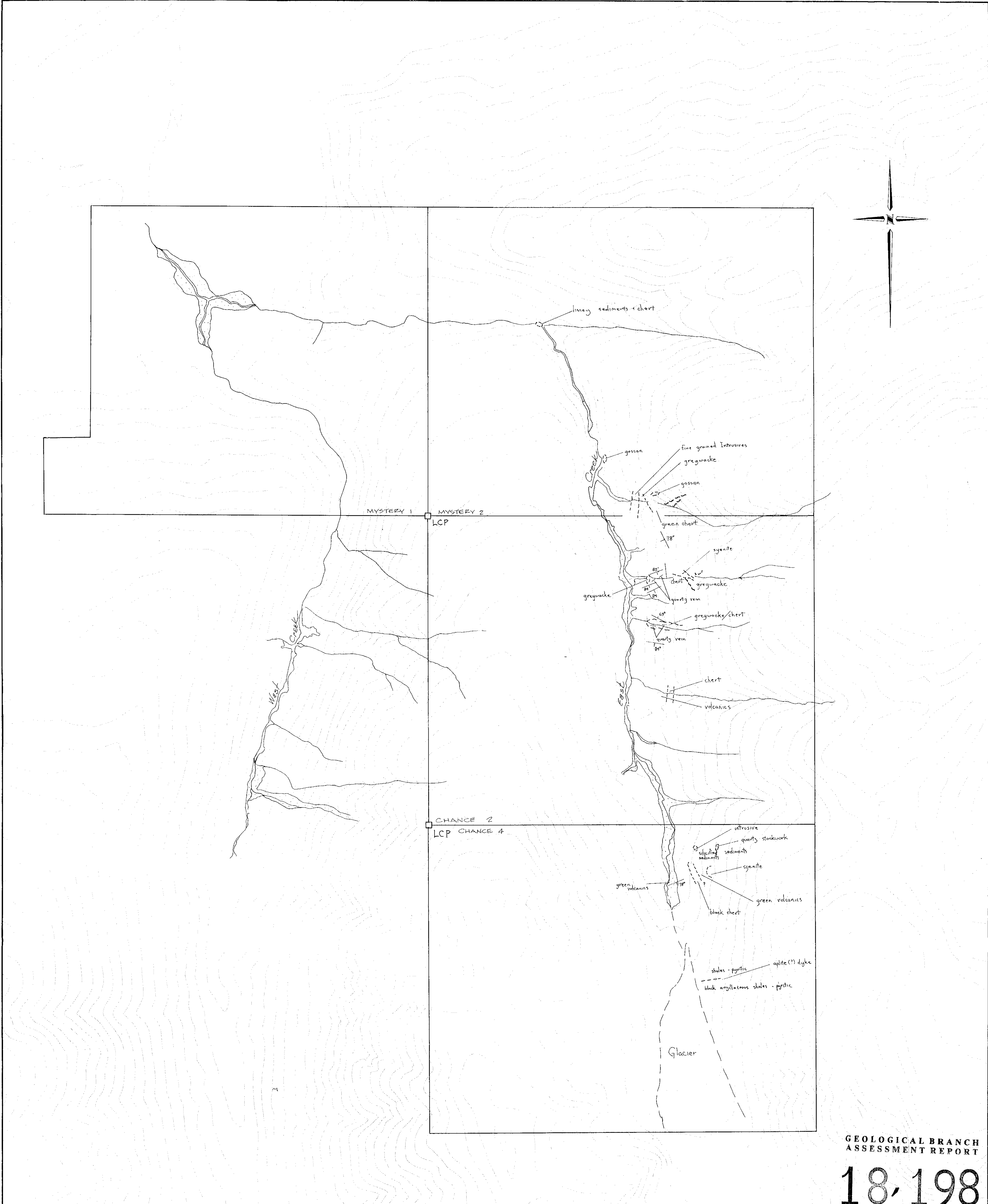
**EXPENSES**

Assessment Filing 200.00

Report 3,000.00

Total This Invoice \$3,450.00

Balances outstanding over 30 days subject to  
interest charges calculated at 1.5% per month (18% per annum)



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**18,198**

Contour interval 10m  
0 100 200 300 400m  
Scale 1:12000

**LEGEND ~**

- - - Approximate geologic outcrop/contact
- ⊃ Bedding or vein orientation; dip
- ~ ~ ~ Assumed fault

**BARYTEX RESOURCES CORP.**

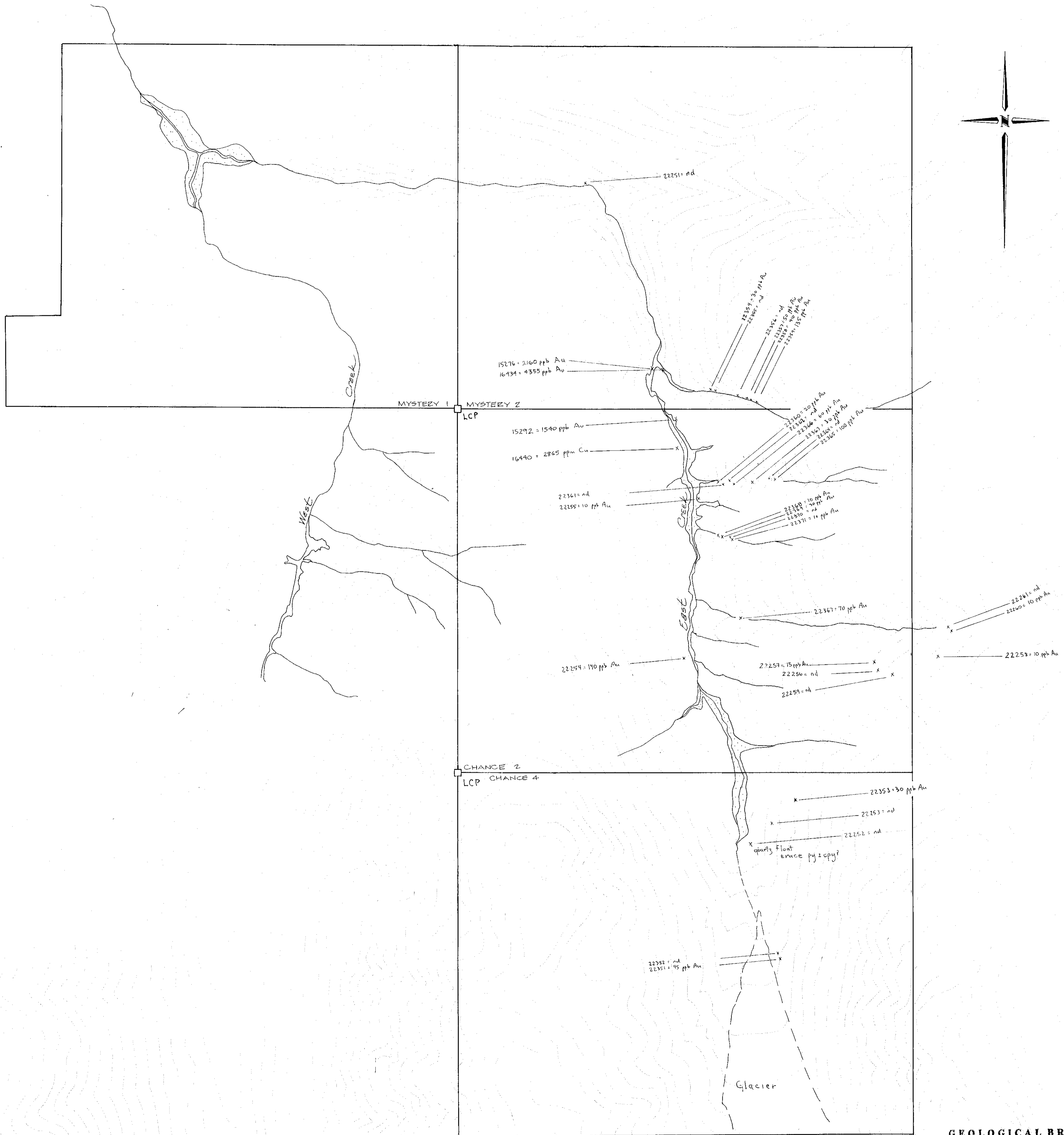
MYSTERY 1,2 and CHANCE 2,4 MINERAL CLAIMS

**PRELIMINARY  
LOCAL GEOLOGY**

LIAED MINING DISTRICT BC

**PAMICON DEVELOPMENTS LIMITED**  
#711-675 West Hastings St., Vancouver, B.C. V6B 1N4

Geologist: E. Scroggins	NTS: 104B/105	Date: Nov. 1988	Figure: 4
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GEOLOGICAL BRANCH  
ASSESSMENT REPORT

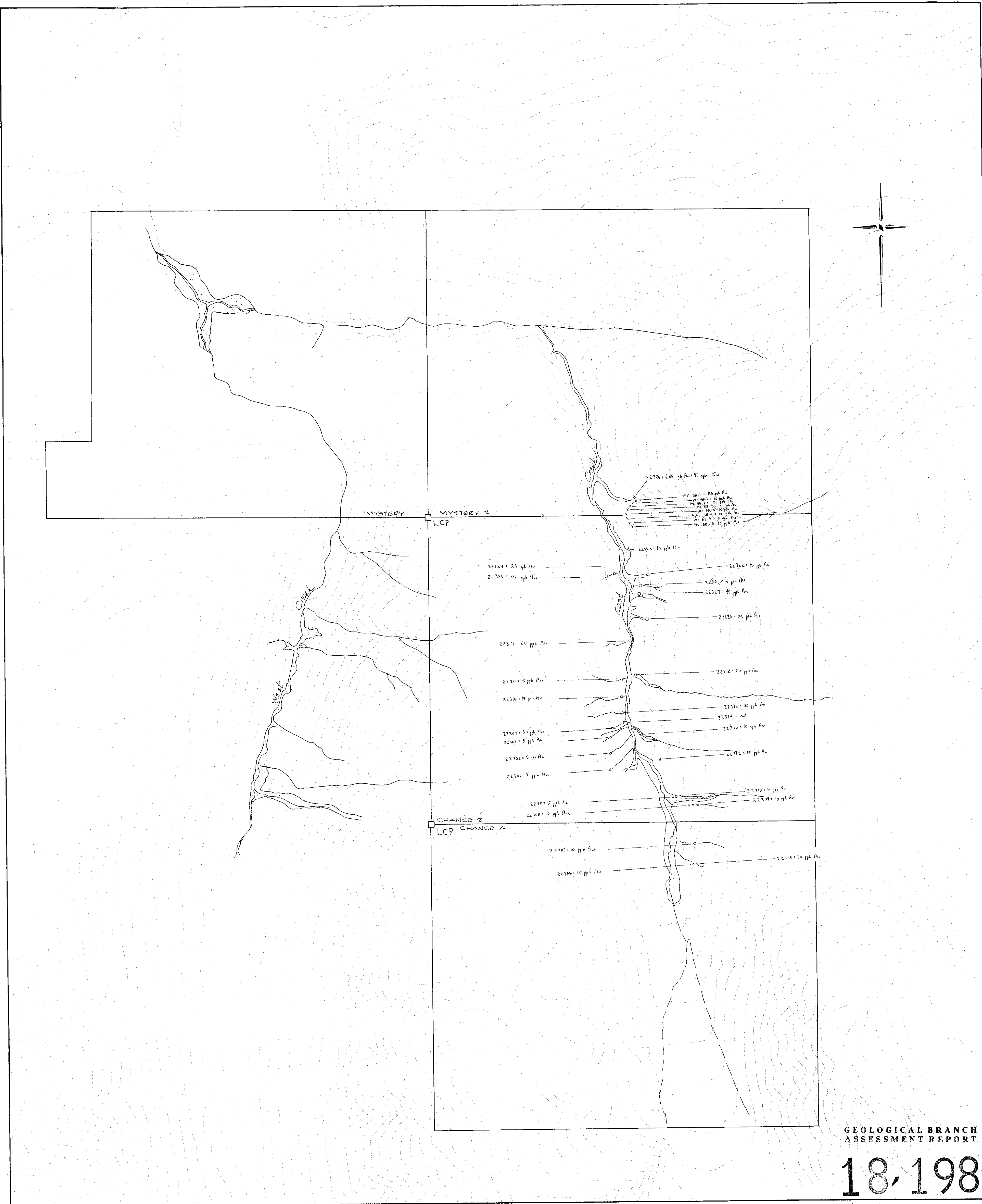
18,198

Contour interval 10m  
0 100 200 300 400m  
Scale 1:10000

LEGEND ~

x Rock chip sample  
(Au in ppb, Cu in ppm)  
ND is non detectable

**BARYTEX RESOURCES CORP.**  
MYSTERY 1,2 and CHANCE 2,4 MINERAL CLAIMS  
**ROCK CHIP SAMPLE  
LOCATION MAP**  
LIARD MINING DIVISION BC  
**PAMICON DEVELOPMENTS LIMITED**  
#711-675 West Hastings St., Vancouver, BC V6B 1N4  
Geologist: E. Scroggins    NTS: 124B/10E    Date: Nov. 1988    Figure: 5



GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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Contour interval 10m  
0 100 200 300 400m  
Scale 1:10000

**LEGEND ~**

- x - Soil sample
  - o - Heavy mineral sample
  - Δ - Silt sample
- (Au in ppb, Cu in ppm as shown)  
Nd - non detectable

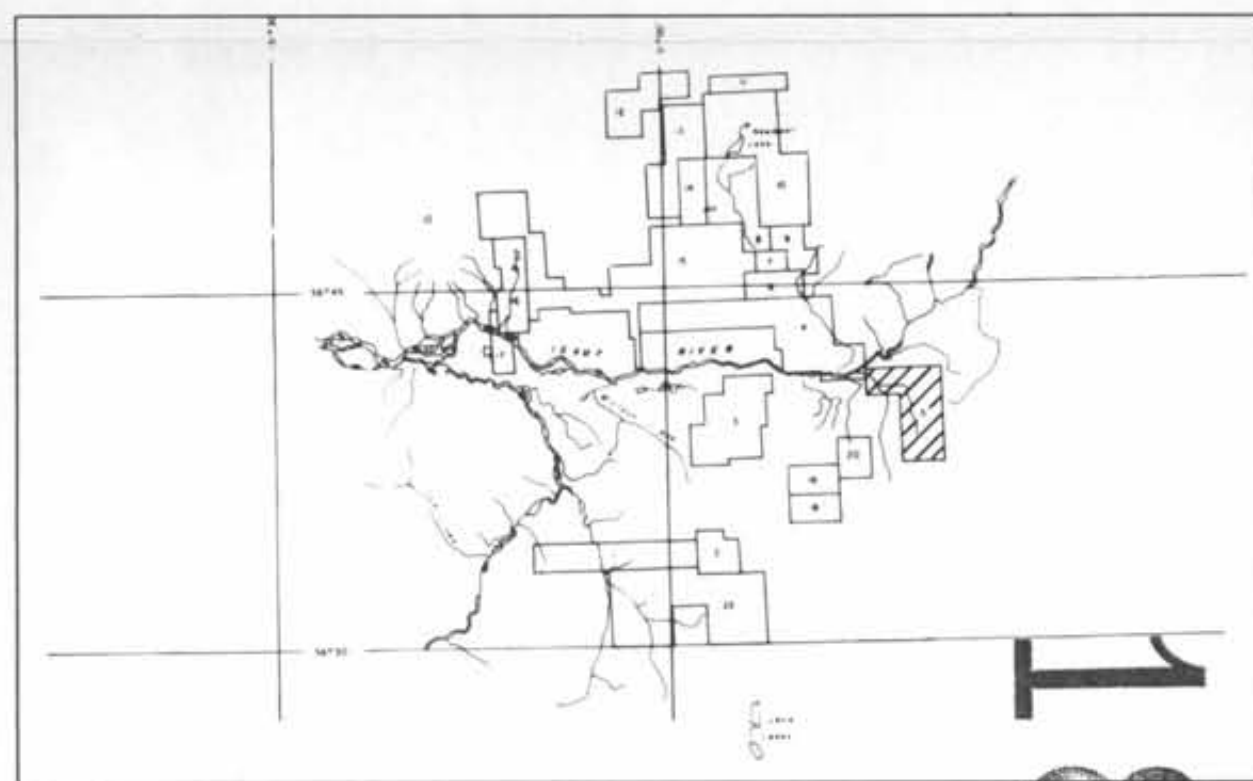
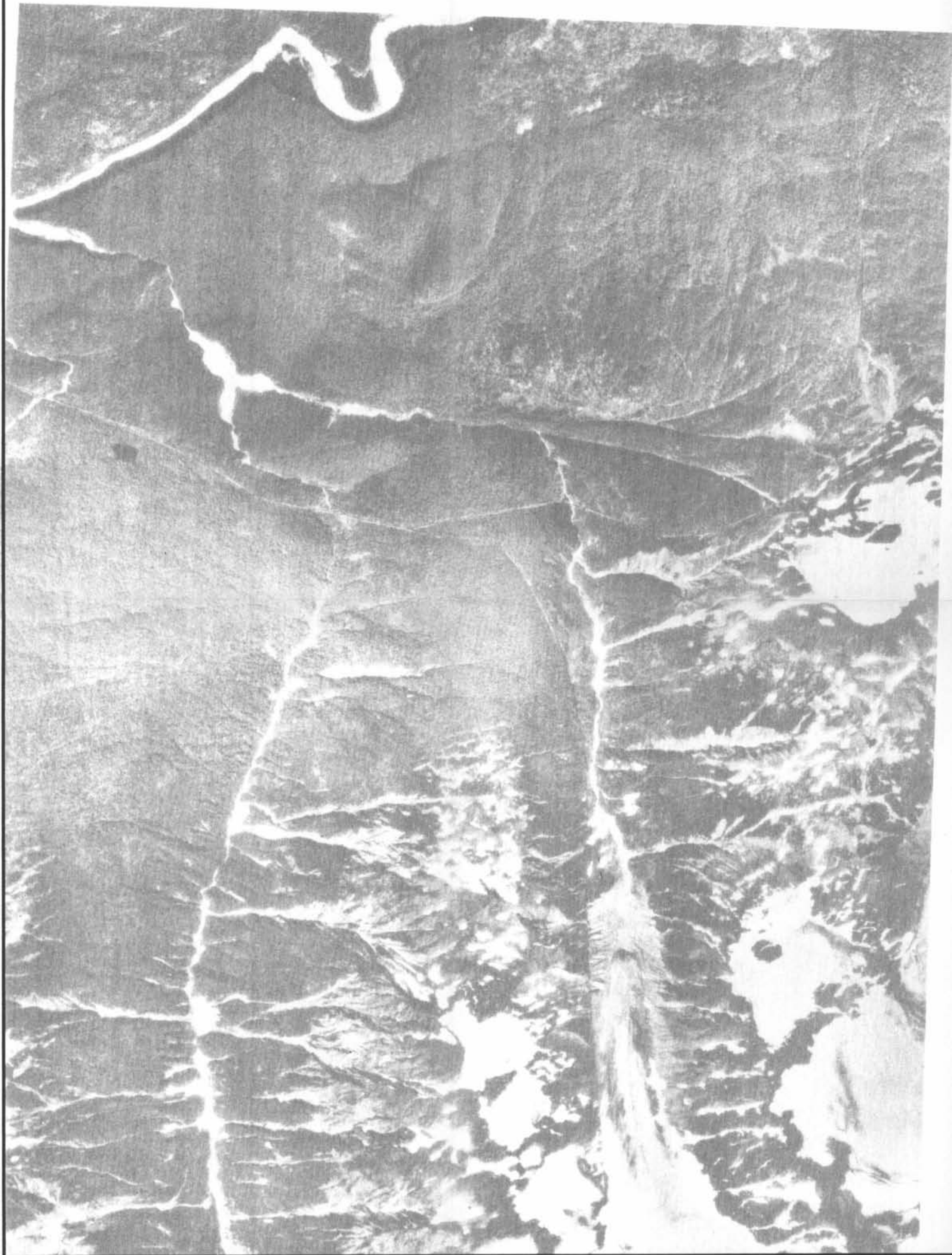
**BARYTEX RESOURCES CORP.**

MYSTERY 1,2 and CHANCE 2,4 MINERAL CLAIMS  
**SOIL, SILT  
and  
HEAVY MINERAL SAMPLE  
LOCATION MAP**

LIARD MINING DIVISION B.C.

**PAMICON DEVELOPMENTS LIMITED**  
#711-1775 West Hastings St., Vancouver, B.C. V6B 1N4

Geologist: E. Scroggins	NTP: 104B/106	Date: Nov. 1988	Figure: 6
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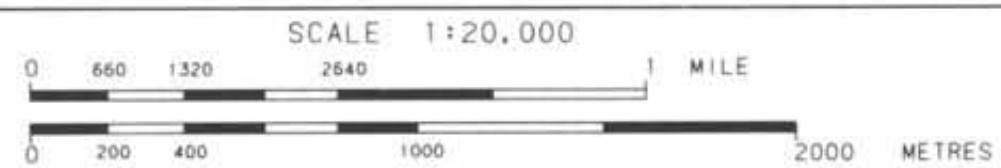
18,198

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

PAMICON DEVELOPMENTS LTD.

BASE MAP

AREA 5  
ISKUT RIVER, B.C.



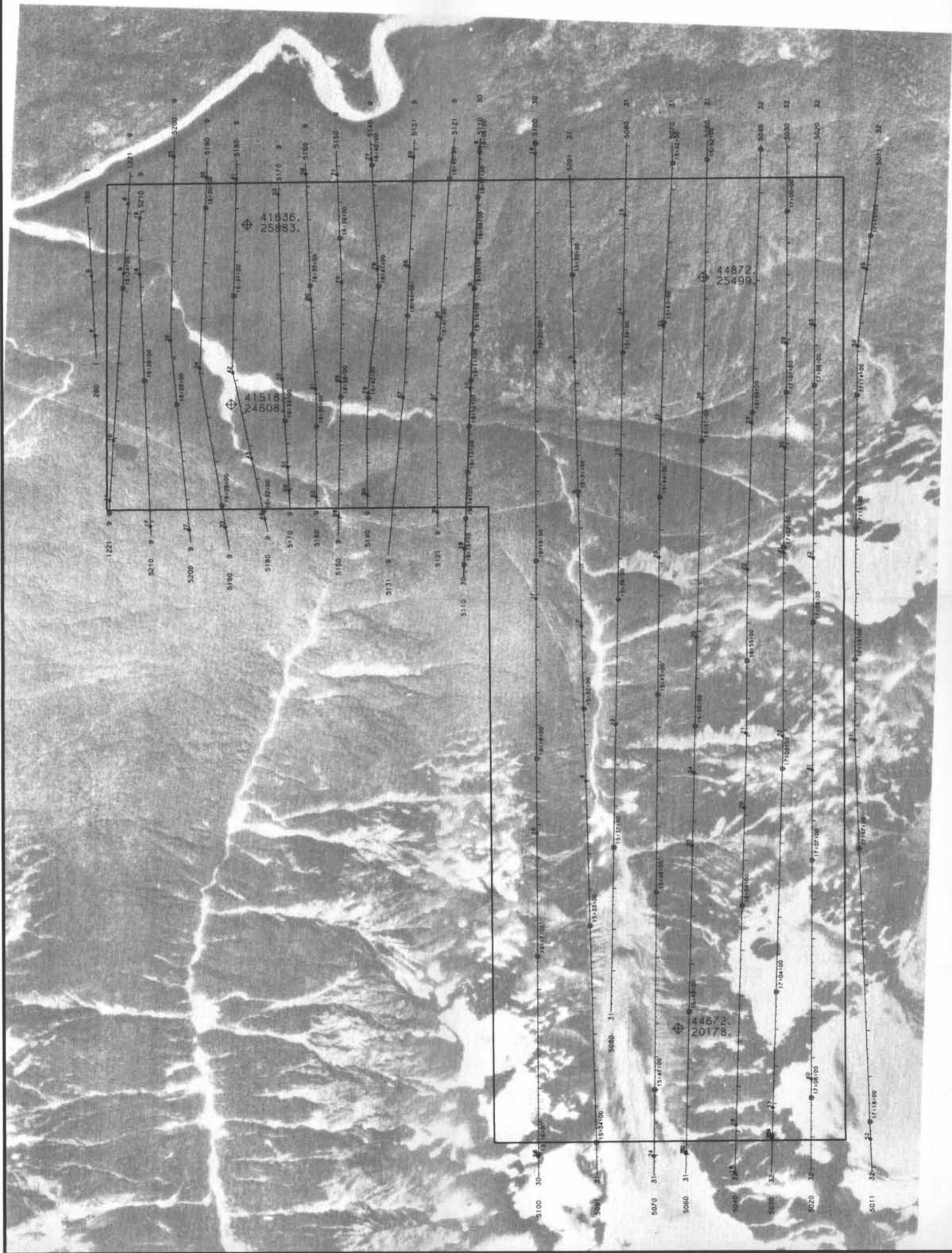
AERODAT LIMITED

DATE: MAY 88

NTS No: 104B

MAP No: 1

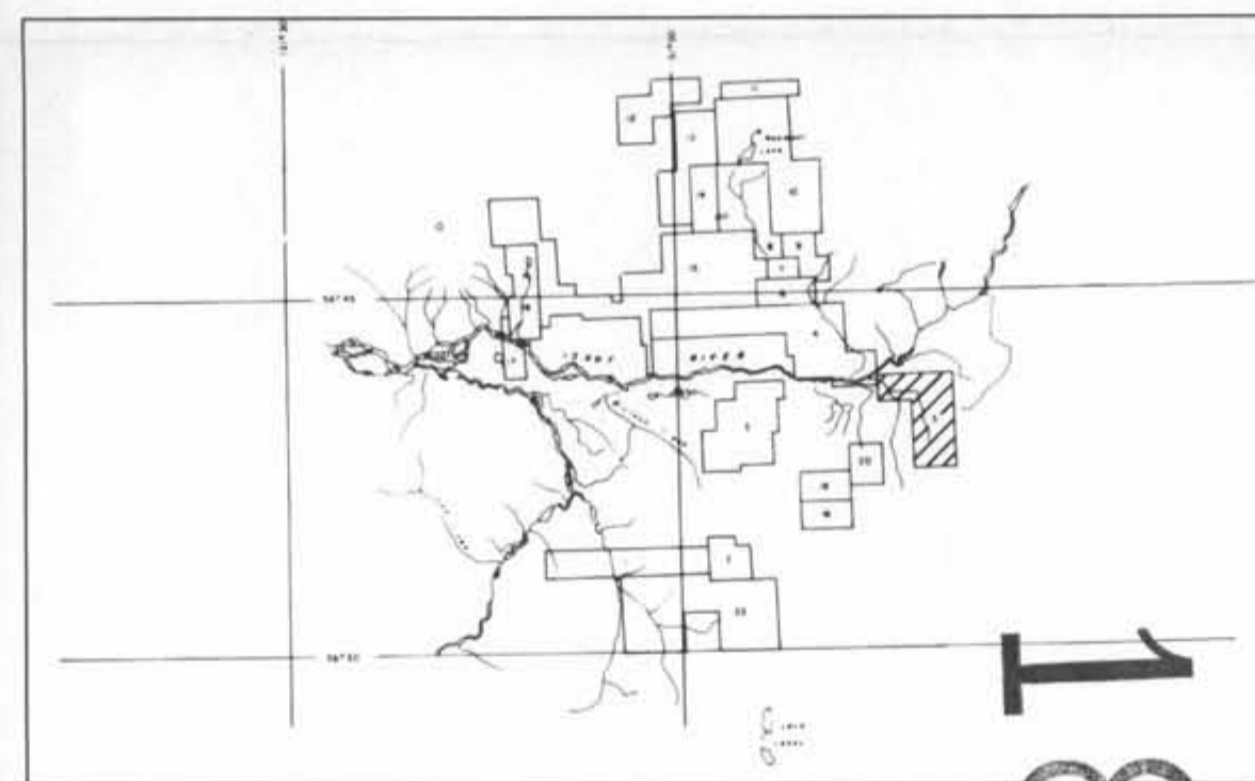
J87100



### Flight Path

Flight path recovery from  
VHS video tape.

Average terrain clearance 60m  
Average line spacing 250m

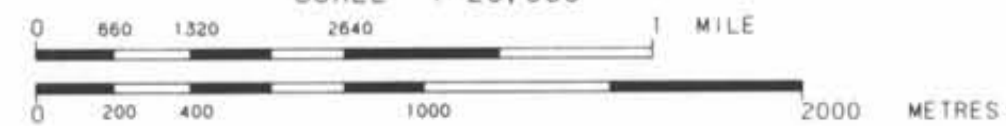


PAMICON DEVELOPMENTS LTD.

FLIGHT PATH

AREA 5  
ISKUT RIVER, B.C.

SCALE 1:20,000



**AERODAT LIMITED**

DATE: MAY 88

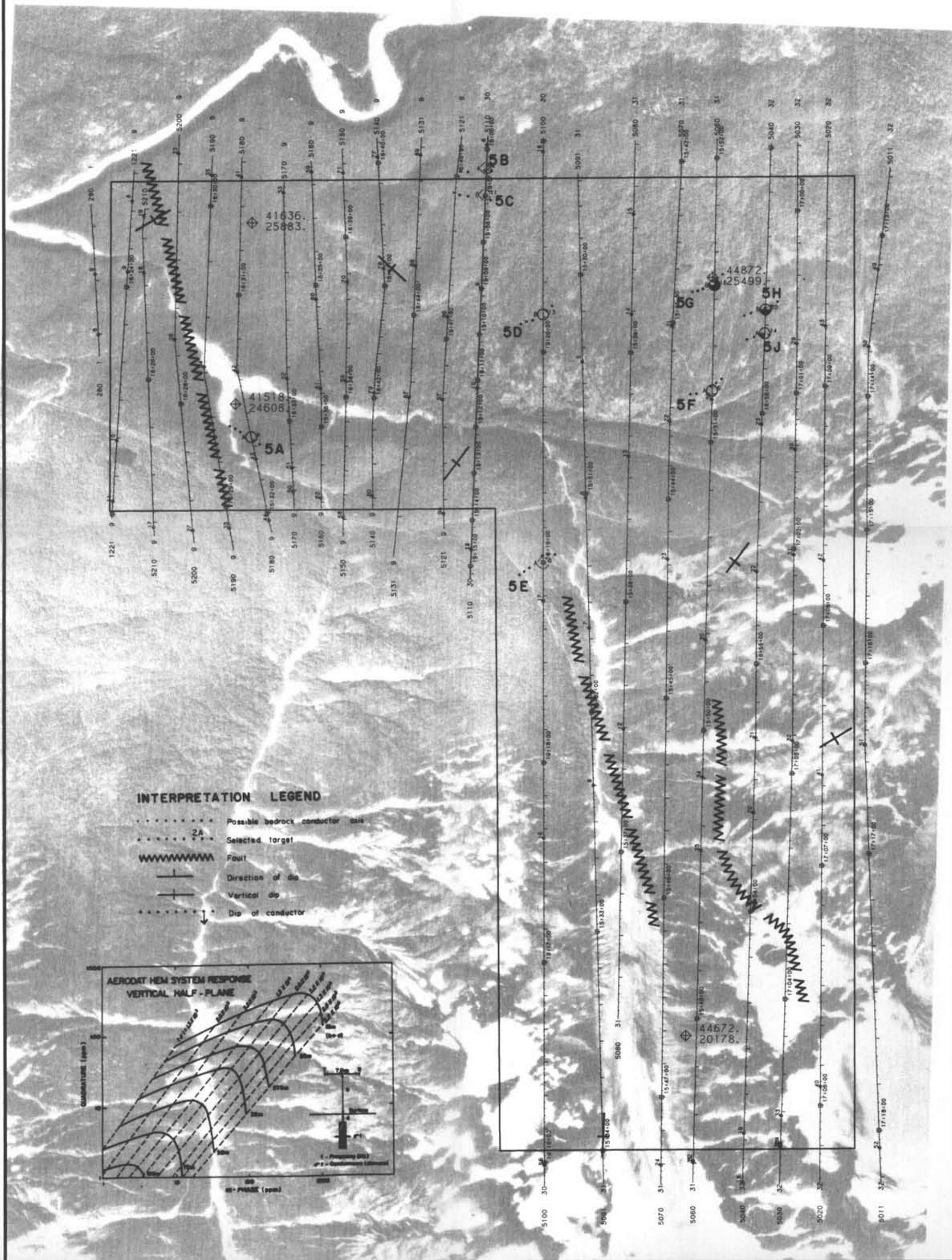
NTS No: 104B

MAP No: 2

J87100

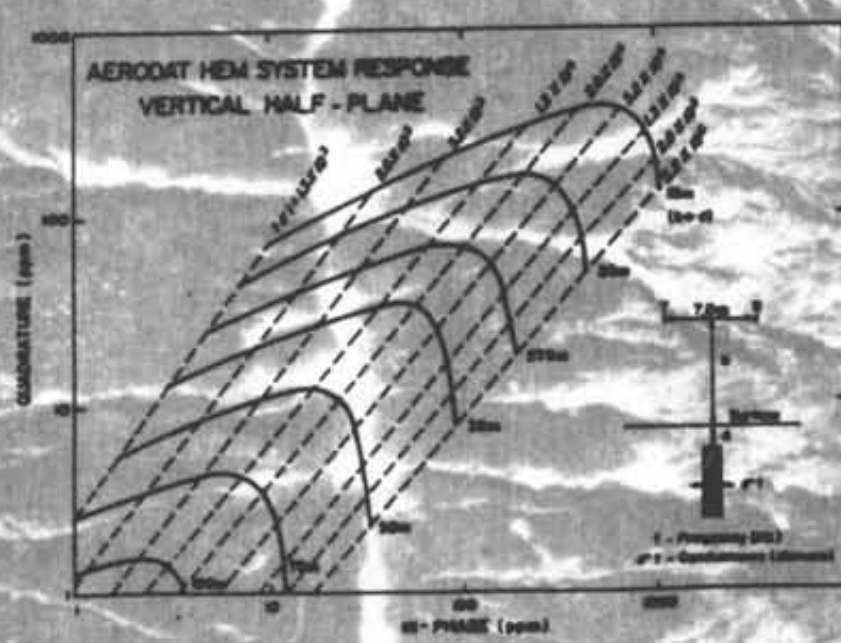
18,198

GEOLOGICAL BRANCH  
ASSESSMENT REPORT



#### INTERPRETATION LEGEND

- ..... Possible bedrock conductor axis
- ..... 2A Selected target
- ~~~~~ Fault
- Direction of dip
- Vertical dip
- ..... Dip of conductor



#### Flight Path

Flight path recovery from VHS video tape.

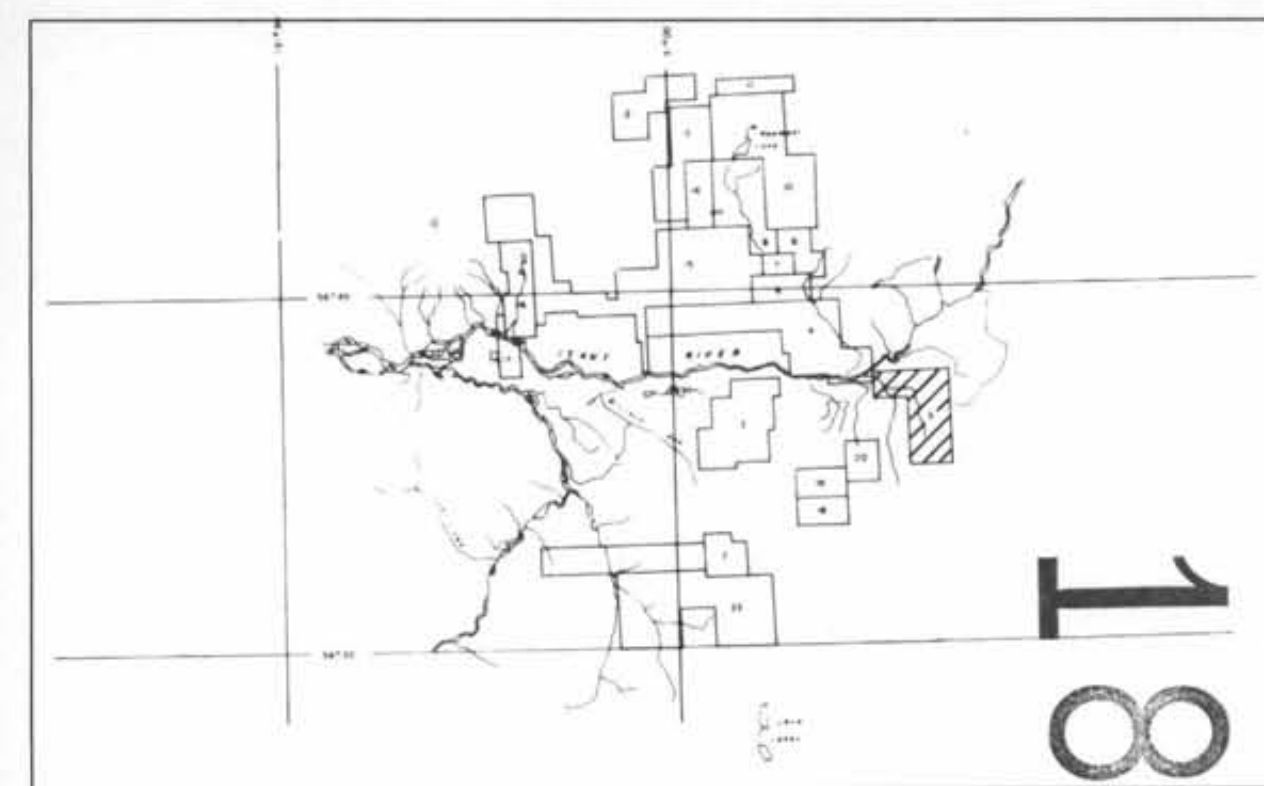
Average terrain clearance 60m  
Average line spacing 250m

#### EM Anomalies

Conductivity Thickness (mos)

- 0 - 1
- 1 - 2
- 2 - 4
- 4 - 8
- 8 - 15
- 15 - 30
- - 30

EM Anomaly A, 4600 Hz  
Inphase amplitude 7 ppm  
Conductivity thickness  
1-2 mos (see code).



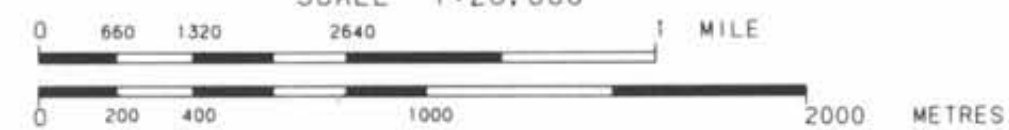
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INTERPRETATION

AREA 5

ISKUT RIVER, B.C.

SCALE 1:20,000



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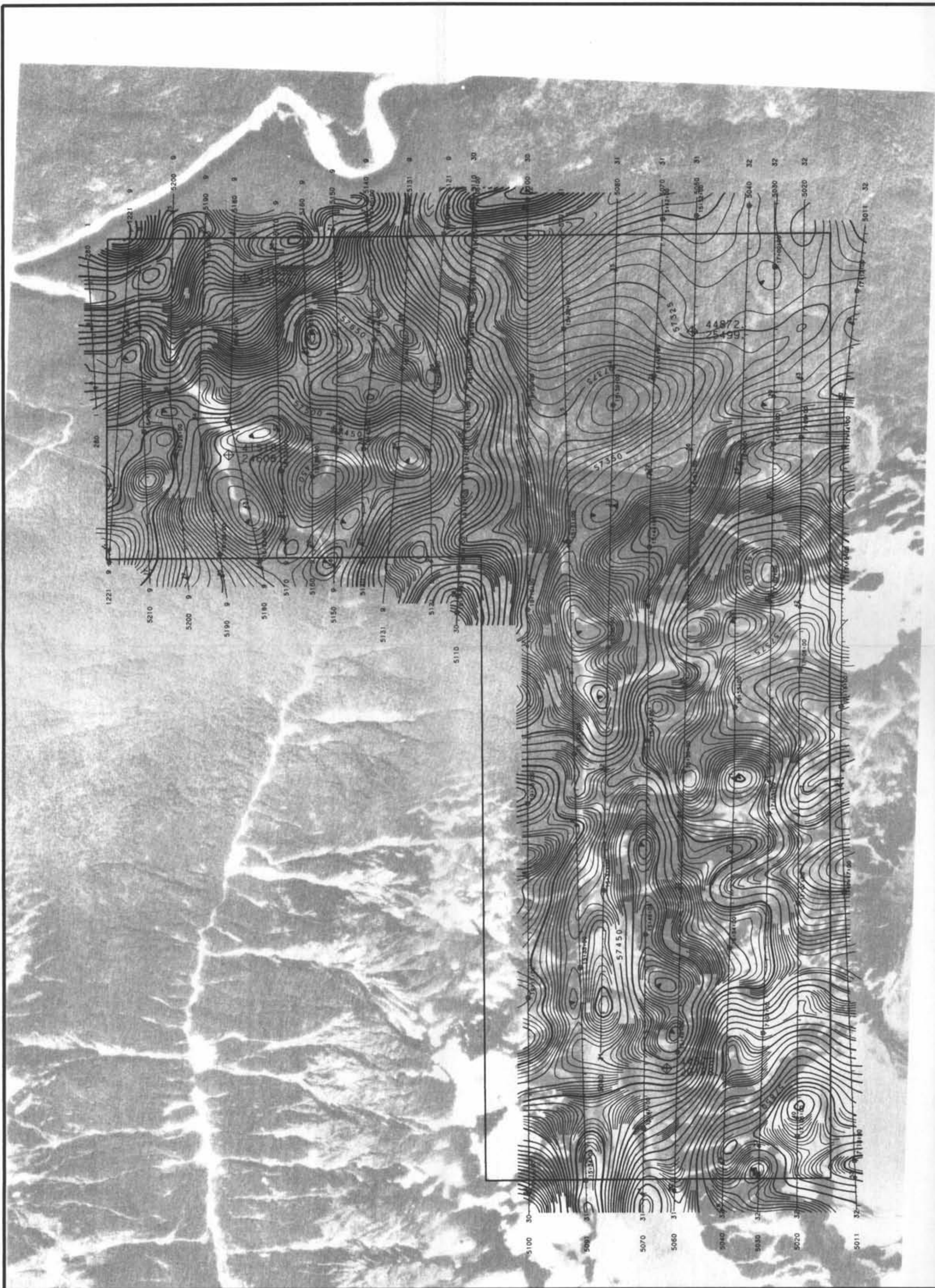
DATE: MAY 88

NTS No: 104B

MAP No: 3

J87100





### Magnetics

Total Field Magnetic Intensity  
Contours in nT.

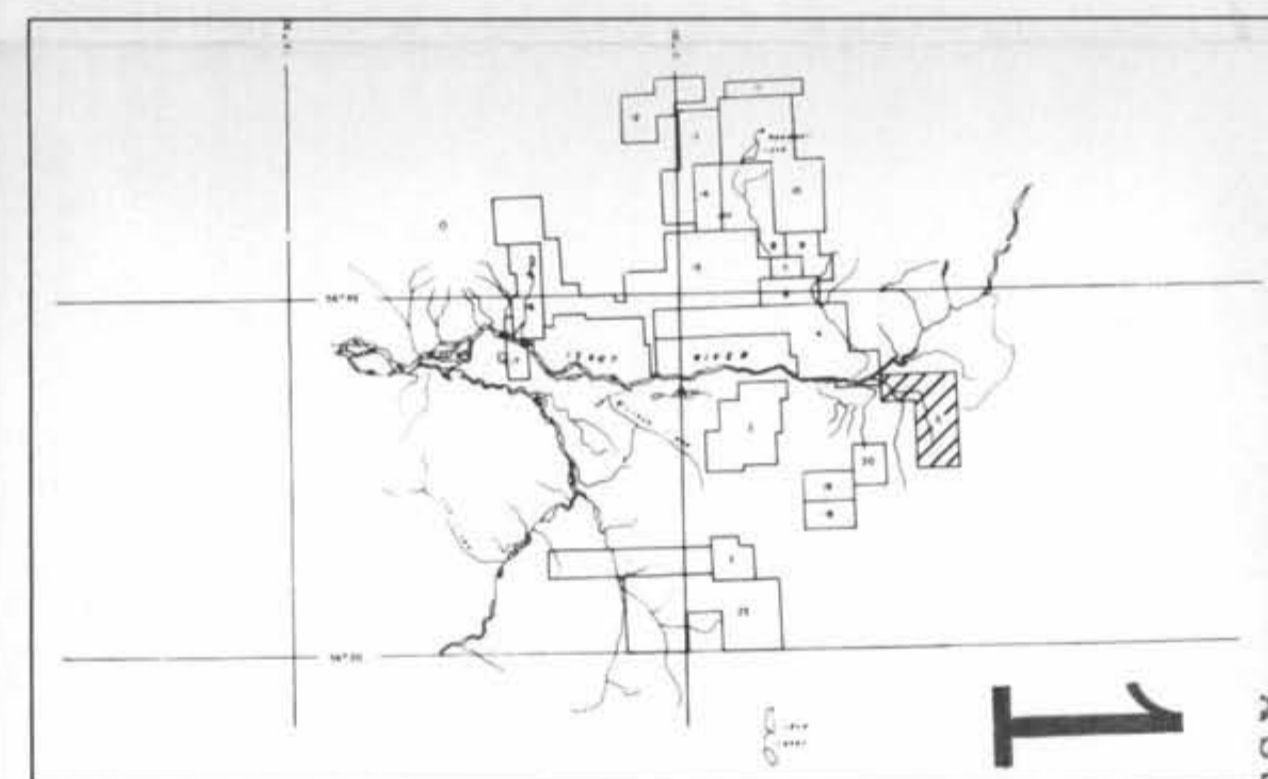
Cesium high sensitivity  
magnetometer.

Sensor elevation 45m

### Flight Path

Flight path recovery from  
VHS video tape.

Average terrain clearance 60m  
Average line spacing 250m

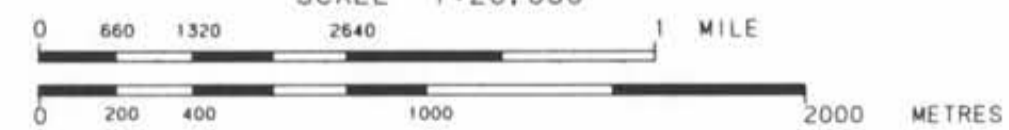


PAMICON DEVELOPMENTS LTD.

TOTAL FIELD MAGNETIC CONTOURS

AREA 5  
ISKUT RIVER, B.C.

SCALE 1:20,000



AERODAT LIMITED

DATE: MAY 88

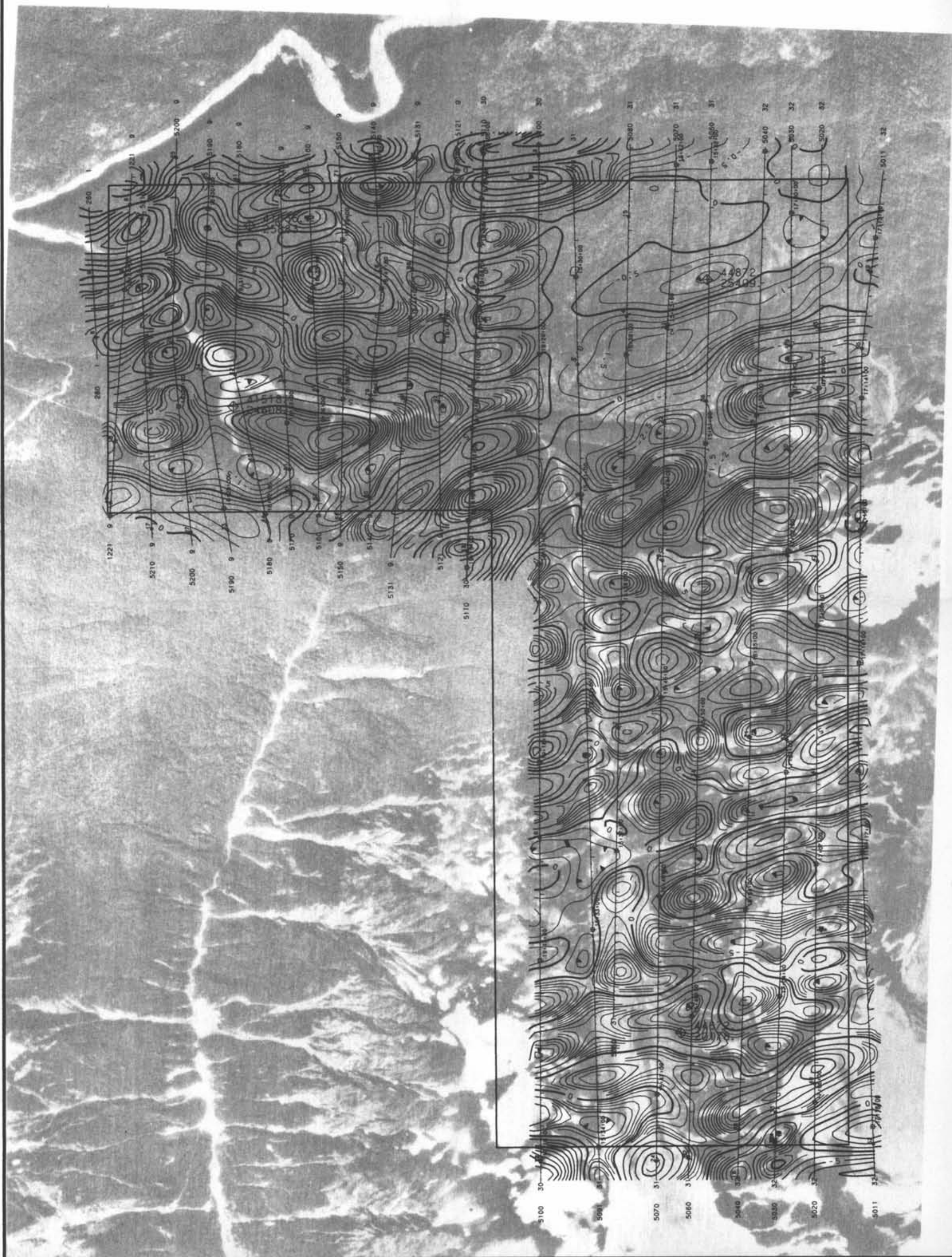
NTS No: 104B

MAP No: 4

J87100

18198

GEOLOGICAL BRANCH  
ASSESSMENT REPORT



### Vertical Gradient

Vertical Magnetic Gradient calculated from the total field magnetic intensity in nT/m.

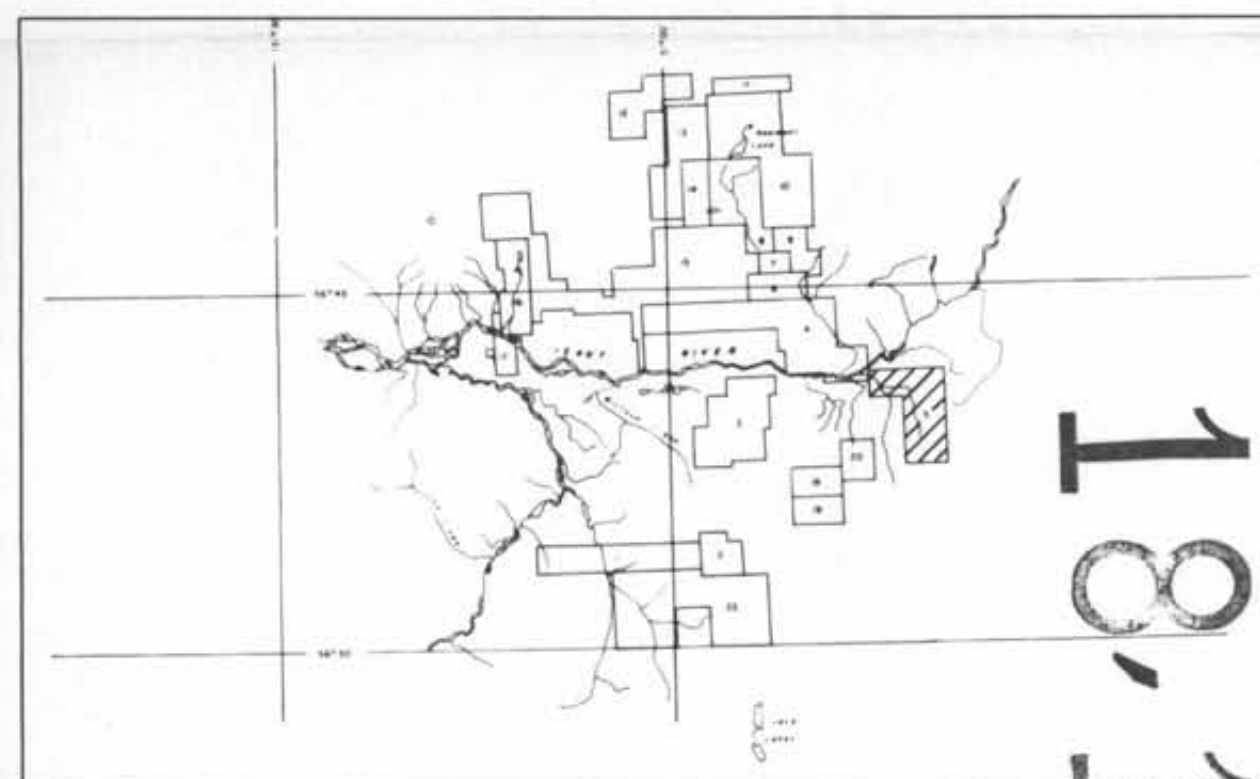
Cesium high sensitivity magnetometer.

Sensor elevation 45m

### Flight Path

Flight path recovery from VHS video tape.

Average terrain clearance 60m  
Average line spacing 250m

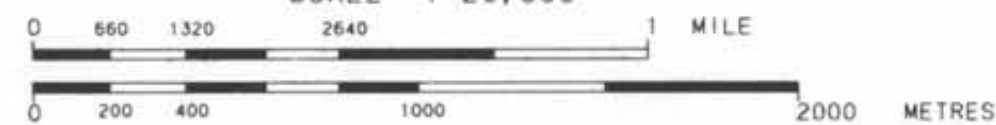


PAMICON DEVELOPMENTS LTD.

CALCULATED VERTICAL MAGNETIC GRADIENT

AREA 5  
ISKUT RIVER, B.C.

SCALE 1:20,000

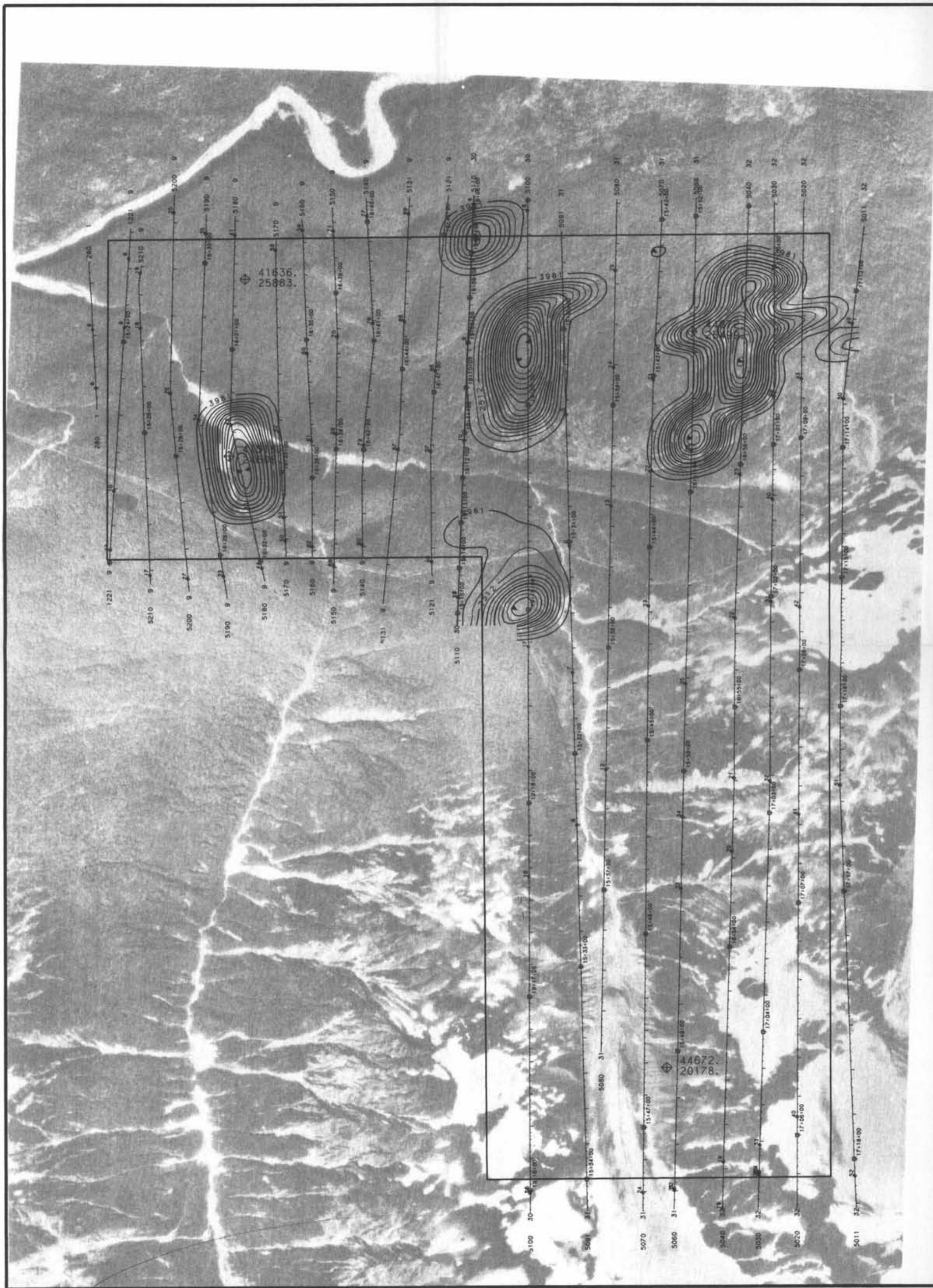


DATE: MAY 88

NTS No: 104B

MAP No: 5

J87100



### Apparent Resistivity

Calculated from 4600 Hz coaxial EM response assuming a 200 m conductive layer.

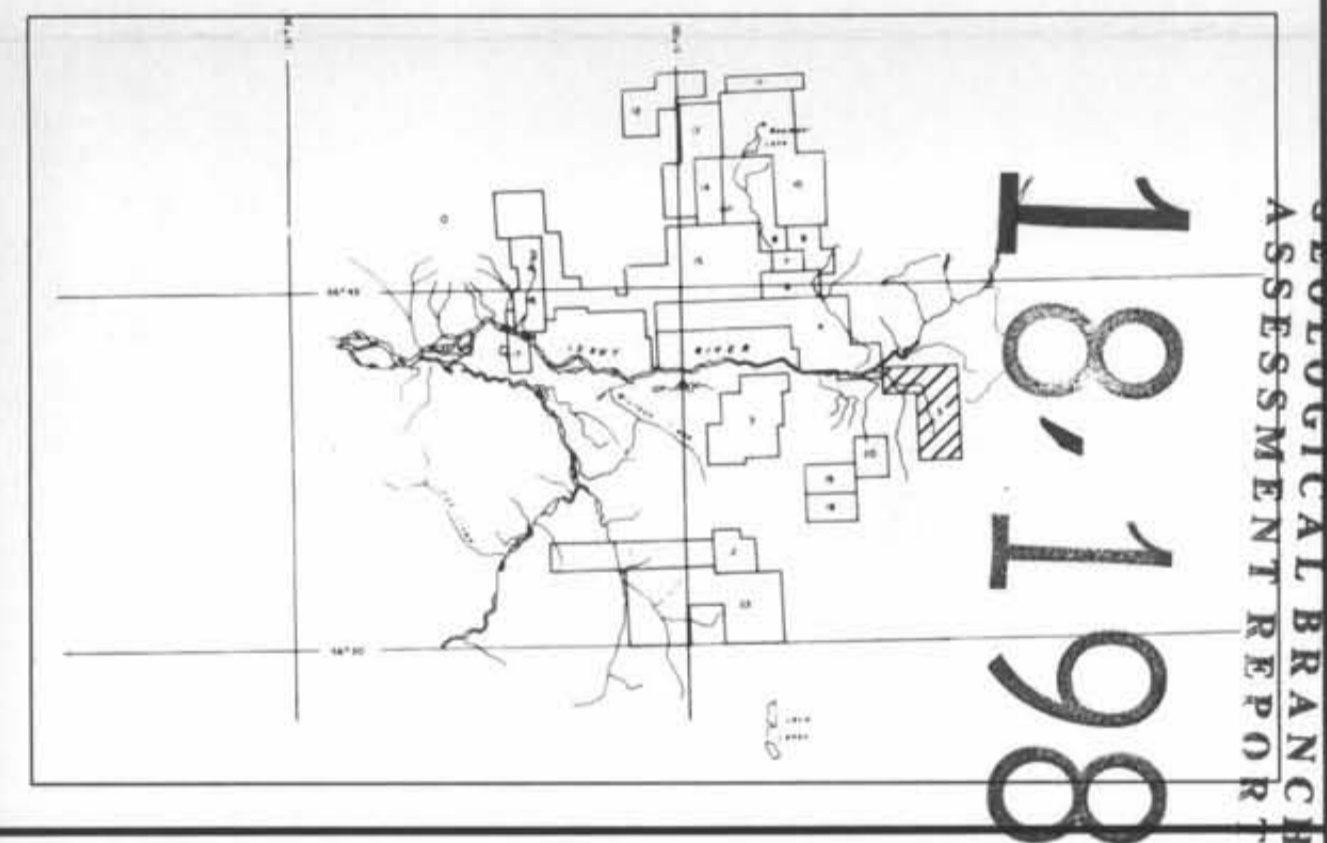
Contouring in ohm·m at logarithmic intervals.

Sensor elevation 30m

### Flight Path

Flight path recovery from VHS video tape.

Average terrain clearance 60m  
Average line spacing 250m

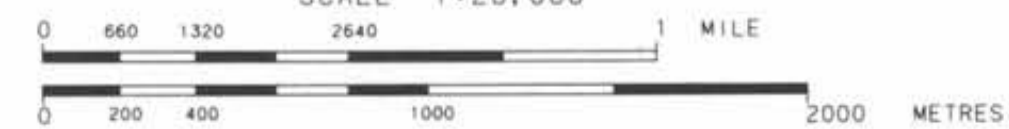


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APPARENT RESISTIVITY CONTOURS

AREA 5  
ISKUT RIVER, B.C.

SCALE 1:20,000



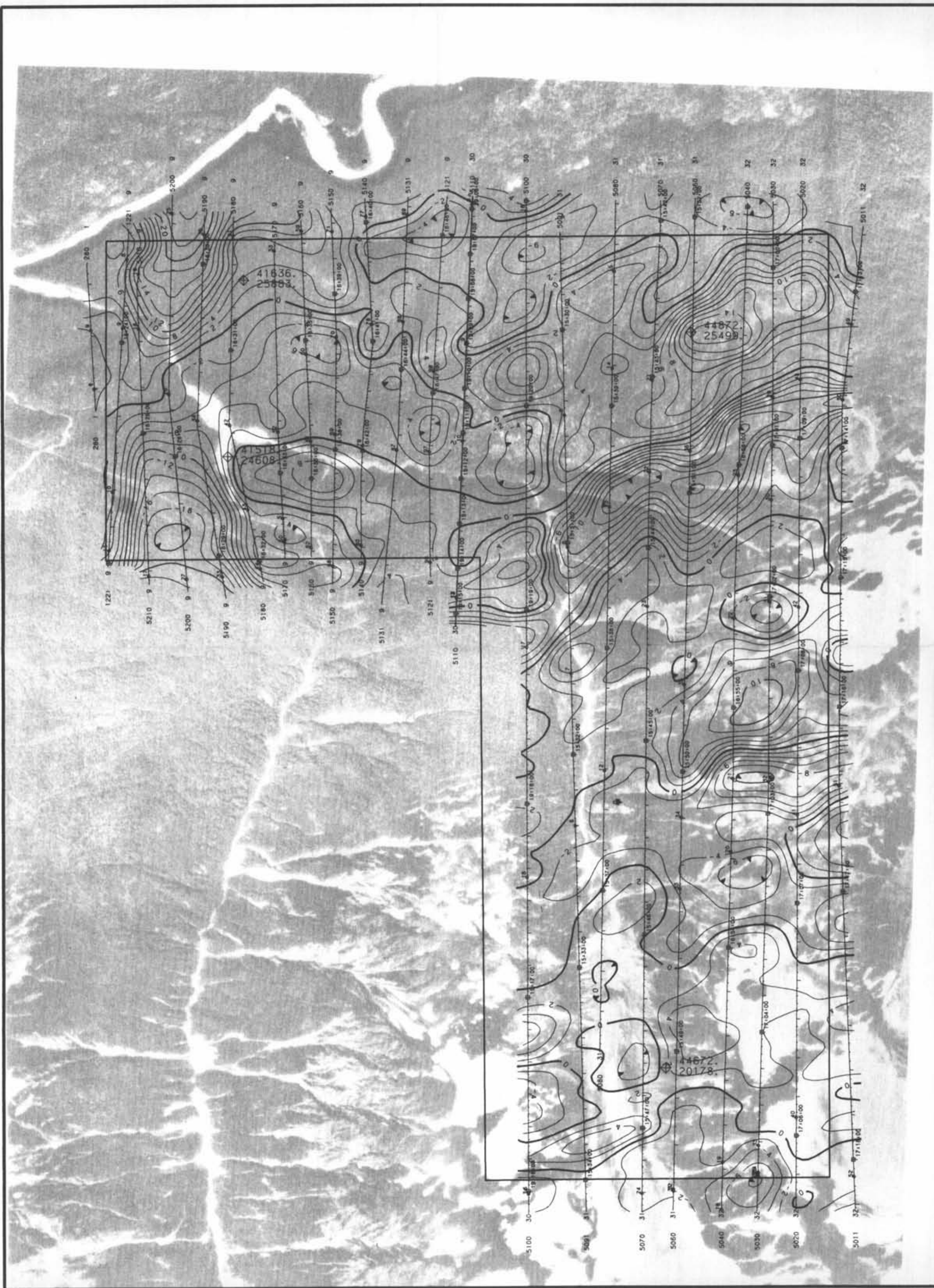
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DATE: MAY 88

NTS No: 104B

MAP No: 6

J87100



### VLF-EM

VLF-EM Total Field Intensity (X)

FLIGHTS 28, 32 to 37 :  
Station-NAA, Cutler, Seattle 24.0kHz

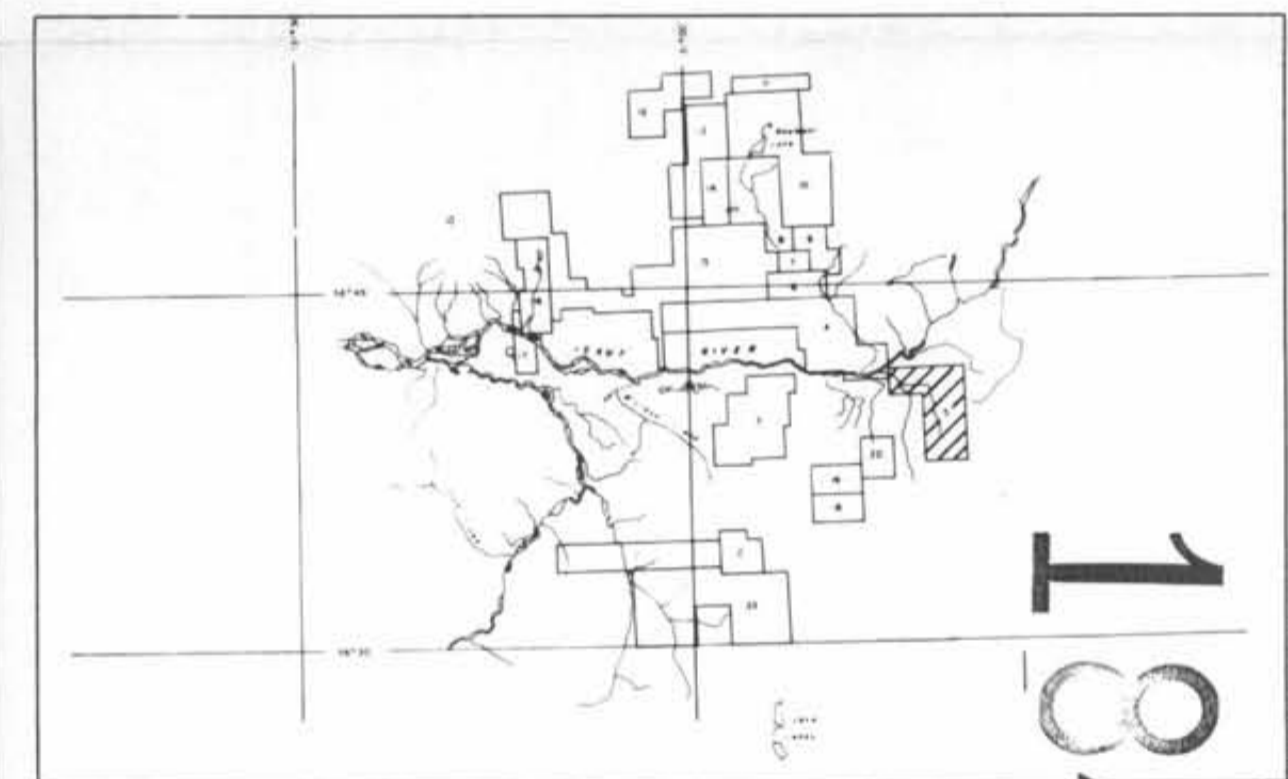
FLIGHTS 30, 31:  
Station-NLK, Jim Creek, Wash. 24.8kHz

REMAINING FLIGHTS:  
Station-NSS, Annapolis, Md. 21.4kHz  
Sensor elevation 45m

### Flight Path

Flight path recovery from  
VHS video tape.

Average terrain clearance 60m  
Average line spacing 250m



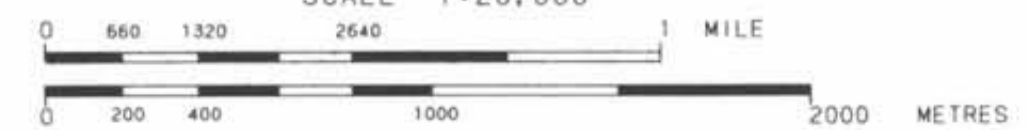
18

PAMICON DEVELOPMENTS LTD.

VLF-EM TOTAL FIELD CONTOURS

AREA 5  
ISKUT RIVER, B.C.

SCALE 1:20,000



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DATE: MAY 88

NTS No: 104B

MAP No: 7

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