

MAP NO.	ASSESSMENT REPORT	X	DOCUMENT NO.:	092641
	PROSPECTUS		MINING DISTRICT:	Whitehorse
	CONFIDENTIAL	X	TYPE OF WORK:	Geochemical
105 D 9	OPEN FILE			

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REPORT FILED UNDER: Aurum Geological Consultants Inc.

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DATE PERFORMED: 13-15 August, 1988

DATE FILED: 13 February, 1989

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LOCATION: LAT.: 60 38'N

AREA: Mt Michie

---

LONG.: 134 09'W

VALUE \$: 2000.00

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CLAIM NAME & NO.: FOX 15-48 (YA96911-20, 35, 44)

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WORK DONE BY: R.W. Hulstein

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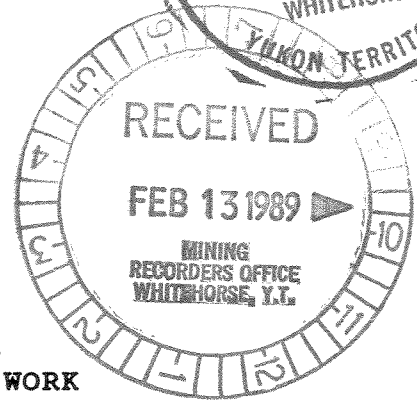
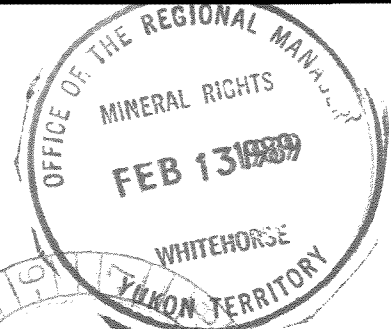
WORK DONE FOR: Aurum Geological Consultants Inc.

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DATE TO GOOD STANDING

REMARKS: #65 MICHIE

In 1988 the chromite showing was re-sampled, a grab sample of which assayed 28.1% Cr. A soil sample from the same area returned 130 ppb Au.



**REPORT ON THE 1988  
GEOLOGICAL ASSESSMENT WORK  
ON THE FOX CLAIMS**

Whitehorse M.D., Yukon  
August 14-16, 1988

**Claims:** Fox 15-24 (YA 96911-920)  
Fox 39-48 (YA 96935-944)

**Location:** 1. 50 km SE of Whitehorse, Yukon  
2. NTS Sheet 105 D/9  
3. Latitude 60° 37.6' N  
Longitude 134° 08.7' W

**For:** Walhala Exploration Ltd.  
5 Teak Avenue  
Whitehorse, Yukon  
Y1A 4W5

**By:** Roger W. Hulstein, B.Sc.  
Aurum Geological Consultants Inc.  
604-675 West Hastings Street  
Vancouver, B.C.  
V6B 1N2

February 7, 1989

092641

## TABLE OF CONTENTS

TABLE OF CONTENTS	i
INTRODUCTION	1
Terms of Reference	1
Location and Access	1
Property	1
History	4
Physiography	4
GEOLOGY AND MINERALIZATION	5
CONCLUSIONS AND RECOMMENDATIONS	7
REFERENCES	8
STATEMENT OF COSTS	9
STATEMENT OF QUALIFICATIONS	10

### List of Figures

Figure 1; Location Map	2
Figure 2; Claim Map	3
Figure 3; Geology and Geochemistry	in pocket
Figure 4; Chromite Showing	6

### Appendices

Rock Sample Descriptions
Analytical Reports

## 1. INTRODUCTION

### 1.1 Terms of Reference

This report was prepared at the request of the directors of Walhala Exploration Ltd. Its purpose is to satisfy assessment requirements of the Yukon Quartz Mining Act through a description of an exploration program carried out on the Fox 15-24 and Fox 39-48 claims. A three day field examination was completed on August 13 to August 15 by Harmen Keyser, B.Sc. and Adrian Cormier of Aurum Geological Consultants Inc.

### 1.2 Location and Access

The Fox claims are located in south-central Yukon, about 50 kilometers southeast of Whitehorse (Figure 1). The claims cover part of the height-of-land between Marsh Lake and Michie Creek. Access is provided by helicopters based at Whitehorse.

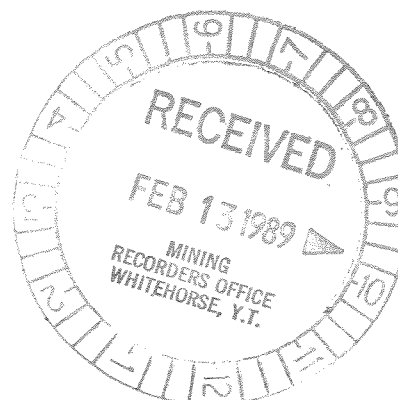
### 1.3 Property

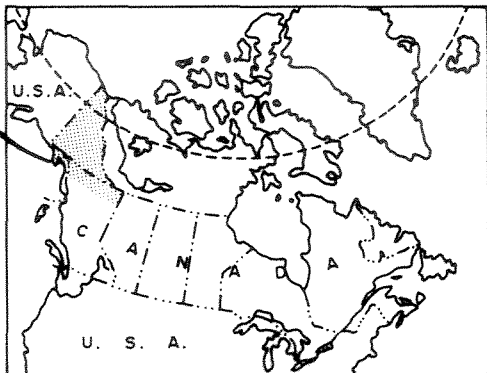
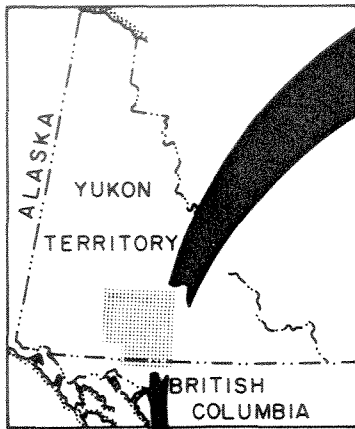
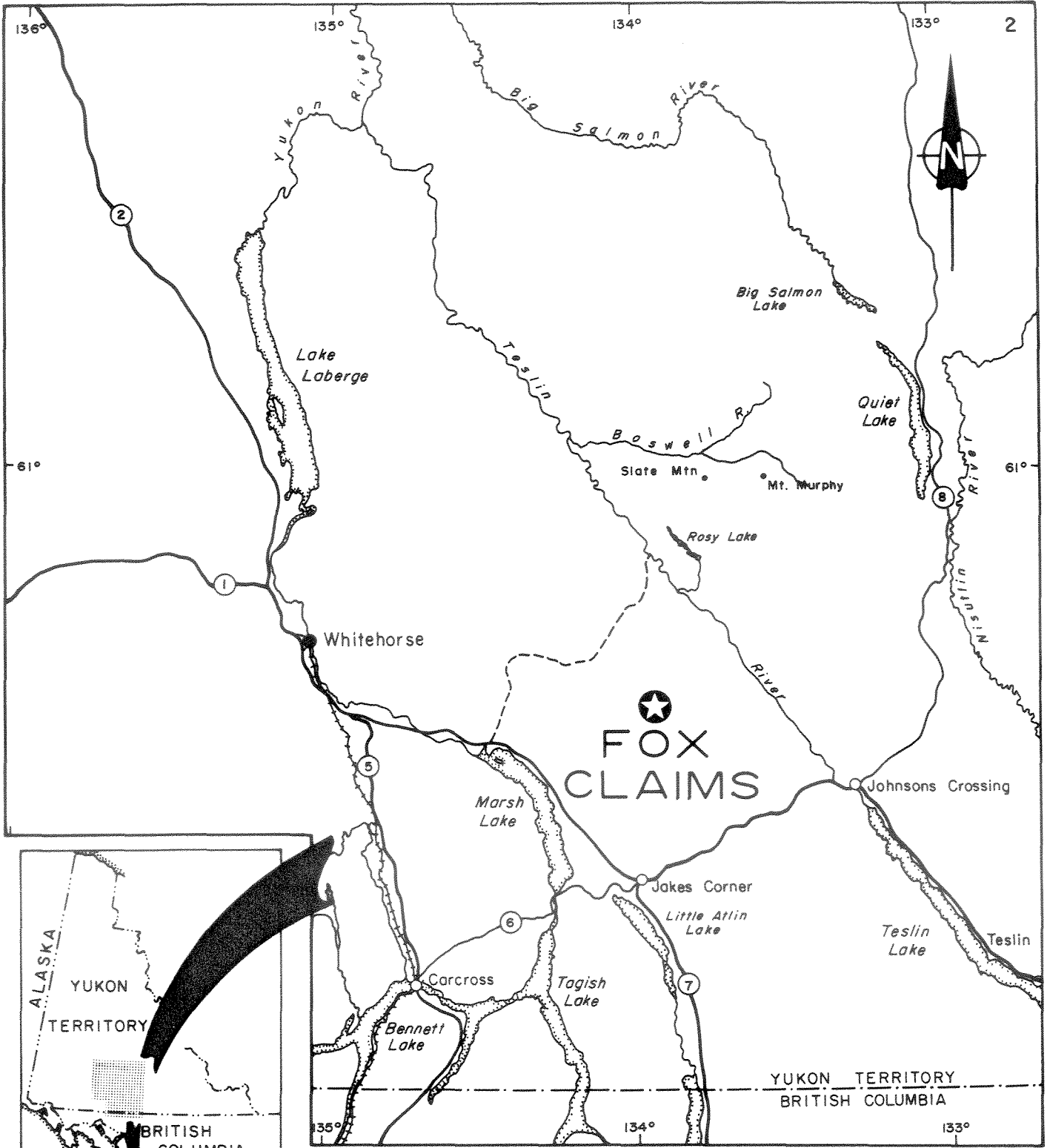
The property consists of 20 contiguous unsurveyed mineral claims covering approximately 416 hectares staked according to the Yukon Quartz Mining Act in the Whitehorse Mining Division. Claim data are as follows:

Claim Name	Grant No's	Staking Date	Expiry Date *
Fox 15-24	YA 96911-920	Feb. 15, 1987	Aug. 16, 1989
Fox 39-48	YA 96935-944	Feb. 15, 1987	Aug. 16, 1989

\* subject to approval of 1988 assessment work.

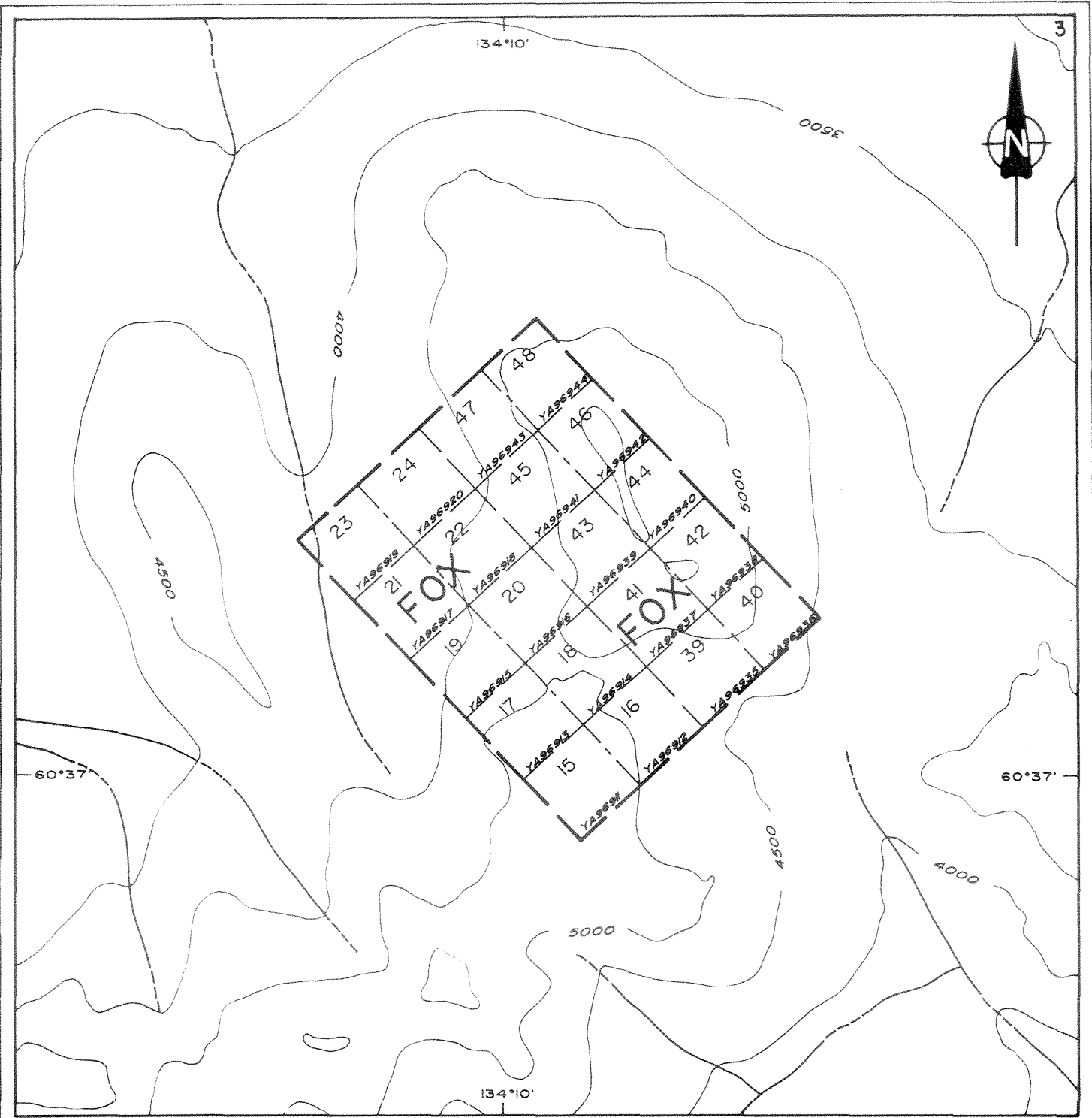
The claims are owned by Walhala Exploration Ltd. and are shown on Yukon Quartz and Placer Sheet 105 D-9.





10km 0 10 20 30 40 50km

WALHALA EXPLORATION LTD.	
FOX CLAIMS WHITEHORSE MINING DISTRICT	
LOCATION	
Aurum Geological Consultants Inc.	JANUARY, 1989
Drawn by NH	Scale 1:1,000,000
FIGURE: 1	



### LEGEND

- claim boundary
- claim number
- tag number
- staking direction
- creek
- elevation contour; interval 500 ft.



WALHALA EXPLORATION LTD.	
FOX CLAIMS WHITEHORSE MINING DISTRICT	
CLAIM MAP	
Aurum Geological Consultants Inc.	JANUARY, 1989
NTS 105 D/9	DRAWN BY NH SCALE 1:31,680 FIGURE : 2

Note: adapted from D.I.A.N.D. map sheet 105 D/9, revised Sept. 29, 1988

#### 1.4 History

Chromite mineralization was discovered in the Michie Lake area in 1923 by a topographic survey party (Archer, Cathro and Associates Ltd., Northern Cordillera Mineral Inventory, 105D; Occurrence Number 71). The occurrence was first staked in 1958 and held intermittently until 1975 (?). Trenching was carried out in 1963. In 1969, R. Hilker collected a sample of chromite which assayed 39.4% Cr<sub>2</sub>O<sub>3</sub> and 5.7% Fe (Hilker, 1969).

Walhala Exploration Ltd. staked the Fox claims in February 1987 to cover the reported chromite occurrence. The property was examined by personnel of Aurum Geological Consultants Inc. and Walhala Exploration Ltd. in 1987 (Hulstein, 1988) but the chromite occurrence could not be located.

#### 1.5 Physiography

Situated in the southern part of the Teslin Plateau, topography on the Fox claims is moderate to rugged. Physiography is dominated by glacial features such as U-shaped valleys, cirques, and outwash plains. Elevations on the property range from 850 meters at Greyling Creek to 1700 meters in the northeast part of the claims.

The climate in the area of the Fox claims is variable, with hot summers and long cold winters. Precipitation amounts to about 50 cm annually.

## 2. GEOLOGY AND MINERALIZATION

The Fox claims are located in the Intermontane Tectonic Belt. Wheeler (1961) has described the regional geology.

The claims are centered on the northern of two Cretaceous ultramafic outliers mapped by Wheeler (1961) as intruding (?) Triassic Lewes River Group sediments. Mapping (Figure 3) completed as part of the 1987 and 1988 field examinations on the Fox claims has identified peridotite (map unit Trum) exposures within the same area mapped as ultramafics by Wheeler. Locally, the peridotite has bands of magnetite. Alteration is typified by serpentine, chlorite, talc, and asbestos minerals, especially near shear zones.

Metasediments (map unit uTrLM) including limestone, marble and quartzite are exposed at the southwestern part of the claims. The contact between the ultramafics and the metasediments on the Fox claims is thought to be a fault.

The chromite lens (Figure 4) approximately 12.5 by 2.0 meters in area reported by Hilker (1969) was located in 1988. The massive chromite, hosted by peridotite, is oriented north-south and pinches out to the north while the southern contact is covered by overburden. A grab sample of the chromite assayed 28.10% Cr.

Old trenches exposing poor quality asbestos mineralization and a barren shear zone along the southern contact of the peridotite located in 1987 were briefly re-examined in 1988.

A total of four rock samples and fourteen soil samples were submitted in 1988 to Bondar-Clegg and Company Ltd. in North Vancouver, B.C. for multi-element analyses including gold, chromium, cobalt, platinum group elements and rare earths. Rock descriptions are included in the Appendix to this report. No anomalous gold was detected in the rock samples, but one soil sample returned 130 ppb gold. With the exception of grab rock sample FR-88-04 returning 28.10 % chromium no other anomalous values were obtained.



FS-88-14/10, 540, 370      FS-88-12/15, 860, 440

FS-88-13/7, 810, 400

small gully

FS-88-11/130, 1100, 440

FS-88-10/5, 1100, 440

FR-88-02/15, 3553, 2290  
FR-88-04/12, 281000, 593  
FR-88-03/18, 3408, 2310

FS-88-09/17, 1500, 580


FS-88-07/15, 670, 400


FS-88-08/8, 650, 590

### LEGEND


#### LITHOLOGIES

##### TRIASSIC

 massive chromite mineralization

 peridotite

#### SYMBOLS

 limit of outcrop

X rock sample location, number/  
Au ppb, Cr ppm, Ni ppm

○ soil sample location, number/  
Au ppb, Cr ppm, Ni ppm



WALHALA EXPLORATION LTD.

FOX CLAIMS  
WHITEHORSE MINING DISTRICT

CHROMITE  
SHOWING

Aurum Geological Consultants Inc.      JANUARY, 1989

NTS 105 D/9

DRAWN BY HK

SCALE 1:500

FIGURE: 4

### 3. CONCLUSIONS AND RECOMMENDATIONS

The Fox claims cover part of an ultramafic rock unit with chromite mineralization. Field work completed in 1988 located the chromite mineralization and a grab sample of massive chromite returned 28.10 % chromium. With the exception of one soil sample returning 130 ppb gold no other anomalous elements were obtained.

The ultramafic rocks underlying the property are a potential host of chromite, platinum group element (PGE), and/or nickel-copper mineralization. Therefore the property should be further explored for these elements. The following work is recommended:

1. Reconnaissance exploration over the remainder of the property for chromite, PGE's, and possibly base and precious metals, should be carried out by prospecting, geological mapping, and rock and sediment geochemistry.
2. Any further work (geophysics, soil geochemistry, trenching, etc.) is contingent on results of the above work.

Respectfully submitted,



Roger W. Hulstein, B.Sc.

February 7, 1989

#### 4. REFERENCES

Hilker, R.G., 1969:

Wind 1-6 Claims, Mitchie (sic) Lake, Yukon Territory,  
Chromite Prospect. D.I.A.N.D. Assessment Report No.  
060006, October 6, 1969.

Hulstein, R.W., 1988:

Report on The 1987 Geological Assessment Work on The  
Fox Claims. Assessment report for Walhala Exploration  
Ltd. by Aurum Geological Consultants Inc., July 27,  
1988

Wheeler, J.O., 1961:

Whitehorse Map-Area, Yukon Territory. 105D. Geological  
Survey of Canada, Memoir 312.

## 5. STATEMENT OF COSTS

Assessment Work Valuation; Fox 7-24 and 31-48 claims.

## A. Fieldwork

Harmen Keyser, B.Sc., FGAC of Vancouver B.C.	
3 days @ 300/day:	\$ 900.00
Adrian Cormier, Assistant, of Whitehorse, Yukon	
3 days @ 160/day:	480.00
Groceries:	164.75
Helicopter Charter:	672.00
Truck Rental:	50.00
Explosives:	120.00
Field supplies:	165.74

## B. Analytical Costs

18 samples:	<u>358.00</u>
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Total Valuation of 1988 Assessment Work:	<u>\$ 2910.49</u>
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## 6. STATEMENT OF QUALIFICATIONS

I, ROGER W. HULSTEIN, hereby certify that;

1. I am a geologist with AURUM GEOLOGICAL CONSULTANTS INC., 604-675 West Hastings Street, Vancouver, British Columbia.
2. I am a graduate of Saint Mary's University, Halifax, with a degree in geology (B.Sc., 1981) and have been involved in geology and mineral exploration continuously since 1978.
3. I am a member of the Geological Association of Canada (A3572) and a member of the Yukon Professional Geoscientists Society.
4. I have no direct or indirect interest in the properties or securities of Walhala Exploration Ltd.
5. I am the author of this report on the Fox claims, Yukon, which is based on my personal involvement of exploration work carried out in 1987 and on August 14-16, 1988 including field notes, maps and conversations with Harmen Keyser, B.Sc., FGAC.
6. This report is intended to satisfy assessment requirements only.



Roger W. Hulstein, B.Sc.

February 7, 1989

Appendix

AURUM GEOLOGICAL CONSULTANTS    Rock Sample Location and Descr  
 Date: Aug. 14-16, 1988    Project: Fox Claims    NTS: 105 D/9    Area: Michie Creek, Yukon

Sample No.	Location	Description	Attitude	Width	Au ppb	Cr
FR-88-01	450 m NW of trenches in saddle	Very rusty qtz-carb-barite float, cut by later qtz vnlets 2% diss sulfides	Float		21	NA
FR-88-02	Chromite showing	Serpentinized peridotite wallrock, east side of the chromite lens	Grab		15	NA
FR-88-03	Chromite showing	Srepentinized peridotite wallrock, west side of the chromite lens	Grab		18	NA
FR-88-04	Chromite showing	Massive black crystalline chromite	Grab		12	28.1

Bondar-Clegg & Company Ltd.  
 130 Pemberton Ave.  
 North Vancouver, B.C.  
 V7P 2R5  
 (604) 985-0681 Telex 04-352667



Geochemical  
 Lab Report

REPORT: V88-06706.0 ( COMPLETE )

REFERENCE INFO:

CLIENT: AURUM GEOLOGICAL CONSULTANTS INC.  
 PROJECT: FOX

SUBMITTED BY: H. KEYSER  
 DATE PRINTED: 4-JAN-89

ORDER	ELEMNT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold	14	5 PPB	NOT APPLICABLE	INST. NEUTRON ACTIV.
2	Ag Silver	14	5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
3	As Arsenic	14	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
4	Ba Barium	14	100 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
5	Br Bromine	14	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
6	Cd Cadmium	14	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
7	Ce Cerium	14	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
8	Co Cobalt	14	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
9	Cr Chromium	14	50 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
10	Cs Cesium	14	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
11	Eu Europium	14	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
12	Fe Iron	14	0.5 PCT	NOT APPLICABLE	INST. NEUTRON ACTIV.
13	Hf Hafnium	14	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
14	Ir Iridium	14	100 PPB	NOT APPLICABLE	INST. NEUTRON ACTIV.
15	La Lanthanum	14	5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
16	Lu Lutetium	14	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
17	Mo Molybdenum	14	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
18	Na Sodium	14	0.05 PCT	NOT APPLICABLE	INST. NEUTRON ACTIV.
19	Ni Nickel	14	50 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
20	Rb Rubidium	14	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
21	Sb Antimony	14	0.2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
22	Sc Scandium	14	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
23	Se Selenium	14	10 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
24	Sm Samarium	14	0.1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
25	Sn Tin	14	200 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
26	Ta Tantalum	14	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
27	Tb Terbium	14	1 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
28	Te Tellurium	14	20 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
29	Th Thorium	14	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
30	U Uranium	14	0.5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
31	W Tungsten	14	2 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
32	Yb Ytterbium	14	5 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
33	Zn Zinc	14	200 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
34	Zr Zirconium	14	500 PPM	NOT APPLICABLE	INST. NEUTRON ACTIV.
35	Pt Platinum	4	15 PPB	FIRE-ASSAY	
36	Pd Palladium	4	2 PPB	FIRE-ASSAY	
37	Au Gold - Fire Assay	4	5 PPB	FIRE-ASSAY	Fire Assay AA

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ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
38	Co Cobalt	4	1 PPM	HN03-HCL HOT EXTR	Atomic Absorption
39	Cr Chromium	3	2 PPM		X-RAY Fluorescence
40	Cu Copper	4	1 PPM	HN03-HCL HOT EXTR	Atomic Absorption
41	Ni Nickel	4	2 PPM	HN03-HCL HOT EXTR	Atomic Absorption
42	Cr Chromium	1	0.01 PCT	PEROXIDE FUSION	Atomic Absorption

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
S SOILS	14	1 -80	14	DRY, SIEVE -80	14
R ROCK OR BED ROCK	4	2 -150	4	CRUSH,PULVERIZE -150	4
				BATCH SURCHARGE	4

REPORT COPIES TO: AURUM GEOLOGICAL  
 WALHALLA EXPLORATION LTD.

INVOICE TO: AURUM GEOLOGICAL







Bondar-Clegg & Company Ltd.  
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 Vancouver, B.C.  
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# Geochemical Lab Report

REPORT: V88-06706.0

PROJECT: FOX

PAGE 10

SAMPLE NUMBER	ELEMENT UNITS	Zr PPM	Pt PPB	Pd PPB	Au PPR	Co PPM	Cr PPM	Cu PPM	Ni PPM	Cr PCT
S1 FS-88-01		<500								
S1 FS-88-02		<500								
S1 FS-88-03		<500								
S1 FS-88-04		<500								
S1 FS-88-05		<500								
S1 FS-88-06		<500								
S1 FS-88-07		<500								
S1 FS-88-08		<500								
S1 FS-88-09		<500								
S1 FS-88-10		<500								
S1 FS-88-11		<500								
S1 FS-88-12		<500								
S1 FS-88-13		<500								
S1 FS-88-14		<500								
R2 FR-88-01			<15	15	21	43	3176	9	1358	
R2 FR-88-02			<15	15	15	80	3553	15	2290	
R2 FR-88-03			<15	10	18	80	3408	9	2310	
R2 FR-88-04			<15	10	12	9		9	593	28.10



# LEGEND

## LITHOLOGIES

- relative ages uncertain
- TRIASSIC
    - U<sup>T</sup>R<sub>Lm</sub> LEWES RIVER GROUP: metasediments
    - T<sub>um</sub> peridotite

## SYMBOLS

- pre 1988 trench
- current claim post
- approximate fault
- soil sample location, number/Au ppb, Cr ppm, Ni ppm
- rock sample location, number/Au ppb, Cr ppm, Ni ppm
- chromite mineralization
- creek
- elevation contour, interval 100 ft.

092641



WALHALA EXPLORATION LTD.	
FOX CLAIMS WHITEHORSE MINING DISTRICT	
GEOLOGY & GEOCHEMISTRY	
540	
Aurum Geological Consultants Inc.	JANUARY, 1989
NTS I05 D/9	DRAWN BY HK SCALE 1:10,000 FIGURE: 3