

094067

**Geochemical Report on the  
DU 11 and DU 13-118 Claims**

**Grant Numbers**

**YC12644, YC12646-12691,  
YC12694-12703, YC12706-12715  
YC12718-12727, YC12730-12739  
YC12742-12751, YC12848-12857**

**NTS 116B/06  
Latitude 64° 17' N  
Longitude 139° 19' W**

**Dawson Mining District  
Yukon Territory**

**Prepared for Tr'ondek Hwech' in  
and Chief Isaac Incorporated**

**by Prospec Geological Enterprises**

**submitted December 30, 1999**



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 \$ 10,700.

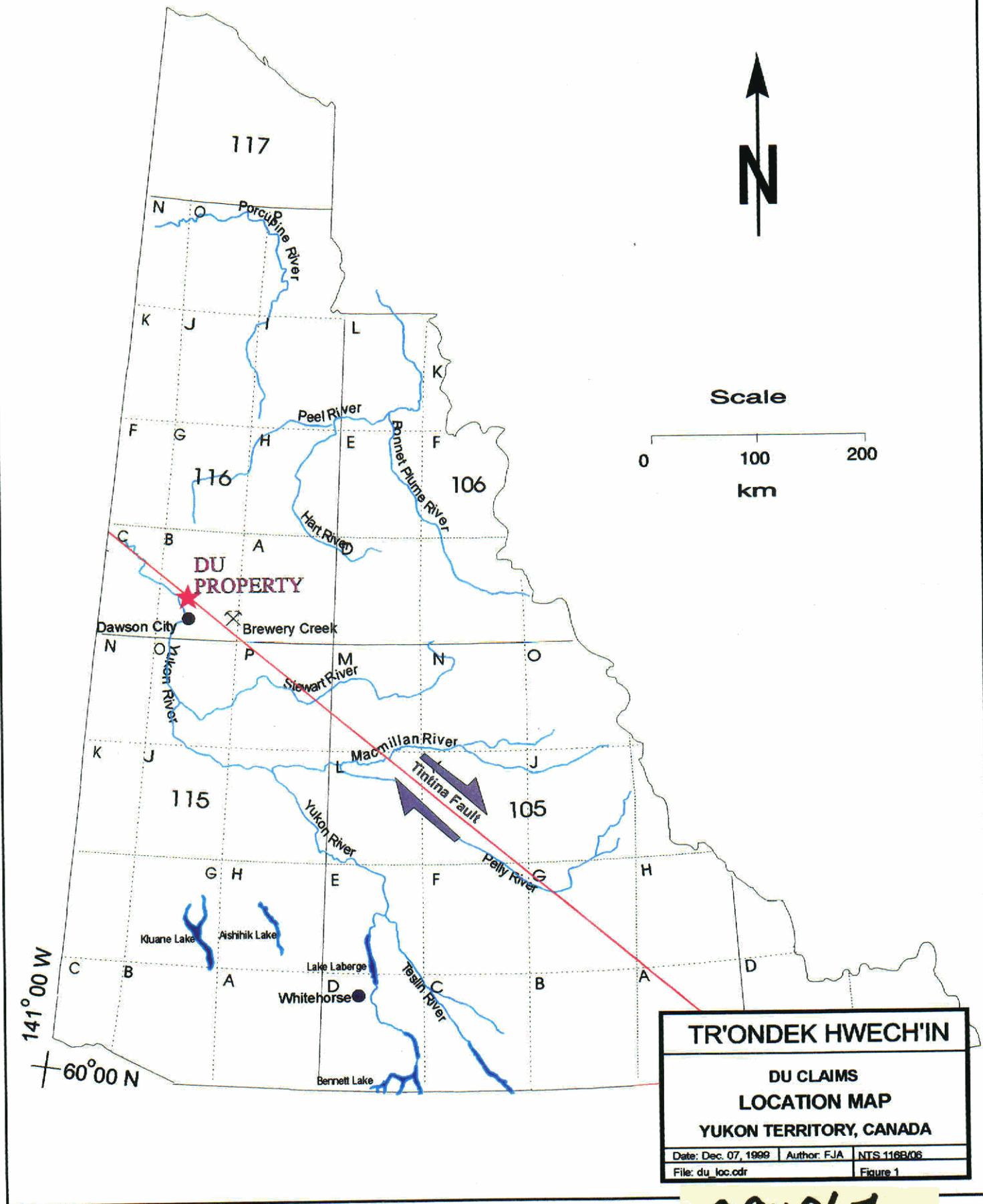
*M. B. K.*  
for Regional Manager, Exploration and  
Geological Services for Commissioner  
of Yukon Territory.

## **SUMMARY**

The Du property of the Tr'ondek Hwech'in nation is situated on Kentucky Creek, 30 kilometres due north of Dawson City, Yukon. The property is overlain by unconsolidated glacial and alluvial material to an estimated thickness of 2-10 metres. Identifying lode mineralization in the area is difficult due to this cover.

A geochemical sampling program was undertaken in 1999 to try and identify potential mineralization on the claims. Results from dense stream sampling of the property failed to locate potentially mineralized drainages. Soil sampling proved ineffective because of the thick overburden.

Gold values of 1350ppb were returned from the coarse fraction of the stream sample taken at the southern boundary of the claim block, and 670ppb gold was returned in the coarse fraction of the stream sample taken furthest upstream on Kentucky Creek. The gold content of these stream samples is believed to be from alluvial sources, and the placer potential of Kentucky Creek upstream of the claim boundary should be evaluated.



<b>TR'ONDEK HWECH'IN</b>		
<b>DU CLAIMS LOCATION MAP YUKON TERRITORY, CANADA</b>		
Date: Dec. 07, 1999	Author: F-JA	NTS 116B/06
File: du_loc.cdr		Figure 1

094067

# TABLE OF CONTENTS

<b>SUMMARY</b> .....	<b>1</b>
<b>FIGURE 1: PROPERTY LOCATION</b> .....	<b>11</b>
<b>1.0 INTRODUCTION</b> .....	<b>1</b>
1.1 LOCATION AND ACCESS.....	1
1.2 PHYSIOGRAPHY AND CLIMATE.....	1
<b>FIGURE 2: CLAIM LOCATION, 1:250 000 SCALE</b> .....	<b>2</b>
<b>FIGURE 3: DU CLAIM BLOCK, 1:31 680 SCALE</b> .....	<b>3</b>
1.3 CLAIM DATA .....	4
<b>TABLE 1: LIST OF CLAIMS RENEWED</b> .....	<b>4</b>
1.4 HISTORY AND PREVIOUS WORK .....	4
<b>2.0 1999 WORK PROGRAM</b> .....	<b>5</b>
<b>3.0 GEOLOGY</b> .....	<b>6</b>
3.1 REGIONAL GEOLOGY.....	6
3.2 PROPERTY GEOLOGY.....	6
<b>4.0 EXPLORATION RESULTS</b> .....	<b>7</b>
4.1 STREAM GEOCHEMISTRY.....	7
4.2 SOIL GEOCHEMISTRY .....	7
<b>FIGURE 4: 1999 STREAM AND SOIL GEOCHEMISTRY, 1:25 000</b> .....	<b>8</b>
<b>5.0 CONCLUSIONS AND RECOMMENDATIONS</b> .....	<b>9</b>
<b>6.0 REFERENCES</b> .....	<b>10</b>
<b>7.0 STATEMENT OF QUALIFICATIONS</b> .....	<b>11</b>
<b>8.0 STATEMENT OF 1999 EXPENDITURES</b> .....	<b>12</b>
<b>APPENDIX A: ANALYTICAL TECHNIQUES</b>	
<b>APPENDIX B: STREAM SAMPLE RESULTS</b>	
<b>APPENDIX C: SOIL SAMPLE RESULTS</b>	

## **1.0 INTRODUCTION**

This report provides an economic assessment of the Du 1-118 quartz claims located in the Dawson Mining District, Yukon. The information is based on research and fieldwork conducted in 1999 by *Prospex Geological Enterprises of Whitehorse, Yukon*. The fieldwork comprised a soil and stream geochemical survey conducted on September 24th and September 27th, 1999.

### **1.1 Location and Access**

The property is situated on NTS map 116B/06 and is centred at latitude 64° 17' north and longitude 139° 19' west. The Du claim block is 30 kilometres due north of Dawson City and is located on Kentucky Creek, a left limit tributary to the Chandindu River. Chandindu River forms the north boundary of the claims. Figure 2 shows the claims relative to Dawson City.

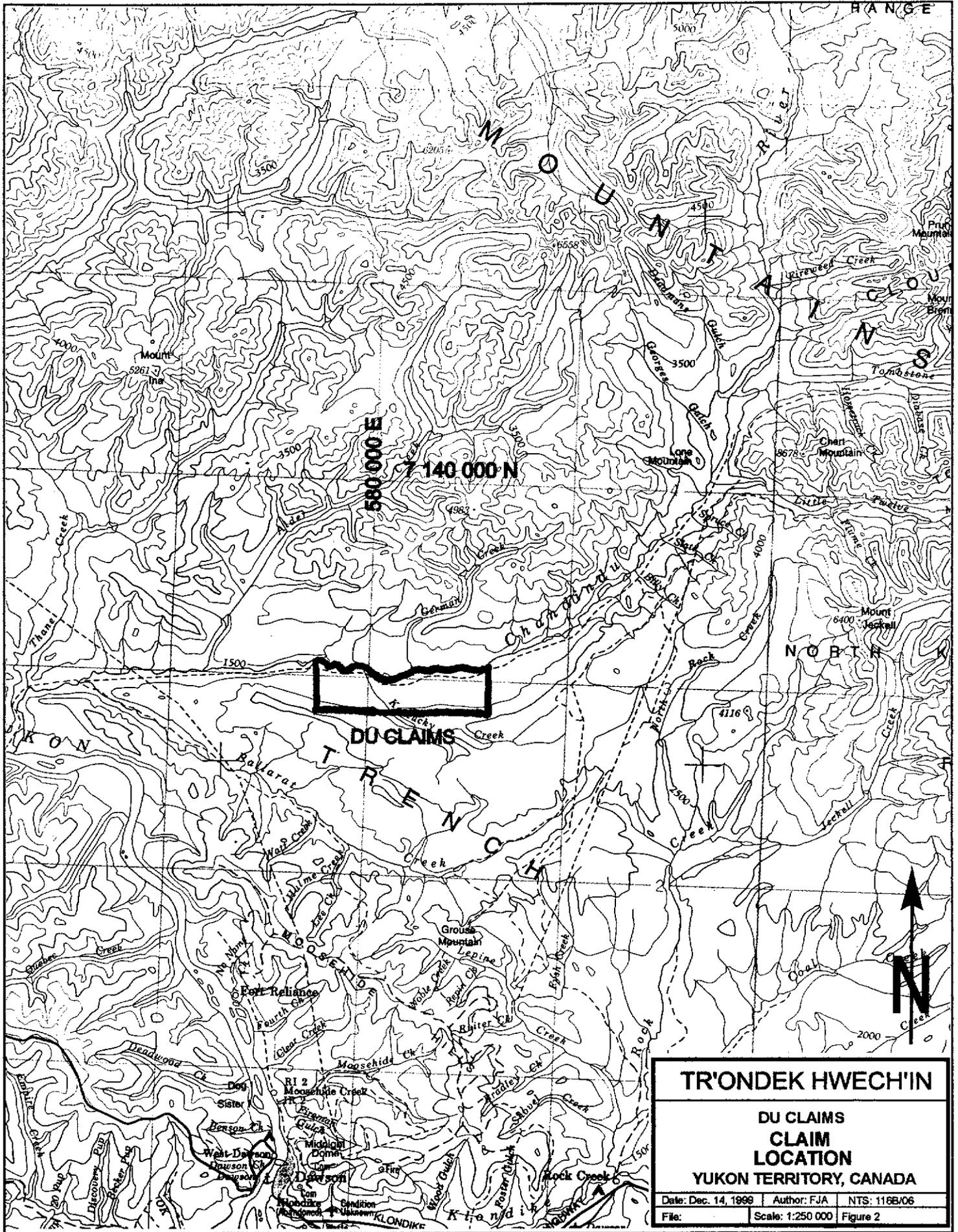
Access to the property in 1999 was via helicopter. There is no trail or road access from Dawson City.

### **1.2 Physiography and Climate**

The Du claim block is situated on the south side of the Chandindu River and covers the drainage of Kentucky Creek to a point 3.5 kilometres above the mouth. The property is either swampy or hilly. All ground is covered by a mix of alluvial and glaciofluvial gravel and sand. The region was also burned in the 1999 fire and most posts and flagging from the claim staking have disappeared.

Elevation ranges from 1700 feet at the mouth of Kentucky Creek to 2300 feet atop the moraine along the south boundary of the claims.

Low precipitation and a wide temperature range characterize the climate. Winters are cold and temperatures of  $-40^{\circ}\text{C}$  are common. Summers are moderately cool with daily highs of  $10^{\circ}\text{C}$  to  $25^{\circ}\text{C}$ .



HANGE

MOUNTAIN RANGE

PRUD  
MOUNTAIN  
MOUNT  
BENT  
TOMBSTONE

Mount  
5261

580 000 E  
7 140 000 N

Lone  
Mountain

Chart  
Mountain  
8678

4983

Mount  
6400

DU CLAIMS

MOUNT  
6400

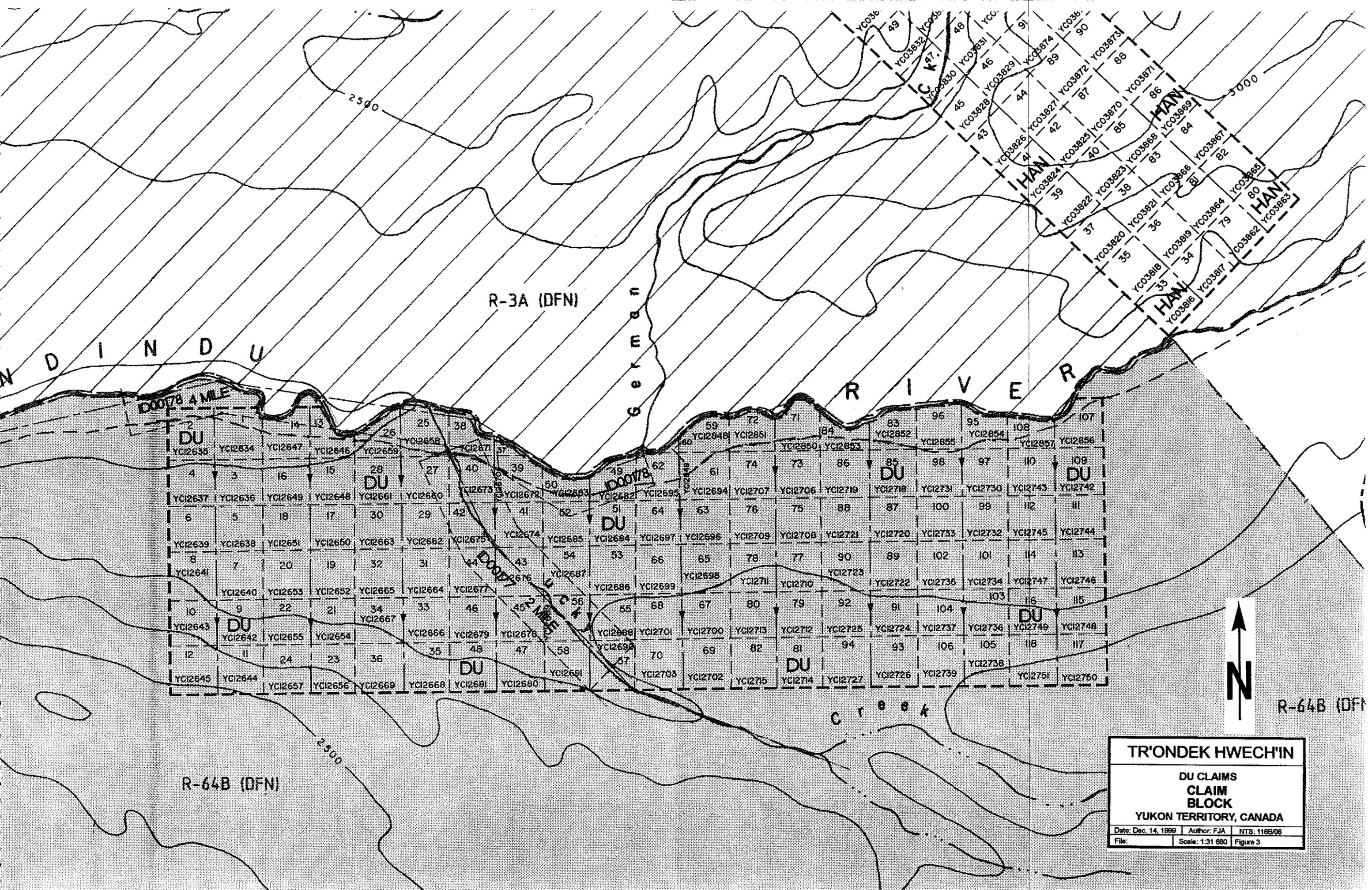
TR'ONDEK HWECH'IN



**TR'ONDEK HWECH'IN**

**DU CLAIMS  
CLAIM  
LOCATION  
YUKON TERRITORY, CANADA**

Date: Dec. 14, 1999    Author: FJA    NTS: 116B/06  
 File:                      Scale: 1:250 000    Figure 2



R-3A (DFN)

W I N D U R I V E R

S E R R E S

R I V E R

HAN

HAN

HAN

DU0078 4 MLE

DU0078

DU0078 4 MLE

2	14	13	25	25	38	59	72	71	83	96	95	108	107						
DU						YCI2848	YCI2851	YCI2850	YCI2853	YCI2855	YCI2854	YCI2857	YCI2856						
YCI2635	YCI2634	YCI2647	YCI2646	YCI2659	YCI2658	YCI2671	37	62	61	74	73	86	85	98	97	110	109		
4	3	16	15	28	27	40	39	50	64	63	76	75	88	87	100	89	112	111	
YCI2637	YCI2636	YCI2649	YCI2648	DU	YCI2661	YCI2660	YCI2673	YCI2693	YCI2682	YCI2695	YCI2694	YCI2707	YCI2706	YCI2719	YCI2718	YCI2731	YCI2730	YCI2743	YCI2742
6	5	18	17	30	29	42	41	52	51	64	63	76	75	88	87	100	89	112	111
YCI2639	YCI2638	YCI2651	YCI2650	YCI2663	YCI2662	YCI2675	YCI2674	YCI2685	YCI2684	YCI2697	YCI2696	YCI2709	YCI2708	YCI2721	YCI2720	YCI2733	YCI2732	YCI2745	YCI2744
8	7	20	19	32	31	44	43	54	53	66	65	78	77	90	89	102	101	114	113
YCI2641						YCI2676	YCI2687	YCI2687	YCI2688	YCI2699	YCI2698	YCI2711	YCI2710	YCI2723	YCI2722	YCI2735	YCI2734	YCI2747	YCI2746
10	9	22	21	34	33	46	45	56	55	68	67	80	79	92	91	104	103	116	115
YCI2643	DU			YCI2667	YCI2666	YCI2679	YCI2678	YCI2688	YCI2701	YCI2700	YCI2713	YCI2712	YCI2725	YCI2724	YCI2737	YCI2736	YCI2749	YCI2748	
12	11	24	23	36	35	48	47	58	57	70	69	82	81	94	93	106	105	118	117
YCI2645	YCI2644	YCI2657	YCI2656	YCI2669	YCI2668	YCI2681	YCI2680	YCI2692	YCI2692	YCI2703	YCI2702	YCI2715	YCI2714	YCI2727	YCI2726	YCI2739	YCI2738	YCI2751	YCI2750

R-64B (DFN)

R-64B (DFN)



**TR'ONDEK HWECH'IN**

**DU CLAIMS CLAIM BLOCK**

**YUKON TERRITORY, CANADA**

Date: Dec. 14, 1999 | Author: FJA | NTS: 116B/06  
 File: | Scale: 1:31 680 | Figure 3

### 1.3 Claim Data

The Du 1-118 quartz claims are located in the Dawson Mining District and are registered to the Tr'ondek Hwech'in nation. The claim block is plotted on Northern Affairs Quartz map 116B/06. Not all claims are being applied for renewal. Table 1 lists the claims being renewed.

**Table 1: List of Claims Renewed**

Claim Name	Grant Numbers	Expiry Date	Renewal to*
Du 11	YC12644	October 9, 1999	October 9, 2000
Du 13-Du 58	YC12646-YC12691	October 9, 1999	October 9, 2000
Du 61-Du 70	YC12694-YC12703	October 9, 1999	October 9, 2000
Du 73-Du 82	YC12706-YC12715	October 9, 1999	October 9, 2000
Du 85-Du 94	YC12718-YC12727	October 9, 1999	October 9, 2000
Du 97-Du106	YC12730-YC12739	October 9, 1999	October 9, 2000
Du109-Du118	YC12742-YC12751	October 9, 1999	October 9, 2000
Du 59, 60, 71, 72, 83, 84, 95, 96, 107, 108	YC12848-YC12857	October 9, 1999	October 9, 2000

\*Pending approval of work described in this report.

Figure 3 shows the claim names and grant numbers.

### 1.4 History and Previous Work

There is no record of previous hard rock activity on the property. One old cabin was seen on Kentucky Creek but no shafts or workings were found.

The geology of the Dawson mapsheet has been mapped and compiled at a 1:250 000 scale (Green, 1972). The mapping shows Kentucky Creek and the surrounding claim block to be covered by unconsolidated sediments of glacial and fluvial origin.

In 1991 the federal government published the results of a regional stream geochemical survey for the Dawson map area. Two samples were collected from Kentucky Creek. Neither sample contained any anomalous elements. The highest gold value in Kentucky Creek or its tributaries was 10ppb.

The federal government flew an aerial geophysical magnetic survey over the Dawson region in 1965, but the unconsolidated glacial and alluvial fill in the Chandindu River valley masks the geophysical signals and is of no use for evaluating the claim block.

## **2.0 1999 WORK PROGRAM**

One day of stream sampling and one day of soil sampling was conducted on the Du claim block. Personnel on the property were geologist Farrell Andersen, geological technician Bruce Bark and prospector Allan Anderson.

To adequately identify potential mineralization on the property, dense stream sampling was undertaken. Three stream samples from the main creek and one stream sample from each of three tributaries were collected. Stream samples involved collecting approximately 2.5 kilograms of -2mm sieved streambed material and analysing the conventional -80 mesh fraction plus the very fine -250 mesh fraction. When obtainable, material at the sample site was also panned into a concentrate to check for visible gold and tungsten minerals.

Soil samples were taken along four traverses. Approximately 500 grams of material was collected by shovel or soil auger at depths ranging from 0.2 to 1.4 metres. Locations were flagged and distances were measured using thread-chain. Coordinates for the starts and ends of traverses were determined in the field with hand-held GPS units. Sample spacing averaged 100 metres and notes about each sample were written in the field.

The soil traverses were planned on UTM coordinates according to the claims plotted on Northern Affairs Quartz map 116B/06. The fire in 1999 burned up the vegetation and eradicated flagging and claim posts, making claim location on the ground very difficult. Claim posts were spotted from the helicopter near the Chandindu River and traverse KC04 followed the Du 95-106 claim line northwards from posts 2 Du 105/106 to posts 1 Du 101/102.

Due to the difference in location between the claim map and the actual post locations on the ground, traverse KC03 was only 500 metres east of traverse KC04. If the claims are assumed correctly located in relation to the Du 95-106 claim line, then traverse KC05 is located 450 metres east of the claim block boundary. This was all ascertained afterwards while compiling the GPS data.

## **3.0 GEOLOGY**

### **3.1 Regional Geology**

The property is just north of the Tintina Trench, a regional northwest trending strike-slip fault separating Yukon into rocks derived from ancient North America to the north, and accreted rocks from foreign landmasses to the south. Outcrops of Jurassic sandstone have been mapped in the Tintina Trench (Green, 1972), but no outcrop was seen on the Du property. North of the Chandindu River the geology is comprised of sedimentary rocks of the Paleozoic Selwyn Basin that are intruded by younger igneous masses.

During the earliest glacial periods, ice filled the wide valley of the Chandindu River and its tributaries, covering the property with a layer of ice. Later glacial episodes did not cover the property with ice but contributed significant material as glacial outwash along the Chandindu River valley and adjacent lowlands.

Ancient rivers also flowed through the valley and some tributaries may have been channels of a larger braided stream. All this material is left behind in various remnant terraces and plains with thicknesses estimated from 2 to 10 metres.

### **3.2 Property Geology**

Rocks found in the streambed of Kentucky Creek belong to the Precambrian Hyland and the Paleozoic Road River groups of the Selwyn Basin (sandstones, argillites, cherts and siltstones). Also seen in the creek were unstrained mafic volcanic and rounded granite cobbles and boulders. Scattered boulders of quartzite were seen along the traverses.

No residual soil or colluvium was found along the traverses. The western traverse, KC02, started on a moraine and dropped onto an alluvial plain. Samples on traverse KC02 were composed of greenish grey sand and gravel with increasing thickness of the organic blanket as you neared the valley floor. Eastern traverses were hindered by till and alluvium. Traverses KC03 and KC04 started in glacial till and proceeded northwards into alluvium. Traverse KC05 started in bouldery till and finished in alluvium. A grey brown clay horizon was repeatedly encountered in the first 700 metres of traverse KC05, and samples were taken of silt and gravel below this horizon.

## **4.0 EXPLORATION RESULTS (FIGURE 4)**

### **4.1 Stream Geochemistry**

Of the six stream samples collected, none were anomalous in multiple elements. This indicates a potential lode deposit may not exist on the property. Analytical results for the sample fine-fractions were uniform and flat. One fine-fraction (KCSS03) carried 35ppb gold. This sample is a left limit tributary of Kentucky Creek. The two other left-limit tributaries, sampled as KCSS01 and KCSS05, each returned over 1ppm tungsten in the fine-fraction. Tungsten is found as scheelite, and is commonly associated with lode and placer gold deposits.

In the coarse-fraction, two samples contained significantly anomalous gold values. These samples, KCSS04 and KCSS06, were both collected from Kentucky Creek (Figure 4). Sample KCSS04 returned 1350ppb gold and was collected immediately upstream of the southern claim boundary, and upstream of the last government RGS stream sample taken on the property. Sample KCSS06 was collected upstream of all tributaries feeding Kentucky Creek and returned 670ppb gold. The fine-fraction analyses for these two streams did not contain gold.

Panned material from the sample sites was checked for scheelite and visible gold. No scheelite was seen. No gold was seen in sample KCSS04, but fine flakes of gold were panned from sample KCSS06.

Stream samples were shipped to Chemex Labs in Vancouver and the -80+250 mesh and the -250 mesh fractions were analysed for gold by 30-gram FA/AAS and 36 other elements by ICP-MS techniques.

### **4.2 Soil Geochemistry**

Of the 45 soil samples collected on the four traverses, none were anomalous in multiple elements. Soil sample KC020500 contained 150ppb gold. This sample is a point anomaly, and because the sample was taken from the top of compact boulder gravel at a depth of 0.4 metres, the 150ppb value is believed to be from alluvial gold. All other soil samples returned values of 10ppb gold or less.

Soil samples were shipped to Chemex Labs in Vancouver and the -150 mesh fraction analysed for gold using 30-gram FA-AAS, for mercury by AAS and 32 other elements by ICP-AES techniques.



## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

The results from the dense stream sampling undertaken in 1999 indicate that a potential mineral deposit does not exist on or adjacent to the Du property. The government stream sampling also indicates there is low potential for economic lode mineralization on the claims. The geology of the property shows that any mineralization would be difficult to identify given the amounts of unconsolidated material. Soil sampling on the property was ineffective and expensive overburden drilling would be required to evaluate the hard rock potential of the claims.

The fact that gold is present in the coarse-fraction of stream samples and not the fine-fraction indicates that gold enrichment is alluvial. From the soil sample results it can be determined there is low placer gold potential for the surface material collected. Enough soil samples were collected from similar facies to justify a conclusion that the upper surface material (0-1.5 metre depth) does not contain recoverable amounts of placer gold. The two samples anomalous in gold collected from Kentucky Creek suggests placer enrichment could exist upstream of the Du claim block boundary.

No further work regarding lode prospecting is recommended. However, the placer potential of Kentucky Creek upstream of the present quartz claims and two-mile placer lease should be evaluated.

## **6.0 REFERENCES**

Green, L.H., 1972. Map 1284A -Geology Dawson, Yukon Territory, 1:250 000 scale map. Accompanies Geological Survey of Canada Memoir 364.

Regional Stream Sediment and Water Geochemical Data, West-Central Yukon. Geological Survey of Canada, Open File 2365.

Surficial Geology, Dawson, Yukon Territory, 1:250 000 scale map. Geological Survey of Canada, Open File 3288.

## 7.0 STATEMENT OF QUALIFICATIONS

I, Farrell Andersen, with business address:

Prospex Geological Enterprises  
901 Fir Street  
Whitehorse, Yukon  
Y1A 4B7

And residential address in Whitehorse, Yukon, do hereby certify that:

1. I am the proprietor of Prospex Geological Enterprises.
2. I am a 1989 graduate of the University of British Columbia with a B.Sc. degree in geology.
3. I have been involved in geology and mineral exploration continuously since 1985.
4. I am the author of this report on the Du 1-118 claims that are located in the Dawson Mining District, Yukon.
5. This report is based on personal examination of the ground between September 24 and September 28, 1999, and research conducted from December 1 to 5, 1999.

A handwritten signature in cursive script that reads "Farrell Andersen". The signature is written in black ink and is positioned above the printed name.

Farrell Andersen, B.Sc.

## 8.0 STATEMENT of 1999 EXPENDITURES

### Geochemistry

<u>Sample Type</u>	<u>No.</u>	<u>\$/Sample</u>	<u>Subtotal</u>	
Soil	45	25.41	1143.83	
Stream	6	65.35	<u>392.14</u>	
				\$1435.97

### Personnel

F. Andersen, Sept. 24 and Sept. 27; 2days @\$375/day:	750.00	
B. Bark, Sept. 24 and Sept. 27; 2days @\$350/day:	700.00	
A. Anderson, Sept. 24 and Sept. 27; 2days @\$175/day:	<u>350.00</u>	
		1800.00

### Support Costs

Food and Accommodation	312.50
Helicopter	3316.22
Radios	56.18
Shipping	157.42
Supplies	133.24
Vehicle	250.00

### Report

Data Compilation, Research and Report Generation	<u>3350.00</u>
--	----------------

**Total Expenditures** **\$10,811.53**

## **Appendix A: Analytical Techniques**

**The following geochemical procedures are referenced from the Chemex website [www.chemex.com](http://www.chemex.com)**

### **Sample Preparation**

Soil samples were dried, manually disaggregated, then sieved to obtain the -150 mesh (106 microns) fraction. This fraction was then analyzed for gold by the standard 30-gram fire assay method. Plasma emission spectroscopy was used to analyze for another 33 elements. A flameless absorption spectrometry method was used to obtain a low detection limit for mercury. The -80+150 mesh fraction is saved and stored.

Stream samples were wet sieved to obtain the -250 mesh (63 microns) fine fraction. They were then dried, manually disaggregated and sieved to obtain the -80+250 mesh fraction. These two fractions were analyzed using standard 30gram fire-assay (one assay ton) for gold and ICP-MS for 36 elements. The +80 mesh fraction is saved and stored.

### **Gold by Fire Assay / Atomic Absorption Spectroscopy (FA-AAS)**

A 30g sample is fused with neutral lead-oxide flux inquarted with 6mg of gold-free silver and then cupelled to yield a precious metal bead. These beads are digested in 0.5ml concentrated nitric acid for 30 minutes, then 1.5 ml of concentrated hydrochloric acid is added and the mixture is digested for 1 hour. The samples are cooled, diluted to a final volume of 5ml, homogenized and then analyzed by atomic absorption spectroscopy. Detection and upper limits are 5 and 10,000ppb respectively.

### **Plasma-Atomic Emission Spectroscopy (ICP-AES)**

A prepared sample (1.0g) is digested with concentrated nitric and aqua-regia acids at medium heat for two hours. The solution is diluted to 25ml with demineralized water, mixed and introduced into the core of an inductively-coupled argon plasma (ICP) at a temperature of approximately 8000 deg. C. At this temperature all elements become thermally excited and emit light at their characteristic wavelengths. This light is collected by the spectrometer and passes through a diffraction grating that serves to resolve the light into a spectrum of its constituent wavelengths. Within the spectrometer, this diffracted light is then collected by wavelength and amplified to yield an intensity measurement that can be converted to an elemental concentration by comparison with calibration standards. The analytical results are corrected for spectral inter-element interference. This measurement process is a form of atomic emission spectroscopy (AES).

### **Plasma-Mass Spectrometry (ICP-MS)**

In plasma mass spectroscopy, the inductively-coupled argon plasma (ICP) is once again used as an excitation source for the elements of interest. However in contrast to plasma emission spectroscopy, the plasma in ICP-MS is used to generate ions, which are then introduced to the mass spectrometer. These ions are then separated and collected according to their mass to charge ratios. The constituents of an unknown sample can then be identified and measured. ICP-MS offers extremely high sensitivity for many elements and can also be successfully applied to a wide range of elements.

### **Flameless Atomic Absorption Spectroscopy (AAS)**

In atomic absorption spectroscopy, an element in its atomic form is introduced into a light beam of appropriate wavelength causing the atom to absorb light (atomic absorption) and enter an excited state. At the same time there is a reduction in the intensity of the light beam and this can be measured and directly correlated with the concentration of the elemental atomic species. Comparing the light absorbency of the unknown sample with the light absorbency of known calibration standards does this. This method is usually done with a flame but for mercury an absorption cell is used instead. Mercury can be reduced to its elemental state by reaction with stannous chloride and then be volatilized by purging with air and swept into the absorption cell that the light beam is passed.

**Appendix B: Stream Sample Results**



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221 FAX: 604-984-0218

To: CHIEF ISAAC INCORPORATED

P.O. BOX 599  
DAWSON CITY, YT  
Y0B 1G0

Project :  
Comments: ATTN: FARELL ANDERSON

Page Number :1-A  
Total Pages :2  
Certificate Date: 19-OCT-1999  
Invoice No. :I9930533  
P.O. Number :  
Account :RLB

## CERTIFICATE OF ANALYSIS A9930533

SAMPLE	PREP CODE	Au ppb FA+AA	Al %	Sb ppm	As ppm	Ba ppm	Be ppm	Bi ppm	B ppm	Cd ppm	Ca %	Cr ppm	Co ppm	Cu ppm	Ga ppm	Ge ppm	Fe %	La ppm	Pb ppm	Mg %
KCSS01+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS01-80+250	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS01 -250	254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS02+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS02-80+250	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS02 -250	254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS03+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS03-80+250	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS03 -250	254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS04+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS04-80+250	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS04 -250	254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS05+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS05-80+250	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS05 -250	254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS06+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS06-80+250	201	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS06 -250	254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

CERTIFICATION:



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221 FAX: 604-984-0218

To: CHIEF ISAAC INCORPORATED

P.O. BOX 599  
DAWSON CITY, YT  
Y0B 1G0

Project :  
Comments: ATTN: FARELL ANDERSON

Page Number : 1-B  
Total Pages : 2  
Certificate Date: 19-OCT-1999  
Invoice No. : 19930533  
P.O. Number :  
Account : RLB

## CERTIFICATE OF ANALYSIS A9930533

SAMPLE	PREP CODE	Mn ppm	Hg ppm	Mo ppm	Ni ppm	P ppm	K %	Sc ppm	Ag ppm	Na %	Sr ppm	S %	Te ppm	Tl ppm	Ti %	W ppm	U ppm	V ppm	Zn ppm
KCSS01+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS01-80+250	201	1040	0.04	1.0	16	700	0.03	2	0.10	0.01	30	0.03	< 0.05	0.04	0.03	0.75	0.95	35	60
KCSS01 -250	254	385	< 0.01	0.6	12	780	0.03	1	0.08	0.01	26	0.01	< 0.05	0.04	0.03	1.40	0.70	27	48
KCSS02+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS02-80+250	201	685	0.07	0.8	22	660	0.04	3	0.12	0.01	33	0.02	0.05	0.06	0.04	0.20	1.20	40	74
KCSS02 -250	254	490	0.02	0.6	19	770	0.04	3	0.08	0.01	31	0.01	0.05	0.06	0.04	0.20	0.90	35	70
KCSS03+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS03-80+250	201	485	0.02	0.8	19	550	0.03	2	0.08	0.01	30	0.01	< 0.05	0.04	0.04	0.30	0.95	34	54
KCSS03 -250	254	350	< 0.01	0.6	17	820	0.04	2	0.08	0.01	33	0.01	< 0.05	0.06	0.04	0.35	0.90	34	56
KCSS04+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS04-80+250	201	1665	0.01	0.8	22	630	0.04	2	0.14	0.01	24	0.01	0.05	0.06	0.04	0.20	0.90	37	64
KCSS04 -250	254	1735	0.04	0.8	20	850	0.04	3	0.10	0.01	31	0.01	< 0.05	0.06	0.04	0.30	1.00	39	68
KCSS05+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS05-80+250	201	575	< 0.01	0.8	14	630	0.03	1	0.06	0.01	23	0.01	0.05	0.04	0.03	0.15	0.60	29	48
KCSS05 -250	254	410	0.03	0.6	13	860	0.03	1	0.06	0.01	26	0.01	0.05	0.06	0.04	1.20	0.65	30	46
KCSS06+80	202	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
KCSS06-80+250	201	460	0.01	0.8	17	560	0.04	2	0.06	0.01	22	0.01	< 0.05	0.06	0.04	0.45	0.70	33	54
KCSS06 -250	254	430	0.04	0.6	17	760	0.04	2	0.08	0.01	26	0.01	0.05	0.06	0.04	0.40	0.75	34	56

CERTIFICATION:

## **Appendix C: Soil Sample Results**



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221 FAX: 604-984-0218

To: CHIEF ISAAC INCORPORATED

P.O. BOX 599  
DAWSON CITY, YT  
Y0B 1G0

Project :  
Comments: ATTN: FARELL ANDERSON

Page Number :1-A  
Total Pages :3  
Certificate Date: 15-OCT-1999  
Invoice No. : I9930397  
P.O. Number :  
Account : RLB

## CERTIFICATE OF ANALYSIS A9930397

SAMPLE	PREP		Au ppb	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg
	CODE		FA+AA	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppb	%	ppm	%
KC020000	216	202	10	< 0.2	1.52	6	< 10	50	< 0.5	< 2	0.01	< 0.5	7	21	25	2.35	< 10	< 10	0.06	60	0.64
KC020100	216	202	< 5	< 0.2	1.99	12	< 10	170	< 0.5	< 2	0.06	< 0.5	8	29	26	3.46	< 10	20	0.09	40	0.55
KC020200	216	202	< 5	< 0.2	1.99	16	< 10	160	< 0.5	< 2	0.10	< 0.5	10	27	18	2.86	< 10	20	0.14	60	0.55
KC020300	216	202	< 5	< 0.2	1.66	14	< 10	330	< 0.5	< 2	0.83	0.5	10	30	30	2.82	< 10	40	0.11	20	0.67
KC020400	216	202	< 5	0.2	1.71	12	< 10	280	< 0.5	< 2	0.53	< 0.5	11	34	26	2.64	< 10	60	0.06	20	0.51
KC020500	216	202	150	< 0.2	1.75	12	< 10	240	< 0.5	< 2	0.63	< 0.5	12	35	21	2.84	< 10	40	0.07	20	0.56
KC020700	216	202	< 5	0.2	2.42	16	< 10	360	0.5	< 2	0.39	< 0.5	13	43	37	3.22	< 10	110	0.08	30	0.63
KC030000	216	202	< 5	0.2	1.70	10	< 10	320	< 0.5	< 2	0.53	< 0.5	13	41	26	3.32	< 10	90	0.11	10	0.69
KC030100	216	202	< 5	< 0.2	1.81	10	< 10	370	< 0.5	< 2	0.50	< 0.5	10	37	19	2.74	< 10	50	0.07	10	0.58
KC030200	216	202	< 5	0.2	1.74	12	< 10	380	< 0.5	< 2	0.45	< 0.5	9	31	25	2.46	< 10	100	0.06	10	0.45
KC030300	216	202	< 5	< 0.2	1.93	16	< 10	480	< 0.5	< 2	0.58	< 0.5	11	34	25	2.60	< 10	50	0.05	10	0.46
KC030400	216	202	< 5	0.2	1.85	10	< 10	580	< 0.5	< 2	0.72	0.5	10	35	19	2.31	< 10	50	0.06	10	0.52
KC030500	216	202	< 5	0.2	1.86	12	< 10	700	< 0.5	< 2	0.67	< 0.5	11	40	25	2.67	< 10	70	0.06	10	0.56
KC030600	216	202	< 5	0.2	1.84	16	< 10	600	< 0.5	< 2	0.54	0.5	10	37	22	2.75	< 10	90	0.05	10	0.50
KC030700	216	202	< 5	0.2	1.76	12	< 10	740	< 0.5	< 2	0.62	0.5	11	32	23	2.60	< 10	80	0.05	10	0.35
KC030800	216	202	< 5	0.2	1.81	14	< 10	600	< 0.5	< 2	0.50	< 0.5	12	35	17	2.46	< 10	50	0.05	10	0.45
KC030900	216	202	< 5	0.2	1.52	12	< 10	480	< 0.5	< 2	0.70	< 0.5	10	30	10	2.09	< 10	50	0.04	10	0.43
KC031000	216	202	< 5	0.2	1.71	12	< 10	500	< 0.5	< 2	0.47	0.5	8	36	20	2.24	< 10	60	0.05	10	0.49
KC031100	216	202	5	< 0.2	1.84	8	< 10	450	< 0.5	< 2	0.41	< 0.5	8	36	16	2.27	< 10	60	0.06	20	0.50
KC031200	216	202	< 5	< 0.2	1.98	14	< 10	640	< 0.5	< 2	0.45	0.5	8	38	17	2.29	< 10	60	0.05	10	0.47
KC040000	201	202	< 10	0.2	1.01	28	< 10	720	< 0.5	< 2	1.81	1.0	7	20	33	2.62	< 10	80	0.04	< 10	0.28
KC040100	201	202	< 5	< 0.2	1.83	8	< 10	300	< 0.5	< 2	0.34	< 0.5	8	33	13	2.48	< 10	20	0.05	10	0.51
KC040200	216	202	< 5	< 0.2	1.97	12	< 10	410	< 0.5	< 2	0.60	< 0.5	11	38	20	2.86	< 10	50	0.07	10	0.55
KC040300	216	202	< 5	< 0.2	1.90	12	< 10	470	< 0.5	< 2	0.66	< 0.5	12	37	26	2.82	< 10	50	0.06	10	0.57
KC040400	216	202	< 5	< 0.2	1.98	14	< 10	510	< 0.5	< 2	0.62	< 0.5	11	38	29	2.80	< 10	50	0.06	20	0.54
KC040500	216	202	< 5	< 0.2	1.53	14	< 10	520	< 0.5	< 2	0.44	0.5	11	34	12	2.45	< 10	20	0.06	10	0.49
KC040600	201	202	< 5	< 0.2	1.44	8	< 10	560	< 0.5	< 2	0.54	0.5	9	29	17	2.06	< 10	60	0.05	10	0.37
KC040700	216	202	< 5	0.2	2.04	16	< 10	660	< 0.5	< 2	0.70	< 0.5	12	38	17	2.83	< 10	70	0.06	10	0.52
KC040800	216	202	< 5	< 0.2	1.59	14	< 10	540	< 0.5	< 2	0.73	0.5	11	33	16	2.41	< 10	60	0.07	10	0.49
KC040900	216	202	< 5	0.2	1.51	8	< 10	460	< 0.5	< 2	0.60	< 0.5	9	31	14	2.21	< 10	60	0.06	10	0.45
KC041000	216	202	< 5	0.2	1.77	6	< 10	650	< 0.5	< 2	0.72	< 0.5	9	33	20	2.47	< 10	80	0.06	10	0.48
KC050000	216	202	< 5	0.2	2.37	22	< 10	490	0.5	< 2	0.49	< 0.5	16	51	42	3.83	< 10	90	0.10	20	0.71
KC050100	216	202	< 5	< 0.2	2.53	16	< 10	420	< 0.5	< 2	0.52	< 0.5	12	46	35	3.45	< 10	90	0.08	20	0.59
KC050200	201	202	< 5	< 0.2	1.97	14	< 10	450	< 0.5	< 2	0.61	0.5	14	41	30	3.03	< 10	90	0.05	10	0.57
KC050300	216	202	< 5	0.2	2.22	10	< 10	530	< 0.5	< 2	0.34	< 0.5	11	41	23	2.83	< 10	40	0.05	20	0.55
KC050400	216	202	< 5	0.2	2.03	18	< 10	650	< 0.5	< 2	0.60	0.5	13	39	34	3.11	< 10	90	0.07	20	0.61
KC050500	216	202	< 5	< 0.2	2.19	12	< 10	500	< 0.5	< 2	0.41	< 0.5	11	38	21	2.99	< 10	60	0.08	20	0.56
KC050600	216	202	< 5	0.2	2.03	14	< 10	620	< 0.5	< 2	0.69	0.5	13	38	26	3.06	< 10	80	0.08	20	0.59
KC050700	216	202	10	0.2	1.52	14	< 10	750	< 0.5	< 2	0.70	1.0	12	33	29	2.33	< 10	70	0.06	10	0.50
KC050800	216	202	< 5	0.2	1.52	6	< 10	650	< 0.5	< 2	0.51	0.5	11	38	26	2.55	< 10	60	0.06	10	0.58

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



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221 FAX: 604-984-0218

To: CHIEF ISAAC INCORPORATED

P.O. BOX 599  
DAWSON CITY, YT  
Y0B 1G0

Project :  
Comments: ATTN: FARELL ANDERSON

Page Number :1-B  
Total Pages :3  
Certificate Date: 15-OCT-1999  
Invoice No. :19930397  
P.O. Number :  
Account :RLB

## CERTIFICATE OF ANALYSIS A9930397

SAMPLE	PREP		Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
	CODE		ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
KC020000	216	202	195	< 1	< 0.01	17	70	24	< 0.01	< 2	1	5	0.01	< 10	< 10	13	< 10	92
KC020100	216	202	380	< 1	< 0.01	22	190	16	< 0.01	< 2	4	26	0.02	< 10	< 10	30	< 10	64
KC020200	216	202	295	< 1	< 0.01	22	150	18	< 0.01	< 2	4	16	0.04	< 10	< 10	30	< 10	80
KC020300	216	202	485	3	0.03	30	740	6	0.05	< 2	4	51	0.06	< 10	< 10	47	< 10	90
KC020400	216	202	1060	1	0.02	27	680	12	0.02	< 2	4	38	0.05	< 10	< 10	46	< 10	72
KC020500	216	202	525	1	0.01	25	630	12	0.01	< 2	4	37	0.06	< 10	< 10	50	< 10	68
KC020700	216	202	375	2	0.01	33	650	14	0.01	< 2	6	33	0.08	< 10	< 10	60	< 10	86
KC030000	216	202	535	3	0.01	34	730	16	0.01	< 2	5	41	0.08	< 10	< 10	49	< 10	90
KC030100	216	202	290	1	0.01	26	640	12	0.01	< 2	4	35	0.06	< 10	< 10	50	< 10	64
KC030200	216	202	295	1	0.01	22	570	8	0.01	< 2	5	33	0.06	< 10	< 10	46	< 10	58
KC030300	216	202	500	3	0.01	24	490	12	0.01	< 2	5	43	0.06	< 10	< 10	52	< 10	54
KC030400	216	202	525	3	0.01	24	590	18	0.03	< 2	4	50	0.06	< 10	< 10	47	< 10	96
KC030500	216	202	295	3	0.01	29	630	14	0.02	< 2	5	44	0.06	< 10	< 10	52	< 10	94
KC030600	216	202	240	2	0.01	25	490	16	0.01	< 2	4	38	0.06	< 10	< 10	55	< 10	82
KC030700	216	202	620	3	0.01	24	650	18	0.05	< 2	4	46	0.03	< 10	< 10	45	< 10	100
KC030800	216	202	715	1	0.01	21	560	16	0.03	< 2	4	36	0.05	< 10	< 10	48	< 10	76
KC030900	216	202	565	4	0.01	17	560	12	0.04	< 2	3	48	0.05	< 10	< 10	47	< 10	68
KC031000	216	202	360	3	0.01	21	670	12	0.03	< 2	4	34	0.07	< 10	< 10	49	< 10	74
KC031100	216	202	215	2	0.01	21	600	14	0.01	< 2	4	30	0.08	< 10	< 10	55	< 10	76
KC031200	216	202	245	2	0.01	22	400	12	0.06	< 2	4	33	0.07	< 10	< 10	59	< 10	76
KC040000	201	202	1010	5	0.02	21	1390	4	0.18	< 2	1	110	0.03	< 10	< 10	42	< 10	54
KC040100	201	202	240	1	0.01	19	460	8	< 0.01	< 2	3	26	0.08	< 10	< 10	54	< 10	52
KC040200	216	202	260	1	0.01	25	580	12	0.02	< 2	5	41	0.07	< 10	< 10	58	< 10	58
KC040300	216	202	470	2	0.01	28	560	10	0.01	< 2	5	45	0.06	< 10	< 10	52	< 10	68
KC040400	216	202	380	3	0.01	30	640	12	0.01	< 2	5	42	0.06	< 10	< 10	53	< 10	64
KC040500	216	202	315	3	0.01	22	580	12	< 0.01	< 2	3	34	0.07	< 10	< 10	48	< 10	92
KC040600	201	202	410	3	0.01	19	660	12	0.05	< 2	3	41	0.04	< 10	< 10	41	< 10	70
KC040700	216	202	535	2	0.01	23	570	16	0.03	< 2	5	49	0.06	< 10	< 10	57	< 10	84
KC040800	216	202	530	4	0.01	22	740	12	0.03	< 2	4	48	0.07	< 10	< 10	50	< 10	74
KC040900	216	202	620	3	0.01	20	640	12	0.03	< 2	4	41	0.06	< 10	< 10	48	< 10	70
KC041000	216	202	455	2	0.01	24	600	16	0.03	< 2	4	52	0.06	< 10	< 10	54	< 10	76
KC050000	216	202	830	1	0.02	44	550	12	< 0.01	< 2	7	43	0.09	< 10	< 10	66	< 10	78
KC050100	216	202	435	2	0.01	35	570	10	< 0.01	< 2	6	38	0.08	< 10	< 10	61	< 10	66
KC050200	201	202	695	3	0.01	33	700	8	0.02	< 2	5	43	0.06	< 10	< 10	55	< 10	66
KC050300	216	202	280	2	0.01	26	420	8	< 0.01	< 2	4	29	0.07	< 10	< 10	57	< 10	60
KC050400	216	202	510	3	0.02	33	680	16	0.01	< 2	5	43	0.07	< 10	< 10	60	< 10	90
KC050500	216	202	325	2	0.01	24	690	12	0.01	< 2	5	34	0.08	< 10	< 10	66	< 10	76
KC050600	216	202	520	3	0.02	30	820	12	0.03	< 2	5	52	0.07	< 10	< 10	59	< 10	86
KC050700	216	202	505	2	0.01	31	700	14	0.03	< 2	4	51	0.05	< 10	< 10	43	< 10	100
KC050800	216	202	325	3	0.01	30	720	12	0.03	< 2	4	38	0.05	< 10	< 10	46	< 10	100

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



# Chemex Labs Ltd.

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

To: CHIEF ISAAC INCORPORATED

P.O. BOX 599  
 DAWSON CITY, YT  
 Y0B 1G0

Project :  
 Comments: ATTN: FARELL ANDERSON

Page Number :2-A  
 Total Pages :3  
 Certificate Date: 15-OCT-1999  
 Invoice No. : I9930397  
 P.O. Number :  
 Account : RLB

<b>CERTIFICATE OF ANALYSIS</b>	<b>A9930397</b>
--------------------------------	-----------------

SAMPLE	PREP CODE		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 ppb	K %	La ppm	Mg %
			FA+AA																		
KC050900	216	202	10	0.2	1.73	12	< 10	550	< 0.5	< 2	0.55	< 0.5	10	35	19	2.77	< 10	50	0.06	10	0.52
KC051000	216	202	< 5	0.2	1.74	14	< 10	700	< 0.5	< 2	0.48	< 0.5	13	44	20	2.92	< 10	70	0.08	20	0.68
KC051100	216	202	5	0.2	1.65	14	< 10	560	< 0.5	< 2	0.59	0.5	12	39	17	2.75	< 10	90	0.08	20	0.59
KC051200	216	202	< 5	< 0.2	1.48	14	< 10	380	< 0.5	< 2	0.63	< 0.5	8	29	25	2.50	< 10	40	0.07	10	0.52
KC051300	216	202	10	< 0.2	1.83	12	< 10	490	< 0.5	< 2	0.54	< 0.5	12	35	23	2.60	< 10	70	0.06	20	0.52



# Chemex Labs Ltd.

Analytical Chemists \* Geochemists \* Registered Assayers

212 Brooksbank Ave., North Vancouver  
British Columbia, Canada V7J 2C1  
PHONE: 604-984-0221 FAX: 604-984-0218

To: CHIEF ISAAC INCORPORATED

P.O. BOX 599  
DAWSON CITY, YT  
Y0B 1G0

Page Number :2-B  
Total Pages :3  
Certificate Date: 15-OCT-1999  
Invoice No. :19930397  
P.O. Number :  
Account :RLB

Project :

Comments: ATTN: FARELL ANDERSON

## CERTIFICATE OF ANALYSIS

### A9930397

SAMPLE	PREP		Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Ti	Tl	U	V	W	Zn
	CODE		ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
KC050900	216	202	645	3	0.01	24	740	12	0.03	< 2	4	38	0.06	< 10	< 10	54	< 10	78
KC051000	216	202	395	2	0.01	33	810	12	0.01	< 2	4	40	0.08	< 10	< 10	53	< 10	104
KC051100	216	202	525	3	0.01	28	860	10	0.01	< 2	4	44	0.08	< 10	< 10	51	< 10	98
KC051200	216	202	300	1	0.01	24	840	6	0.03	< 2	4	41	0.07	< 10	< 10	49	< 10	70
KC051300	216	202	770	3	0.01	24	690	8	0.01	< 2	5	39	0.07	< 10	< 10	52	< 10	66