

# GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

SIMPSON LAKE GROUP OF CLAIMS

WATSON LAKE MINING DISTRICT  
YUKON TERRITORY, CANADA  
NTS MAP SHEETS 105A/11,6

Centred at Latitude: 60° 34' 00"N ,Longitude: 129° 13' 30"W  
Work Performed: April 18-21, June 18 - August 11, 1996

FOR:

PACIFIC BAY MINERALS LTD. and  
DEMAND GOLD LTD.  
#908-700 West Pender Street  
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March, 1997

093666

This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ 154,867.38 .

*M. Burke*  
for Regional Manager, Exploration and  
Geological Services for Commissioner  
of Yukon Territory.

## TABLE OF CONTENTS

	<u>PAGE #</u>
SUMMARY .....	1
INTRODUCTION .....	2
Location and Access.....	3
Physiography and Climate.....	3
Property Status and Ownership.....	5
HISTORY OF EXPLORATION .....	7
Regional History .....	7
Property History .....	7
GEOLOGY.....	8
Regional Geology.....	8
Regional Economic Geology.....	11
Property Geology.....	17
Lithologies .....	17
Structure .....	18
Alteration.....	18
Mineralization.....	18
1996 EXPLORATION PROGRAM .....	18
Geological Mapping.....	18
Geochemistry .....	18
Sampling Procedure.....	19
Rock Geochemistry .....	20
Soil Geochemistry .....	20
Stream Silt Geochemistry .....	20
Geophysical Survey .....	20
CONCLUSIONS .....	24
RECOMMENDATIONS .....	25
REFERENCES.....	26
STATEMENT OF QUALIFICATIONS.....	27

## LIST OF FIGURES

	<u>PAGE #</u>
1. Property Location Map.....	4
2. Claim Map - Simpson Lake Properties (1" = ½ mile).....	6
3. Regional Tectonic Map (1:10,000,000).....	9
4. Regional Geology.....	10
5. Interpretation Map (North Sheet)-AERODAT Survey.....	22
6. Interpretation Map (South Sheet)-AERODAT Survey.....	23

## LIST OF TABLES

	<u>PAGE #</u>
1. Claim Status.....	5

## LIST OF MAPS

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1. Property Geology and Lithochemisrty (North Sheet)-1:10,000.....	Pocket
2. Soil Geochemisrty (Cu in ppm)-1:10,000.....	Pocket
3. Soil Geochemisrty (Pb in ppm)-1:10,000.....	Pocket
4. Soil Geochemisrty (Zn in ppm)-1:10,000.....	Pocket
5. Soil Geochemisrty (Ag in ppm)-1:10,000.....	Pocket
6. Geochemisrty (Cu, Pb, Zn, Ag in ppm) (South Sheet)-1:10,000.....	Pocket
7. Geology and Geochemisrty - JIM-BO Claims-1:10,000.....	Pocket

## LIST OF APPENDICES

APPENDIX I	Itemized Cost Statement
APPENDIX II	Summary of Personnel
APPENDIX III	Analytical Procedures
APPENDIX IV	Rock Geochemical Lab Reports
APPENDIX V	Soil Geochemical Lab Reports
APPENDIX VI	Stream Silt Geochemical Lab Reports
APPENDIX VII	Rock, Soil and Stream Silt Data Sheets

## **SIMPSON LAKE GROUP OF CLAIMS ASSESSMENT REPORT**

### **SUMMARY:**

The Simpson Lake Group of claims comprises 392 claims located approximately 62 km north-northwest of Watson Lake, Yukon Territory in the Watson Lake Mining District. Access to the property is via the Robert Campbell Highway (No. 4) thence via ATV and horseback along cut trails and trapper's routes.

This report presents the results of a geological, geochemical and prospecting survey conducted over the property employing rock, soil and stream silt as sample media. This survey was a multidisciplinary study of the area with the objective of evaluating the mineral potential of the property.

The property is situated in the Simpson Range of the Pelly Mountains on NTS map sheets 105A/6 and 11 near the southeastern portion of the Yukon. The claims cover a region of low to high relief with >95% of the property covered by forest, muskeg swamp and glaciofluvial material. The claims cover a geologically complex terrain of polydeformed metavolcanic and sedimentary rocks belonging to the Slide Mountain Terrane. These rocks are believed to represent middle and upper Paleozoic ophiolite sheets which have been thrust northeastward over the North American Continental Margin and are currently preserved as klippen overlying autochthonous, structurally imbricated shelf strata. The strata appear faulted and displaced by an intersecting pattern of probably high angle faults trending roughly NE-SW and NW-SE. On a broader scale, the southwestern boundary of the rugged Simpson Range is marked by the Tintina Fault Zone. The claim group is bounded to the east and northeast by the Finlayson Lake Fault Zone.

A review of available information indicates that the area has experienced little or no prospecting. The Simpson Lake Group was staked during the period of January 7 to April 6, 1996 to protect potential mineral bearing strata belonging to the Yukon-Tanana and Slide Mountain Terranes. In addition, staking was based upon anomalous stream silt geochemistry documented in local drainages.

The 1996 exploration program consisted of an AERODAT combined, helicopter-borne MAGNETIC, EM and VLF-EM survey conducted over the properties in April. This was followed by a ground exploration program conducted by a 3-15 member crew during June 18 - August 11, 1996.

A total of 12 rock grab samples, 12 stream silt samples and 201 grid-controlled and contour soil samples were collected concurrent with geological mapping, prospecting and property reconnaissance. Several geophysical anomalies were targeted for follow-up examination by establishing limited soil grids over areas to be tested.

Analytical results are low for base metal elements tested. Weakly to moderately elevated single station gold-in-soil values are recorded; however, no coincident anomalous base metal values are returned from the respective samples.

Geological mapping was effectively restricted to outcrop exposed along a northeasterly to northerly trending, barren, lightly forested ridge top in the northwestern portion of the BAY claims. Several other locations on the claim group were visited by prospectors on horseback and ATV's in search of outcrop exposure.

Results of the 1996 ground reconnaissance program are disappointing; however, several geophysical targets in the southern half of the claim group remain to be soil sampled. Continued geochemical surveys are recommended to fully assess the mineral potential of this area.

## **INTRODUCTION:**

Pacific Bay Minerals Ltd. conducted a field exploration program on the Simpson Lake Group of claims centred approximately 62 km NNW of Watson Lake in the Simpson Range of the Pelly Mountains. Exploration work was performed by a 3-15 member crew operating out of a base camp constructed off the Robert Campbell Highway on the west bank of the Frances River, at a point 12 km north of the bridge crossing over the Frances River.

The objective of this program was to evaluate the claim group's economic mineral potential through follow-up ground examinations of geophysical anomalies delineated by an AERODAT combined, helicopter-borne MAGNETIC, EM and VLF-EM survey and to provide reconnaissance coverage throughout the property. The airborne geophysical survey completed over the property between April 18 to 21, 1996 delineated limited, low-resistivity zones whose major presence is documented on the west side of the northern claims area. At this location, they form two elongated anomalies flanking the eastern side of a deep seated magnetic belt. Fourteen conductive trends are designated and associate with low resistivity zones, fault zones and magnetic trends. The 1996 field program was carried out during the period of June 18 to August 11, 1996 and comprised cutting access trails, geological mapping, prospecting and rock, soil and stream silt sampling. A total of 12 rock grab samples, 201 soil samples and 12 stream silt samples were collected from the claims area concurrent with prospecting and mapping. Soil samples were collected from short soil lines established perpendicular to, and parallel to, electromagnetic anomalies delineated by the airborne survey. Geological and geochemical field data were compiled on 1:10,000 scale contour maps enlarged from 1:50,000 scale NTS topographic maps and all final data were produced on hand drafted and computer generated maps at 1:10,000 scale.

All geochemical samples were shipped to ACME Analytical Labs in Vancouver, B.C. for geochemical analysis utilizing 30 element ICP method and gold analysis by wet extraction followed with graphite furnace AA finish. Analytical procedures are described in APPENDIX III and analytical results are presented in APPENDICES IV, V and VI.

### **Location and Access:**

The Simpson Lake Group is centred at 60° 34' 00"N latitude and 129° 13' 30"W longitude on NTS map sheets 105A/6 and 11 in the Watson Lake Mining District. The claims are located 62 km north-northwest of Watson Lake and 5 km south of Simpson Lake and extend for approximately 17.1 km along the west side of the Frances River (Figure 1).

General access to the claims area is via the Robert Campbell Highway, an all-weather gravel road which connects to the Alaska Highway at Watson Lake. Watson Lake serves as the main supply centre for the exploration program on the Simpson Lake properties. Direct access to individual claims is via four-wheel all-terrain vehicle, pack horse and by foot from a base camp established on the west bank of Frances River. Distance to the claims from base camp is approximately 0.8 km.

### **Physiography and Climate:**

The properties are located near the southeastern end of the rugged Simpson Range, a subdivision of the Yukon Plateau of the northern Cordillera. Elevations on the claims range from 2,350 feet (716 metres) to 5,250 feet (1601 metres) above sea level. The southwestern boundary of the Simpson Range is marked by Tintina Trench, a major northwest-trending valley and surface expression of the Tintina Fault Zone. The Simpson Range is bordered by the Finlayson Lake Fault Zone to the northeast.

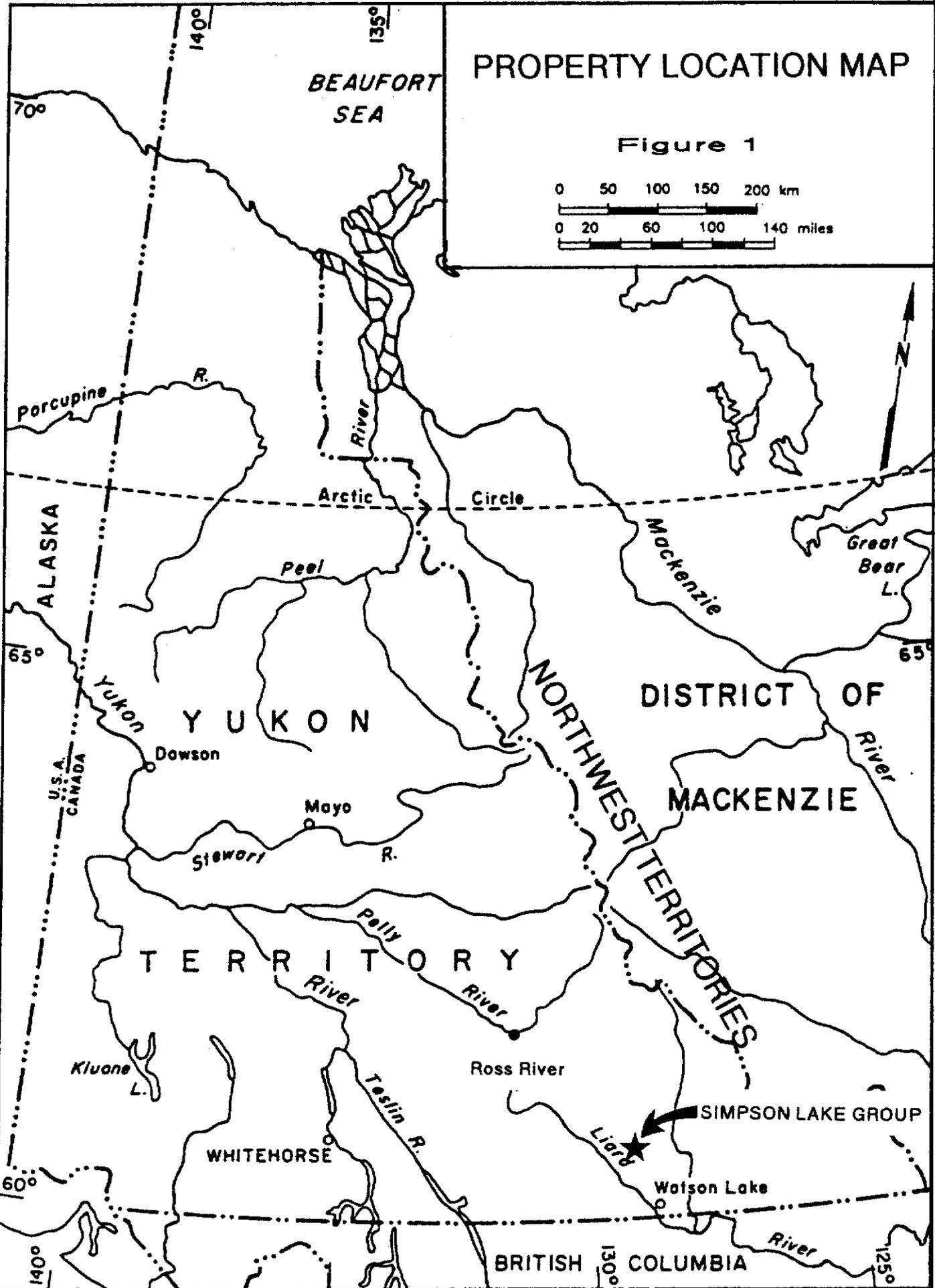
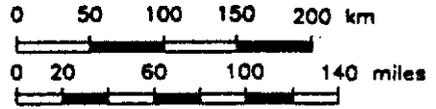
During the Pleistocene Epoch, the entire area, except for the tops of the highest peaks, was covered by a continental ice sheet. Consequently, glacial and glaciofluvial deposits are common at lower elevations. Glaciation has produced broad valleys surrounding isolated mountains and ranges. Valley bottoms are typically underlain with glaciofluvial sediments having a probable thickness exceeding five metres. Outcrop is sparse and is confined to ridge crests and rare exposures on cliffs or steep slopes.

The valley bottoms are generally covered by muskeg swamp and beaver ponds. Vegetation at these locations comprise dense alder, "buckbrush" and black spruce. Elevations above this level are densely forested with mixed balsam fir, spruce, poplar and juniper with treeline extending to the highest elevations on the claims. Upland areas are mainly gently rolling with rounded peaks and ridge crests.

Weather data for the project area records light precipitation, averaging 50-60 cm per annum, falling mainly as rain during summer months. Snow cover averages 60-65 cm by late winter. The climate is continental type with warm summers and long, cold winters. Annual mean daily temperature is -5°C with ranges from lows of -30° to -50°C in January to 13° to 30°C in July. Permafrost at this latitude is discontinuous but widespread. It is rarely possible to commence surface geological work before late May and difficult to continue past September.

# PROPERTY LOCATION MAP

Figure 1



**Property Status and Ownership:**

The Simpson Lake Group (Figure 2) comprises 392 claims located in the Watson Lake Mining District. The claims are 100% owned by Pacific Bay Minerals Ltd. and Demand Gold Ltd. Work performed on Demand Gold's claims was performed by, and financed by, Pacific Bay Minerals Ltd. on behalf of Demand Gold Ltd. Relevant claims data are tabulated in Table 1:

**TABLE 1: SIMPSON LAKE GROUP - CLAIM STATUS**

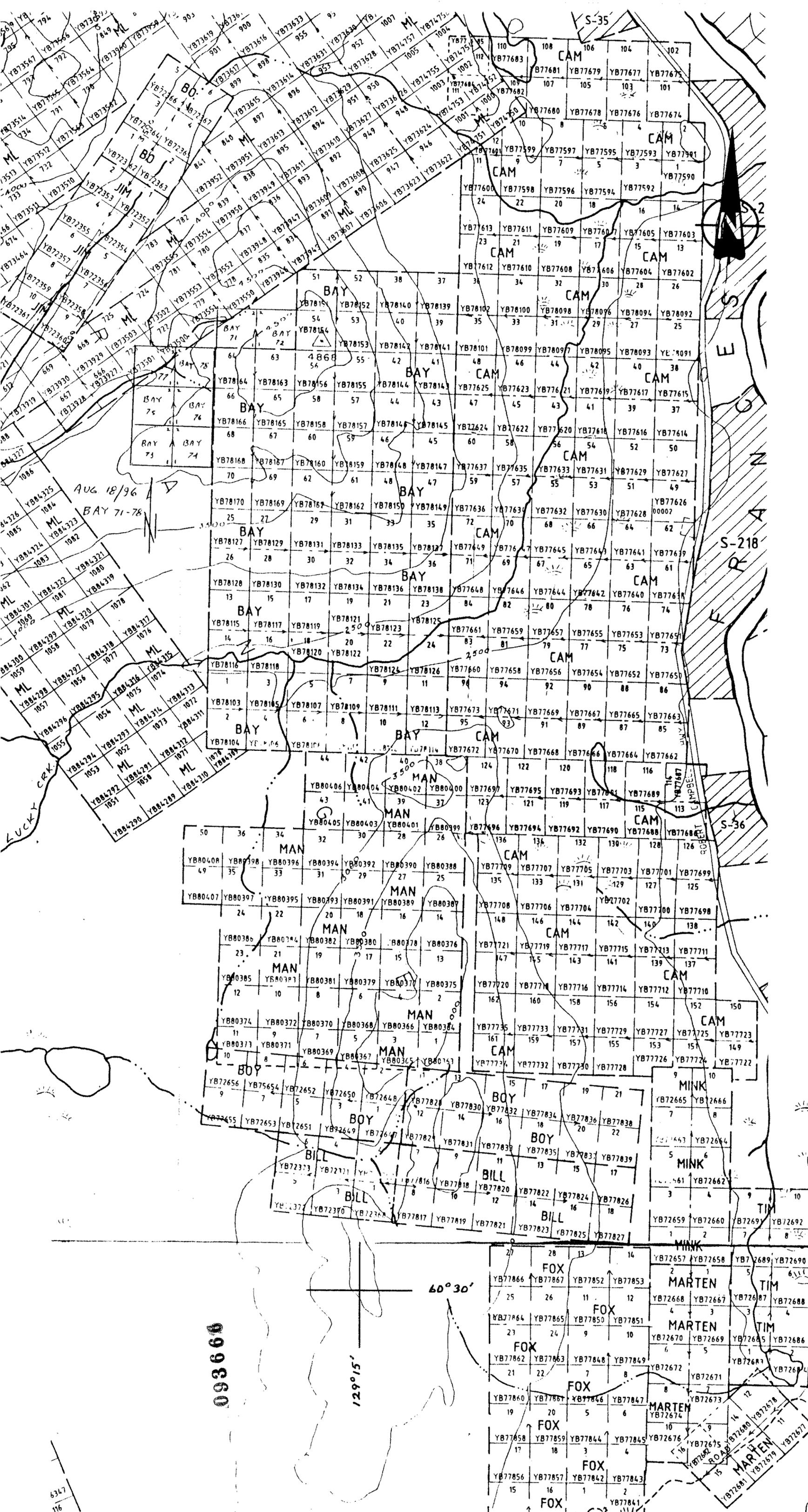
**Pacific Bay Minerals Ltd.**

<b><u>CLAIM NAME</u></b>	<b><u>GRANT NUMBER</u></b>	<b><u>RECORDING DATE</u></b>	<b><u>EXPIRY DATE</u></b>
BILL 1-6	YB72368-72373	1996/01/08	2002/01/08
BILL 7-8	YB77816-77827	1996/02/26	2002/02/26
BOY 1-10	YB72647-72656	1996/01/12	2002/01/12
BOY 11-22	YB77828-77839	1996/02/26	2002/02/26
FOX 1-28	YB77840-77867	1996/02/26	2002/02/26
MINK 1-10	YB72657-72666	1996/01/12	2002/01/12
MARTEN 1-16	YB72667-72682	1996/01/12	2002/01/12
TIM 1-10	YB72683-72692	1996/01/12	2002/01/12
CAM 1-96	YB77590-77673	1996/02/26	2002/02/26
CAM 101-162	YB77674-77735	1996/02/26	2002/02/26
JIM 1-10	YB-72352-72361	1996/01/08	2002/01/08
BO 1-6	YB72362-72367	1996/01/08	2002/01/08

**Demand Gold Ltd.**

<b><u>CLAIM NAME</u></b>	<b><u>GRANT NUMBER</u></b>	<b><u>RECORDING DATE</u></b>	<b><u>EXPIRY DATE</u></b>
BAY 1-48	YB78103-78150	1996/03/01	2002/03/01
BAY 51-70	YB78151-78170	1996/03/01	2002/03/01
MAN 1-44	YB80363-80406	1996/04/09	2002/04/09
MAN 49-50	YB80407-80408	1996/04/09	2002/04/09

\*\* CAM 25-36 recording dates are 1997/03/01; the new expiry dates have been advanced to 2002/02/26.



PACIFIC BAY MINERALS LTD.  
VANCOUVER, BRITISH COLUMBIA

SIMPSON LAKE PROPERTIES

CLAIM MAP

Figure 2

NTS Ref: 105A/2, 11	REVISIONS
Work by: G. WESA	Work by:
Drawn by:	Drawn by:
Date: NOVEMBER, 1996	Date:

Scale: 1/2" = 1 mi

6347  
116  
YON  
42 YB76343

093660

129°15'

60°30'

ROAD  
MARTEN  
YB72681 YB72679 YB72677

## **HISTORY OF EXPLORATION:**

### **Regional History:**

Although it was recognized for several years that the area had potential to host volcanogenic massive sulphide (VMS) deposits, relatively little exploration was conducted by mining companies south of Simpson Lake.

Occurrences of this type of mineralization, although not previously classified as VMS mineralization, have been known in Finlayson Lake area since the early 1960's. During this period, the FYRE and PAK occurrences were first staked, 13 km and 26 km south, respectively, of the present day Kudz Ze Kayah deposit. During the mid-1960's, the area became active following discovery of the Faro zinc-lead-silver ore deposit.

Between the early 1970's and 1980's, several companies conducted regional exploration programs in the area for SEDEX and VMS mineralization and tungsten skarns. In 1973, the FETISH claims were staked by Finlayson Joint Venture 25 km east of Kudz Ze Kayah. The PY claims were staked in 1975 by Cyprus Anvil Mining Corporation 40 km southeast of Kudz Ze Kayah.

In 1988 the G.S.C. released Open File 1648, causing many claims to be staked over gold and arsenic-in-stream silt anomalies.

Current exploration activity in Finlayson Lake area commenced in fall, 1993, when Cominco performed soil geochemical and geophysical surveys in a drainage in which a government stream sediment survey recorded strongly anomalous lead, zinc and copper. Prospecting downstream from the survey area located a cobble of banded massive sulphide float. The first hole, drill in April, 1994, immediately intersected the deposit. Cominco quickly followed up with regional-scale, helicopter-borne EM and MAG surveys followed by a major staking program. By fall, 1994, 4,200 claims were staked and development in 1995 continued with construction of a 25 km access road connecting the camp site and deposit with the Robert Campbell Highway. Published reserves to the end of 1996 are 13 million tonnes grading 5.5% Zn, 1.0% Cu, 1.3% Pb, 125 g/t Ag and 1.2 g/t Au.

The Simpson Lake Group of claims were staked commencing in January through to April, 1996. Staking was performed by contract stakers for Pacific Bay Minerals Ltd. and Demand Gold Ltd. to protect ground reported to host mineral showings and anomalous stream geochem values. The claims cover potentially favourable ground belonging to Yukon-Tanana Terrane and Slide Mountain Terrane near the junction of the Tintina Fault Zone and the Finlayson Lake Fault Zone.

### **Property History:**

A review of government assessment files does not reveal any record of work for the area covered by the Simpson Lake Group of claims.

## **GEOLOGY:**

### **Regional Geology:**

A large portion of the western to southeastern Yukon, from the Alaska border to British Columbia, is underlain by a geologically complex terrain composed of polydeformed, dynamothermally metamorphosed sedimentary, volcanic and plutonic rocks. These rocks have been grouped within the Yukon-Tanana and Slide Mountain Terranes and are believed to represent a mid-Paleozoic volcanic-plutonic arc assemblage (Yukon-Tanana Terrane) umbricated with middle and upper Paleozoic ophiolitic sheets (Slide Mountain Terrane); these accreted terranes are believed thrust northeastward over the North American Continental Margin (Figure 3). This allochthonous assemblage is preserved in klippen above autochthonous, structurally umbricated Paleozoic and lower Mesozoic North American shelf strata in the central to southeastern Yukon.

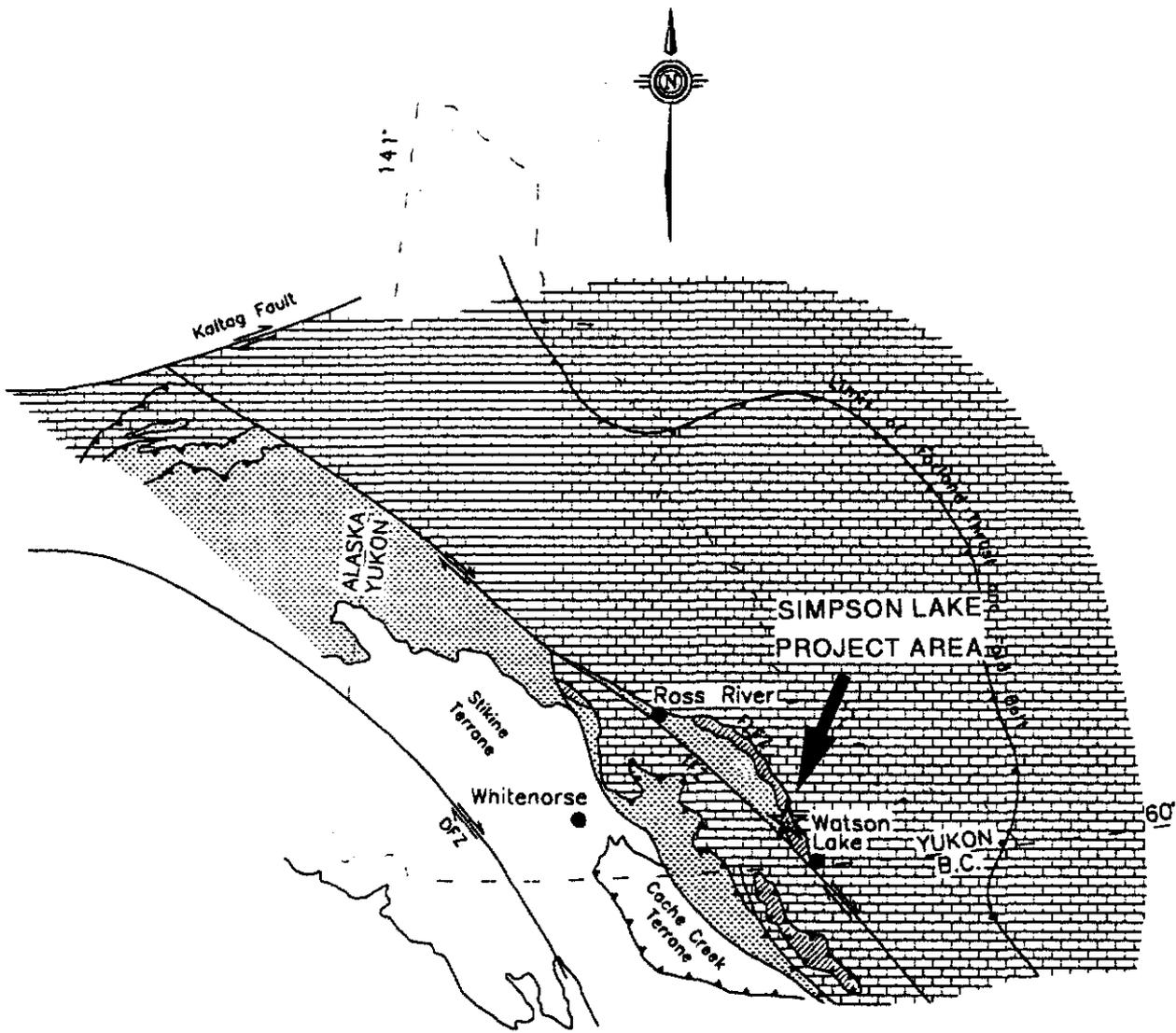
The southwestern side of the allochthon is bounded by the Tintina Fault Zone comprising a series of subparallel transcurrent faults which have produced 450 km of dextral displacement during late Cretaceous and/or early Tertiary times. The northeastern boundary traces a broad arc marking the surface expression of the Finalyson Lake Fault Zone which comprises a complex assemblage of thrust and high angle faults that may, in part, represent a transpressive paleosuture. Both faults juxtapose the allochthonous rocks with autochthonous rocks of the North American miogeocline (Figure 4).

Rocks of the Yukon-Tanana and Slide Mountain Terranes are believed to have evolved offshore of North America in Paleozoic and early Mesozoic time and were subsequently deformed and metamorphosed in pre-early Jurassic time in a southwest dipping, right-oblique subduction system. These rocks were derived from a basin which formed outboard of present day, western North America. This basin was constructed, in part, on oceanic crust locally preserved as ophiolitic assemblages within the Slide Mountain Terrane.

The Yukon-Tanana Terrane is divided into three structural assemblages (Mortensen, 1992):

1) the Nisling Assemblage comprising a structurally lower package of Proterozoic to lower Proterozoic (Cambrian) quartzofeldspathic siliclastic (quartzitic) rocks and marble interpreted as a continental margin sequence; 2) Nasina Assemblage comprising a middle structural package of late Devonian to middle Mississippian carbonaceous quartzite, marble, metasedimentary and mafic to felsic metavolcanic rocks with lesser metaplutonic rocks, interpreted as a continental arc system; and 3) an upper package of mid-Permian felsic metavolcanic and metaplutonic rocks (including Klondike Schist) interpreted as either a continental arc or an anorogenic magmatic suite.

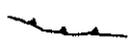
Yukon-Tanana rocks are generally more metamorphosed and contain more felsic metaplutonic suites whereas Slide Mountain Terrane is characterized by the presence of obducted ophiolitic rocks. These lithologies comprise massive to pillowed greenstones, basalt, chert and variably serpentized mafic to ultramafic plutonic rocks. This suite of rocks has been interpreted by Tempelman-Kluit (1979) and Mortensen and Jilson (1985) as fragments of a dismembered ophiolite complex. The rocks range in age from late Devonian to early Permian based upon U-Pb zircon dating methods and fossil ages. Fossil collections made in the Anvil district from ophiolitic



Scale: 1:10,000,000

**LEGEND**

-  North American Miogeoclinal Strata
-  Yukon - Tanana Terrane
-  Slide Mountain Terrane

-  Thrust Fault
-  Strike-Slip Fault, with sense of movement
- FLZ - Finlayson Lake Fault Zone
- TFZ - Tintina Fault Zone
- DFZ - Denali Fault Zone

After Mortensen & Jilson, 1985.

<b>PACIFIC BAY MINERALS LTD.</b>	
VANCOUVER, BRITISH COLUMBIA	
<b>SIMPSON LAKE GROUP</b>	
<b>REGIONAL TECTONIC MAP</b>	
Figure 3	
NTS Ref: <b>105A/6, II</b>	REVISIONS
Work by: <b>G. Wesa</b>	Work by:
Drawn by:	Drawn by:
Date: <b>March, 1997</b>	Date:
Scale:	

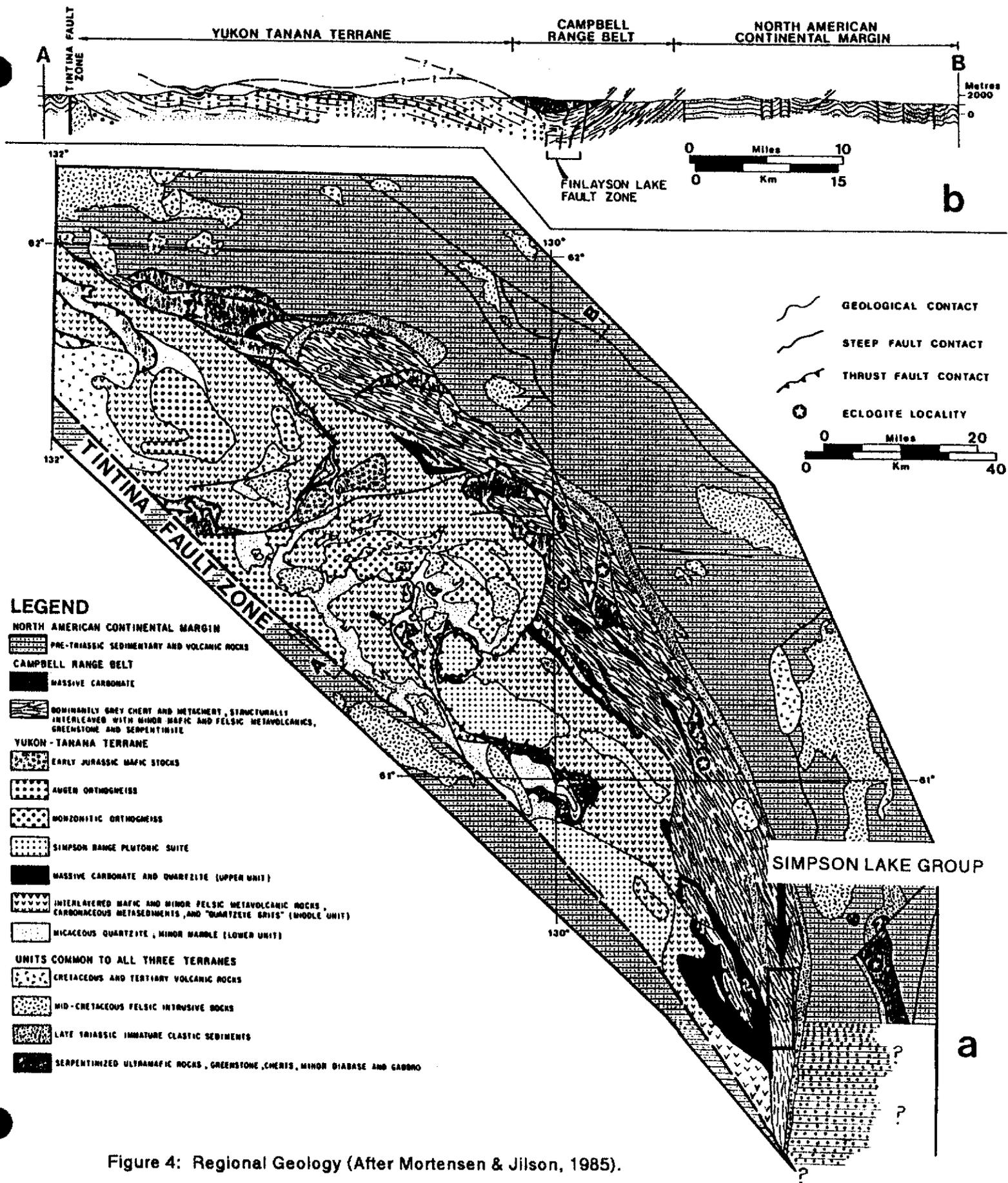


Figure 4: Regional Geology (After Mortensen & Jilson, 1985).

rocks of the Anvil Range Group (Tempelman-Kluit, 1972) gave latest Pennsylvanian or earliest Permian ages. These ages were recorded from fusulinids and conodonts interfingering depositionally with red and green chert and basalt of the Anvil Range assemblage.

The Slide Mountain Terrane is believed to be a key element in the reconstruction of ancestral North America in late Paleozoic time (Nelson and Bradford, 1993). The terrane comprises a belt of klippen preserved along the length of the Canadian Cordillera. Representative of the Slide Mountain Terrane is the Sylvestor allochthon located in the Midway-Cassiar area of northern British Columbia.

Devonian to late Triassic oceanic sedimentary and volcanic strata of this allochthon are complexly interleaved in tectonic slices bounded by subhorizontal, layer-parallel, younger-over-older faults that juxtapose unrelated rock types. Faulting occurred synchronously with deposition. The allochthon comprises oceanic and arc components divisible into three lithologic and structural packages: 1) Pennsylvanian - Permian calc - alkalic to alkalic igneous rocks representative of an island arc; 2) Mississippian-Permian mid-ocean ridge basalt with argillite and chert indicative of marginal basin sedimentation; and 3) marginal basin strata with shallow-water limestone and siliciclastic components indicative of continental provenance.

The Slide Mountain Terrane is broadly oceanic in character, yet typically lies in direct structural or stratigraphic contact with continental margin sequences. A study of the Sylvestor allochthon shows that the lowest and middle divisions of this allochthon are representative of the Slide Mountain Terrane which also includes the Anvil allochthon proper (Tempelman-Kluit, 1979a; Mortensen and Jilson, 1985). These divisions comprise: 1) pelagic and hemi-pelagic sediments with a minor basaltic component representative of a deep-water sedimentary basin and 2) interleaved basalt-diorite-sedimentary rocks and ultramafic-gabbro slivers that, combined, constitute a late Paleozoic ophiolite suite, respectively (Nelson and Bradford, 1993).

### **Regional Economic Geology:**

The geologically complex Yukon-Tanana and Slide Mountain Terranes are host to a variety of economically important classes of mineral deposits in the Finlayson Lake area.

Four classes of stratabound, syngenetic mineralization have been identified in YTT. These are: 1) Kuroko-type VMS deposits, hosted by metamorphosed felsic volcanic and subvolcanic rocks; 2) Besshi-type VMS deposits, hosted mainly by metamorphosed mafic volcanic and associated sedimentary rocks; 3) SEDEX-type deposits, hosted mainly by metamorphosed carbonaceous siliciclastic rocks, and 4) Cyprus-type massive sulphide deposits associated with low-K basaltic volcanics that form the upper portions of ophiolite complexes.

- In the Finlayson Lake area, Kuroko-type VMS mineralization occurs within felsic metavolcanic and volcanoclastic assemblages of early Mississippian age. These occurrences are spatially associated with deformed subvolcanic domes or thick sills with their distal equivalents interfingering with carbonaceous siliciclastics. The ABM deposit, PAK and FETISH occurrences are in this class.

- Besshi-type VMS mineralization is associated with interlayered mafic metavolcanic rocks, carbonaceous schist and fine grain siliciclastics of the Nasina Assemblage. The Fyre Lake occurrence has been classified as a Besshi-type. Mineralization is crudely zoned with a sulphide-rich facies consisting predominantly of fine grain pyrite with minor chalcopyrite and sphalerite and an oxide-rich facies consisting of siliceous, chlorite-rich, magnetite iron formation with disseminated pyrite, pyrrhotite and chalcopyrite.
- The SEDEX-type of mineralization (HOO deposit) also occurs in Finlayson Lake area but does not occur in the vicinity of the Simpson Lake Group and is not an exploration target.
- Cyprus-type massive sulphide deposits occur in ophiolite complexes of various ages. The lithologic sequences hosting these deposits formed within the environment of active basaltic submarine volcanism that characterizes spreading sea floor or behind-arc systems where new oceanic crust is being formed. The ophiolite complexes that contain Cyprus-type deposits may become strongly dismembered in the process of incorporation into continental margins. The ICE deposit is considered to be a Cyprus-type VMS deposit. A brief description of some of the more important deposits in the region is presented below:

**Kudz Ze Kayah Project (ABM deposit):**

The discovery of the ABM deposit by Cominco geologists followed a program of prospecting and contour soil sampling aimed at locating the source of anomalous Zn, Pb and Cu concentrations detected in stream sediments by a G.S.C. regional stream sediment and water geochemical survey (G.S.C.O.F. 1648). A small cobble of banded massive sulphide mineralization found by Cominco geologist A.B. Mawer, in 1993, provided the encouragement to continue exploration with a UTEM ground electromagnetic survey. This survey and soil geochemical surveys outlined a drill target about one kilometre up ice from the mineralized float. The discovery hole was drilled in April, 1994 resulting in an intercept of 22.5 metres grading 0.5% Cu, 2.8% Pb, 10% Zn, 278 g/t Ag and 1.2 g/t Au.

The ABM deposit lies in a belt of metamorphosed rocks referred to as the Yukon-Tanana Terrane. The deposit is a volcanic hosted massive sulphide body within a thick complex of felsic tuffs and sills or flows interlayered with minor mafic sills or flows and sedimentary rocks. A subhorizontal to moderately north dipping, penetrative schistosity affects the deposit and the rocks which host it. Units exhibit isoclinal, recumbent folding with bedding generally paralleling schistosity. As a result of folding, the ABM deposit itself, at least in part, is overturned. Evidence for overturning includes base and precious metal and barium zonation within the deposit, the position of proximal chloritic alteration above portions of the deposit and litho-geochemical signatures which suggest a petrogenetic link between units hosting the deposit and those overlying them.

The deposit subcrops beneath 2 to 20 metres of glacial overburden. It measures roughly 700 metres east-west along strike and extends as much as 400 metres downdip. Over much of its areal extent, the deposit is sheet-like and forms a main, single layer; in the southwestern part, two main layers of sulphides merge locally into a

single thick zone. The sulphide sheets range in thickness from less than 2 to 39 metres. The southeastern part of the deposit has been down-dropped about 150 metres by a fault which dips at 70° to 75° to the southeast.

At the end of 1996, a geological resource of 13 million tonnes of 5.5% Zn, 1% Cu, 1.3% Pb, 125 g/t Ag, and 1.2 g/t Au was defined, based on 8300 metres of drilling in 50 NQ diameter holes drilled on 50 and 100 metre centres.

The metamorphic rocks which host the sulphide horizon have been derived from a variety of igneous and sedimentary protoliths. Sulphide mineralization is now hosted by quartz-muscovite-carbonate schist within a sequence of chlorite schist (mafic metavolcanic), quartz-sericite-schist (rhyolite), feldspar porphyry and black phyllites. Chlorite, albite and carbonate alteration are associated with the deposit. Three types of mineralization have been recognized: well-laminated magnetite-pyrite; buckshot-textured pyrite-sphalerite in laminated siliceous-carbonate gangue, and net-textured pyrrhotite-pyrite-chalcopyrite-chlorite. Up to 2% Ba is associated with mineralization. The association of magnetite with sulphides, which makes up about 1/3 of the mineralization, is unusual for VMS deposits.

### **Wolverine Zone:**

The Wolverine Lake properties, owned by Atna Resources, were identified as prospective ground by Westmin Resources in late 1994. In January, 1995 Westmin finalized an option agreement with Atna on 143 claims in Foot, Toe and Pak properties and subsequently added more claims in spring and summer of 1995. Westmin has presently increased its land holdings to approximately 2,200 claims.

The Wolverine Zone is located 25 km east of Kudz Ze Kayah near a contact between Yukon-Tanana and overlying Slide Mountain rocks. It lies within the middle unit of a Paleozoic layered metamorphic sequence. The zone is hosted within felsic (rhyolitic) metavolcanics interbedded with carbonaceous argillites and quartz grits thought to be Devonian-Mississippian in age. Mineralization consists primarily of semi-massive to massive sulphides. Pyrite and sphalerite occur with varying amounts of galena, chalcopyrite, tetrahedrite and native gold. The surface expression of the zone is marked by a vegetation kill zone containing weakly malachite-stained schist. At the end of 1995, Westmin had intersected the zone in fifteen consecutive diamond drill holes and traced it 400 metres along strike and up to 250 metres down-dip. It averages 6.2 metres thick with shallow dips to the north. Although the zone is blind to surface, it is open down-dip and along strike in both directions. The Wolverine deposit contains significantly more zinc and precious metals than the Kudz Ze Kayah orebody. The weighted average grade for intersections reported to the end of June, 1996 was 13.0% zinc, 1.3% copper, 1.4% lead, 350 g/t silver and 1.9 g/t gold with a resource estimate of 3.1 million tonnes. Soil geochemistry outlined weakly to moderately anomalous values along the projected surface trace of the zone while magnetic surveys easily traced a laterally extensive banded iron formation which occurs about 80 metres up-section from the massive sulphide horizon.

To the end of the 1996 field season, a total of 72 drill holes have been completed on the Fisher, Sable and Lynx zones at Wolverine. The final holes, drilled in the new Lynx zone, immediately west of the Wolverine zone, have produced exceptional grades of up to 33% Zn, 19 oz/t Ag and 0.15 oz/t Au across a three metre intersection. A current geological resource in excess of 5.0 million tonnes is apparent.

### **Fyre Lake Project:**

The Fyre Lake property lies within the Finlayson Lake District where prior work outlined flat-lying, massive sulphide mineralization on surface which remains open for reserve delineation in all directions. Fyre Lake was the original polymetallic, volcanogenic massive sulphide discovery in the Finlayson Lake area.

At the Fyre Lake property, the potential for several volcanogenic massive sulphide copper-cobalt-gold deposits is indicated along a 13 km. belt. To date, Columbia Gold Mines Ltd. has drilled 71 holes that have defined the open ended Kona deposit over a length of 1 km within a 3.5 km long target.

The Fyre Lake volcanogenic massive sulphide copper-cobalt-gold property is situated immediately east of Fire Lake along the North River drainage, approximately 160 km. northwest of Watson Lake, Yukon Territory. The 70 square kilometre property, comprising 196 claims, is located approximately 30 km south of Cominco's Kudz Ze Kayah polymetallic deposit and 30 km southwest of the Atna-Westmin Wolverine discovery.

Massive sulphide mineralization was first discovered on the property in 1960 by Cassiar Asbestos Corporation, and since then various companies, including Atlas Explorations (1966-67), Amax Potash Limited (1976), Welcome North Mines Ltd. (1980-81) and Placer Dome Explorations (1990-91), explored their respective claim holdings with a variety of surface surveys plus 23 shallow packsack (224 m) and 20 AX (1423 m) drill holes.

Columbia Gold Mines Ltd. acquired the property from Welcome Opportunities Ltd. in 1995 and between late June and early October, 1996, conducted an integrated exploration program over three grid areas which include (from north to south): the "Kona" grid area that covers the Kona Creek drainage and the original massive sulphide discoveries; the "Lake" grid area, situated immediately east of the south end of Fire Lake, that covers geochemical and geophysical anomalies reported by Atlas Explorations and Placer Dome, and the "Dub" grid area on the east side of the North River three to seven kilometres southeast of Fire Lake. A total of 142.8 line-km of combined geological, geochemical, and geophysical surveying was carried out and 71 NQ- and/or BQTK-core diamond drill holes, totalling 9531.51 metres, were completed within the Kona grid area. This drilling has partially tested the Kona copper-cobalt-gold VMS deposit along a portion of the 3.5 km long anomaly within the Kona zone. There remain two more three-kilometre long geochemical-geophysical anomalies within the other two grid areas yet to be drill tested.

The Fyre Lake property is underlain by a sequence of metamorphosed sedimentary and volcanic rocks belonging to the Layered Metamorphic Sequence ("LMS") (Mortensen, 1985) or Klondike Schist (Tempelman-Kluit *et al.*, 1977) of the Yukon-Tanana Terrane. The LMS is composed of three units; lower and upper metasedimentary units separated by an interlayered, metamorphosed volcanic-sedimentary middle unit. The lower metasedimentary rocks crop out predominantly along the western side of the property and a belt of metamorphosed mafic volcanic and carbonaceous, clastic sedimentary rocks of the middle member underlie the centre of the property. The eastern portion of the property contains a thin wedge of upper unit metasedimentary rocks that is overthrust by the late Devonian to late Pennsylvanian-early Permian Slide Mountain Terrane (Anvil-Campbell Allochthonous Assemblage).

Copper-cobalt-gold VMS mineralization within the Kona grid area is hosted by a well deformed and moderately metamorphosed chlorite to quartz-chlorite schist sequence which is interpreted to be a succession of mafic to possibly intermediate flows with interbedded tuffs and volcanically-derived, fine grain sedimentary rocks belonging to the middle unit of the LMS. The chloritic schist sequence is overlain by a micaceous quartz schist unit which is, in turn, overlain by a thick sequence of phyllite of the upper metasedimentary sequence.

The Kona deposit, situated within the Kona Creek drainage, has at least three distinct horizons of massive to semi-massive sulphide and magnetite mineralization with a combined mineralized thickness of 70 to 80 metres, a continuous strike length of more than 1000 metres and widths in excess of 100 metres. A brief description of the three mineralized horizons is as follows:

- 1) The "Lower Horizon" is hosted by chlorite and quartz-chlorite schists and measures 4 to 12 metres thick. The horizon is comprised of less than 1- to more than 6-metre thick alternating layers of massive sulphide and massive magnetite mineralization.
- 2) The "Middle Horizon" is also hosted by chlorite and quartz-chlorite schists and averages five metres thick. It hosts similar mineralization with copper, gold and cobalt grades equivalent to the Lower Horizon.
- 3) The "Upper Horizon" is situated immediately beneath the stratigraphic metavolcanic-metasedimentary contact of the quartz-chlorite schists with upper micaceous phyllites, and it is the most laterally continuous mineralization tested to date. This horizon varies from 6 to 40 metres thick and is comprised of individual 5- to 15-metre thick massive and semi-massive sulphide layers overlying 2- to 27-metre thick banded magnetite horizons.

The massive sulphide mineralization of the Kona deposit is comprised of fine to coarse grain pyrite, chalcopyrite, pyrrhotite and sphalerite while the associated semi-massive sulphide mineralization consists of thinly laminated pyrite, chalcopyrite  $\pm$  pyrrhotite within alternating laminae of very fine grain siliceous chlorite schist (ie meta-tuff and

chert). Banded and massive magnetite layers host trace to 10 percent sulphides, usually chalcopyrite, pyrite and rarely bornite. The Lower and Middle Horizons have the highest gold values associated with the copper mineralization (ie: Drill Hole 21 intersected 6.6 metres grading 1.77% Cu, 1.26 g/t Au, 0.73% Zn and 0.22% Co) while the copper metal grades are relatively higher in the Upper Horizon (ie: Drill Hole 65 graded 2.29% Cu, 0.52 g/t Au, and 0.07% Co over 31.3 metres).

The Kona VMS mineralization has been drill-tested over a combined length of 1000 metres within a coincidental geochemical and geophysical (Magnetic and MaxMin EM) anomaly extending over a 3.5 km strike length. The drill-tested mineralization is open for expansion. The two 3-kilometre long coincident geological, geochemical and geophysical anomalies lie within the Lake and Dub survey grid areas and remain to be tested by drilling.

The Fyre Lake property has the potential for hosting extensive copper-cobalt-gold VMS mineralization with significant thickness, grade and lateral continuity. A major drilling campaign is planned for 1997. Drilling to date on the Kona deposit has delineated a resource exceeding 5.0 million tonnes.

### **Ice Property:**

The Ice property covers a new deposit in basalt of the Slide Mountain Terrane that has seen almost no previous exploration. The property is located 60 km east of Ross River in the Finlayson Lake area of southeastern Yukon. Expatriate Resources Ltd. owns a 100% interest in 1081 claims that cover the deposit and extensions of the favourable geology. The main area of interest is in a range of low hills 17 km north of the Robert Campbell Highway.

A prospector found the first mineralization in early June, 1996 and soil geochemical and geophysical surveys began almost immediately. Diamond drilling commenced in July, 1996 and by late October, 34 holes totalling 2704 metres were completed. The first 33 holes outlined a 450 by 200 metre zone of secondary copper mineralization while Hole 34 intersected a non-outcropping, unoxidized, Cyprus-type VMS body.

The VMS discovery intersection averaged 5.20% copper, 0.6 g/t gold, 25 g/t silver and 0.06% cobalt over an approximate true width of 20.56 metres. Mineralization comprises pyrite, chalcopyrite, bornite and lesser digenite with minor quartz  $\pm$  calcite gangue. Most of the pyrite occurs in pebble to cobble size fragments which are surrounded by the copper-bearing minerals. The sulphides exhibit sharp contacts with the surrounding unmineralized basalt and there is no underlying stockwork or breccia that would suggest proximity to a vent. Narrow, barren pyrite lenses intersected in other holes probably lie nearer the edge of the VMS system.

The secondary copper zone is believed to have formed when near surface sulphide mineralization oxidized, and the copper was leached, transported in acidic groundwater and then reprecipitated. The source of the secondary copper zone has not yet been identified but it is thought to be VMS similar to that intersected in Hole

34. The secondary copper mineralization consists of fracture-filling cuprite, tenorite, malachite, azurite and native copper plus chalcocite overprinting barren pyrite lenses up to 2 metres thick. Secondary mineralization is restricted to the zone of weathering which extends downward to a maximum depth of 60 metres below surface. The underlying rocks consist of fresh, unmineralized basalt. The mineralogy and geometry of the secondary copper zone makes it well-suited for low cost open pit mining and solvent extraction/electrowinning metallurgy.

Helicopter-borne magnetic and electromagnetic surveys were flown over the entire property in late fall and these detected the known mineralization plus a number of other targets. These surveys are expected to form the basis of property-wide exploration to be conducted in 1997.

### **Property Geology:**

Regional geological mapping by several workers indicates that the area covered by the Simpson Lake Group is characterized by great internal structural complexity. Bedrock geology constitutes a late Paleozoic ophiolite suite comprising mainly chert intercalated with minor mafic to felsic metavolcanics, greenstone (basalt-diabase-sedimentary lithologies) and ultramafic-gabbro (serpentinite) slivers. Mortensen and Jilson (1985) refer to these ophiolitic assemblages as the Campbell Range Belt.

### **Lithologies:**

No current geological maps of appropriate scale are available for the project area. Geological mapping on selected portions of the Simpson Lake Group, by Pacific Bay Minerals Ltd. personnel, identified the predominant lithologies to comprise a suite of sedimentary rocks overlain by intermediate to mafic metavolcanic rocks. These units are exposed along a northeast-southwest trending ridge in the north western corner of the BAY claims.

The basal lithology is a light to medium grey, mainly massive, cryptocrystalline chert commonly coated with a rusty, variably carbonaceous surface stain. This lithology is exposed in isolated outcrops and talus debris on steep slopes in the region. A measured thickness was not determined; however, this unit may be several hundred metres thick.

Overlying this lithology is approximately 150 metres of pale cream to medium grey, fine to coarse crystalline, thin bedded to massive, locally sucrosic (dolomitic), pale grey weathering limestone. This unit encloses thin beds or lenses of pale grey quartzite, limey argillite or argillaceous limestone and thin argillite layers. Limestone is exposed in cliffs where it commonly exhibits differential weathering. A single horizon of interbedded argillite and dark quartzite was observed contained within the massive carbonate unit.

The carbonate unit is overlain in turn by an undetermined thickness of mesocratic, foliated, chlorite-talc  $\pm$  quartz schist enclosing abundant flattened and deformed clasts possibly resembling lapilli fragments. The protolith may have been an intermediate submarine pyroclastic rock, possibly an ash to lapilli tuff.

### **Structure:**

Pervasive dense forest cover precludes the determination of regional structural trends; however, examination of air photographs indicates the claims area is affected by predominant NE-SW trending linears. A northwest-southeast trending fault displaces exposed stratigraphy along the previously mentioned ridge on the BAY claims. Stratigraphy southwest of the fault comprises the carbonate-argillite-chlorite-talc schist sequence. Northeast of this fault, the ridge is underlain by pale green, massive, foliated chlorite schist, approximately 150 metres of pale grey limestone and an undetermined thickness of massive, light grey chert.

Stratigraphy southwest of the fault dips approximately 20-22° north at 100° azimuth. Stratigraphy northeast of the fault appears to be folded about an anticline whose axial plane strikes northeastward at roughly 060° azimuth. Foliation dips roughly 20° northwest at 025° azimuth measured on the intermediate metavolcanics along the north trending ridge.

Lithological contacts were not observed during this survey; however, it is speculated that the major facies packages examined represent thrust slivers of allochthonous stratigraphy which has been structurally stacked reflecting telescoping of the continental margin basin.

### **Alteration:**

The lithologies described in the previous sections are unmetamorphosed with the exception of the volcanic package. These rocks exhibit weak to moderate chlorite-talc +/- carbonate alteration and occur as mesocratic, foliated, chlorite-talc ± quartz schist.

### **Mineralization:**

No visible sulphide mineralization was observed in these lithologies.

### **1996 EXPLORATION PROGRAM:**

#### **Geological Mapping:**

Less than 5% of the property was evaluated by geological mapping at a scale of 1:10,000 concurrent with prospecting and sampling. This effort focused on the northern half of the BAY claim and the BO 1-6 and JIM 1-10 claims. These areas were selected for mapping due to the presence of exposed bedrock exhibiting faulting and alteration and, more significantly, on the basis of electromagnetic anomalies detected by the AERODAT airborne survey.

#### **Geochemistry:**

AERODAT personnel categorized 14 conductive anomalies on a first to third priority basis and 9 of these were examined and sampled by Pacific Bay Minerals personnel. Outcrop is generally scarce in the conductive areas; however, existing exposures were examined and representative samples of lithotypes were collected for analysis where available.

A total of eight electromagnetic anomalies were gridded and soil sampled in the northern half of the BAY claims and central portion of the CAM claims. These anomalies are designated No's 1,2,3,5,6,7,8 and 9. Anomaly No. 4 was prospected but not soil sampled.

The size of the grids and lengths of the soil lines was determined by the strike length and azimuth of the respective geophysical anomalies delineated by the AERODAT survey. Soil samples were collected at 50 metre and 100 metre intervals along 50 to 100 metre spaced lines over the target areas.

### **Sampling Procedure:**

A total of 12 rock grab and float samples, 12 stream silt samples and 201 grid-controlled and contour soil samples were collected during the 1996 reconnaissance survey. Rock and float samples were selected from outcrops or regolith material which exhibited favourable characteristics of alteration and oxide staining. These were placed in coded plastic sample bags and sample sites were marked with similarly coded fluorescent ribbon.

Soil samples were collected from an average depth of 25-30 cm from pits dug with short handled mattocks, and were placed in numbered, large gusseted kraft paper soil bags. Samples generally reflect good representative B to C horizon soils obtained from moderately to well developed soil profiles. Soil composition ranges between dark brown to orange-brown and rusty sandy clays, silts and fine to coarse sands commonly containing chips and fragments of underlying, broken regolith. On steeper slopes, soils tended to be coarser, more gravelly and contained higher percentages of regolith chips. The latter probably represents downslope transported talus material.

Terrain covered by this soil survey is mainly rugged, steep and covered by dense forest cover. Steep and rocky slopes exhibit minimal to negligible soil development. Soils collected along ridges and knolls appear to exhibit a residual character and probably reflect in situ development. Glacial and glaciofluvial material is rare at higher elevations and bedrock occurs less than one metre below surface.

Soil samples collected from grids covering anomaly No's 8 and 9 represent soils developed in situ upon glaciofluvial material. These anomalies occur in an area of low relief characterized by muskeg swamps and poor drainage.

Stream silt samples were collected from streams draining the areas of the geophysical anomalies plus other drainages on the BO, MAN and BAY claims. These samples were collected in coded, large gusseted kraft paper sample bags and the sample sites were marked with similarly coded fluorescent ribbon.

Ground control for geological mapping and geochem sampling was provided by altimeter, compass and hip chain. Field crews were supplied with 1:10,000 scale contoured base maps and air photos for navigational purposes and plotting data. Analytical results are presented in APPENDICES IV, V and VI and geochemical values are plotted on Maps 1 to 7.

### **Rock Geochemistry:**

Concurrent with geological mapping, 12 rock grab and float samples were collected. Analytical results are presented in Appendix IV and rock sample descriptions are recorded in Appendix VII. Rock sample locations and analytical values are plotted on Map 1.

The majority of lithochem samples were collected from outcrop, subcrop and float debris. Samples were collected from exposures exhibiting foliation, variable degrees of chlorite-carbonate alteration and, less commonly, iron staining and slickensiding. No visible sulphides were detected and analytical results from these samples were not encouraging.

### **Soil Geochemistry:**

A total of 152 soil samples were collected from eight grids covering geophysical anomalies No's 1,2,3,5,6,7,8 and 9 (Maps 2-5). These grids were positioned using compass, altimeter and hip chain. The purpose of these grids was to provide control for a limited soil sampling survey performed over areas of low resistivity associated with conductivity intercepts. The direction of soil lines tended to coincide with the trend of respective electromagnetic anomalies. An additional 49 contour soil samples were collected from contour lines established in the vicinity of anomaly No.'s 1, 2, and 3.

Analytical results are low, recording moderately elevated values for Cu (146 ppm), Pb (102 ppm), Zn (392 ppm), Mo (37 ppm) and silver (4.3 ppm). No anomalous values were returned for other elements tested. In addition, weakly elevated gold-in-soil values of 10-17 ppb Au are documented. A single station anomalous gold value of 45 ppb Au was recorded from anomaly No. 7; no other corresponding anomalous element values are associated with this value. Analytical values are presented in Appendix V.

### **Stream Silt Geochemistry:**

Twelve stream silt samples were collected from selected locations along steep creeks draining the project area, specifically, the ridge in the northwestern portion of the BAY claims. Analytical results for gold and base metals are low. A single weakly elevated value of 19 ppb Au was recorded. Analytical values for these samples are presented in Appendix VI.

### **Geophysical Survey:**

A combined, helicopter-borne MAGNETIC, ELECTROMAGNETIC and VLF-EM survey was performed over the Simpson Lake Group in April, 1996 by AERODAT INC. Fourteen electromagnetic targets and seven major magnetic zones or horizons were delineated over the property (Figures 5 and 6). Ground examinations were conducted over some of these targets upon which data and conclusions were documented by AERODAT INC. R.W. Woolham, P.Eng., Consulting Geophysicist for AERODAT reports:

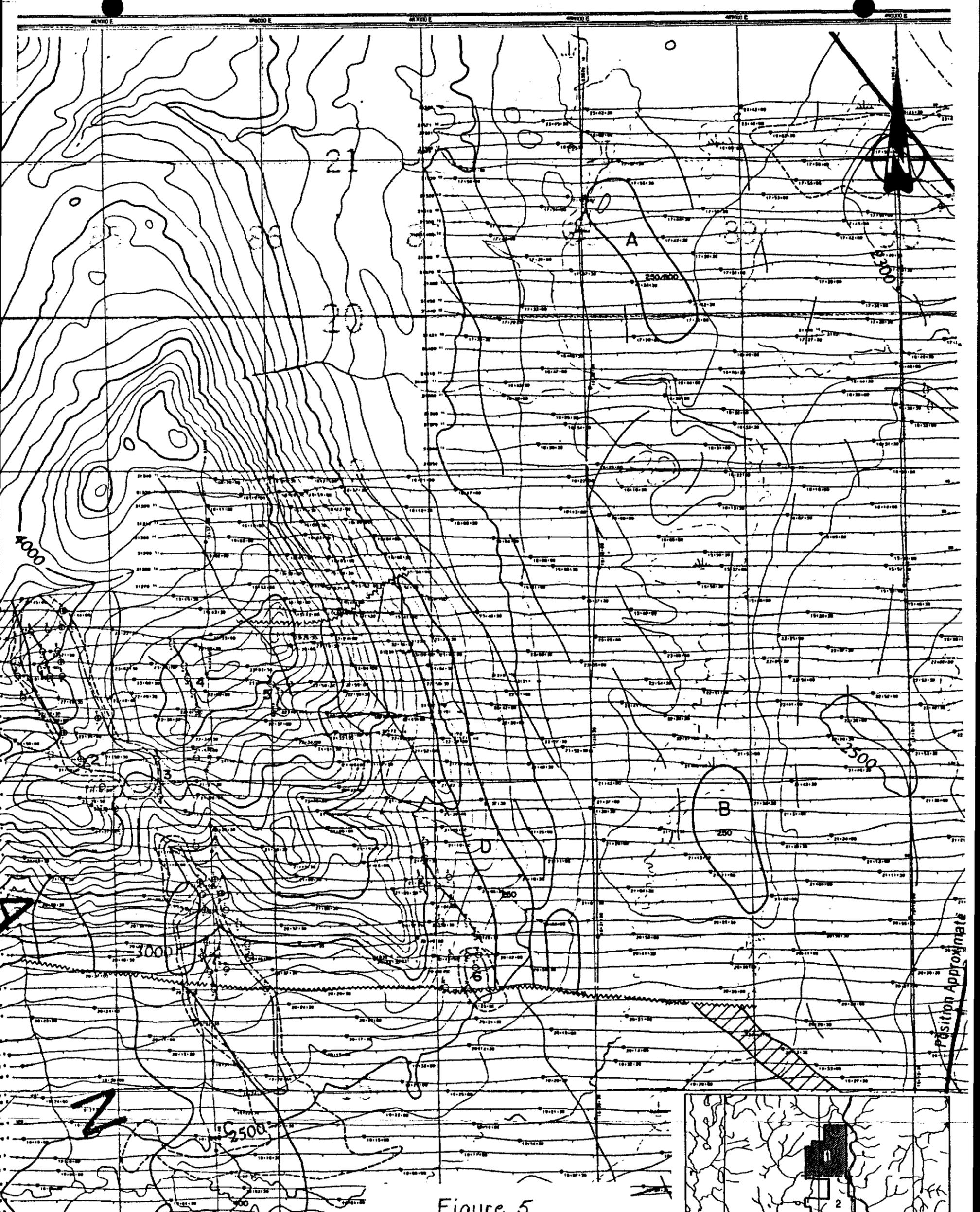
The magnetic background is interpreted to be approximately 58,220 nT. Amplitudes range from about 25 nT below background to 250 nT above background. The area is characterized by two main types of magnetic signatures. The most numerous are semi-circular to elongated, broad anomalies shown encircled with solid thick lines. Examples are anomalies A, B and C on the north sheet and anomaly G on the south sheet. The source of these anomalies is at some depth of burial. Half amplitude - half width values from 250 to 800 metres were measured over the anomalies. The source of these responses could be mafic plutonic or volcanic rocks buried by overlying non-magnetic rocks such as sediments or felsic volcanics.

The second type of magnetic anomaly has a more linear narrow character having strike extensions exceeding several kilometres. Wider anomalies are outlined while narrow, less well defined trends are shown with a single line. Examples of the former are anomalies D and E on the north sheet and F on the south sheet. Note anomaly D is related to a deep seated source while anomalies E and F are responses from relatively shallow bodies. As explained previously, shallow source responses are indicated with cross hatching. The negative east flank of anomalies E and F indicate the bodies are dipping to the west. The long formational anomalies are probably filled with mafic sill or dyke structures or mafic volcanic flow units. Anomalies E and F could reflect the same stratigraphic unit but displaced by thrust faulting or folding.

Two major east-west fault structures, one on each map sheet, are interpreted from the magnetic anomaly patterns. For the most part they appear to mark minor displacements and change in amplitude levels in the anomaly trends.

The low resistivity zones on this property are limited. Their major presence is in the west side of the north sheet where they form two elongated anomalies flanking the east side of a deep seated magnetic belt. Magnetic anomaly C is part of this belt. These low resistivity zones are associated with four designated conductors numbered 1, 2, 3, and 7. These conductors are additional to the conductivity and have profile signatures typical of vertical to near vertical tabular bodies.

Conductor 6 is essentially an isolated low resistivity zone with a north extension. It is selected because of its association with an east-west fault zone and adjacent magnetic response. The remaining anomalies, 4, 5, 7, 8 and 9 on the north sheet and 11 to 14 on the south sheet are relatively poor conductivity responses. They were selected because of their isolated characteristics exemplified particularly by conductors 4, 5, 8 and 9. Conductors 8, 9, 11, 12 and 13 have a spatial association with some magnetic features or trends and may be of more interest.



**EM ANOMALIES**

EM anomalies selected by computer algorithm and manually confirmed. Selection is based on the response correlation to theoretical source such as a steeply dipping conductor.

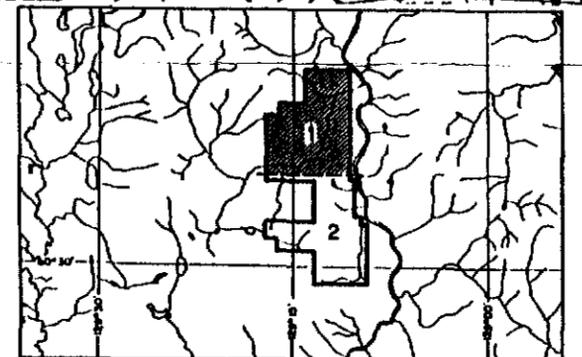
Calculation of conductance is based on the response of the 4800 Hz coaxial data, and forms the basis for anomaly classification.

Letter codes are used to identify individual anomalies on a line, and the inphase amplitude of the 4800 Hz response is annotated opposite.

- 0 - 1 mhos
- 1 - 2 mhos
- 2 - 4 mhos
- 4 - 8 mhos
- 8 - 16 mhos
- 16 - 32 mhos
- > 32 mhos

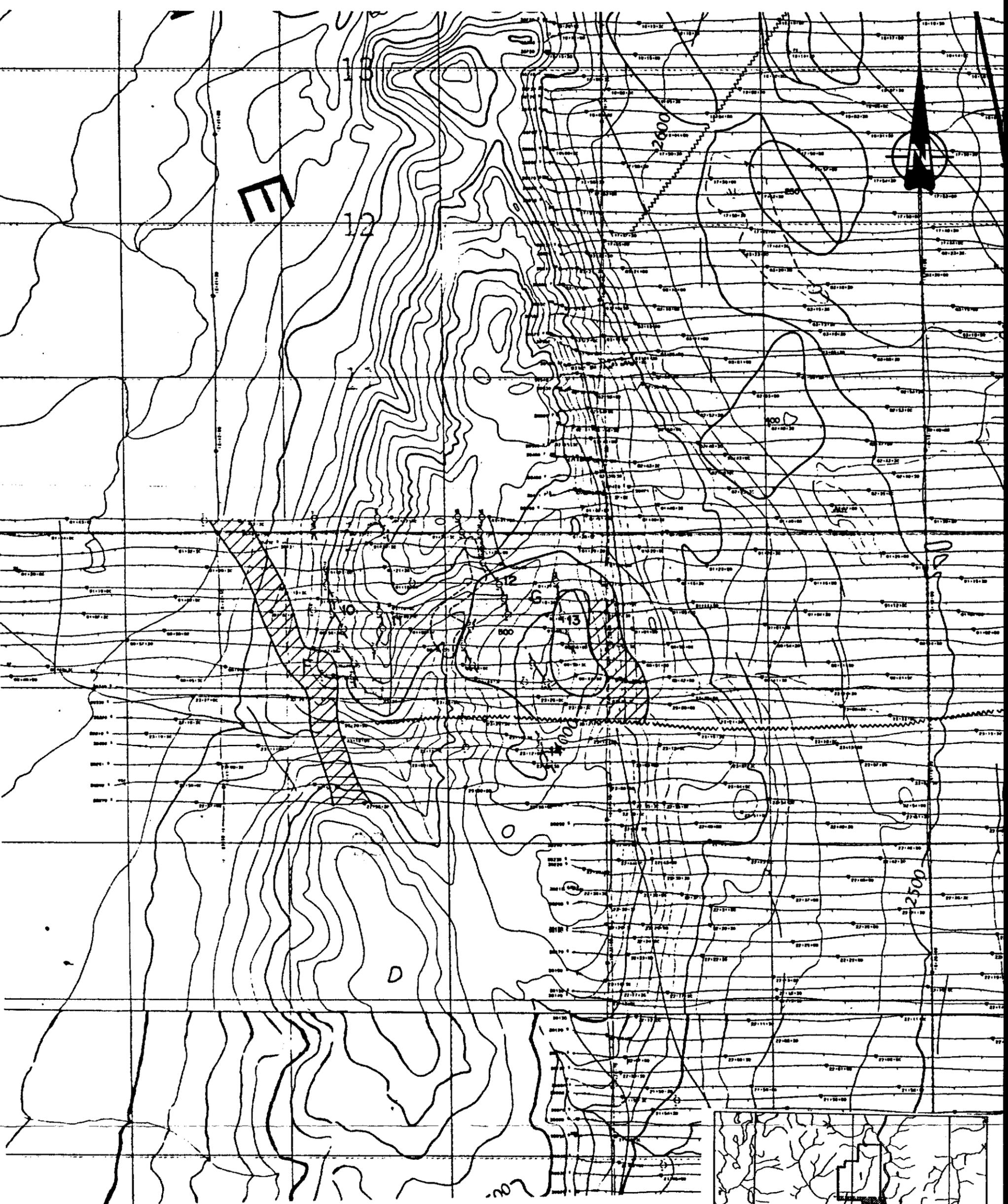
**Figure 5**  
**INTERPRETATION LEGEND**

- Major magnetic zone or horizon
- a) At depth
- b) Shallow
- Other magnetic trends
- Non-magnetic below-background zone
- 100 ohm-metre resistivity contour
- 50 ohm-metre resistivity contour
- Conductive trend
- Fault structure interpreted from magnetics
- Conductor designated for investigation
- Magnetic anomaly designated for reference (see report)



<b>PACIFIC BAY MINERALS LTD.</b>	
<b>INTERPRETATION</b>	
<b>SIMPSON LAKE CLAIMS</b>	
YUKON TERRITORY	
SCALE 1:10 000	
 AERODAT INC.	Date Flown: APRIL 1990
	NTS: 105 A/6, 105 A/11
	Project: J9631    Map Ref: 1 - 2

Position Approximate



**EM ANOMALIES**

EM anomalies selected by computer algorithm and manually confirmed. Selection is based on the response correlation to theoretical sources such as a steeply dipping conductor.

Calculation of conductance is based on the response of the 4600 Hz coaxial data, and forms the basis for anomaly classification.

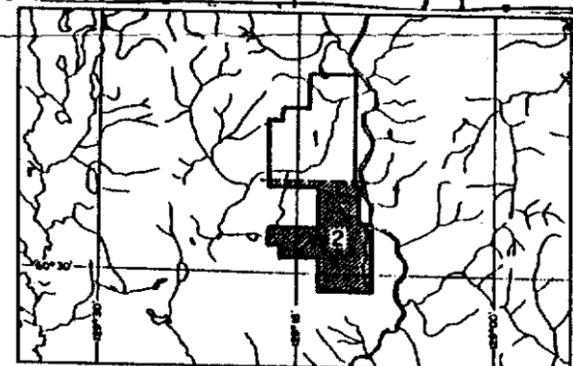
Letter codes are used to identify individual anomalies on a line, and the inphase amplitude of the 4600 Hz response is annotated opposite.

- 0 - 1 mhos
- 1 - 2 mhos
- 2 - 4 mhos
- 4 - 8 mhos
- 8 - 16 mhos
- 16 - 32 mhos
- > 32 mhos

**Figure 6**

**INTERPRETATION LEGEND**

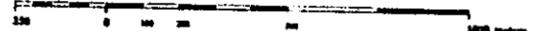
- Major magnetic zone or horizon
- a) At depth
- b) Shallow
- Other magnetic trends
- Non-magnetic below-background zone
- 100 ohm-metre resistivity contour
- 50 ohm-metre resistivity contour
- Conductive trend
- Fault structure interpreted from magnetics
- Conductor designated for investigation
- Magnetic anomaly designated for reference (see report)



**PACIFIC BAY MINERALS LTD.**

**INTERPRETATION  
SIMPSON LAKE CLAIMS  
YUKON TERRITORY**

SCALE 1:10 000



Date Flown: APRIL 1966

NTS: 105 A/8, 105 A/11

Project: J9631 Map Ref: 2 - 2

## **CONCLUSIONS:**

Geological mapping, prospecting and lithogeochemical soil and stream silt sampling, primarily on targets delineated by the AERODAT airborne geophysical survey, was the focus of the 1996 reconnaissance program on the Simpson Lake Group of claims. Mapping shows that the property is underlain by Slide Mountain Terrane comprising an assemblage of sedimentary rocks overlain by intermediate to mafic metavolcanic rocks. Sedimentary strata comprises cryptocrystalline chert and fine to coarse crystalline, locally sucrosic, limestone with thin interbeds of grey quartzite, limey argillite and shale/argillite. The metavolcanic sequence is represented by foliated chlorite-talc  $\pm$  quartz schist and chlorite schist. This stratigraphy is disrupted by several faults represented locally by drainages and small-scale gullies characterized by abrupt changes in lithology. Predominant NE-SW trending regional structures are crosscut by locally observed NW-SE trending faults.

Geological mapping and prospecting focused on structures where these were exposed on surface primarily in the northwestern portion of the BAY claims. It was not determined from this limited survey which fault set precedes the other or if both sets developed simultaneously. Faults probably represent high angle normal or reverse faults. High angle reverse faults may be a consequence of more deep-seated, low angle thrust faulting developed in the active portions of a diastrophic belt.

A total of 12 rock grab and float samples, 201 grid-controlled and contour soil samples and 12 stream silt samples were collected for analysis for the purpose of evaluating the property's economic potential plus following up geophysical anomalies delineated by the AERODAT airborne survey.

Small grids and contour soil lines were established over designated electromagnetic anomalies and possibly corresponding fault structures. Soil samples were collected at 50 and 100 metre intervals along 50 to 100 metre spaced grid lines. In addition, stream silt samples were collected from selected drainages to provide broader geochem coverage of the claims.

Low to weakly elevated gold values were recorded for all samples. Coincident, low to weakly elevated copper, lead, zinc and silver values were returned from all sample media.

Results from prospecting and sampling were disappointing; however, the presence of apparent structurally controlled, weakly elevated gold and base metal values associated with geophysical anomaly No's 1, 2, 3 and 7, suggests that mineralization may be related to buried structures. These results, plus the presence of untested geophysical anomalies located in the southern half of the project area (Figure 6), suggest that further investigation of this area is warranted. The presence of untested electromagnetic anomalies on the BOY and BILL claims indicates that this area may have potential to host structurally controlled mineralization. The BILL, BOY and MAN claims and other claim blocks in the southern part of the claim group were briefly prospected using cut trails and routes to access these claims via horseback and ATV. Detailed follow-up surveys were not conducted in this area during this program; however, there remain indications that the southern part of the claim group is a prospective exploration target. It may be concluded that buried fault zones are a significant factor in the control and emplacement of mineralization.

**RECOMMENDATIONS:**

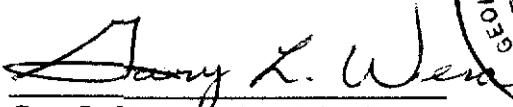
Although the results from the 1996 reconnaissance program were somewhat disappointing, there remain untested portions of the Simpson Lake Group possessing the potential to host base metal mineralization. Additional work is therefore required, particularly in the southern half of the property, to fully evaluate the property's mineral potential.

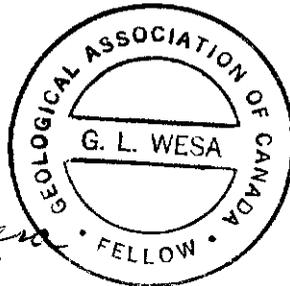
Conductive trends numbered 10, 11, 12 and 13 and magnetic anomalies F and G should be tested. These geophysical anomalies remain worthwhile targets and warrant further examination in the form of grid controlled soil sampling and prospecting. Soil lines spaced at 50 to 100 metres should be oriented parallel to the trend of the geophysical anomalies and sampled at 50 metre intervals. The location and azimuth of corresponding fault zones should be determined; however, this may prove difficult in the field due to the thick overburden and dense forest cover.

The grid-controlled soil survey would target areas of mineralized bedrock and possibly fault zones masked by glaciofluvial cover and forest.

Stream silt sampling should be incorporated with the grid-controlled soil survey to obtain a broader regional geochem signature of the area.

Respectfully submitted,  
*Pacific Bay Minerals Ltd.*  
*Demand Gold Ltd.*

  
\_\_\_\_\_  
Gary L. Wesa, B.Sc., FGAC



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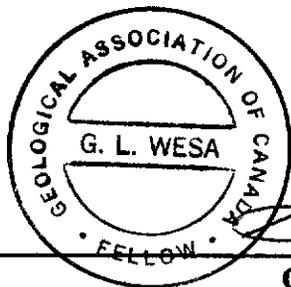
**STATEMENT OF QUALIFICATIONS**

I, Gary L. Wesa, of #309 - 6669 Telford Avenue, in the City of Burnaby, B.C., do hereby certify that:

1. I am presently employed as Project Geologist to Pacific Bay Minerals Ltd. with offices at #908-700 West Pender Street, Vancouver, British Columbia.
2. I am a graduate of the University of Saskatchewan with a B.Sc. Degree in Geology (1974) and I have practiced my profession continuously since graduation.
3. I have been employed in mineral exploration in Canada and the U.S.A. since 1970.
4. I am a Fellow of the Geological Association of Canada.
5. I have personally performed the work referenced in this report and I am familiar with the regional geology of nearby properties.
6. I am the author of this report which is based upon researched documents, referenced in this report, and supervision of the field program.

Dated at Vancouver, British Columbia this 24 day of March, 1997.

Respectfully submitted:



*Pacific Bay Minerals Ltd.  
Demand Gold Ltd.*

*Gary L. Wesa*  
\_\_\_\_\_  
Gary L. Wesa, B.Sc., F.G.A.C.

# **APPENDIX I**

## **Itemized Cost Statement**

## ITEMIZED COST STATEMENT

### FIELD COSTS:

#### Salaries:

Gary Wesa	9 days @\$200.00/day	\$ 1,800.00
Stephan Meinke	40 days @\$150.00/day	\$ 6,000.00
Andrew Harman	72 days @ \$200.00/day	\$14,400.00
Dean Harman	71 days @ \$125.00/day	\$ 8,875.00
Dan Brett	7 days @ \$175.00/day	\$ 1,225.00
Matt Griffin	10 days @ \$145.00/day	\$ 1,450.00
Rob Denholm	5 days @ \$ 85.00/day	\$ 425.00
Subcontractors		<u>\$37,325.00</u>

\$71,500.00

#### Field Expenses:

Accommodations and Lodging	\$ 1,730.19
Meals	\$ 2,779.16
Gas/Fuels	\$ 2,781.95
Travel/Airfare	\$ 1,700.00
Rentals/Communications	\$ 4,730.00
Freight/Shipping	\$ 250.00
Aircraft Charter	\$ 979.41
Truck Rental	\$ 8,750.00
Horse Rental	\$14,391.00
Veterinary Supplies/Feed	\$ 2,258.72
Misc. Supplies and Groceries	\$29,465.95
GST (7%) on Field Expenses	<u>\$ 4,887.15</u>

\$74,703.53

#### GEOPHYSICAL SURVEY: (AERODAT INC.)

\$85,082.39

#### GEOCHEMICAL ANALYSIS:

Rock Samples	12 @ \$16.00 per sample	\$ 192.00
Soil Samples	201 @ \$13.20 per sample	\$ 2,653.20
Silt Samples	12 @ \$13.20 per sample	\$ 158.40
G.S.T. (7%)		<u>\$ 210.25</u>

\$ 3,213.85

**OFFICE COSTS:**

**Salaries:**

Gary Wesa	30 days @ \$165.00 per day	\$ 4,950.00
Report Preparation/Post Field		<u>\$ 500.00</u>
		\$ 5,450.00

**TOTAL EXPENDITURES:** **\$239,949.77**

## **APPENDIX II**

### **Summary of Personnel**

## Summary of Personnel

<u>NAME</u>	<u>TITLE</u>	<u>ADDRESS</u>
Gary L. Wesa	Project Geologist	Burnaby, B.C.
Stephen Meinke	Geologist	Burnaby, B.C.
Andrew Harman	Prospector	Vancouver, B.C.
Dean Harman	Camp Manager	Vancouver, B.C.
Dan Brett	Prospector/Sampler	Point Roberts, WA
Matt Griffin	Sampler	Vancouver, B.C.
Rob Denholm	Sampler	Vancouver, B.C.
Tim Dunk	Prospector	Whitehorse, Y.T.

## **APENDIX III**

# **Analytical Procedure**

# ACME ANALYTICAL LABORATORIES LTD.

## Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C., Canada V6A 1R6

Telephone: (604) 253-3158 Fax: (604) 253-1716

## METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 1D - 30 ELEMENT ICP BY AQUA REGIA

### Sample Preparation:

Soils and sediments are dried (60°C) and sieved to -80 mesh (-177 microns), rocks and drill core are crushed and pulverized to -100 mesh (-150 microns). Plant samples are dried (60°C) and pulverized or dry ashed (550°C). Moss-mat samples are dried (60°C), pounded to loosen trapped sediment then sieved to -80 mesh. At the clients request, moss mats can be ashed at 550°C then sieved to -80 mesh although this can result in the potential loss by volatilization of Hg, As, Sb, Bi and Cr. A 0.5 g split from each sample is placed in a test tube. A duplicate split is taken from 1 sample in each batch of 34 samples for monitoring precision. A sample standard is added to each batch of samples to monitor accuracy.

### Sample Digestion:

Aqua Regia is a 3:1:2 mixture of ACS grade conc. HCl, conc. HNO<sub>3</sub> and demineralized H<sub>2</sub>O. Aqua Regia is added to each sample and to the empty reagent blank test tube in each batch of samples. Sample solutions are heated for 1 hour in a boiling hot water bath (95°C).

### Sample Analysis:

Sample solutions are aspirated into an ICP emission spectrograph (Jarrel Ash Atom Comp model 800 or 975) for the determination of 30 elements comprising: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

### Data Evaluation:

Raw and final data from the ICP-ES undergoes a final verification by a British Columbia Certified Assayer who then signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang.

# ACME ANALYTICAL LABORATORIES LTD.

## Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C., Canada V6A 1R6

Telephone: (604) 253-3158 Fax: (604) 253-1716

## METHOD FOR WET GEOCHEM GOLD ANALYSIS

### Sample Preparation:

Soils and sediments are dried (60°C) and sieve to -80 mesh.

Rocks and cores are crushed and pulverized to -100 mesh.

### Sample Digestion

1. 10g samples in 250 ml beaker, ignite at 600°C for four hours.
2. Add 40 ml of 3:1:2 mixture HCL:HNO<sub>3</sub>:H<sub>2</sub>O.
3. Cover beaker with lids.
4. Boil in hot water bath for one hour.
5. Swirl samples 2 to 3 times within the hour.
6. Cool, add 60 ml of distilled water and settle.
7. Pour 50 ml of leached solution using a graduated cylinder into 100 ml volumetric flask.
8. Add 10 ml of MIBK and 25 ml of distilled water.
9. Shake 3 to 4 minutes in shaker.
10. Add additional 25 ml of distilled water to stripe out excess iron.
11. Shake each flask 10 times.
12. Pour MIBK into container for graphite AA finished.

## **APPENDIX IV**

### **Rock Geochemical Lab Reports**



## GEOCHEMICAL ANALYSIS CERTIFICATE



Pacific Bay Minerals Ltd. PROJECT SIMPSON LAKE File # 96-3013 Page 1

908 - 700 W. Pender St., Vancouver BC V6C 1G8

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
96-SIM-R-M-01	<1	6	3	14	<.3	<1	<1	36	.09	<2	<5	<2	<2	265	.7	<2	<2	1	40.78	<.001	<1	<1	1.03	10	<.01	<3	.05	<.01	<.01	<2	2
96-SIM-R-M-02	5	5	3	8	<.3	11	<1	69	.35	<2	<5	<2	<2	8	.2	<2	<2	1	3.61	<.001	<1	8	.98	5	<.01	<3	.01	.01	<.01	<2	<2
96-SIM-R-M-03	<1	3	5	48	<.3	12	<1	123	.17	<2	<5	<2	<2	506	.9	2	<2	5	43.49	<.001	<1	2	1.43	44	<.01	3	.23	<.01	.01	2	<2
96-SIM-R-M-04	2	28	6	68	<.3	37	7	694	1.55	12	<5	<2	2	41	1.0	<2	<2	18	2.55	.059	7	38	1.00	207	<.01	3	1.01	.01	.12	<2	3
96-SIM-R-M-05	1	26	6	75	<.3	38	7	839	1.65	6	<5	<2	2	74	1.6	<2	<2	25	5.51	.028	6	52	1.11	236	<.01	3	1.10	.01	.14	2	4
RE 96-SIM-R-M-05	1	26	3	77	.3	40	7	853	1.69	4	<5	<2	2	75	1.7	<2	<2	26	5.63	.029	7	51	1.13	235	<.01	3	1.12	.01	.14	2	3
96-SIM-R-M-06	<1	134	<3	113	<.3	16	23	1657	5.05	2	<5	<2	<2	18	.4	<2	<2	121	1.37	.079	2	5	2.78	164	.45	<3	2.95	.02	.10	<2	2
96-SIM-R-M-07	1	5	<3	19	<.3	3	1	88	.29	7	<5	<2	<2	70	.3	<2	<2	4	11.29	<.001	<1	<1	.28	23	<.01	<3	.04	<.01	.01	<2	3
STANDARD C2/AU-R	20	57	37	141	6.3	76	36	1152	3.84	46	17	8	36	53	20.4	16	19	72	.55	.098	41	59	1.07	211	.08	28	2.00	.06	.14	11	495

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK AU\*\* ANALYSIS BY FA/ICP FROM 30 GM SAMPLE.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 20 1996

DATE REPORT MAILED: July 20/96

SIGNED BY: C. Leong .D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

## GEOCHEMICAL ANALYSIS CERTIFICATE

Pacific Bay Minerals Ltd. PROJECT SIMPSON LAKE File # 96-2788A

908 - 700 W. Pender St., Vancouver BC V6C 1G8



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
96-SIM-R-M-8	<1	3	4	14	<.3	3	1	503	.21	6	<5	<2	<2	187	1.7	<2	<2	1	39.89	<.001	6	7	.31	35	<.01	<3	.01	.01	<.01	<2	6
96-SIM-R-M-9	1	3	<3	16	<.3	4	1	194	.66	3	<5	<2	<2	9	<.2	<2	<2	2	.17	.026	1	10	.08	9	<.01	<3	.19	.06	.01	3	3
96-SIM-R-M-10	<1	2	<3	13	<.3	3	1	174	.16	<2	10	<2	<2	109	.8	<2	<2	<1	23.39	<.001	3	3	.38	11	<.01	<3	.03	.01	.01	<2	2
RE 96-SIM-R-M-10	<1	3	4	14	<.3	3	1	171	.14	<2	<5	<2	<2	119	.9	<2	<2	<1	25.46	<.001	4	<1	.42	12	<.01	<3	.03	.01	.02	<2	1

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 11 1996

DATE REPORT MAILED:

July 22/96

SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



## GEOCHEMICAL ANALYSIS CERTIFICATE



Pacific Bay Minerals Ltd. PROJECT SIMPSON LAKE File # 96-3103 Page 1

908 - 700 W. Pender St., Vancouver BC V6C 1G8 Submitted by: G. Wesa

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
96-SIM-W-R-01	5	54	<3	51	<.3	27	6	988	3.47	3	<5	<2	<2	30	<.2	<2	2	11	.23	.058	7	19	.05	57	.02	<3	.15	.08	.02	<2	19
96-SIM-W-R-02	2	72	5	58	<.3	10	7	794	2.43	<2	<5	<2	<2	71	<.2	<2	<2	54	.96	.037	8	12	.86	248	.23	<3	1.39	.03	.07	<2	17

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS &gt; 1%, AG &gt; 30 PPM &amp; AU &gt; 1000 PPB

- SAMPLE TYPE: P1 ROCK P2 SOIL P3 SILT AU\*\* ANALYSIS BY FA/ICP FROM 30 GM SAMPLE.

DATE RECEIVED: JUL 24 1996

DATE REPORT MAILED: Aug 1/96

SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

## **APPENDIX V**

### **Soil Geochemical Lab Reports**



## GEOCHEMICAL ANALYSIS CERTIFICATE



Pacific Bay Minerals Ltd. PROJECT SIMPSON LAKE File # 96-2788 Page 1

908 - 700 W. Pender St., Vancouver BC V6C 1G8

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb							
ANOMALY 1 96-SIM-S-M-72	3	41	9	103	.9	28	7	344	2.64	11	<5	<2	<2	39	.3	<2	<2	62	.54	.048	16	31	.76	283	.07	3	1.62	.01	.12	<2	<1
ANOMALY 1 96-SIM-S-M-73	1	25	9	121	.9	20	7	368	3.08	9	<5	<2	3	37	1.6	2	<2	82	.50	.080	16	31	.85	186	.12	<3	2.07	.01	.14	<2	1
ANOMALY 1 96-SIM-S-M-74	1	24	11	101	.3	22	6	352	3.14	10	<5	<2	4	25	.3	<2	<2	80	.32	.102	20	34	.81	129	.11	<3	1.99	.01	.14	<2	<1
ANOMALY 1 96-SIM-S-M-75	2	33	6	97	1.1	25	6	343	3.05	10	<5	<2	<2	23	.5	<2	<2	85	.28	.054	18	38	.97	128	.12	3	2.10	.01	.12	<2	1
ANOMALY 1 96-SIM-S-M-76	1	46	9	159	<.3	37	10	584	4.01	14	<5	<2	4	38	.2	5	<2	94	.51	.102	17	45	1.44	188	.15	4	2.95	.01	.15	<2	2
ANOMALY 1 96-SIM-S-M-77	2	30	12	125	<.3	34	7	403	4.34	14	<5	<2	4	20	<.2	<2	<2	93	.18	.085	16	53	1.15	123	.11	<3	2.58	.01	.12	<2	<1
ANOMALY 1 96-SIM-S-M-78	5	42	10	74	1.0	28	4	163	1.85	6	<5	<2	<2	13	.3	<2	<2	63	.09	.053	15	34	.42	315	.04	4	1.31	.01	.12	<2	2
ANOMALY 1 96-SIM-S-M-79	2	14	10	64	.5	13	3	195	2.01	8	<5	<2	<2	11	<.2	<2	<2	56	.11	.032	18	27	.52	177	.06	<3	1.23	.01	.10	<2	<1
ANOMALY 1 96-SIM-S-M-80	1	21	10	105	<.3	20	6	465	2.81	9	<5	<2	2	30	1.0	2	<2	65	.36	.039	20	30	.71	231	.07	<3	1.60	.01	.15	<2	<1
ANOMALY 1 96-SIM-S-M-81	1	42	9	111	<.3	34	7	556	3.85	12	<5	<2	3	21	<.2	<2	<2	112	.25	.075	13	53	1.41	196	.14	<3	2.70	.01	.21	<2	2
ANOMALY 1 96-SIM-S-M-82	2	42	9	107	.3	33	8	558	2.70	13	<5	<2	<2	94	<.2	2	2	77	.98	.049	9	41	1.00	234	.09	<3	1.89	.02	.16	<2	1
RE ANOMALY 1 96-SIM-S-M-82	2	43	10	108	.3	33	8	564	2.73	13	<5	<2	<2	94	<.2	3	2	77	.99	.050	10	42	1.01	235	.09	3	1.90	.02	.16	<2	<1
ANOMALY 1 96-SIM-S-M-83	2	46	12	98	.7	30	10	410	2.98	12	<5	<2	<2	48	.3	2	2	80	.89	.065	17	42	.94	1043	.06	<3	2.32	.01	.13	<2	2
ANOMALY 1 96-SIM-S-M-84	2	16	6	61	.5	14	3	176	1.69	7	5	<2	<2	49	.2	3	<2	67	.92	.024	12	33	.56	1170	.08	<3	1.61	.01	.12	<2	<1
ANOMALY 1 96-SIM-S-M-85	3	43	13	168	.5	47	11	685	4.25	15	<5	<2	2	22	.2	3	<2	97	.23	.088	16	57	1.31	212	.09	<3	2.72	.01	.17	<2	2
ANOMALY 1 96-SIM-S-M-86	7	39	8	129	.5	34	5	274	2.63	8	<5	<2	<2	21	.4	<2	<2	75	.20	.051	16	41	.85	331	.06	<3	1.85	.01	.16	<2	2
ANOMALY 1 96-SIM-S-M-87	8	31	9	145	.9	20	8	664	2.49	6	<5	<2	<2	17	1.4	<2	<2	54	.21	.093	18	33	.48	483	.02	<3	1.90	.01	.08	<2	1
ANOMALY 1 96-SIM-S-M-88	2	25	9	186	<.3	30	9	388	3.48	9	<5	<2	3	24	<.2	2	<2	84	.30	.058	18	44	1.03	291	.10	<3	2.41	.01	.14	<2	10
ANOMALY 1 96-SIM-S-M-89	2	16	10	96	.3	15	4	338	3.40	10	<5	<2	3	22	.8	2	<2	114	.23	.087	17	28	.65	111	.14	<3	1.52	.01	.12	<2	1
ANOMALY 1 96-SIM-S-M-90	1	4	12	49	<.3	7	2	125	1.41	4	<5	<2	3	9	.2	<2	2	40	.12	.036	21	17	.28	68	.07	<3	.85	.01	.06	<2	<1
ANOMALY 1 96-SIM-S-M-91	2	17	9	154	<.3	22	7	303	3.19	6	<5	<2	8	19	.6	<2	<2	58	.20	.049	27	29	.66	170	.07	<3	2.03	.01	.09	<2	1
ANOMALY 1 96-SIM-S-M-92	21	53	11	357	.7	67	9	479	3.41	13	<5	<2	5	38	8.4	3	2	173	.57	.130	26	47	.75	289	.07	<3	2.09	.01	.15	<2	1
ANOMALY 1 96-SIM-S-M-93	37	74	11	248	.3	94	13	553	3.32	24	<5	<2	6	32	1.1	5	<2	90	.52	.123	30	33	.67	223	.06	<3	1.52	.01	.14	<2	2
ANOMALY 1 96-SIM-S-M-94	8	22	8	121	.3	27	6	255	1.83	9	<5	<2	2	20	.7	2	<2	72	.31	.036	17	23	.33	204	.05	<3	1.23	.02	.07	<2	<1
ANOMALY 1 96-SIM-S-M-95	15	61	11	326	.9	67	9	375	3.91	15	<5	<2	2	35	1.3	4	<2	129	.39	.100	21	46	.90	271	.09	<3	2.24	.01	.16	<2	1
ANOMALY 1 96-SIM-S-M-96	11	26	11	143	.8	29	6	251	2.13	6	<5	<2	<2	23	.5	2	<2	110	.23	.047	27	32	.54	270	.03	<3	1.82	.01	.12	<2	1
ANOMALY 1 96-SIM-S-M-97	18	97	11	290	.4	65	14	712	4.14	17	<5	<2	<2	35	1.6	2	<2	135	.36	.074	26	44	.80	372	.06	<3	2.87	.01	.14	<2	15
ANOMALY 1 96-SIM-S-M-98	11	36	7	162	.4	34	13	809	2.61	10	<5	<2	<2	28	1.4	2	<2	83	.39	.106	22	33	.66	323	.03	<3	1.94	.01	.12	<2	2
ANOMALY 2 96-SIM-S-M-18	4	22	8	69	<.3	21	3	106	1.63	7	<5	<2	<2	12	<.2	<2	2	62	.09	.024	23	31	.27	180	.06	3	.91	.01	.08	<2	1
ANOMALY 2 96-SIM-S-M-19	11	93	11	174	4.3	45	7	169	3.13	23	<5	<2	2	80	.5	3	<2	66	.26	.117	22	38	.47	1077	.02	3	1.86	.02	.17	<2	7
ANOMALY 2 96-SIM-S-M-20	5	26	11	91	.7	23	4	119	2.17	13	<5	<2	4	15	<.2	<2	<2	74	.06	.045	26	27	.29	255	.05	<3	1.05	.01	.08	<2	2
ANOMALY 2 96-SIM-S-M-21	1	10	12	75	.3	14	3	133	1.48	3	<5	<2	3	20	.3	<2	2	50	.38	.021	23	30	.39	220	.05	<3	1.22	.01	.07	<2	1
ANOMALY 2 96-SIM-S-M-22	5	37	10	193	.3	56	9	275	2.99	16	<5	<2	3	18	<.2	3	<2	130	.14	.051	24	71	1.17	208	.06	<3	2.08	.01	.11	<2	2
ANOMALY 2 96-SIM-S-M-23	6	90	36	392	<.3	127	41	1294	4.29	54	<5	<2	6	9	.6	8	<2	98	.12	.075	18	105	1.49	284	.06	<3	3.17	.01	.11	<2	2
ANOMALY 2 96-SIM-S-M-24	9	43	15	289	1.0	52	7	246	3.32	21	<5	<2	3	34	1.5	5	<2	103	.32	.188	25	49	.54	561	.02	<3	1.58	.01	.10	<2	13
STANDARD C2/AU-S	19	57	36	137	6.2	69	34	1159	3.80	43	20	8	35	51	18.4	18	17	71	.56	.094	39	64	1.00	200	.08	27	2.13	.06	.14	12	45

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

- SAMPLE TYPE: SOIL AU\* - IGNITED, AQUA-REGIA/HIBK EXTRACT, GF/AA FINISHED.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 11 1996 DATE REPORT MAILED: July 22/96 SIGNED BY: C. Toy, D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



ACME ANALYTICAL

## Pacific Bay Minerals Ltd. PROJECT SIMPSON LAKE FILE # 96-2788

Page 2



ACME ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb							
ANOMALY 2 96-SIM-S-M-25	2	22	13	89	.3	26	5	195	2.92	12	<5	<2	3	9	.2	3	<2	70	.08	.040	24	39	.54	105	.07	3	1.30	.01	.07	<2	<1
ANOMALY 2 96-SIM-S-M-26	1	52	17	149	.5	45	9	255	3.58	12	<5	<2	3	10	.3	3	2	96	.09	.067	20	47	.70	104	.09	4	1.79	.01	.06	<2	2
ANOMALY 2 96-SIM-S-M-27	1	10	8	49	<.3	13	3	107	1.46	5	<5	<2	2	7	<.2	<2	2	39	.05	.024	25	21	.33	62	.03	<3	1.01	.01	.06	<2	1
ANOMALY 3 96-SIM-S-M-28	2	38	13	185	.4	32	9	381	3.55	16	<5	<2	5	18	.8	2	<2	65	.22	.077	21	30	.70	202	.08	4	2.12	.01	.10	<2	2
RE ANOMALY 3 96-SIM-S-M-28	2	39	14	188	.3	33	10	386	3.58	18	<5	<2	5	18	.8	2	<2	65	.22	.078	21	29	.70	202	.08	4	2.14	.01	.10	<2	2
ANOMALY 3 96-SIM-S-M-29	<1	42	9	106	<.3	16	9	515	3.36	4	<5	<2	3	21	<.2	<2	<2	72	.19	.048	18	22	.69	225	.15	3	1.88	.01	.08	<2	1
ANOMALY 3 96-SIM-S-M-30	1	36	9	86	<.3	24	9	398	3.35	6	<5	<2	6	17	<.2	<2	<2	62	.17	.041	22	30	.75	350	.11	3	2.04	.01	.07	<2	1
ANOMALY 3 96-SIM-S-M-31	2	21	12	86	<.3	21	8	353	3.42	17	<5	<2	4	18	<.2	2	2	66	.30	.028	20	27	.61	243	.11	3	1.66	.01	.10	<2	1
ANOMALY 3 96-SIM-S-M-32	2	51	10	88	.3	25	10	409	3.08	16	<5	<2	3	18	<.2	2	2	60	.34	.037	21	25	.79	318	.08	4	1.89	.01	.09	<2	1
ANOMALY 3 96-SIM-S-M-33	2	26	14	78	<.3	24	8	520	2.93	12	<5	<2	2	17	.3	<2	<2	47	.41	.034	18	29	.56	227	.07	3	1.25	.01	.07	<2	3
ANOMALY 3 96-SIM-S-M-34	2	65	8	71	<.3	23	9	448	2.73	9	<5	<2	5	24	<.2	2	<2	51	.35	.044	22	22	.76	527	.12	3	1.54	.01	.07	<2	5
ANOMALY 3 96-SIM-S-M-35	3	107	10	121	.8	53	14	658	3.30	22	<5	<2	3	42	<.2	3	<2	40	.79	.139	31	29	1.18	286	.03	3	1.68	.01	.08	<2	8
ANOMALY 3 96-SIM-S-M-36	4	21	8	237	.7	22	8	417	2.77	14	<5	<2	2	22	1.1	2	<2	50	.33	.053	20	27	.59	175	.04	3	1.48	.01	.09	<2	2
ANOMALY 3 96-SIM-S-M-37	10	51	16	224	.8	47	12	593	3.17	28	<5	<2	2	37	1.6	3	<2	62	.50	.123	22	31	.72	181	.05	4	1.48	.01	.13	<2	4
ANOMALY 3 96-SIM-S-M-38	3	42	11	159	.4	20	11	1839	2.28	9	<5	<2	<2	39	3.7	<2	2	52	1.02	.053	14	21	.38	459	.04	3	1.35	.01	.09	<2	1
ANOMALY 3 96-SIM-S-M-39	3	72	8	73	.5	31	7	998	1.48	105	7	<2	<2	69	1.6	3	<2	25	3.25	.074	9	12	.32	344	.02	5	.88	.01	.08	<2	1
ANOMALY 3 96-SIM-S-M-40	2	29	12	98	.3	22	8	592	2.50	38	<5	<2	<2	28	.8	<2	<2	50	.75	.033	15	23	.47	235	.05	<3	1.22	.01	.10	<2	1
ANOMALY 3 96-SIM-S-M-41	5	146	11	152	.5	41	13	653	3.35	497	<5	<2	<2	34	.7	4	<2	71	1.53	.113	20	23	1.06	388	.01	3	2.13	.01	.11	<2	17
ANOMALY 3 96-SIM-S-M-42	3	32	14	94	<.3	23	9	812	2.54	14	<5	<2	2	28	.7	<2	<2	45	.71	.042	17	22	.57	246	.06	<3	1.39	.01	.10	<2	1
ANOMALY 3 96-SIM-S-M-43	2	45	14	97	<.3	30	11	579	2.99	9	<5	<2	8	28	<.2	2	<2	42	.48	.069	32	22	.78	209	.10	3	1.46	.01	.10	<2	2
ANOMALY 3 96-SIM-S-M-44	7	48	12	331	.6	33	7	510	2.34	10	<5	<2	<2	40	4.8	<2	<2	54	.71	.062	17	27	.48	392	.03	<3	1.44	.01	.08	<2	2
ANOMALY 5 96-SIM-S-M-1	1	35	10	69	.4	16	5	698	1.35	12	7	<2	<2	49	1.0	<2	<2	22	2.31	.150	8	16	.29	580	.01	3	.97	.01	.05	<2	2
ANOMALY 5 96-SIM-S-M-2	1	13	7	91	<.3	7	3	144	1.20	16	<5	<2	<2	14	2.5	<2	<2	24	.33	.043	9	9	.12	180	.01	<3	.57	.02	.07	<2	<1
ANOMALY 5 96-SIM-S-M-3	1	17	17	137	<.3	23	9	408	2.94	18	<5	<2	<2	14	.3	2	<2	51	.39	.078	20	28	.57	278	.03	<3	1.99	.01	.09	<2	2
ANOMALY 5 96-SIM-S-M-4	1	25	13	122	<.3	28	10	500	2.96	22	<5	<2	3	15	.3	2	<2	58	.32	.083	17	32	.63	296	.05	<3	2.46	.01	.08	<2	1
ANOMALY 5 96-SIM-S-M-5	1	10	12	75	<.3	16	5	187	2.40	16	<5	<2	<2	9	<.2	2	<2	44	.17	.055	17	22	.37	116	.02	<3	1.12	.01	.06	<2	<1
ANOMALY 5 96-SIM-S-M-6	1	16	16	141	<.3	24	9	511	2.84	34	<5	<2	<2	20	.2	2	<2	44	.74	.162	21	30	.56	324	.02	<3	1.62	.01	.07	<2	1
ANOMALY 5 96-SIM-S-M-7	1	12	11	82	<.3	16	5	218	2.34	15	<5	<2	2	17	.3	<2	2	41	.50	.050	18	21	.43	150	.03	<3	1.37	.01	.07	<2	<1
ANOMALY 5 96-SIM-S-M-8	1	18	11	93	<.3	18	7	295	2.67	13	<5	<2	2	15	.2	<2	<2	46	.35	.041	21	21	.52	206	.04	<3	1.56	.01	.11	<2	1
ANOMALY 5 96-SIM-S-M-9	<1	12	11	122	<.3	23	8	282	2.60	8	<5	<2	3	12	.2	<2	<2	43	.26	.044	19	27	.54	177	.04	<3	1.83	.01	.06	<2	<1
ANOMALY 5 96-SIM-S-M-10	1	42	16	83	.3	31	11	895	2.48	36	<5	<2	3	34	.2	2	<2	39	1.75	.192	30	26	1.11	170	.06	3	1.37	.01	.13	<2	3
ANOMALY 5 96-SIM-S-M-11	1	17	17	202	<.3	31	9	547	2.99	27	<5	<2	<2	21	1.6	<2	<2	49	.62	.071	21	33	.61	351	.05	<3	1.90	.01	.06	<2	1
ANOMALY 5 96-SIM-S-M-12	1	22	11	192	<.3	52	11	458	3.51	64	<5	<2	3	12	.9	6	<2	38	.45	.131	25	53	.65	196	.02	3	1.59	.01	.08	<2	<1
ANOMALY 5 96-SIM-S-M-13	<1	10	11	95	<.3	14	4	164	2.11	13	<5	<2	<2	14	<.2	<2	<2	40	.40	.038	17	22	.39	238	.02	<3	1.24	.01	.07	<2	1
ANOMALY 5 96-SIM-S-M-14	1	48	14	132	<.3	45	13	951	2.94	48	<5	<2	<2	26	1.0	7	<2	39	1.80	.145	50	37	.69	200	.04	4	1.61	.01	.10	<2	2
ANOMALY 5 95-SIM-S-M-15	<1	36	18	125	<.3	54	15	670	3.73	26	<5	<2	7	17	.3	3	<2	68	.46	.065	23	46	.94	385	.05	4	3.17	.01	.12	<2	2
STANDARD C2/AU-S	20	58	39	142	6.3	75	35	1148	3.75	44	20	8	36	52	18.6	18	20	72	.53	.096	41	65	1.04	202	.08	29	2.08	.06	.14	12	46

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb							
ANOMALY 9 96-SIM-S-M-45	1	11	8	59	<.3	15	5	154	1.87	6	<5	<2	4	11	.2	2	2	33	.17	.038	19	18	.38	200	.03	3	1.20	.01	.07	<2	<1
ANOMALY 9 96-SIM-S-M-46	1	9	10	49	<.3	18	4	138	1.67	8	<5	<2	5	10	<.2	3	<2	25	.18	.026	15	19	.42	118	.02	4	.88	.01	.05	<2	<1
ANOMALY 9 96-SIM-S-M-47	1	5	9	70	<.3	11	3	130	1.55	5	5	<2	5	6	.2	2	<2	31	.09	.013	17	17	.32	104	.04	3	.91	<.01	.06	<2	<1
ANOMALY 9 96-SIM-S-M-48	1	5	8	49	<.3	11	4	125	1.63	8	<5	<2	4	6	.2	2	<2	32	.09	.017	14	16	.32	105	.03	<3	.84	.01	.05	<2	1
ANOMALY 9 96-SIM-S-M-49	1	14	13	69	<.3	22	6	227	2.25	5	<5	<2	7	12	<.2	2	2	32	.19	.035	25	26	.61	171	.04	<3	1.29	.01	.09	<2	1
ANOMALY 9 96-SIM-S-M-50	1	23	15	85	<.3	30	7	268	2.53	6	<5	<2	7	14	<.2	2	2	34	.26	.041	27	28	.67	250	.03	<3	1.43	.01	.10	<2	1
ANOMALY 9 96-SIM-S-M-51	1	16	14	151	<.3	22	8	575	2.34	8	<5	<2	6	17	1.1	<2	2	38	.35	.038	22	25	.46	280	.04	3	1.90	.02	.06	<2	4
ANOMALY 9 96-SIM-S-M-52	1	7	10	88	<.3	14	5	182	2.04	7	<5	<2	5	7	.2	2	2	35	.11	.027	17	20	.37	94	.04	<3	.99	.01	.06	<2	<1
ANOMALY 9 96-SIM-S-M-53	1	7	11	89	<.3	14	5	192	2.17	7	<5	<2	6	9	<.2	<2	3	42	.13	.021	18	22	.42	123	.05	<3	1.22	.01	.08	<2	<1
ANOMALY 9 96-SIM-S-M-54	1	5	9	49	<.3	10	3	127	1.55	7	<5	<2	4	7	<.2	2	<2	37	.10	.019	17	17	.27	112	.04	<3	.85	.01	.06	<2	<1
ANOMALY 9 96-SIM-S-M-55	1	10	11	65	<.3	21	7	143	2.24	10	<5	<2	6	10	<.2	4	<2	37	.14	.037	16	22	.36	168	.04	<3	1.44	.01	.06	<2	1
ANOMALY 9 96-SIM-S-M-56	1	6	10	93	<.3	14	5	247	1.70	4	<5	<2	6	10	.2	<2	<2	31	.19	.023	18	19	.36	150	.03	<3	1.01	.01	.06	<2	2
ANOMALY 9 96-SIM-S-M-57	1	5	11	58	<.3	10	4	143	1.64	6	<5	<2	5	7	<.2	<2	<2	29	.12	.021	15	16	.32	89	.03	<3	.80	.01	.06	<2	2
ANOMALY 9 96-SIM-S-M-58	<1	3	10	51	<.3	8	3	89	1.33	5	<5	<2	5	7	<.2	3	<2	34	.10	.013	16	15	.23	80	.04	<3	.93	.01	.04	<2	<1
ANOMALY 9 96-SIM-S-M-59	1	7	10	99	<.3	18	5	157	2.23	8	<5	<2	5	8	<.2	<2	3	40	.13	.028	16	23	.42	106	.04	<3	1.16	.01	.07	<2	1
ANOMALY 9 96-SIM-S-M-60	<1	1	12	31	<.3	4	1	55	.75	3	<5	<2	5	8	<.2	2	<2	31	.12	.006	17	12	.14	73	.05	<3	.73	.01	.03	<2	<1
ANOMALY 9 96-SIM-S-M-61	1	4	12	60	<.3	11	4	136	1.54	5	5	<2	4	10	<.2	3	<2	38	.18	.020	18	19	.35	150	.05	<3	1.06	.01	.05	<2	<1
ANOMALY 9 96-SIM-S-M-62	1	4	10	56	<.3	11	4	132	1.65	5	<5	<2	5	7	<.2	2	<2	37	.10	.016	18	18	.33	92	.05	<3	.92	.01	.05	<2	<1
ANOMALY 9 96-SIM-S-M-63	1	4	10	65	<.3	14	5	161	1.50	4	<5	<2	5	10	<.2	<2	<2	29	.20	.015	16	16	.35	193	.03	<3	.98	.01	.04	<2	1
RE ANOMALY 9 96-SIM-S-M-63	<1	4	8	65	<.3	13	5	160	1.50	4	<5	<2	4	10	<.2	<2	<2	28	.20	.015	15	16	.35	192	.03	<3	.98	.01	.05	<2	<1
ANOMALY 9 96-SIM-S-M-64	1	3	9	53	<.3	9	4	180	1.31	4	<5	<2	5	11	<.2	<2	<2	26	.21	.018	19	15	.37	162	.04	<3	.85	.01	.06	<2	1
ANOMALY 9 96-SIM-S-M-65	1	16	11	61	<.3	22	7	573	1.87	7	<5	<2	4	27	.6	<2	<2	29	.57	.068	18	20	.45	285	.04	3	1.06	.02	.09	<2	1
ANOMALY 9 96-SIM-S-M-66	<1	4	9	34	<.3	13	3	99	1.25	5	<5	<2	5	11	<.2	2	2	24	.21	.040	14	14	.32	131	.04	<3	.81	.01	.04	<2	<1
ANOMALY 9 96-SIM-S-M-67	<1	2	9	45	<.3	8	3	125	1.25	2	<5	<2	5	10	<.2	<2	<2	31	.18	.013	17	15	.32	147	.05	<3	.81	.01	.05	<2	<1
ANOMALY 9 96-SIM-S-M-68	1	6	8	71	<.3	15	9	590	1.79	4	<5	<2	4	13	<.2	<2	<2	32	.25	.027	14	18	.30	266	.03	<3	1.34	.02	.04	<2	1
ANOMALY 9 96-SIM-S-M-69	1	2	8	38	<.3	8	3	106	1.12	4	<5	<2	3	8	<.2	<2	<2	26	.13	.021	14	13	.26	112	.03	<3	.75	.01	.05	<2	1
ANOMALY 9 96-SIM-S-M-70	1	1	10	32	<.3	7	2	86	1.16	4	<5	<2	4	6	<.2	2	<2	27	.10	.013	15	13	.25	82	.03	<3	.69	.01	.04	<2	6
ANOMALY 9 96-SIM-S-M-71	<1	<1	7	21	<.3	4	1	53	.70	3	<5	<2	4	6	<.2	<2	<2	26	.08	.007	16	9	.17	61	.05	<3	.53	.01	.04	<2	1
STANDARD C2/AU-S	21	59	43	146	6.9	73	37	1204	3.90	42	20	7	38	53	19.9	16	21	75	.54	.099	42	67	1.07	204	.09	29	2.09	.06	.14	12	45

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



## SAMPLE#

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**
	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppb								
ANOMALY 8 96-SIM-S-M-99	1	20	13	76	<.3	20	6	207	2.53	5	<5	<2	3	21	<.2	<2	4	36	.62	.037	22	26	.51	257	.06	<3	1.38	.01	.06	<2	5
ANOMALY 8 96-SIM-S-M-100	1	11	13	73	<.3	15	5	205	2.53	6	<5	<2	3	10	<.2	<2	2	42	.18	.026	16	21	.28	98	.04	<3	1.06	.01	.08	<2	3
ANOMALY 8 96-SIM-S-M-101	1	16	12	56	<.3	18	6	202	2.07	4	<5	<2	5	15	<.2	2	2	33	.30	.042	24	20	.47	256	.03	<3	1.43	.01	.08	<2	5
ANOMALY 8 96-SIM-S-M-102	1	5	12	97	<.3	7	4	220	1.43	<2	<5	<2	2	11	.3	<2	2	39	.23	.007	14	17	.25	150	.05	<3	.99	.01	.07	<2	2
ANOMALY 8 96-SIM-S-M-103	1	12	12	115	<.3	26	8	298	2.65	6	<5	<2	4	12	.3	<2	3	44	.27	.023	20	28	.47	205	.05	<3	1.74	.01	.07	<2	3
ANOMALY 8 96-SIM-S-M-104	1	8	7	50	<.3	7	3	186	1.55	4	<5	<2	<2	11	.3	<2	<2	38	.31	.021	14	16	.18	114	.04	<3	.76	<.01	.06	<2	<2
ANOMALY 8 96-SIM-S-M-105	<1	11	12	69	<.3	23	6	210	2.35	3	<5	<2	3	13	<.2	<2	<2	40	.40	.016	16	24	.39	204	.02	<3	1.56	.01	.06	<2	<2
ANOMALY 8 96-SIM-S-M-106	1	13	10	82	<.3	21	6	264	2.29	<2	<5	<2	4	15	.4	<2	<2	35	.42	.014	20	23	.44	222	.04	<3	1.36	.01	.06	<2	<2
ANOMALY 8 96-SIM-S-M-107	<1	25	11	77	<.3	26	5	195	2.16	<2	<5	<2	2	19	<.2	<2	<2	30	.61	.033	19	24	.45	212	.04	<3	1.17	.02	.06	<2	<2
ANOMALY 8 96-SIM-S-M-108	1	17	10	81	<.3	13	6	356	2.03	6	<5	<2	<2	27	.3	<2	2	40	1.26	.024	15	20	.31	224	.03	<3	1.37	.01	.05	<2	<2
ANOMALY 8 96-SIM-S-M-108A	<1	11	12	160	<.3	12	7	1438	1.71	2	<5	<2	<2	23	1.0	<2	<2	36	.79	.025	15	19	.32	242	.04	<3	1.35	.02	.06	<2	<2
ANOMALY 8 96-SIM-S-M-109	1	10	14	66	<.3	10	6	279	1.70	<2	<5	<2	<2	16	.5	<2	<2	40	.50	.024	11	17	.44	194	.04	<3	1.25	.01	.05	<2	<2
ANOMALY 8 96-SIM-S-M-110	1	9	11	67	<.3	18	6	225	2.14	3	<5	<2	3	13	<.2	<2	2	40	.37	.013	20	23	.36	245	.02	<3	1.64	.01	.04	<2	<2
ANOMALY 8 96-SIM-S-M-111	1	6	11	66	<.3	12	4	164	2.24	7	<5	<2	<2	15	.3	<2	2	59	.49	.023	10	24	.37	125	.04	<3	1.23	.01	.06	<2	11
ANOMALY 8 96-SIM-S-M-112	1	4	8	50	<.3	8	3	121	1.84	2	<5	<2	4	8	<.2	<2	<2	54	.12	.007	21	16	.23	81	.06	<3	.79	<.01	.06	<2	<2
ANOMALY 8 96-SIM-S-M-113	1	4	6	65	<.3	6	3	86	1.59	2	<5	<2	3	7	.4	<2	<2	44	.10	.015	15	15	.14	37	.07	<3	.62	<.01	.04	<2	3
ANOMALY 8 96-SIM-S-M-114	<1	10	13	54	<.3	17	5	231	2.05	2	<5	<2	4	13	<.2	<2	<2	33	.29	.009	18	23	.41	255	.03	<3	1.29	.01	.06	<2	<2
ANOMALY 8 96-SIM-S-M-115	1	14	11	92	.4	21	6	262	2.38	6	<5	<2	<2	41	<.2	<2	<2	39	1.30	.047	15	28	.58	305	.06	<3	1.59	.03	.07	<2	<2
ANOMALY 8 96-SIM-S-M-116	<1	17	102	88	<.3	16	6	348	1.86	4	<5	<2	<2	33	.7	<2	<2	29	1.55	.042	12	21	.41	288	.03	3	1.30	.02	.07	<2	<2
ANOMALY 8 96-SIM-S-M-117	<1	5	6	31	<.3	4	2	210	.79	<2	<5	<2	<2	15	.4	<2	<2	25	.45	.011	15	9	.07	155	.04	<3	.52	.01	.05	<2	8
RE ANOMALY 6 96-SIM-S-M-125	1	9	4	34	<.3	12	4	183	1.78	5	<5	<2	3	11	.3	<2	<2	42	.24	.011	16	17	.25	136	.06	<3	1.08	.01	.07	<2	<2
ANOMALY 8 96-SIM-S-M-118	<1	5	5	58	<.3	11	4	171	1.62	3	<5	<2	2	16	<.2	<2	2	35	.48	.011	13	18	.40	237	.05	3	1.18	.01	.07	<2	<2
ANOMALY 8 96-SIM-S-M-119	1	8	13	112	<.3	13	9	513	2.50	3	<5	<2	2	10	.3	<2	<2	53	.15	.024	14	21	.30	173	.04	<3	1.41	.01	.05	<2	<2
ANOMALY 8 96-SIM-S-M-120	1	4	7	85	<.3	7	5	207	1.88	<2	<5	<2	2	11	.3	<2	<2	49	.29	.014	17	19	.19	176	.05	<3	1.00	.01	.06	<2	<2
ANOMALY 8 96-SIM-S-M-121	<1	8	14	76	<.3	11	4	234	1.76	<2	<5	<2	<2	16	.4	<2	<2	40	.55	.017	12	17	.25	174	.04	4	1.21	.01	.05	<2	<2
ANOMALY 8 96-SIM-S-M-122	<1	21	11	90	<.3	23	8	578	2.46	2	<5	<2	<2	28	.6	<2	<2	39	1.10	.029	17	25	.42	310	.05	3	1.68	.01	.05	<2	<2
ANOMALY 6 96-SIM-S-M-123	<1	14	8	54	<.3	19	6	371	2.33	4	<5	<2	4	15	<.2	<2	2	38	.41	.007	20	25	.53	244	.06	<3	1.52	.01	.08	<2	3
ANOMALY 6 96-SIM-S-M-124	<1	33	7	57	<.3	28	8	416	2.81	15	<5	<2	5	18	.2	<2	4	53	.51	.007	22	30	.58	315	.08	<3	1.88	.02	.09	<2	<2
ANOMALY 6 96-SIM-S-M-125	1	8	6	37	<.3	10	4	193	1.87	6	<5	<2	3	12	<.2	2	2	45	.26	.012	17	18	.27	138	.07	<3	1.16	.01	.08	<2	2
ANOMALY 6 96-SIM-S-M-126	1	65	5	44	<.3	11	7	547	2.53	5	<5	<2	<2	23	<.2	<2	2	60	.90	.018	12	17	.47	259	.12	3	1.75	.01	.09	<2	<2
ANOMALY 6 96-SIM-S-M-127	1	17	5	43	<.3	14	5	180	2.04	10	<5	<2	2	12	.2	2	<2	37	.27	.015	13	19	.40	180	.05	<3	1.20	<.01	.11	<2	3
ANOMALY 6 96-SIM-S-M-128	1	40	9	62	.3	25	8	426	2.26	16	<5	<2	3	37	.3	<2	<2	39	4.12	.036	17	24	.66	329	.07	4	1.45	.01	.15	<2	6
ANOMALY 6 96-SIM-S-M-129	2	25	14	71	<.3	28	9	220	2.88	12	<5	<2	4	12	<.2	<2	<2	55	.26	.032	16	30	.51	287	.06	<3	1.77	.01	.12	<2	<2
ANOMALY 6 96-SIM-S-M-130	1	19	11	60	<.3	22	6	260	2.40	8	<5	<2	2	19	<.2	<2	<2	45	.84	.014	16	26	.55	403	.06	3	1.41	.01	.08	<2	2
ANOMALY 6 96-SIM-S-M-131	1	28	9	80	<.3	28	9	564	2.54	14	<5	<2	4	26	.2	<2	<2	41	1.01	.074	28	26	.70	285	.07	4	1.45	.01	.14	<2	10
ANOMALY 6 96-SIM-S-M-131A	1	8	10	50	<.3	10	6	336	2.01	2	<5	<2	2	15	<.2	<2	<2	49	.43	.004	16	21	.33	189	.09	<3	1.50	.01	.05	<2	<2
STANDARD C2/AU-S	19	60	37	139	6.3	69	33	1140	3.84	38	21	7	35	53	18.3	15	23	71	.55	.093	40	63	.96	217	.08	26	2.07	.07	.16	11	52

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



AA ANALYTICAL



AA ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**
	ppm	%	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb															
ANOMALY 6 96-SIM-S-M-132	1	11	9	67	<.3	18	7	451	2.46	4	<5	<2	4	12	<.2	<2	<2	48	.37	.009	17	26	.34	175	.08	<3	1.66	.01	.06	<2	4
ANOMALY 6 96-SIM-S-M-133	1	34	11	56	.7	20	7	469	2.08	11	<5	<2	<2	30	.3	3	2	32	1.94	.069	13	29	.86	335	.04	3	1.22	.01	.08	<2	<2

Sample type: SOIL.



ALCANTARA ANALYTICAL



ALCANTARA ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**
	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb							
96-SIM-S-M-135	2	42	13	100	.3	34	11	771	3.14	18	<5	<2	3	28	<.2	<.2	<.2	58	.51	.085	17	35	.80	204	.08	3	1.95	.01	.14	<2	9
96-SIM-S-M-136	1	22	11	92	<.3	21	10	952	2.65	12	<5	<2	<2	42	.3	<.2	<.2	52	.95	.051	15	27	.62	251	.04	5	1.69	<.01	.11	<2	<2
96-SIM-S-M-137	1	25	4	45	<.3	15	5	347	1.40	6	<5	<2	<2	148	1.2	<.2	<.2	19	18.69	.049	7	13	.47	338	.03	3	.67	<.01	.08	<2	5
96-SIM-S-M-138	2	27	11	95	<.3	22	9	483	2.71	34	<5	<2	3	41	.6	<.2	<.2	44	1.05	.060	20	25	.74	331	.08	3	1.66	.01	.16	<2	<2
96-SIM-S-M-139	1	28	11	109	<.3	19	8	709	2.30	16	<5	<2	2	29	1.5	<.2	<.2	37	1.01	.072	17	20	.59	319	.07	5	1.38	.01	.14	<2	2
96-SIM-S-M-140	2	31	12	104	<.3	22	9	660	2.63	27	<5	<2	4	25	<.2	<.2	<.2	45	.56	.087	24	27	.71	282	.08	<3	1.55	.01	.14	<2	11
96-SIM-S-M-141	1	28	6	66	<.3	11	5	437	1.47	8	<5	<2	<2	24	1.8	<.2	<.2	27	.59	.042	13	14	.35	206	.06	<3	.82	.01	.11	<2	<2
96-SIM-S-M-142	3	29	12	120	<.3	25	10	469	3.44	31	<5	<2	4	22	.8	<.2	<.2	58	.38	.108	25	31	.88	291	.07	4	2.14	.01	.19	<2	3
96-SIM-S-M-143	2	42	10	107	<.3	24	9	676	2.88	24	<5	<2	5	25	.5	<.2	<.2	47	.53	.070	25	26	.75	378	.08	<3	1.83	.01	.17	<2	4
96-SIM-S-M-144	2	49	13	102	<.3	32	11	740	3.01	18	<5	<2	4	39	.2	<.2	<.2	45	.90	.092	27	26	.86	288	.08	4	1.73	.02	.17	<2	6
96-SIM-S-M-145	2	24	9	106	<.3	22	8	753	2.88	20	<5	<2	3	25	.8	<.2	<.2	49	.49	.094	23	25	.76	340	.07	<3	1.82	.01	.18	<2	<2
96-SIM-S-M-146	3	41	9	135	<.3	25	11	903	3.16	12	<5	<2	5	21	.5	<.2	<.2	58	.42	.048	25	32	.74	396	.06	<3	2.19	.01	.16	<2	4
96-SIM-S-M-147	1	35	14	99	<.3	29	10	898	2.82	24	<5	<2	<2	38	.5	<.2	<.2	44	1.23	.128	23	28	.86	279	.06	3	1.67	.01	.16	<2	7
96-SIM-S-M-148	1	27	11	80	<.3	24	9	562	2.74	24	<5	<2	4	30	<.2	<.2	<.2	43	.82	.081	23	26	.77	295	.07	<3	1.67	.01	.14	<2	45
RE 96-SIM-S-M-148	2	27	8	80	<.3	24	8	562	2.74	23	<5	<2	4	30	<.2	<.2	<.2	43	.82	.084	22	25	.78	287	.07	3	1.66	.01	.13	<2	-
96-SIM-S-M-149	1	22	11	86	<.3	24	8	519	2.77	<2	<5	<2	6	20	.2	<.2	<.2	41	.49	.025	26	26	.70	367	.07	3	1.84	<.01	.13	<2	<2
96-SIM-S-M-150	1	10	8	77	<.3	13	6	480	2.01	<2	<5	<2	3	16	.5	<.2	<.2	35	.34	.016	18	18	.46	193	.06	<3	1.28	.01	.14	<2	<2
96-SIM-S-M-151	1	21	4	72	<.3	15	6	669	1.70	12	<5	<2	2	58	.8	<.2	<.2	30	5.50	.099	10	15	1.08	122	.07	3	.85	.01	.11	<2	2
96-SIM-S-M-158	1	24	9	69	<.3	20	7	814	2.12	16	<5	<2	2	77	.7	<.2	<.2	38	4.83	.092	11	20	1.27	172	.09	4	1.02	.01	.11	<2	<2
96-SIM-S-M-159	1	27	9	62	<.3	19	7	702	1.88	16	<5	<2	2	61	.7	<.2	<.2	35	5.59	.095	12	21	1.40	155	.08	4	.92	.01	.11	<2	4
STANDARD C2/AU-S	20	57	38	146	6.6	75	35	1219	4.06	38	21	8	35	53	20.5	15	21	73	.53	.099	41	67	1.03	212	.09	28	2.06	.07	.15	11	51

ANOMALY 7

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

## GEOCHEMICAL ANALYSIS CERTIFICATE

Demand Gold Ltd. File # 96-4422 Page 1

908 - 700 W. Pender St., Vancouver BC V6C 1G8

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
BY-2-1	1	27	17	95	<.3	24	11	1997	2.64	<2	<5	<2	2	22	.6	<2	<2	55	.52	.069	19	36	.58	405	.05	<3	1.82	.01	.07	<2	1
BY-2-2	1	10	6	43	<.3	6	2	185	.88	20	<5	<2	<2	22	.9	<2	2	23	.54	.037	7	11	.15	149	.03	3	.76	.03	.05	<2	1
BY-2-3	1	69	14	93	1.6	30	6	1011	2.11	140	5	<2	<2	43	3.3	3	<2	38	1.34	.134	21	20	.21	383	.02	<3	1.76	.02	.04	<2	1
BY-2-4	2	81	11	83	.4	17	11	1244	2.82	23	<5	<2	2	50	1.1	5	<2	57	2.18	.086	14	21	.54	530	.07	5	2.01	.01	.06	<2	3
BY-2-5	2	59	6	126	<.3	17	10	823	4.10	<2	<5	<2	3	30	.6	<2	<2	97	.45	.103	15	21	.92	185	.21	4	2.17	.01	.09	<2	12
BY-2-6	5	45	12	103	<.3	27	8	426	4.42	14	<5	<2	4	21	.2	2	<2	85	.23	.053	18	27	.73	107	.15	5	2.07	.01	.09	<2	2
BY-2-7	1	70	11	119	.4	19	9	712	2.35	39	5	<2	2	43	1.1	<2	2	40	1.96	.142	14	26	.51	329	.03	<3	1.66	.01	.06	<2	2
BY-2-8	2	40	14	85	<.3	24	10	386	3.06	21	<5	<2	4	25	.3	2	<2	53	.67	.063	21	29	.67	467	.06	<3	1.98	.01	.06	<2	2
BY-2-9	1	6	9	20	<.3	2	<1	57	.69	<2	<5	<2	2	15	<2	<2	2	53	.09	.015	14	8	.10	45	.09	<3	.88	.01	.03	<2	2
BY-3-1	3	16	11	48	<.3	12	2	191	2.95	5	<5	<2	3	14	<.2	<2	<2	102	.12	.046	19	18	.32	63	.12	<3	1.49	.01	.04	<2	1
BY-3-2	2	29	13	61	<.3	12	4	312	2.96	10	<5	<2	3	23	<.2	<2	<2	112	.25	.057	16	20	.54	90	.22	<3	1.87	.01	.06	<2	2
BY-3-3	2	36	18	103	<.3	29	12	380	3.65	7	<5	<2	9	15	<.2	2	<2	55	.14	.069	30	27	.77	181	.06	<3	2.43	.01	.11	<2	1
BY-3-4	2	21	19	101	<.3	22	8	345	3.63	6	<5	<2	6	14	.2	<2	<2	58	.25	.057	25	26	.58	148	.06	3	2.19	.01	.09	<2	2
BY-3-5	2	7	13	41	<.3	8	2	145	2.08	<2	<5	<2	5	8	<.2	<2	<2	53	.07	.038	21	17	.23	72	.05	3	1.46	.01	.05	<2	1
BY-3-6	3	32	11	56	<.3	16	5	245	2.86	6	<5	<2	4	16	.2	3	<2	82	.21	.052	17	19	.43	98	.12	<3	1.65	.01	.07	<2	1
RE BY-3-10	2	13	11	59	<.3	14	4	246	2.73	3	<5	<2	6	12	<.2	<2	<2	60	.14	.058	22	20	.34	88	.08	<3	1.25	.01	.06	<2	<1
BY-3-7	1	8	7	37	<.3	7	2	124	1.71	<2	<5	<2	3	15	<.2	3	3	58	.14	.045	19	12	.15	54	.10	<3	.92	.01	.06	<2	<1
BY-3-8	4	30	13	82	<.3	20	6	422	3.54	8	<5	<2	5	21	<.2	2	<2	90	.36	.071	14	19	.60	99	.18	6	1.69	.01	.08	<2	1
BY-3-9	1	19	7	56	<.3	11	4	281	2.46	<2	<5	<2	3	12	.2	<2	<2	62	.18	.060	13	15	.34	76	.10	3	1.24	.01	.05	<2	1
BY-3-10	1	12	8	53	<.3	13	4	226	2.48	2	<5	<2	6	11	<.2	5	<2	55	.12	.053	19	18	.31	78	.08	<3	1.12	.01	.06	<2	1
BY-3-11	1	10	9	39	<.3	9	2	144	1.90	<2	<5	<2	6	14	<.2	<2	<2	55	.15	.042	23	14	.22	71	.09	<3	1.05	<.01	.05	<2	1
BY-3-12	3	43	12	87	<.3	20	8	495	4.17	5	<5	<2	5	27	.3	<2	<2	99	.31	.076	17	21	.75	119	.19	<3	2.03	.01	.07	<2	4
BY-3-13	2	23	11	68	<.3	13	4	268	3.85	2	<5	<2	6	25	<.2	2	<2	98	.22	.072	17	19	.43	112	.18	<3	1.58	.01	.07	<2	1
BY-3-14	2	29	11	64	<.3	14	5	303	3.23	6	<5	<2	5	21	.3	<2	<2	84	.22	.067	14	14	.43	108	.17	3	1.35	.01	.07	<2	2
BY-3-15	2	21	11	72	<.3	17	5	282	3.47	5	<5	<2	4	21	.3	2	<2	87	.21	.062	19	20	.44	76	.15	<3	1.47	.01	.08	<2	1
BY-3-16	1	25	7	57	<.3	12	4	304	3.09	3	<5	<2	7	29	.2	2	<2	85	.24	.051	22	18	.51	72	.16	<3	1.70	.01	.05	<2	3
BY-3-17	2	22	12	93	<.3	20	7	403	3.75	7	<5	<2	4	20	.5	<2	<2	67	.29	.155	20	26	.60	134	.09	<3	1.65	.01	.09	<2	1
BY-3-18	2	16	11	78	<.3	18	5	216	3.13	5	<5	<2	6	11	.2	3	<2	59	.10	.071	20	25	.43	77	.08	<3	1.41	.01	.05	<2	1
BY-3-19	2	16	11	79	<.3	13	4	267	3.32	<2	<5	<2	5	16	.3	<2	<2	83	.18	.074	19	23	.40	100	.11	<3	1.68	.01	.05	<2	1
BY-3-20	2	22	8	94	<.3	11	5	567	3.92	<2	<5	<2	4	17	.3	<2	<2	112	.34	.107	15	17	.41	106	.17	<3	1.74	.01	.07	<2	2
BY-4-1	<1	3	5	11	<.3	1	<1	37	.37	<2	<5	<2	<2	11	<.2	<2	2	30	.08	.013	17	6	.06	55	.05	<3	.67	.01	.02	<2	1
BY-4-2	1	27	37	120	.4	20	6	374	2.12	75	<5	<2	2	21	1.2	<2	<2	47	.56	.055	17	27	.45	365	.04	3	1.80	.01	.05	<2	1
BY-4-3	1	25	12	67	.7	16	5	1013	1.63	65	<5	<2	<2	30	.9	<2	<2	36	.84	.109	14	17	.26	321	.02	<3	1.51	.02	.05	<2	1
BY-4-4	1	13	6	15	<.3	7	2	926	.47	2	<5	<2	<2	46	1.5	<2	<2	7	5.42	.152	7	6	.13	170	.01	6	.85	.02	.02	<2	1
BY-4-5	1	78	13	87	.7	18	7	661	2.08	40	<5	<2	2	45	1.3	<2	<2	32	2.43	.131	17	22	.46	312	.02	4	1.32	.01	.06	<2	2
STANDARD C2/AU-S	22	62	40	150	7.1	76	37	1219	3.97	39	18	8	38	54	20.3	12	16	76	.57	.109	43	67	1.06	211	.09	29	2.11	.06	.14	11	41

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

- SAMPLE TYPE: SOIL AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 13 1996 DATE REPORT MAILED: Sep 24/96 SIGNED BY: J.D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
BY-4-6	<1	3	6	25	<.3	3	1	40	.44	<2	5	<2	<2	8	.2	<2	<2	25	.10	.013	11	9	.09	73	.03	<3	.90	.02	.02	<2	1
BY-4-7	2	44	30	102	.8	27	15	2056	2.97	303	<5	<2	<2	31	1.8	<2	<2	54	.81	.082	27	27	.42	369	.04	3	2.40	.02	.06	<2	<1
BY-4-8	<1	4	8	15	<.3	2	<1	26	.35	<2	8	<2	<2	7	<.2	<2	<2	29	.05	.012	20	8	.06	57	.03	<3	.77	.01	.03	<2	<1
BY-4-9	<1	2	3	7	<.3	1	<1	22	.27	<2	<5	<2	<2	6	<.2	<2	<2	19	.05	.014	9	4	.04	31	.03	<3	.37	.02	.02	<2	<1
BY-4-10	1	19	12	97	<.3	12	4	1095	1.59	5	6	<2	<2	35	2.5	<2	2	29	2.91	.137	13	15	.39	225	.02	4	1.52	.02	.04	<2	1
BY-4-11	<1	4	5	14	<.3	1	<1	34	.34	<2	<5	<2	<2	12	<.2	<2	<2	28	.11	.013	17	7	.07	61	.04	<3	.73	.01	.02	<2	1
BY-4-12	1	27	14	99	<.3	11	3	228	2.88	37	<5	<2	2	23	.9	2	<2	102	.30	.037	12	20	.39	145	.15	4	1.95	.01	.03	<2	6
BY-4-13	1	23	14	93	<.3	17	5	317	2.19	70	<5	<2	<2	19	.4	<2	2	53	.38	.048	21	25	.51	304	.05	3	1.97	.01	.06	<2	1
BY-4-14	1	23	9	108	<.3	19	7	349	2.61	93	<5	<2	3	18	.2	<2	<2	54	.25	.028	20	25	.56	265	.07	<3	1.83	.01	.09	<2	1
BY-4-15	<1	1	4	17	<.3	1	1	42	.44	<2	7	<2	<2	7	.2	<2	<2	21	.11	.013	7	7	.08	43	.03	<3	.70	.02	.02	<2	1
BY-4-16	1	16	11	49	<.3	8	2	192	1.94	5	<5	<2	2	18	<.2	<2	<2	67	.19	.019	11	11	.29	57	.12	3	1.33	.01	.04	<2	1
RE BY-4-16	1	16	8	49	<.3	8	2	195	1.93	6	<5	<2	2	18	<.2	<2	<2	67	.19	.019	11	11	.29	56	.12	<3	1.32	.01	.03	<2	2
BY-4-17	<1	14	8	37	<.3	6	2	369	.58	6	5	<2	<2	37	1.4	<2	<2	10	3.92	.100	5	5	.21	104	.01	5	.79	.03	.02	<2	1
BY-4-18	1	8	11	44	<.3	8	2	205	3.20	2	5	<2	5	9	<.2	<2	<2	60	.08	.027	19	21	.27	56	.09	<3	1.28	<.01	.04	<2	1
BY-4-19	1	15	11	52	<.3	13	4	186	2.68	<2	<5	<2	3	14	<.2	<2	<2	66	.17	.022	18	22	.42	145	.07	<3	1.73	.01	.04	<2	1
BY-4-20	1	13	13	61	<.3	11	4	283	2.91	<2	<5	<2	4	16	<.2	2	<2	63	.15	.034	19	20	.40	97	.12	3	1.54	.01	.07	<2	<1
STANDARD C2/AU-S	21	59	41	141	6.9	72	35	1204	3.90	35	20	7	37	52	19.2	15	20	73	.57	.106	41	64	1.03	195	.09	28	2.11	.06	.14	10	46

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

## **APPENDIX VI**

### **Stream Silt Geochemical Lab Reports**



SAMPLE#	No ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
96-SIM-W-M-1	<1	11	6	39	<.3	10	4	313	1.31	12	<5	<2	<2	21	.2	<2	<2	21	.80	.039	9	14	.38	179	.03	<3	.67	.01	.06	<2	2
96-SIM-W-M-2	<1	12	8	41	<.3	10	5	533	1.35	15	5	<2	<2	23	.4	<2	<2	22	1.00	.046	10	12	.41	198	.03	<3	.72	.01	.06	<2	7
RE 96-SIM-W-M-2	<1	12	7	40	<.3	10	5	513	1.33	14	<5	<2	<2	22	.4	<2	3	22	.96	.044	9	11	.40	189	.03	<3	.68	.01	.06	3	1
96-SIM-W-M-3	1	13	7	39	<.3	10	5	324	1.42	17	<5	<2	2	22	.2	<2	2	22	.94	.040	8	14	.43	165	.04	3	.73	<.01	.06	<2	2
96-SIM-W-M-4	<1	26	7	39	<.3	11	6	428	1.59	18	<5	<2	<2	38	.3	2	<2	26	1.94	.049	10	23	.60	327	.06	5	.95	.01	.08	<2	2
96-SIM-W-M-5	<1	18	8	47	<.3	9	8	582	1.99	15	<5	<2	<2	29	<.2	<2	<2	30	1.45	.032	5	8	.71	132	.12	<3	.85	.01	.07	<2	2
96-SIM-W-M-6	<1	42	11	52	<.3	13	7	469	1.57	11	6	<2	<2	36	.4	<2	<2	26	3.12	.054	10	22	.81	329	.06	3	.93	<.01	.08	<2	2
96-SIM-W-M-7	1	43	10	57	<.3	14	8	469	1.73	9	7	<2	<2	39	.5	2	<2	28	3.30	.061	11	20	.87	347	.06	<3	1.02	.01	.09	<2	19
STANDARD C2/AU-S	20	61	40	142	6.5	75	40	1198	4.07	42	25	8	37	52	21.2	18	16	74	.57	.101	41	64	1.11	179	.07	27	2.16	.07	.16	12	53

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au** ppb
96-SIM-W-M-08	<1	18	7	77	<.3	20	6	484	2.02	9	<5	<2	2	38	.3	<2	<2	40	1.05	.095	14	26	.89	161	.05	3	1.07	.01	.09	<2	<2
96-SIM-W-W-01	3	169	3	141	<.3	26	16	2145	3.53	33	<5	<2	<2	39	1.1	<2	<2	86	1.31	.125	12	21	1.37	961	.11	<3	2.20	.02	.11	<2	10
96-SIM-W-W-02	3	72	7	135	<.3	30	11	1909	3.49	35	<5	<2	<2	81	1.0	<2	<2	61	1.64	.136	13	31	.93	458	.08	<3	1.49	.01	.13	<2	7
96-SIM-W-W-03	1	54	9	106	<.3	33	9	523	2.22	11	<5	<2	<2	125	.8	2	<2	52	4.05	.100	14	35	1.25	259	.06	7	1.41	.01	.16	<2	<2
96-SIM-W-W-04	<1	27	6	42	<.3	10	5	414	1.21	15	<5	<2	<2	55	.8	<2	<2	23	3.92	.089	7	20	.57	271	.04	10	.64	.02	.07	<2	2
RE 96-SIM-W-W-04	1	25	7	40	<.3	10	4	406	1.21	14	<5	<2	<2	53	.6	<2	<2	23	3.84	.086	8	19	.56	269	.04	11	.63	.01	.07	<2	3
STANDARD C2/AU-S	20	58	36	146	6.6	73	34	1176	3.95	38	23	8	34	53	19.4	46	18	72	.52	.102	41	63	.99	203	.08	26	2.07	.07	.15	11	48

Sample type: SILT. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

## **APPENDIX VII**

### **Rock, Soil and Stream Silt Data Sheets**

SIMPSON RECCE TRAVERSE/SAMPLE RECORD

NAME: *S. Meinke / G. Wesa*

PAGE 1 OF 1

DATE	TRAVERSE	NTS	AREA	SAMPLE #'s	COMMENTS/ROCK DESCRIPTION
JUNE 28/96	SIM-01	105A/11	Anomaly #3	96SIMRM-01	Carbonaceous intermed tuff; f.g, med to dk grey w pale cream to wte, fn laminations; o/c - grab.
			"	-02	grab sample - outcrop: pale grey chert w carbonaceous, rusty red oxide surface coating
			"	-03	grab - outcrop: dk grey lmst w slickensides on fn calcite vns; hosts calcite lenses.
			Anomaly #4	-04	grab - outcrop: intermed (lapilli?) tuff; med gry strongly carbonaceous, weakly foliated; fn lapilli(?)
			Anomaly #5	-05	FLOAT: same as -04 w fn lapilli frags/clasts in weakly foliated, slightly chloritic matrix, CARB.
				-06	grab - o/c: f. g. chlorite schist (mafic meta-volcanic; med. green in colour.
JULY 1/96	SIM-02			-07	grab - o/c: limestone; pale cream to buff w pale cream to buff, cherty interbeds.
				-08	grab - outcrop: pale grey chert w rusty oxide coating
				-09	same as -08
				-10	FLOAT: same as -08
JULY 20/96		105A/11	Bo 2 Claim	96SIMWR-01	Quartz float - rusty stained vein Qtz.
JULY 21/96		"	Bo 2 Claim	96SIMWR-02	grab - o/c; pale green, cryptocrystalline chert w trace v. f. g. pyrite.

SIMPSON RECCE TRAVERSE/SAMPLE RECORD

NAME: S. Meinke

PAGE 1 OF 2

DATE	TRAVERSE	NTS	AREA	SAMPLE #'s	COMMENTS/ROCK DESCRIPTION
JULY 1/96	Soil Lines	105A/11	Anomaly*5	96SIMSM-01	soil samples collected on AERODAT EM
"				96SIMSM-15	anomaly #5. B <sub>1</sub> horizon, brown sand.
JULY 3/96			Anomaly*2	96SIMSM-16	Soil samples: mainly brown B <sub>1</sub> horizon,
"				96SIMSM-27	fine sand, fairly well-developed soil profile
JULY 3/96			Anomaly*3	96SIMSM-28	" " " " " "
"				96SIMSM-44	
JULY 4/96			Anomaly*9	96SIMSM-45	" " " " " "
"				96SIMSM-71	
JULY 8/96			Anomaly*1	96SIMSM-72	" " " " " "
"				96SIMSM-98	
JULY 14/96			Anomaly*8	96SIMSM-99	" " " " " "
"				96SIMSM-122	
JULY 15/96			Anomaly*6	96SIMSM-123	" " " " " "
"				96SIMSM-134	
JULY 18/96			Anomaly*7	96SIMSM-135	" " " " " "
				96SIMSM-151	

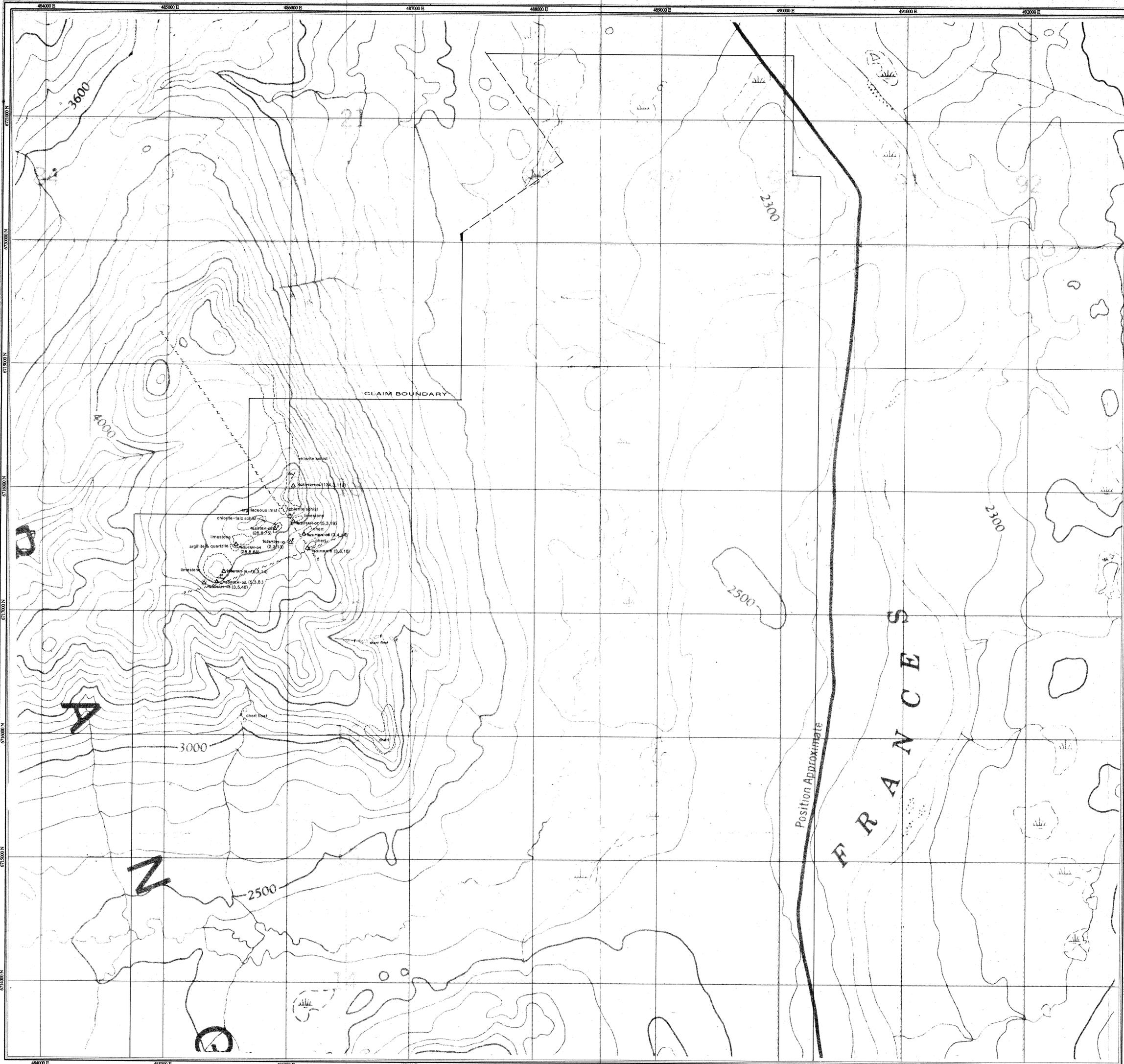


SIMPSON RECCE TRAVERSE/SAMPLE RECORD

NAME: *S. Meinke / G Wesa*

PAGE *1* OF *1*

DATE	TRAVERSE	NTS	AREA	SAMPLE #'S	COMMENTS/ROCK DESCRIPTION
<i>June 25/96</i>		<i>105A/11</i>	<i>Anomaly #7</i>	<i>96SIMWM-01</i>	<i>Stream silt</i>
				<i>-02</i>	<i>"</i>
				<i>-03</i>	<i>"</i>
				<i>-04</i>	<i>"</i>
				<i>-05</i>	<i>"</i>
<i>June 26/96</i>		<i>105A/11</i>	<i>Anomaly #6</i>	<i>96SIMWM-06</i>	<i>Stream silt</i>
<i>"</i>		<i>"</i>	<i>"</i>	<i>-07</i>	<i>"</i>
<i>JULY 18/96</i>		<i>"</i>	<i>LUCKY CREEK</i>	<i>96SIMWM-08</i>	<i>Dark brown sand fr. gravel bar in creek.</i>
<i>JULY 21/96</i>		<i>105A/11</i>	<i>Bo Claims</i>	<i>96SIMWW-01</i>	<i>Gravelly dk brn coarse sand; coarse chips present</i>
<i>"</i>		<i>"</i>	<i>"</i>	<i>-02</i>	<i>" " " " " "</i>
<i>"</i>		<i>"</i>	<i>MAN 15 claim</i>	<i>-03</i>	<i>" " " " " "</i>
<i>"</i>		<i>"</i>	<i>BAY 29 claim</i>	<i>-04</i>	<i>" " " " " "</i>

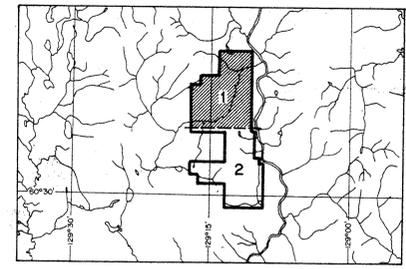


Square: Grid North  
 Star: True North  
 Arrow: Magnetic North  
 Angles presented are approximate mean deviations for centre of NTS sheet.  
 Use diagram for reference only.  
 Grid North - True North: 0.2'  
 Grid North - Magnetic North: 32.9'  
 Annual change: -0.09"

**SYMBOLS**

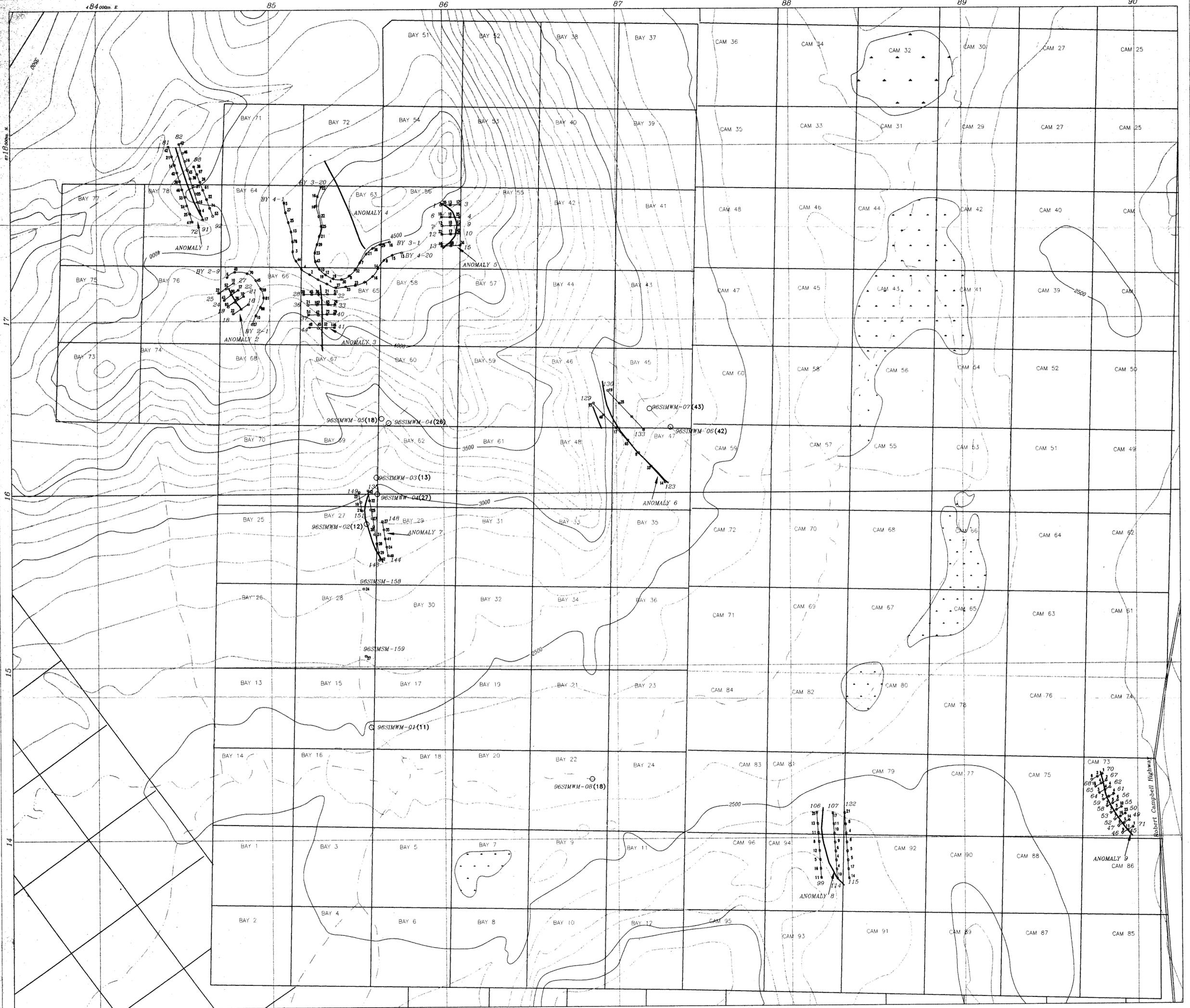
- Outcrop boundary (defined, approximate)
  - Fault (approximate)
  - Bedding (inclined)
  - Foliation (inclined)
  - Float
  - Sample location (28,6.68)
- \*Analytical values in ppm  
 (Cu, Pb, Zn)

093666



**PACIFIC BAY MINERALS LTD.**  
 VANCOUVER, BRITISH COLUMBIA  
**SIMPSON LAKE GROUP**  
 GEOLOGY & LITHOGEOCHEMISTRY  
 (North Sheet)  
**MAP 1**

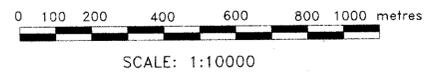
NTS ref: 105A/11	revision:
drawn by: G. WESA	plot by:
checked by: G. WESA	checked by:
date: MARCH 1997	date:
	scale: 1:10,000



• CONTOUR INTERVAL 100 FEET.  
 • ELEVATION IN FEET.

**LEGEND**

- 96SIMWW-02 - Stream silt sample location
- 40 41 42 - Soil line with sample location
- 42 - Cu (ppm)



SCALE: 1:10000



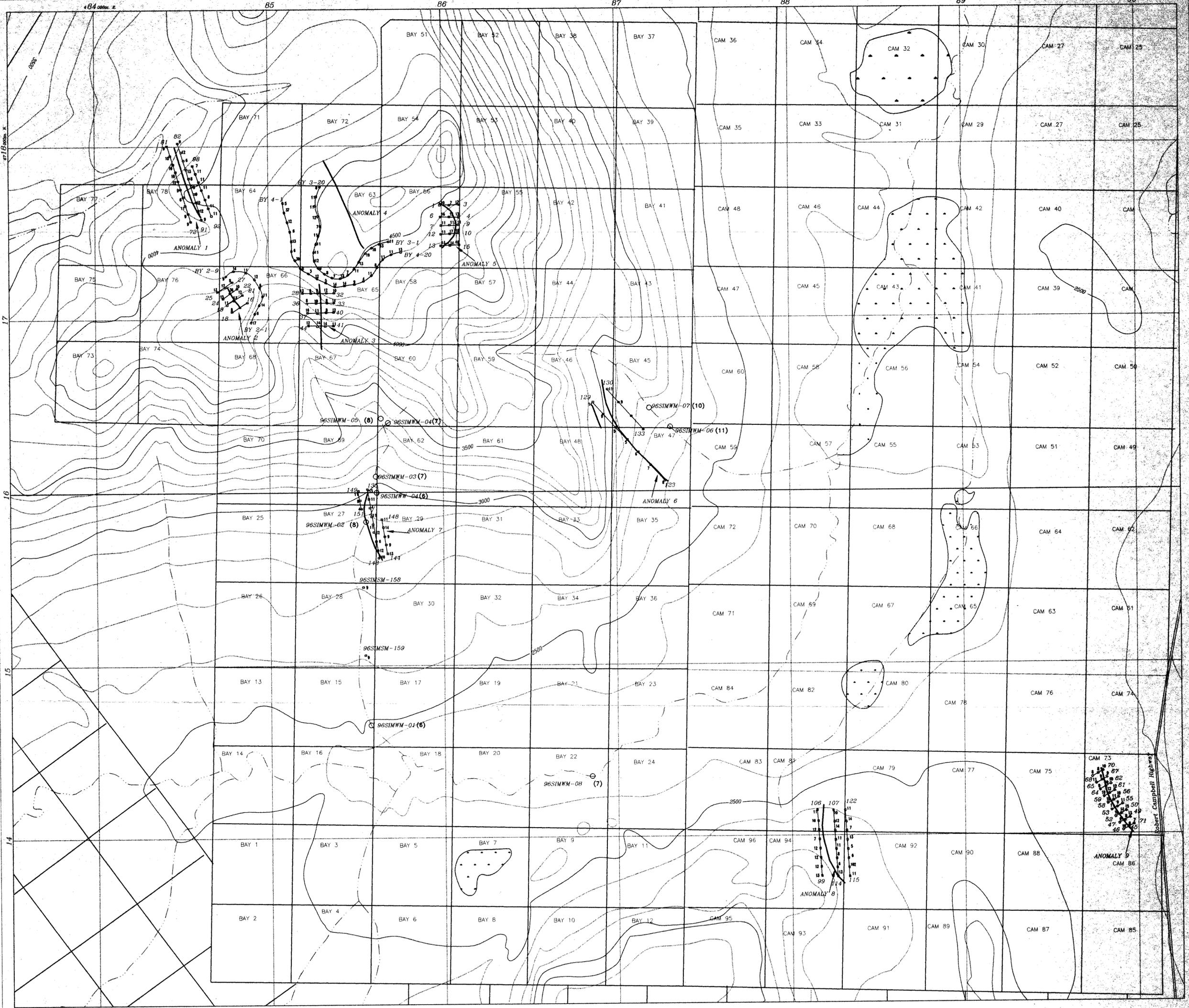
**PACIFIC BAY MINERALS LTD.**  
 VANCOUVER, BRITISH COLUMBIA

**SIMPSON LAKE GROUP**  
**SOIL GEOCHEMISTRY Cu (PPM)**  
**MAP 2 - NORTH SHEET**

LOCATION: Simpson Range, Yukon Territory	
DATE: March 1997	SCALE: 1 : 10,000
DRAWN: TerraCAD 97037	WORK BY: G. WESA
DATA: NTS 105-A-11	FIGURE:

3

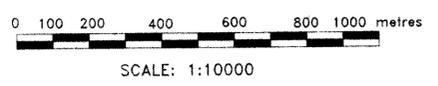
99960



• CONTOUR INTERVAL 100 FEET.  
 • ELEVATION IN FEET.

**LEGEND**

- 96SIMMW-02 - Stream silt sample location
- 40 41 42 - Soil line with sample location
- 42 - Pb (ppm)



**PACIFIC BAY MINERALS LTD.**  
 VANCOUVER, BRITISH COLUMBIA

**SIMPSON LAKE GROUP**  
**SOIL GEOCHEMISTRY Pb (PPM)**  
**MAP 3 - NORTH SHEET**

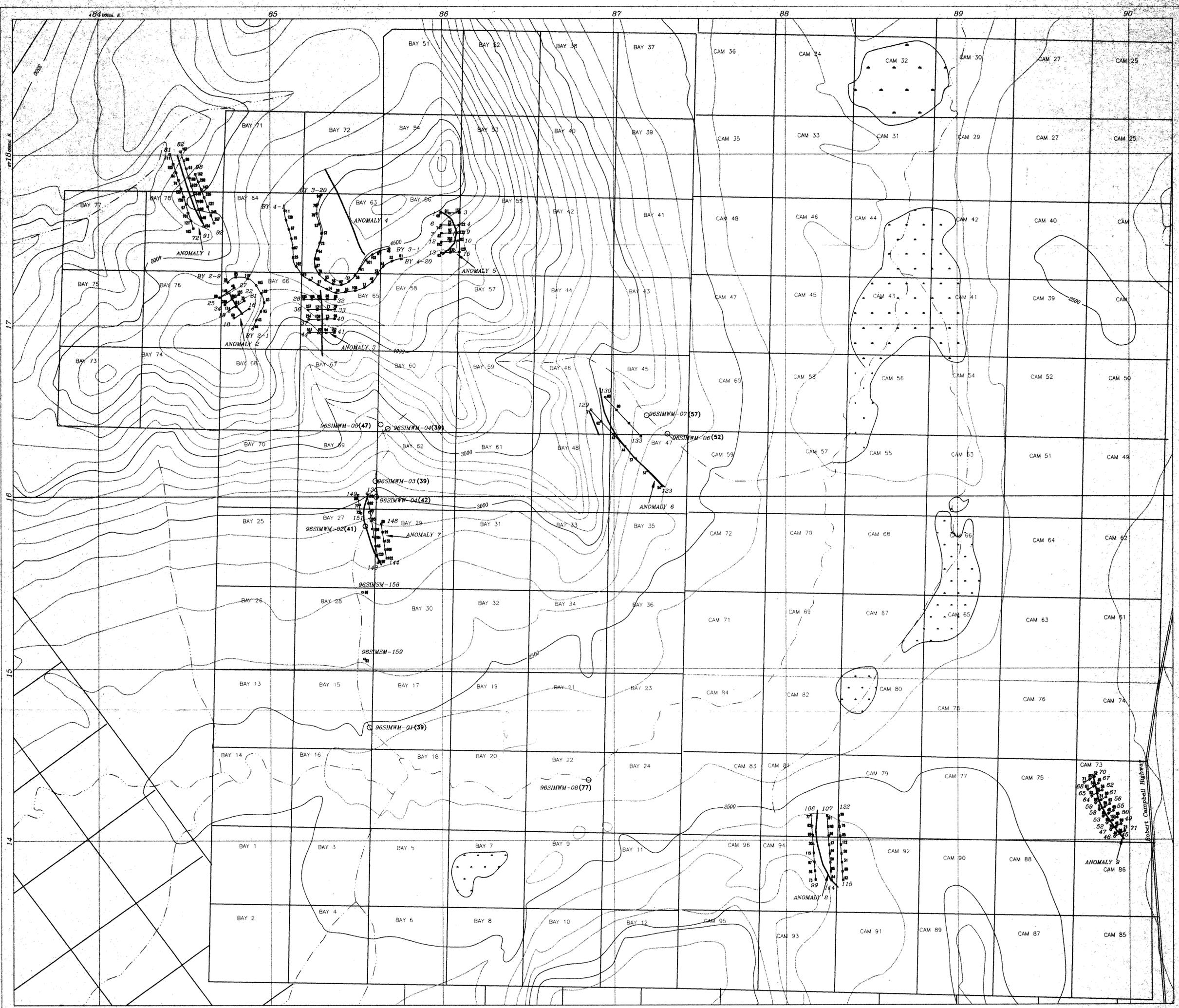
LOCATION: Simpson Range, Yukon Territory

DATE: March 1997	SCALE: 1 : 10,000
DRAWN: TerraCAD 97037	WORK BY: G. WESA
DATA: NTS 105-A-11	FIGURE:

4

093666

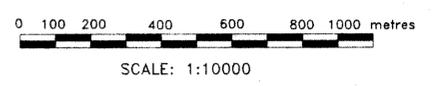
Robert Campbell Highrey



• CONTOUR INTERVAL 100 FEET.  
 • ELEVATION IN FEET.

**LEGEND**

- 96SIMWW-02 - Stream silt sample location
- 40 41 42 - Soil line with sample location
- 42 - Zn (ppm)



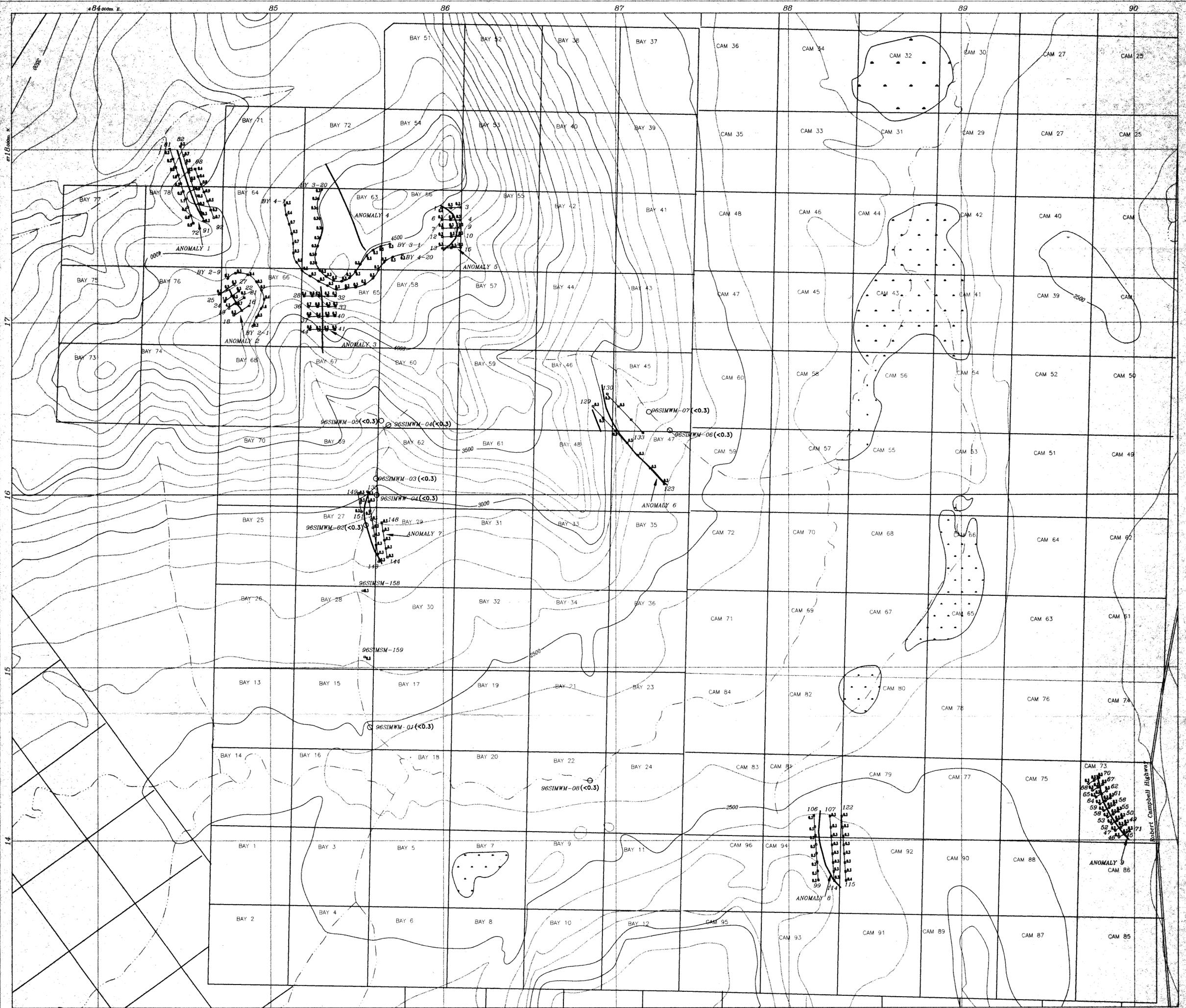
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 VANCOUVER, BRITISH COLUMBIA

**SIMPSON LAKE GROUP**  
**SOIL GEOCHEMISTRY Zn (PPM)**  
**MAP 4 - NORTH SHEET**

LOCATION: Simpson Range, Yukon Territory

DATE: March 1997      SCALE: 1 : 10,000  
 DRAWN: TerraCAD 97037      WORK BY: G. WESA  
 DATA: NTS 105-A-11      FIGURE:

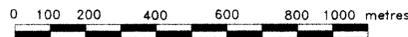
093600



\* CONTOUR INTERVAL 100 FEET.  
 \* ELEVATION IN FEET.

**LEGEND**

- 96SIMMW-02 - Stream silt sample location
- Soil line with sample location
- 40 41 42 - Ag (ppm)



SCALE: 1:10000



**PACIFIC BAY MINERALS LTD.**  
 VANCOUVER, BRITISH COLUMBIA

**SIMPSON LAKE GROUP**  
**SOIL GEOCHEMISTRY Ag (PPM)**  
**MAP 5 - NORTH SHEET**

LOCATION: Simpson Range, Yukon Territory

DATE: March 1997      SCALE: 1 : 10,000  
 DRAWN: TerraCAD 97037      WORK BY: G. WESA  
 DATA: NTS 105-A-11      FIGURE:

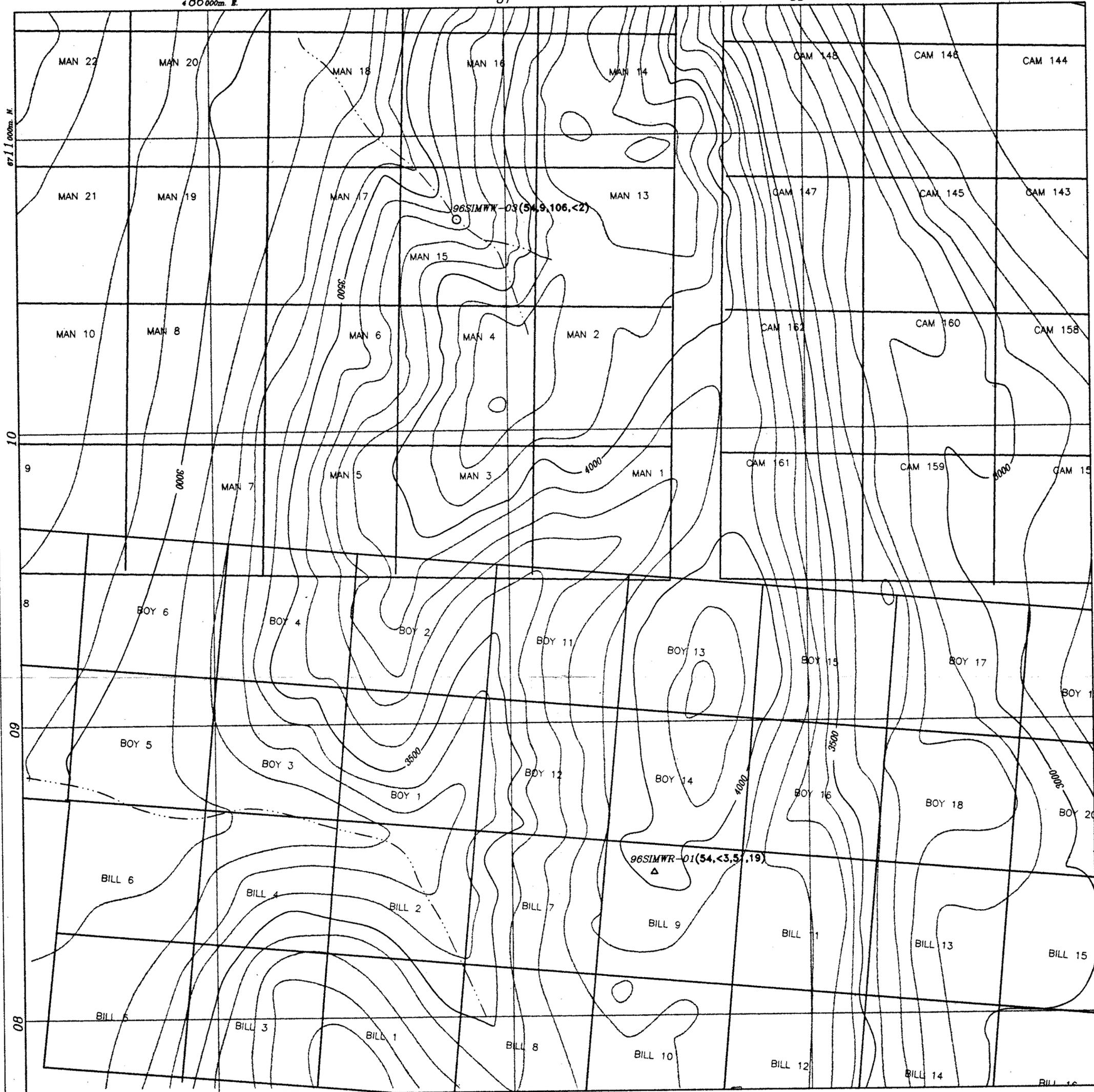
093008

Robert Campbell Figure

486000m. E.

87

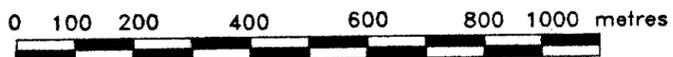
88



- CONTOUR INTERVAL 100 FEET.
- ELEVATION IN FEET.

**LEGEND**

- △ 96SIMWR-01 - Rock sample location
- 96SIMWR-02 - Stream silt sample location
- (Cu,Pb,Zn,Au) - Analytical values in ppm ( Au in ppb)



SCALE: 1:10000



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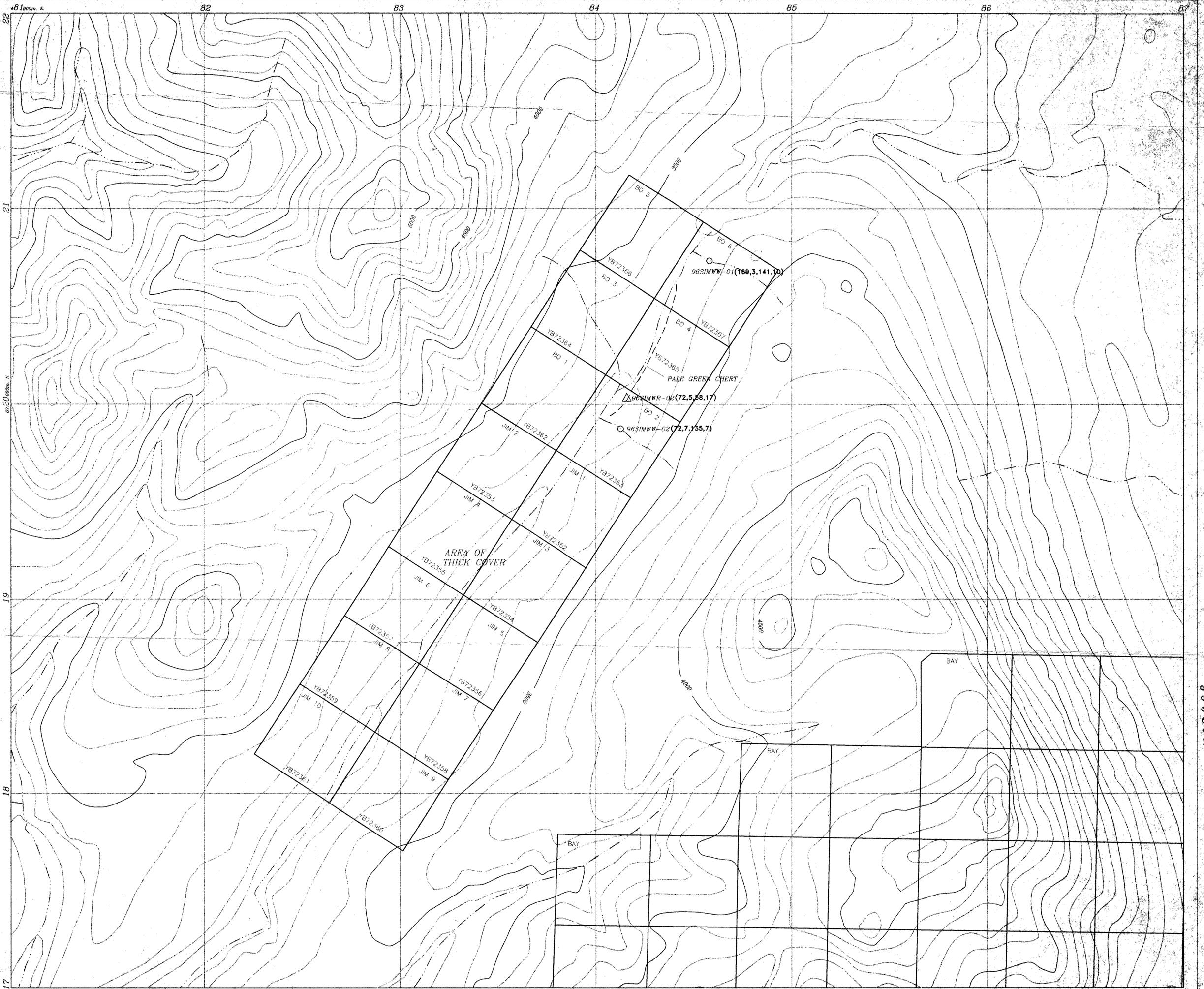
**SIMPSON LAKE GROUP  
GEOCHEMISTRY  
MAP 6 - SOUTH SHEET**

LOCATION: **Simpson Range, Yukon Territory**

DATE: March 1997	SCALE: 1 : 10,000
DRAWN: TerraCAD 97037	WORK BY: G. WESA
DATA: NTS 105-A-11	FIGURE:

7

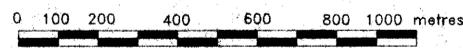
093660



• CONTOUR INTERVAL 100 FEET.  
 • ELEVATION IN FEET.

**LEGEND**

-  - Outcrop Boundary
-  96SIMWR-01 - Rock sample location.
-  96SIMWW-02 - Stream silt sample location.
- (Cu,Pb,Zn,Au.) - Analytical values in ppm (Au in ppb)



SCALE: 1:10000



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**SIMPSON LAKE GROUP**  
**GEOLOGY AND GEOCHEMISTRY**

**MAP 7**

LOCATION: **JIM-BO CLAIMS, Yukon Territory**

DATE: March 1997	SCALE: 1:10,000
DRAWN: TerraCAD 97009	WORK BY: G. WESA
DATA: NTS 105-A-31	FIGURE:

093666