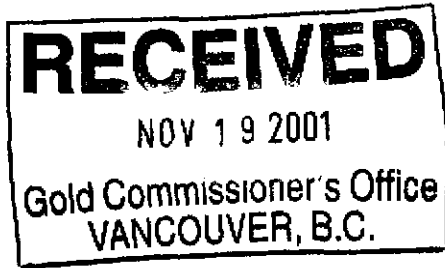


**GEOLOGICAL SURVEY BRANCH**  
**ASSESSMENT REPORT**



26,681

**GEOLOGICAL AND GEOCHEMICAL REPORT**  
**ON THE**  
**GOLDEN HOPE, BLACK BEAR, LITTLE JOE, MOLLY Fraction AND MOLLY**  
**MINERAL CLAIMS**

**Tillicum Gold Property**  
**Slocan Mining Division**  
**British Columbia**

**NTS:** 82F/13E&W  
49°58.2' - 49°59.1' North  
117°41.2' - 117°44.5' West

**OWNER:** 1330275 Ontario Limited

**AUTHOR:** N.C. CARTER, Ph.D. P.Eng.

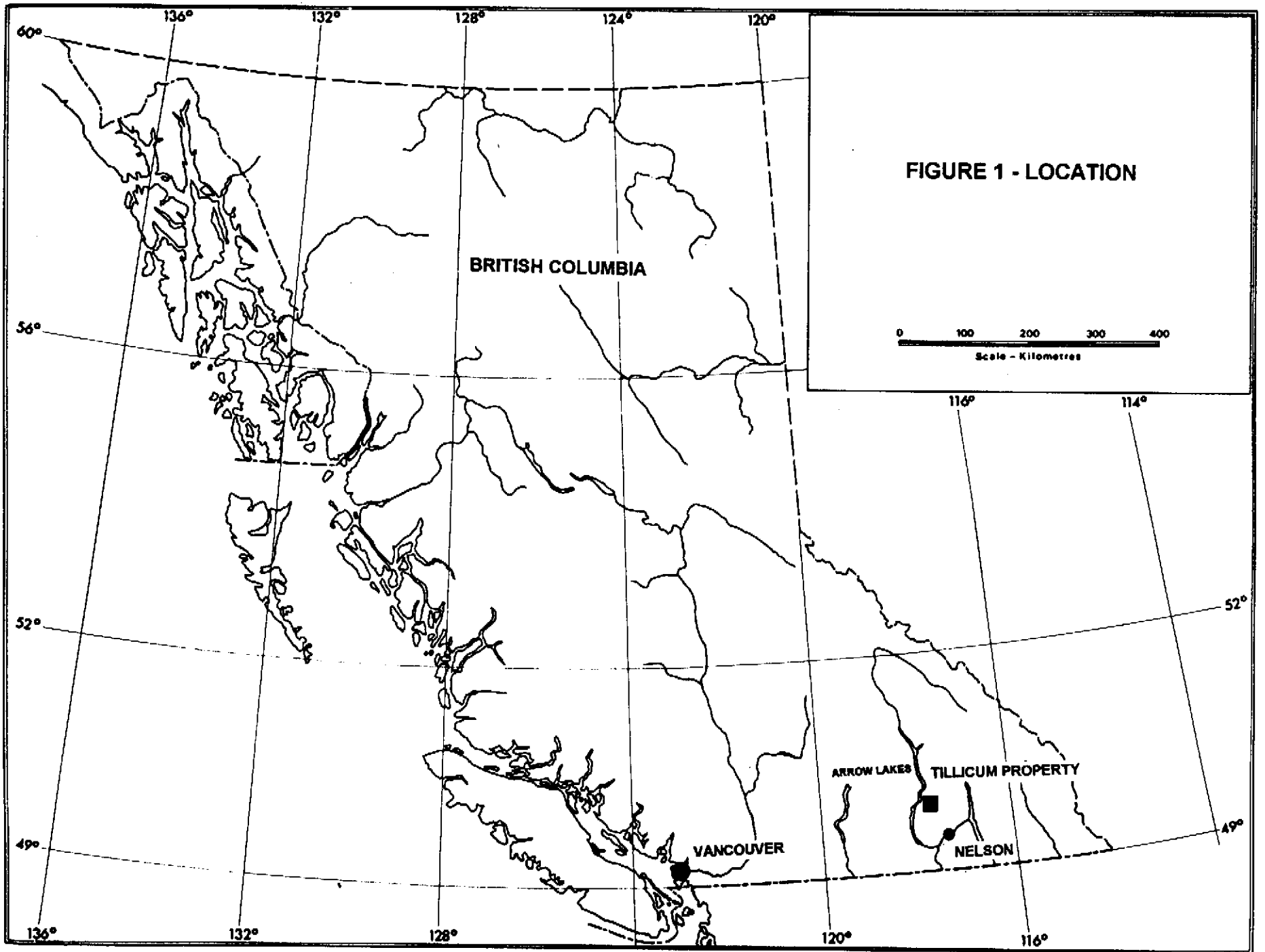
**DATE:** November 2, 2001

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## INTRODUCTION

### Location and Access

The Golden Hope, Black Bear, Little Joe, Molly Fraction and Molly mineral claims, all part of a large claim block comprising the Tillicum gold property, are situated 60 km northwest of Nelson in southeastern British Columbia (Figure 1). The various mineral claims are between 10 and 14 km east of the small community of Burton on the east shore of Lower Arrow Lake (Figure 2).

Access to the area of the subject mineral claims from Burton, which is on provincial highway 6, is by way of logging and mining roads extending up the south side of Caribou Creek to a former exploration camp site near the headwaters of Londonderry Creek (Figure 3). Four-wheel drive vehicles are required to negotiate the steep access road to the principal Tillicum workings near the summit of Tillicum Mountain. Total road distance from Burton is approximately 17 km.

### Mineral Property

The four subject mineral claims and one fractional claim, which are reverted Crown granted mineral claims, form part of a larger claim holding covering the Tillicum gold property. Locations of the various claims, which are the subject of this report, are shown on Figure 3 and details are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>(Lot Number)</u>	<u>Record Number</u>	<u>Date of Record</u>
GOLDEN HOPE	1	(1797)	255530	August 8, 1978
BLACK BEAR	1	(2208)	255531	August 8, 1978
LITTLE JOE, MOLLY Fr.	1	(2728, 2729)	255532	August 8, 1978
MOLLY	1	(2727)	255533	August 8, 1978

As indicated on Figure 3, the Golden Hope and Black Bear are individual claims situated in the south-central and southeastern parts of the Tillicum property. The Little Joe, Molly Fraction and Molly claims, in the west central property area, are contiguous.

### Previous Work

Extensive exploration and development work was undertaken in the central part of the Tillicum property following the discovery of free gold on the northern slopes of Tillicum Mountain in 1980. Work completed by Esperanza Explorations Ltd. through 1989 included a variety of surface geological, geochemical and geophysical surveys, 32875 metres of surface and underground diamond drilling in 376 holes and 1800 metres of underground development on the Heino-Money and East Ridge zones (Figure 3).

Limited underground mining of the Heino-Money zone was undertaken by Bethlehem Resources Corporation and Goldnev Resources Inc. in 1993 by way of an option agreement with Columbia Gold Mines Ltd., the successor company to Esperanza Explorations Ltd. Some 6000 tonnes, with an average head grade of 19.82 g/t gold, were shipped for processing to Bethlehem's Goldstream mill north of Revelstoke.

AMT Resources Ltd. acquired the Tillicum property in 1996 and completed a surface and underground geological evaluation, additional rock and soil sampling, geophysical surveys, rehabilitation of access roads plus a detailed review of the extensive exploration database (Addie, 1997).

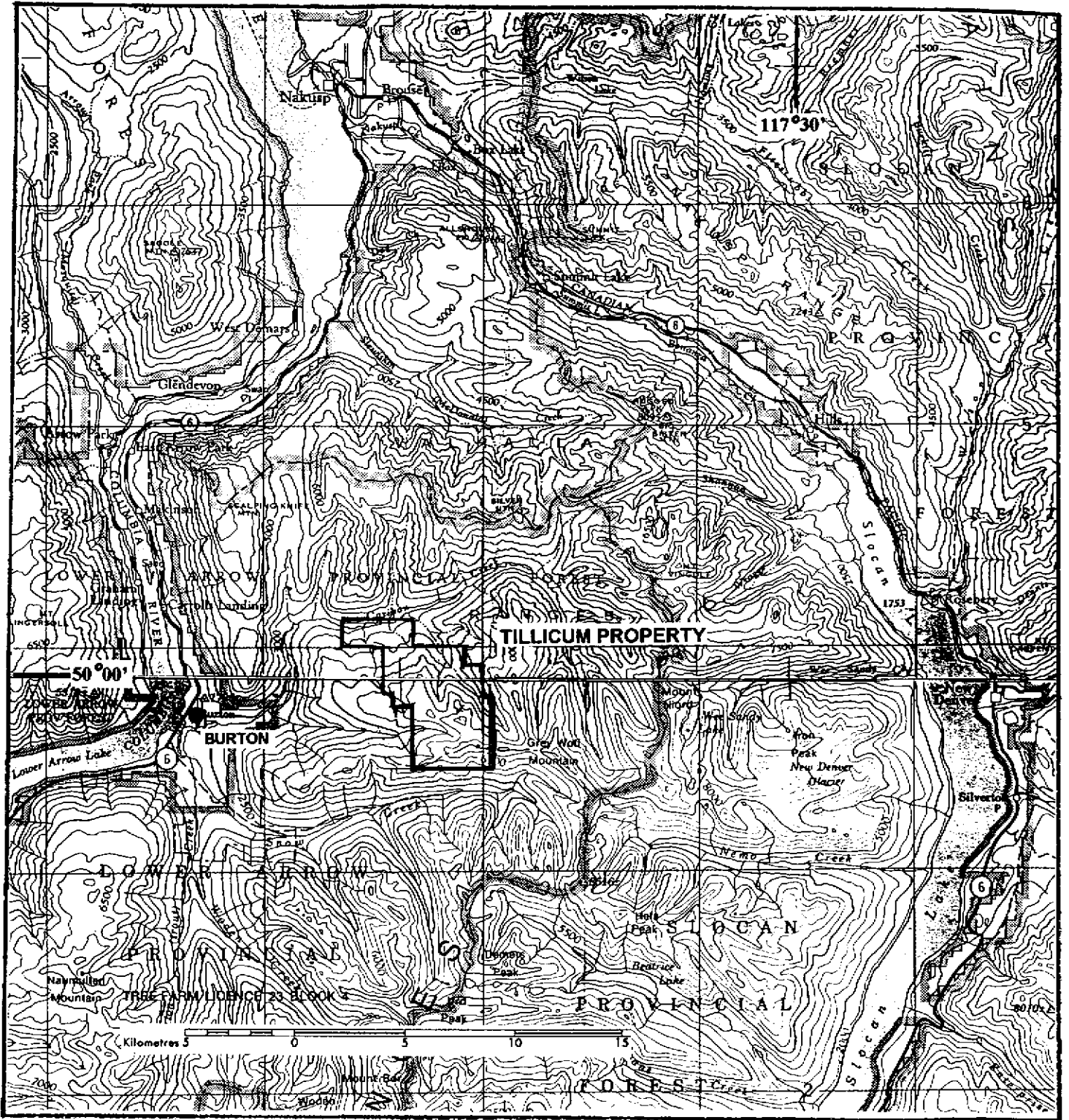
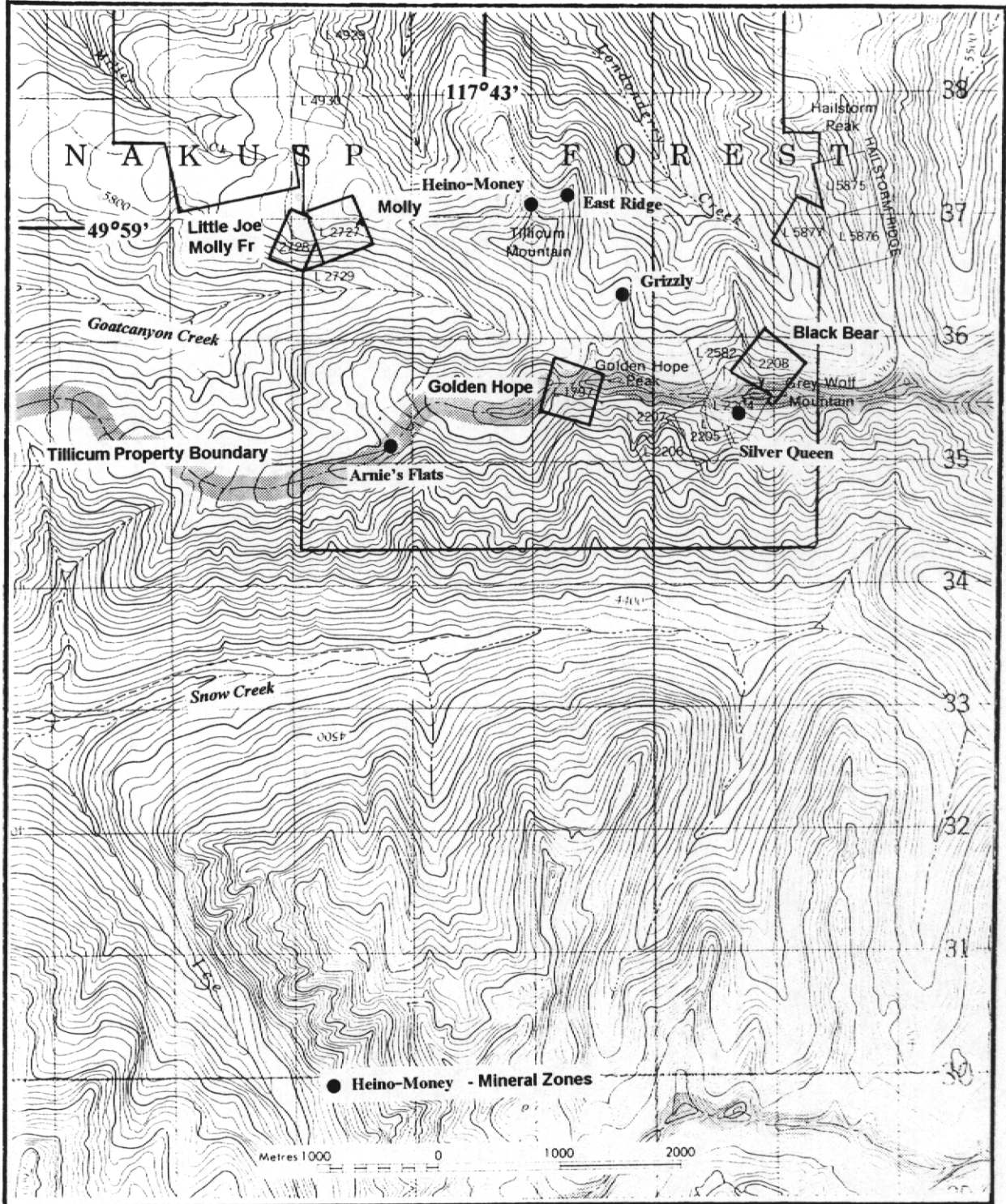


FIGURE 2 - LOCATION - TILLICUM PROPERTY



**FIGURE 3 - GOLDEN HOPE, BLACK BEAR, LITTLE JOE, MOLLY Fr. and MOLLY Mineral Claims**

Details of previous work on the Golden Hope, Black Bear, Little Joe, Molly Fraction and Molly claims are mainly unknown. Minister of Mines Annual Reports indicate that the contiguous Little Joe, Molly Fraction and Molly claims were Crown granted in 1898; the Black Bear, then part of the Silver Queen property, was Crown granted in 1899 and the Golden Hope claim achieved similar status in 1901.

Partial records of work in the early 1900s are available for the Silver Queen property which included the Black Bear claim until at least 1930. Early work on the Silver Queen mineralized zone(s) consisted 110 metres of underground workings on one adit level on the south slope of Grey Wolf Mountain, a 10 metres shaft and a number of open cuts near the ridge crest. More recent work in the 1980s included soil geochemistry and the completion of several drill holes, results of which are not available.

Evidence of previous work on the Golden Hope mineral claim includes a small dump and a caved adit portal near the base of the cirque in the northern part of the claim. The only evidence of previous work on the Little Joe - Molly claims was the remains of a cabin found during the 2001 field program.

A prospecting program on the Golden Hope, Black Bear, Little Joe, Molly Fraction and Molly claims was undertaken in 1979. No significant results were obtained from the several rock samples submitted for analyses (Gustafson, 1979).

#### **Current Status**

The Tillicum gold property was acquired by 1033275 Ontario Limited in 1997. The various mineral claims have been maintained in good standing by cash-in-lieu payments.

A program of assessment work, initiated in mid-2001 included a field program in late July - early August. An investigation of the Golden Hope, Black Bear, Little Joe, Molly Fraction and Molly mineral claims was undertaken by the writer and George G. Addie, P.Eng., on August 2 and 3, 2001.

## **GEOLOGY AND MINERALIZATION**

### **Physical Setting**

The Tillicum property is situated in the Valhalla Ranges east of Arrow Lakes. Elevations within the property area range from about 800 metres above sea level along Caribou Creek in the northern claims area to more than 2300 metres at the summit of Grey Wolf Mountain in the southeastern part of the property. The topography is generally steep and locally precipitous. Steeper slopes are mantled by a thin veneer of overburden and forest cover extends to elevations of 2100 metres. Bedrock is best exposed along ridge crests and in recent road cuts.

Both the Golden Hope and Black Bear claims are on or near ridge crests well above tree line and bedrock is more or less continuously exposed on both claims. The contiguous Little Joe, Molly Fraction and Molly claims, in the west-central property area, are situated in relatively subdued, forest-covered terrain with little or no natural bedrock exposure.

### **Regional Geological Setting**

The Tillicum property, within Quesnel terrane of the Omineca Belt, is underlain part by Late Paleozoic to Early Mesozoic metasedimentary rocks which are locally overlain by basic and intermediate volcanic rocks. These supracrustal rocks are contained in a roof pendant bounded by the Halifax Creek - Goatscanyon Creek granitic stocks of Cretaceous age on the north and west and by the Tertiary Nemo Creek stock on the south.

The metasedimentary and metavolcanic rocks are further intruded by feldspar porphyry stocks and sills of possible early Mesozoic age and by Tertiary lamprophyre dyke swarms.

### **Property Geology and Mineralization**

A predominantly metasedimentary sequence, which underlies the central part of the Tillicum property, consists principally of deformed and metamorphosed siltstone, calcareous siltstone, quartzite and greywacke with lesser mafic volcanic rocks, tuffs argillites and impure carbonate and marble layers (Ettlinger and Ray, 1989).

The metasedimentary sequence is intruded by sill-like feldspar porphyries which pre-date the Halifax Creek - Goatscanyon Creek granitic stocks. Precious metals enriched skarns are developed marginal to the feldspar porphyry intrusions. The skarn zones are structurally controlled and strike north-northeast and dip steeply east and west, paralleling the trend of the porphyry intrusions.

Native gold occurs as fine disseminations and as coarse flakes along the margins of quartz-actinolite-chlorite skarns zones which also contain variable amounts of finely disseminated pyrrhotite, pyrite, sphalerite and galena.

A number of gold-rich skarn zones, identified by previous work in the central property area, include the Heino-Money, East Ridge and Grizzly zones (Figure 3). The Silver Queen and Amie's Flats zones, situated in the southeastern and southwestern property area respectively, are silver-rich skarns in which gold values are low to absent.

Addie (1997) noted a semi-circular regional geochemical pattern centred on Tillicum Mountain and consisting of an outer anomalous molybdenum zone grading inward to higher silver values followed by gold.

The most significant gold zones identified to date are the Heino-Money and East Ridge zones on the northern slopes of Tillicum Mountain. Prior to mining, geological reserves for the Heino-Money zone were estimated to be 14850 tonnes grading 35.04 g/t gold at a cutoff grade of 13.71 g/t (Saunders and Budinski, 1989). Several estimates of geological reserves and resources have been prepared for the East Ridge zone including 11846721 tonnes grading 5.82 g/t gold; this figure includes 440000 tonnes at 10.26 g/t (BC Minfile).

Significantly, post-mineral lamprophyre dyke swarms, which follow the dominant north-northeast structural trend, are particularly evident in both the Heino-Money and East Ridge zones.

With respect to the mineral claims that are the subject of this report, little or no data are available for the contiguous Little Joe, Molly Fraction and Molly claims in the west-central property area or for the Golden Hope claim to the southeast.



The Black Bear mineral claim is contiguous with the Silver Queen Crown granted claims in the southeastern property area (Figure 3). Silver and lesser gold mineralization on these claims have been described (Minister of Mines Annual Reports for 1930 and 1935) as being associated with carbonate-rich units marginal to porphyry dykes and irregular aplite intrusions over a northeast strike length of more than 300 metres between elevations of 2000 and 2250 metres.

An adit near the southwestern limits of the zone was collared in irregular quartz veins containing fine-grained pyrite about 20 metres east of a 15 metres wide aplite intrusion which apparently terminated the zone in the underground workings. Adit dump samples returned values of between 1.4 and 3.4 g/t gold and 685 to 1060 g/t silver accompanied by 2.7% lead and 2.6% zinc. A 0.50-0.75 metre wide carbonate-rich zone, containing pyrite and fine-grained black sulphides some 300 metres northeast of the adit, returned values of 2.1 g/t gold and 257 g/t silver. A selected sample from a similar zone on the ridge crest 200 metres west of the summit of Grey Wolf Mountain assayed 3.4 g/t gold and 960 g/t silver.

These various zones are contained within a northeast-trending, +3 ppm silver in soils anomaly measuring 1000 x 160 metres which was identified by 1980s work. A number of drill holes tested this zone which was described by Ettlinger and Ray (1989) as consisting of several 20 metres thick skarn zones developed in a 30 metres wide sequence of impure calcareous quartzites, siltstones and thin marble beds marginal to feldspar porphyry sills. The skarn assemblage includes quartz- tremolite-actinolite, anhedral garnet and hosts pyrite, pyrrhotite, tetrahedrite, sphalerite, galena, pyrargyrite and arsenopyrite.

## 2001 PROGRAM

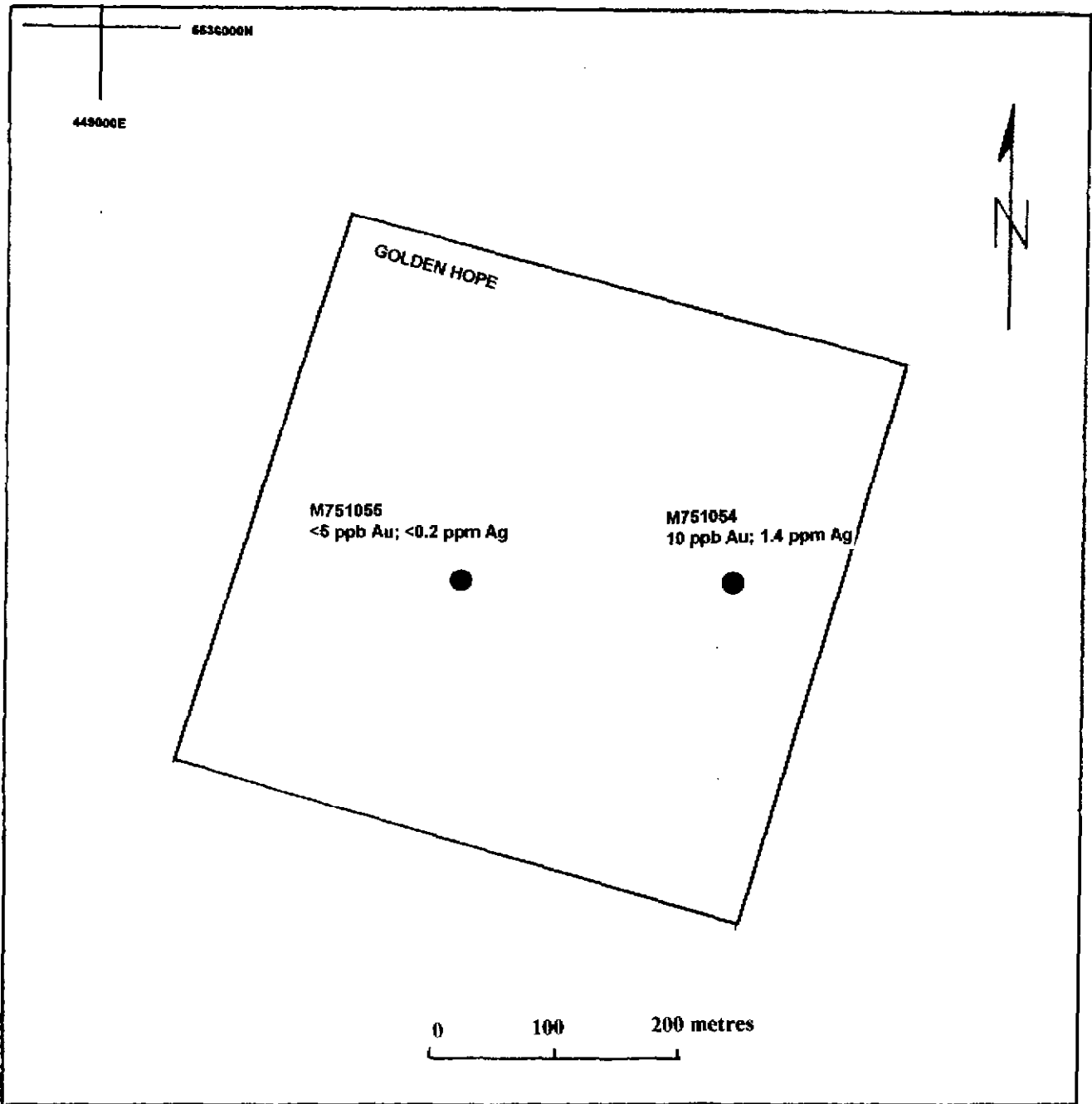
Field work was undertaken by the writer and George G. Addie, P.Eng., on the Golden Hope, Black Bear, Little Joe, Molly Fraction and Molly mineral claims August 2 and 3, 2001. This work included geological reconnaissance and the collection of three rock samples and eleven soil samples.

Sample locations were determined using a Global Positioning System instrument and hip chain. Individual rock samples consisted of about 2 kg of material which was placed in plastic samples bags; soil samples, collected from reddish-brown, B horizon material from depths of between 30 and 40 cm, were placed in gusseted kraft paper bags.

The rock and soil samples were submitted to ALS Chemex for preparation and subsequent analyses for 32 major and trace elements by induced coupled argon plasma (ICP) techniques. Gold values were determined by fire geochemistry with atomic absorption finish. Sample preparation and analytical procedures for both rocks and soils preface complete analytical results in Appendix I.

### ***Golden Hope Mineral Claim***

The Golden Hope claim is centred on the ridge crest marking the divide between Goatcanyon and Snow Creek drainages (Figure 3). Elevations range from 2050 to 2225 metres and the entire claim is above tree line. Bedrock is well exposed along the ridge crest and in road cuts east and west of the saddle in the central claim area and consists principally of steeply-dipping, light grey micaceous and schistose greywacke with an overall east-northeast trend. These rocks contain



**FIGURE 4 - GOLDEN HOPE MINERAL CLAIM  
ROCK SAMPLE SITES**

very fine-grained disseminated pyrite and are characterized by a rusty weathered surface. Character sample M751054, collected east of the saddle, is proximal to a fine-grained, porphyritic quartz diorite dyke. The second sample (M751055), consisted of similar rusty micaceous greywacke exposed west of the saddle marginal to a fine-grained aplite or alaskite dyke which is 2 metres wide, strikes east-northeast and dips gently north. This dyke is visible on the in the headwall of the cirque in the northern claim area and the original Golden Hope adit was apparently collared immediately below the dyke.

Sample locations are shown on Figure 4. No significant results were obtained from the two rock samples collected as indicated in the following table.

Sample Number	UTM Coordinates	Au(ppb)	Ag(ppm)	Pb(ppm)	Zn(ppm)	Cu(ppm)
M751054	449506E 5535591N	10	1.4	<2	24	135
M751055	449361E 5535592N	<5	<0.2	2	8	22

#### ***Black Bear Mineral Claim***

The Black Bear claim, on the steep north-facing slope north of the summit of Grey Wolf Mountain (Figure 3) is underlain by light grey, micaceous quartzite which locally contains finely disseminated pyrite and pyrrhotite. Near the south boundary of the claim, these metasedimentary rocks strike east-northeast to northeast and dip moderately to steeply northwest. The one character sample collected (Figure 5) of this material is marginal to a sill-like intrusions of leucocratic, fine-grained diorite porphyry with 2-4 mm feldspar phenocrysts set in a fine-grained, biotite-rich matrix.

Partial results of the one sample collected are as follows:

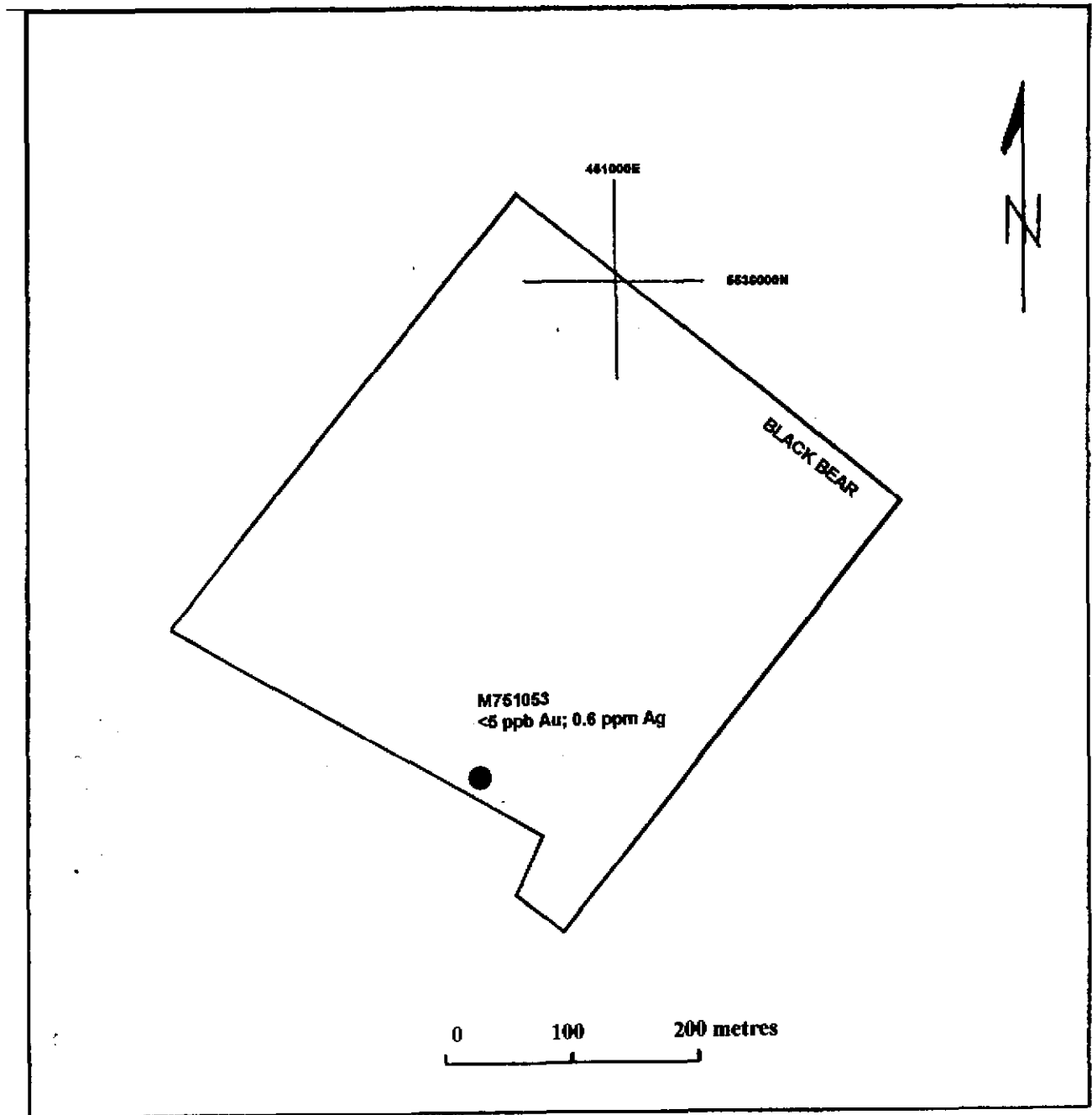
Sample Number	UTM Coordinates	Au(ppb)	Ag(ppm)	Pb(ppm)	Zn(ppm)	Cu(ppm)
M751053	450945E 5535577N	<5	0.6	12	86	34

#### ***Little Joe, Molly Fraction and Molly Mineral Claims***

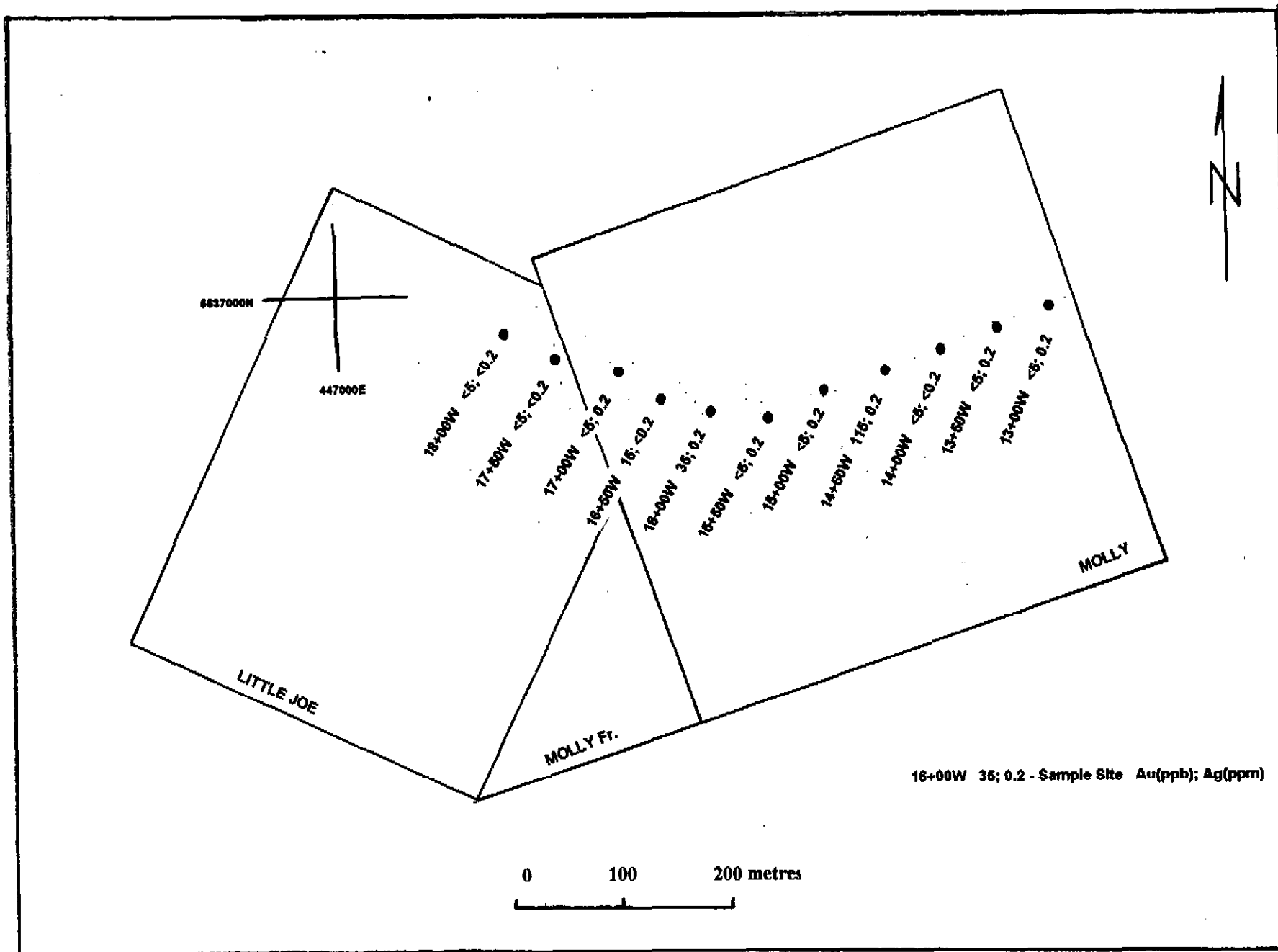
These contiguous two claims and one fraction are situated on a south-facing slope above Goatcanyon Creek (Figure 3). Elevations within the claims ranges from 1700 metres to 1950 metres and the entire area is well below tree line. Overburden is extensive with no bedrock exposures noted in the areas traversed.

Eleven soil samples were collected along the 1900 metres topographic contour at  $\pm 50$  metres intervals as measured by hip chain. Locations of the samples are shown on Figure 6 and partial results are as follows:

Sample Station	Au(ppb)	Ag(ppm)	Pb(ppm)	Zn(ppm)	Cu(ppm)
13+00W	<5	0.2	6	60	10
13+50W	<5	0.2	6	58	8
14+00W	<5	<0.2	10	86	10
14+50W	115	0.2	22	70	6
15+00W	<5	0.2	6	66	8
15+50W	<5	<0.2	6	58	7
16+00W	35	0.2	8	68	13
16+50W	15	<0.2	8	46	7
17+00W	<5	0.2	2	24	9
17+50W	<5	<0.2	8	40	7
18+00W	<5	<0.2	8	66	6



**FIGURE 5 - BLACK BEAR MINERAL CLAIM  
ROCK SAMPLE SITE**



**FIGURE 6 - LITTLE JOE, MOLLY Fr. and MOLLY MINERAL CLAIMS  
SOIL GEOCHEMISTRY**

As indicated, three of the samples (14+00W, 15+50W, 16+00W) contained weakly anomalous gold values accompanied by slightly elevated lead values. These three sample sites, in the central and western parts of the Molly claim (Figure 6), may be indicative of an as yet undetected mineralized zone. Evidence of historic work on the property includes the remains of a log cabin and an overgrown access road near sample site 17+50W.

The area of these claims has been interpreted as being underlain by granitic rocks of the Goatcanyon Creek stock. Significantly, abundant angular float of light grey, micaceous greywacke was noted along the soil sampling line. One rock sample was collected from the southwestern part of the Molly claim during a 1979 prospecting program (Gustafson, 1979); reported results were low for all elements.

### CONCLUSIONS AND RECOMMENDATIONS

While the results obtained from recent rock and soil sampling are not particularly encouraging, additional investigation of all of the subject claims should be considered.

Bedrock sampling in the vicinity of the adit portal on the Golden Hope claim is warranted. Additional sampling of the Black Bear claim, particularly marginal to observed porphyry dykes should be undertaken to evaluate the potential for possible skarn mineralization similar to that found on claims immediately to the south.

The Little Joe, Molly Fraction and Molly claims should be further investigated in an attempt to locate a possible mineralized zone which may have provided the rationale for conducting the required legal survey to establish Crown grant status for these claims in 1898.

**COST STATEMENT**Wages

- August 2 and 3, 2001

N.C. Carter	0.6 day @ \$700/day	\$400.00
G.G. Addie	0.6 day @ \$500/day	\$300.00

Analytical Costs

Sample Preparation and Analyses		
3 rock samples @ \$25.44/sample		\$76.31
11 soil samples @ \$21.85/sample		\$240.35

Report Preparation

N.C. Carter - Data compilation, word processing, duplicating		\$200.00
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<b>TOTAL EXPENDITURES</b>		<b>\$1,216.66</b>
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**REFERENCES**

- British Columbia Ministry of Energy and Mines, Annual Reports of the Minister of Mines:  
1898 - p.1191  
1899 - p.842,846  
1901 - p.1225  
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- Addie, George G.(1997): Geology Report on the Tillicum Mountain Gold Property, Slocan Mining Division, British Columbia for AMT Resources Ltd., B.C. Ministry of Energy and Mines Assessment Report 25004
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- Gustafson, E.(1989): Prospecting - Gustafson Claims, Tillicum Mountain Area, B.C. Ministry of Energy and Mines Assessment Report 7692
- Saunders, C.R. and Budinski, D.R.(1989): Ore Reserves for the Tillicum Mountain Project, private report for Esperanza Explorations Ltd.



**STATEMENT OF QUALIFICATIONS****George G. Addie, P.Eng.**

1988 - Present Consulting Geologist


1974 - 1989 District Geologist, Nelson, B.C., B.C. Ministry of Energy Mines and Petroleum Resources

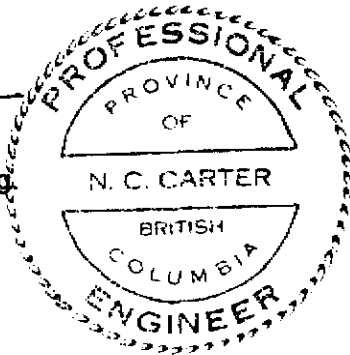
1959 - 1974 Mine Geologist Rio Algom Mines Ltd.  
Bralome-Pioneer Gold Mines Ltd.  
Phoenix Copper Mines Ltd.  
Cominco Ltd. - Sullivan mine  
Pend Oreille Mines Ltd.  
Reeves MacDonald mine  
Consulting geologist - J.C. Sproule & Associates Ltd., Calgary

**AUTHOR'S QUALIFICATIONS**

I, NICHOLAS C. CARTER, of 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc.(1960), Michigan Technological University with M.S.(1962) and the University of British Columbia with Ph.D.(1974).
3. I have practiced my profession in eastern and western Canada, parts of the United States and abroad for more than 30 years.
4. The foregoing report on the Golden Hope, Black Bear, Little Joe, Molly Fraction and Molly mineral claims is based in part on a review of data pertaining to the geological setting and styles of mineralization of the Tillicum gold property and on personal observations derived from an examination of the subject claims August 2 and 3, 2001.

  
N.C. Carter, Ph.D. P.Eng.  
Victoria, B.C.  
November 2, 2001



**APPENDIX I**  
**Analytical Results**



# ALS Chemex

Aurora Laboratory Services Ltd.  
 Analytical Chemists \* Geochemists \* Registered Assayers  
 212 Brooksbank Ave., North Vancouver  
 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221 FAX: 604-984-0218

CARTER, N. C.

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 VICTORIA, BC  
 V8P 3T5

A0123370

Comments: ATTN: N.C. CARTER

CERTIFICATE

A0123370

(OUO) - CARTER, N. C.

Project:  
 P.O. #:

Samples submitted to our lab in Vancouver, BC.  
 This report was printed on 31-AUG-2001.

## SAMPLE PREPARATION

METHOD CODE	NUMBER SAMPLES	DESCRIPTION
PUL-31	3	Pulv. <250g to >85%/-75 micron
STO-21	3	Reject Storage-First 90 Days
LOG-22	3	Samples received without barcode
CRU-31	3	Crush to 70% minus 2mm
SPL-21	3	Splitting Charge
229	3	ICP - AQ Digestion charge

\* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Tl, W.

## ANALYTICAL PROCEDURES 1 of 2

METHOD CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
WEI-21	3	Weight of received sample	BALANCE	0.01	1000.0
Au-AA23	3	Au-AA23 : Au ppb: Fuse 30 grams	FA-AAS	5	10000
Ag-ICP41	3	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
Al-ICP41	3	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
As-ICP41	3	As ppm: 32 element, soil & rock	ICP-AES	2	10000
B-ICP41	3	B ppm: 32 element, rock & soil	ICP-AES	10	10000
Ba-ICP41	3	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
Be-ICP41	3	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
Bi-ICP41	3	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
Ca-ICP41	3	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
Cd-ICP41	3	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
Co-ICP41	3	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
Cr-ICP41	3	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
Cu-ICP41	3	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
Fe-ICP41	3	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
Ga-ICP41	3	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
Hg-ICP41	3	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
K-ICP41	3	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
La-ICP41	3	La ppm: 32 element, soil & rock	ICP-AES	10	10000
Mg-ICP41	3	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
Mn-ICP41	3	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
Mo-ICP41	3	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
Na-ICP41	3	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
Ni-ICP41	3	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
P-ICP41	3	P ppm: 32 element, soil & rock	ICP-AES	10	10000
Pb-ICP41	3	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
S-ICP41	3	S %: 32 element, rock & soil	ICP-AES	0.01	10.00
Sb-ICP41	3	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
Sc-ICP41	3	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
Sr-ICP41	3	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
Ti-ICP41	3	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
Tl-ICP41	3	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
U-ICP41	3	U ppm: 32 element, soil & rock	ICP-AES	10	10000
V-ICP41	3	V ppm: 32 element, soil & rock	ICP-AES	1	10000



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The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

## ANALYTICAL PROCEDURES 2 of 2

METHOD CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
W-ICP41	3	W ppm: 32 element, soil & rock	ICP-AES	10	10000
Zn-ICP41	3	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000



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 British Columbia, Canada V7J 2C1  
 PHONE: 604-984-0221 FAX: 604-984-0218

CARTER, N. C.  
 1410 WENDE RD.  
 VICTORIA, BC  
 V8P 3T5

Page Number : 1-A  
 Total Pages : 1  
 Certificate Date: 31-AUG-2001  
 Invoice No. : I0123370  
 P.O. Number :  
 Account : OUC

Project :  
 Comments: ATTN: N.C. CARTER

## CERTIFICATE OF ANALYSIS A0123370

SAMPLE	PREP CODE	Weight Au ppb		Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La
		Kg	FA+AA	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
M751053	94139402	1.82	< 5	0.6	2.41	10	< 10	90	< 0.5	10	0.23	2.0	6	117	34	2.77	< 10	< 1	1.05	< 10
M751054	94139402	1.66	10	1.4	0.97	2	< 10	20	< 0.5	6	0.43	0.5	15	30	135	4.28	< 10	< 1	0.08	< 10
M751055	94139402	1.18	< 5	< 0.2	0.27	< 2	< 10	< 10	< 0.5	4	0.02	< 0.5	< 1	81	22	0.24	< 10	1	0.16	< 10

CERTIFICATION:



# ALS Chemex

Aurora Laboratory Services Ltd.  
 Analytical Chemists \* Geochemists \* Registered Assayers  
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 British Columbia, Canada V7J 2C1  
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Page 1 of 1  
 Total Pages : 1  
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 Invoice No. : I0123370  
 P.O. Number :  
 Account : OUG

Project :  
 Comments: ATTN: N.C. CARTER

## CERTIFICATE OF ANALYSIS A0123370

SAMPLE	PREP CODE	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
M751053	94139402	1.48	690	24	0.07	16	540	12	0.11	4	8	27	0.11	< 10	< 10	108	< 10	86
M751054	94139402	0.27	115	6	0.09	11	1430	< 2	1.03	< 2	1	29	0.06	< 10	< 10	52	< 10	24
M751055	94139402	0.01	130	1	0.05	3	10	2	< 0.01	8	< 1	7	< 0.01	< 10	< 10	1	< 10	8

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CARTER, N. C.

1410 WENDE RD.  
 VICTORIA, BC  
 V8P 3T5

A0123380

Comments: ATTN: N.C. CARTER

CERTIFICATE

A0123380

(OUO) - CARTER, N. C.

Project:  
 P.O. #:

Samples submitted to our lab in Vancouver, BC.  
 This report was printed on 05-SEP-2001.

## SAMPLE PREPARATION

METHOD CODE	NUMBER SAMPLES	DESCRIPTION
SCR-42	61	-180 micron screen - Save Minus
SCR-01	61	Screen - Save Plus Charge
LOG-22	61	Samples received without barcode
229	61	ICP - AQ Digestion charge

\* NOTE 1:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

## ANALYTICAL PROCEDURES

METHOD CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
WEI-21	61	Weight of received sample	BALANCE	0.01	1000.0
Au-AA23	61	Au-AA23 : Au ppb: Fuse 30 grams	FA-AAS	5	10000
Ag-ICP41	61	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
Al-ICP41	61	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
As-ICP41	61	As ppm: 32 element, soil & rock	ICP-AES	2	10000
B-ICP41	61	B ppm: 32 element, rock & soil	ICP-AES	10	10000
Ba-ICP41	61	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
Be-ICP41	61	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
Bi-ICP41	61	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
Ca-ICP41	61	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
Cd-ICP41	61	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
Co-ICP41	61	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
Cr-ICP41	61	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
Cu-ICP41	61	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
Fe-ICP41	61	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
Ga-ICP41	61	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
Hg-ICP41	61	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
K-ICP41	61	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
La-ICP41	61	La ppm: 32 element, soil & rock	ICP-AES	10	10000
Mg-ICP41	61	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
Mn-ICP41	61	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
Mo-ICP41	61	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
Na-ICP41	61	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
Ni-ICP41	61	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
P-ICP41	61	P ppm: 32 element, soil & rock	ICP-AES	10	10000
Pb-ICP41	61	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
S-ICP41	61	S %: 32 element, rock & soil	ICP-AES	0.01	10.00
Sb-ICP41	61	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
Sc-ICP41	61	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
Sr-ICP41	61	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
Ti-ICP41	61	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
Tl-ICP41	61	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
U-ICP41	61	U ppm: 32 element, soil & rock	ICP-AES	10	10000
V-ICP41	61	V ppm: 32 element, soil & rock	ICP-AES	1	10000
W-ICP41	61	W ppm: 32 element, soil & rock	ICP-AES	10	10000
Zn-ICP41	61	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000





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To: CARTER, N. C.

1410 WENDE RD.  
 VICTORIA, BC  
 V8P 3T5

Page Number :2-A  
 Total Pages :2  
 Certificate Date: 05-SEP-2001  
 Invoice No. :10123380  
 P.O. Number :  
 Account :OUO

Project :  
 Comments: ATTN: N.C. CARTER

## CERTIFICATE OF ANALYSIS

## A0123380

SAMPLE	PREP CODE	Weight Au ppb		Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm
		Kg	FA+AA																	
AUG3-01-13+00W	94069407	0.24	< 5	0.2	3.05	2	< 10	40	1.0	< 2	0.09	< 0.5	5	16	10	3.10	10	< 1	0.11	< 10
AUG3-01-1350W	94069407	0.20	< 5	0.2	3.77	4	< 10	60	1.0	< 2	0.11	< 0.5	6	14	8	2.30	< 10	< 1	0.10	< 10
AUG3-01-1400W	94069407	0.18	< 5	< 0.2	4.53	2	< 10	50	1.5	< 2	0.19	< 0.5	4	12	10	2.63	10	< 1	0.15	< 10
AUG3-01-1450W	94069407	0.24	115	0.2	2.33	< 2	< 10	40	0.5	< 2	0.07	< 0.5	2	10	6	3.35	10	< 1	0.08	< 10
AUG3-01-1500W	94069407	0.26	< 5	0.2	4.84	8	< 10	90	1.5	< 2	0.31	< 0.5	3	6	8	1.83	10	< 1	0.13	10
AUG3-01-1550W	94069407	0.28	< 5	< 0.2	2.45	< 2	< 10	40	0.5	< 2	0.09	< 0.5	4	10	7	2.22	< 10	< 1	0.09	< 10
AUG3-01-1600W	94069407	0.22	35	0.2	3.47	< 2	< 10	50	1.5	< 2	0.11	< 0.5	7	22	13	2.48	< 10	< 1	0.14	< 10
AUG3-01-1650W	94069407	0.14	15	< 0.2	2.06	2	< 10	30	0.5	< 2	0.05	< 0.5	2	11	7	2.27	10	< 1	0.07	< 10
AUG3-01-1700W	94069407	0.12	< 5	0.2	4.09	< 2	< 10	20	0.5	< 2	0.03	< 0.5	1	7	9	1.72	10	< 1	0.02	< 10
AUG3-01-1750W	94069407	0.14	< 5	< 0.2	3.85	4	< 10	30	1.0	< 2	0.04	< 0.5	2	10	7	2.12	10	< 1	0.04	< 10
AUG3-01-1800W	94069407	0.24	< 5	< 0.2	3.27	5	< 10	20	1.0	< 2	0.05	< 0.5	3	10	6	3.09	10	< 1	0.05	< 10

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Project:  
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Page Number :2-B  
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 Certificate Date: 05-SEP-2001  
 Invoice No. : 10123380  
 P.O. Number :  
 Account : OVO

## CERTIFICATE OF ANALYSIS A0123380

SAMPLE	PREP CODE	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
AUG3-01-13+00W	94069407	0.59	270	< 1	< 0.01	8	350	6	0.03	< 2	1	38	0.15	< 10	< 10	63	< 10	60
AUG3-01-1350W	94069407	0.52	235	< 1	< 0.01	8	470	6	0.03	< 2	1	64	0.12	< 10	< 10	43	< 10	58
AUG3-01-1400W	94069407	0.43	235	< 1	< 0.01	9	740	10	0.01	< 2	2	47	0.12	< 10	< 10	43	< 10	86
AUG3-01-1450W	94069407	0.26	160	1	< 0.01	5	730	22	0.01	< 2	1	60	0.14	< 10	< 10	57	< 10	70
AUG3-01-1500W	94069407	0.28	210	< 1	0.01	6	900	6	0.03	< 2	2	78	0.10	< 10	< 10	28	< 10	66
AUG3-01-1550W	94069407	0.37	180	< 1	< 0.01	5	1080	6	0.02	< 2	1	28	0.11	< 10	< 10	44	< 10	58
AUG3-01-1600W	94069407	0.64	290	< 1	< 0.01	7	1310	8	0.01	< 2	3	33	0.11	< 10	< 10	55	< 10	68
AUG3-01-1650W	94069407	0.36	175	< 1	< 0.01	4	620	8	0.01	< 2	1	21	0.11	< 10	< 10	46	< 10	46
AUG3-01-1700W	94069407	0.10	80	< 1	0.01	3	830	2	0.04	< 2	1	9	0.12	< 10	< 10	29	< 10	24
AUG3-01-1750W	94069407	0.23	140	< 1	< 0.01	4	710	8	0.02	< 2	1	16	0.15	< 10	< 10	37	< 10	40
AUG3-01-1800W	94069407	0.27	535	< 1	< 0.01	4	690	8	0.03	< 2	1	17	0.18	< 10	< 10	48	< 10	66

CERTIFICATION: \_\_\_\_\_