

MAP NO.: ASSESSMENT REPORT X  
105 D 3 PROSPECTUS  
CONFIDENTIAL X  
OPEN FILE

DOCUMENT NO: 092993  
MINING DISTRICT: WHITEHORSE  
TYPE OF WORK: DIAMOND DRILLING

REPORT FILED UNDER: AURUM GEOLOGICAL CONSULTANTS INCORPORATED

DATE PERFORMED: AUGUST 14-20, 1991

DATE FILED: JANUARY 17, 1992

LOCATION: LAT.: 60°11'N

AREA: WHEATON RIVER

LONG.: 135°21'W

VALUE \$:

CLAIM NAME & NO.: CHIEF 35, 37, 56, 58, 62F, 63F, 75F

WORK DONE BY: R. ALLAN DOHERTY

WORK DONE FOR: WHEATON RIVER MINERALS LIMITED

DATE TO GOOD STANDING:

REMARKS: REPORT COVERS DDH 91-564, ONE OF THREE DRILLED ON THE PROPERTY IN 1991. HOLE WAS DRILLED ON THE OCEAN GRID. VEIN DRILLED WAS THE OCEAN VEIN. N-GROUP INTERFACE WHICH MARKS THE TRANSITION FROM STARVED BASIN CALCAREOUS SHALES AND SILICLASTIC TURBIDITES AND DEBRIS FLOWS. SOILS GIVE ELEVATED VALUES FOR CU, CD, AG, AS AND MO WITH VERY HIGH ZN AND NI WHICH IS CHARACTERISTIC OF SEDEX DEPOSITS.

*No significant intersection reported*



M.R. file no.
R.M.M.R. file no.
Date forwarded <b>17 Jan '92</b>

### TRANSMITTAL FORM

From ► Mining Recorder at: **Whitehorse**

To ► Regional Manager, Mineral Rights at Whitehorse, Y.T.

For action are:

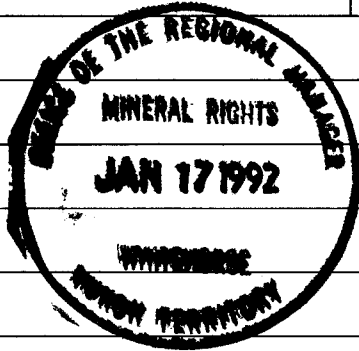
<input type="checkbox"/> NEW APPLICATION FOR PLACER LEASE TO PROSPECT	Name	
<input type="checkbox"/> RENEWAL APPLICATION PLACER LEASE TO PROSPECT	Name	Lease no.
<input type="checkbox"/> AFFIDAVIT OF EXPENDITURE ON PLACER LEASE	Name	Lease no.
<input type="checkbox"/> SECURITY DEPOSIT		
<input type="checkbox"/> FINANCIAL ABILITY		
<input type="checkbox"/> ASSIGNMENT OF PLACER LEASE NO.	From	To
<input type="checkbox"/> GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT.	Owner	
<input checked="" type="checkbox"/> DIAMOND DRILL LOGS	Claims <b>Chief 35, 37, 56, 58, 62F, 63F, 75F</b>	Claim sheet no. <b>105-D-3</b>
<input type="checkbox"/> QUARTZ ASSESSMENT REPORT	Claims	Claim sheet no.
	Type of report	Submitted by
	Cls. work performed on	\$ req. for ren. application

*H. Southwick*  
Signature

REPLY ACTION

Date returned

092993



Signature

**ASSESSMENT REPORT  
DIAMOND DRILL HOLE 91-564  
CHIEFTAIN HILL, WHEATON RIVER AREA**

**WHITEHORSE MINING DISTRICT  
YUKON TERRITORY  
August 14-20, 1991**

**092993**

**Claims:** CHIEF 35 YA74418  
CHIEF 37 YA74420  
CHIEF 56 YA74439  
CHIEF 58 YA74441  
GLEE 62F YA93996  
GLEE 63F YA93997  
GLEE 75F YA94009

**Location:** 1. 85 km SW of Whitehorse, Yukon  
2. NTS 105 D/3  
3. Latitude 60° 11' 30" N  
Longitude 135° 21' W

**For:** Wheaton River Minerals Ltd.  
Suite 1400, 25 Adelaide Street East,  
Toronto, Ontario  
M5C 1Y2

**By:** R. Allan Doherty, B.Sc.  
Aurum Geological Consultants Inc.  
P.O. Box 4367,  
Whitehorse, Yukon  
Y1A 3T5

January 10, 1992





January 10, 1992

Mr. R. H. Whittingham  
Mining Recorder  
Whitehorse Mining District  
Room 201, Federal Building  
Whitehorse, Yukon Territory  
Y1A 2B5

Dear Sir;

Re: 1991 Assessment work on CHIEF and GLEE Claims, NTS 105  
D/3

Please find enclosed maps, drill logs, drill section, statement of costs and analytical results for Diamond drill hole 91-564, completed in August 1991 for Wheaton River Minerals Ltd. on Chieftain Hill.

We intend to apply only three years work to each of the following claims CHIEF 35,37,56, 58, GLEE 62F, 63F, 75F. This is for a total of 21 claim years. I have included an Invoice from E. Caron Diamond Drilling Limited for \$14,163.05 covering the costs of Diamond Drilling for Hole 91-564.

I trust the enclosed information will meet the 1991 assessment requirements as filed by Aurum Geological Consultants Inc. on behalf of Wheaton River Minerals Ltd.

Sincerely,  
**Aurum Geological Consultants Inc.**

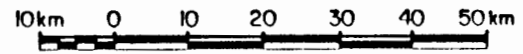
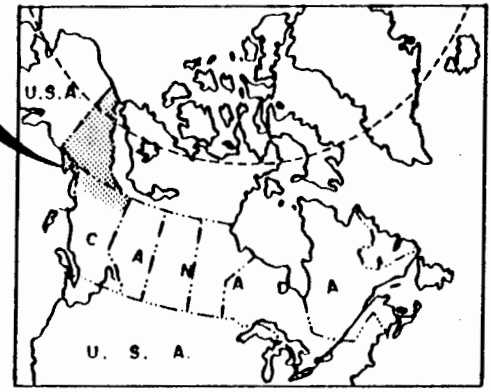
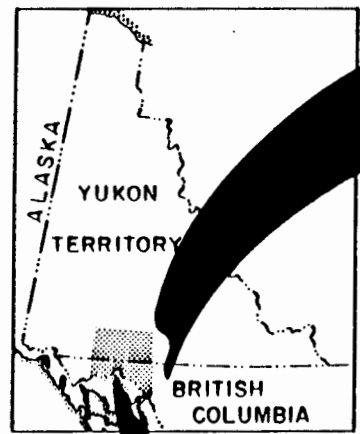
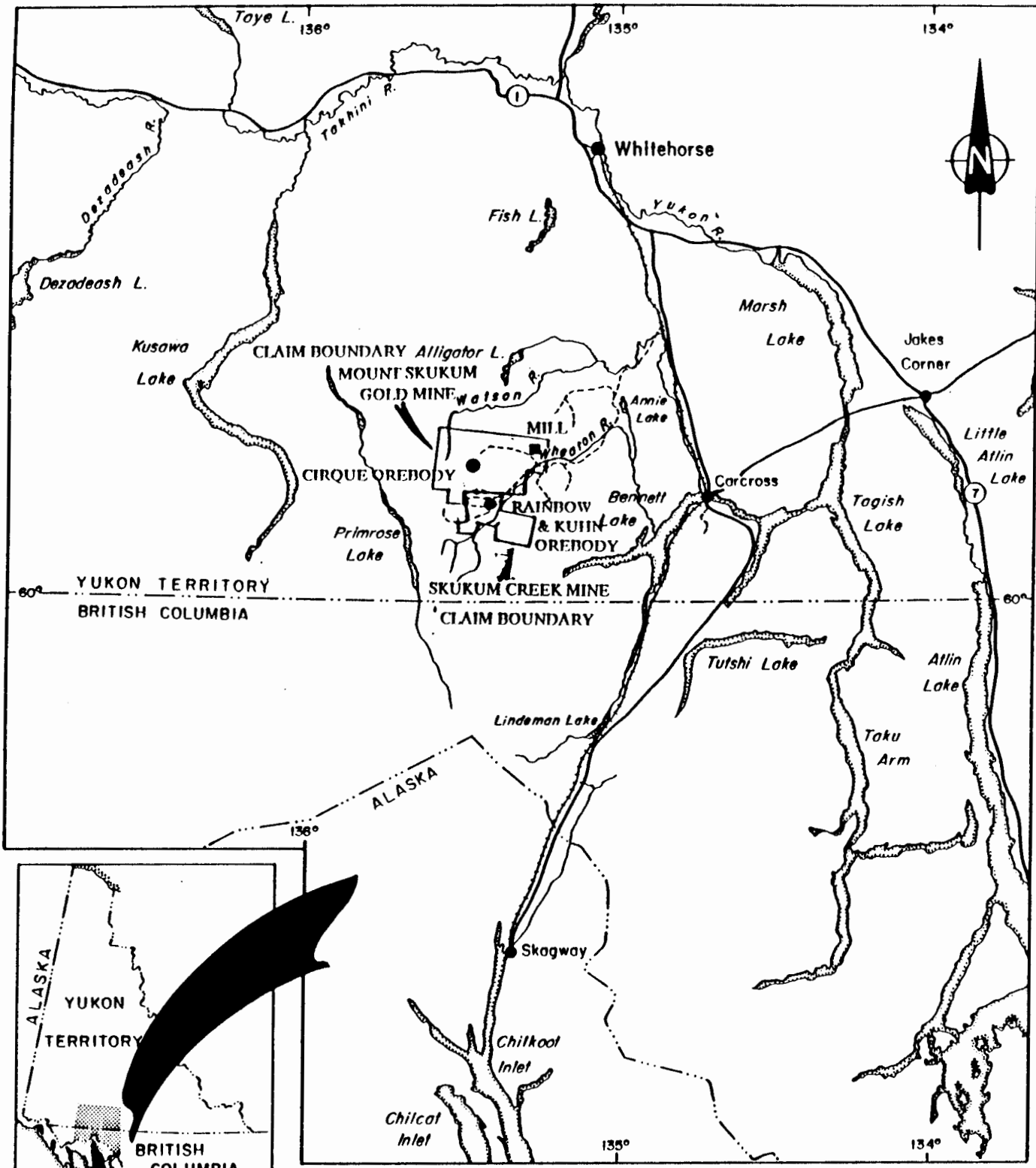
R. Allan Doherty, B.Sc.

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**PROPERTY LOCATION MAPS**



<b>WHEATON RIVER MINERALS LIMITED</b>		
<b>LOCATION MAP</b>		
<i>Aurum Geological Consultants Inc.</i>	OCTOBER, 1987	
Drawn by NH	Scale 1:1,000,000	FIGURE : 1

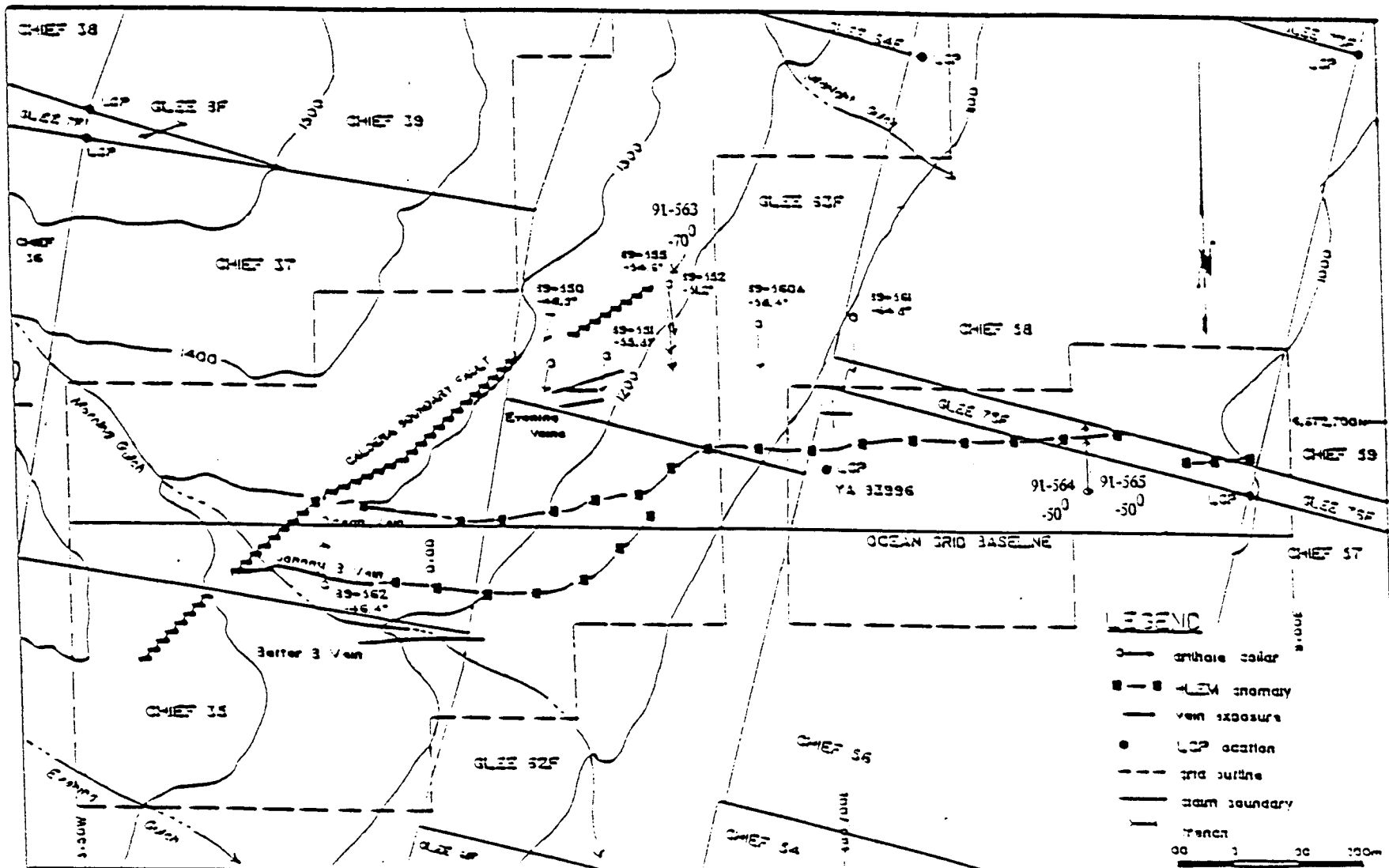


FIGURE 2 LOCATION OF OCEAN GRID, VEINS, CLAIM BOUNDARIES AND 1989 & 1991 DRILL COLLARS

AT  
3



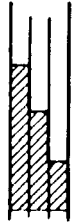
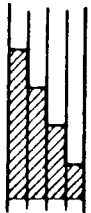
**DIAMOND DRILL LOG  
HOLE 91-564**

# TOTAL ERICKSON RESOURCES LTD.

MINERALS SECTION

## DRILL LOG

5

PROJECT <i>CHIEFMIN HILL OCEAN VEIN</i>	GROUND ELEV. <i>1026 m ASL</i>															
HOLE No. <i>71-564</i>	BEARING <i>000°</i>															
LOCATION <i>OCEAN GRID L 6 100E STA 0136N</i>	DIP <i>-50°</i>															
	TOTAL LENGTH <i>178.92</i>															
LOGGED BY <i>R. HULSTEIN</i>	HORIZONTAL PROJECT															
DATE <i>AUG. 21 / 91</i>	VERTICAL PROJECT															
CONTRACTOR <i>CARON DIAMOND DRILLING</i>	ALTERATION SCALE  <ul style="list-style-type: none"> <li>absent</li> <li>slight</li> <li>moderate</li> <li>intense</li> </ul>															
CORE SIZE <i>HQ 16.54 - 25.60 NQ 25.60 - 178.92 F.O.H.</i>	TOTAL SULPHIDE SCALE  <ul style="list-style-type: none"> <li>traces only</li> <li>&lt; 1%</li> <li>1% - 3%</li> <li>3% - 10%</li> <li>&gt; 10%</li> </ul>															
DATE STARTED																
DATE COMPLETED																
DIP TESTS <table style="width: 100%; border: none;"> <tr> <td style="text-align: left;">0°</td> <td style="text-align: left;"><i>0m</i></td> <td style="text-align: left;"><i>42°</i></td> <td style="text-align: left;"><i>38°</i></td> </tr> <tr> <td style="text-align: left;">187'</td> <td style="text-align: left;"><i>(57.00m)</i></td> <td style="text-align: left;"><i>44°</i></td> <td style="text-align: left;"><i>27°</i></td> </tr> <tr> <td style="text-align: left;">387'</td> <td style="text-align: left;"><i>(117.96m)</i></td> <td style="text-align: left;"><i>42°</i></td> <td style="text-align: left;"><i>34°</i></td> </tr> <tr> <td style="text-align: left;">587'</td> <td style="text-align: left;"><i>(178.92m)</i></td> <td></td> <td></td> </tr> </table>	0°	<i>0m</i>	<i>42°</i>	<i>38°</i>	187'	<i>(57.00m)</i>	<i>44°</i>	<i>27°</i>	387'	<i>(117.96m)</i>	<i>42°</i>	<i>34°</i>	587'	<i>(178.92m)</i>		
0°	<i>0m</i>	<i>42°</i>	<i>38°</i>													
187'	<i>(57.00m)</i>	<i>44°</i>	<i>27°</i>													
387'	<i>(117.96m)</i>	<i>42°</i>	<i>34°</i>													
587'	<i>(178.92m)</i>															
COMMENTS	LEGEND															

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					Sil A	Prop B	Hy C	Arg D	P. E	
1.3m				0.00-16.54	0.00 - 16.54 : OVERBURDEN/CASING					
1		CASING	N/A							
2										
3										
4										
5										
6										
7		GRDR		16.54-22.40	GRDR: Fresh v. weak prop, alt-chl/act magnetic, 10% chl hbl ± 60% white 2-5mm plag crystals in a light pink siliceous-feldspar matrix. Numerous <sup>2cm</sup> pellets of hbl (1-2mm) in white plag groundmass, minor limonite on frac. Prop to argillic alteration adjacent to frac.					
1										
2										
3										
4										
5		AND/D		22.40-22.73	AND/D: Fresh green aphanitic dyke. Sharp contacts at 45°, 1-2cm chill margins. GRDR virtually unaltered. <1% hairline calcite filled fractures.					
6										
7										
8										
9										
10				22.73-64.31	GRDR: As 16.54-22.40. Fresh, magnetic, weak prop alt, increase downhole 1-3cm irregular AND/dyketts (as at 22.40-22.73) at 23.27, 23.90 24.25. Fractured w/ limonite stain from 26.00-27.76. 0.5cm grey clay gouge on str @ 18" at 27.76m. From 26.00-64.31 local zones (10-30cm) w/ 1-3mm mag x-fals/blebs. 29.11-64.31 local zones of hem alt w ser (light green) plag, diss py 36.00 1-3mm qtz unlet w/ diss py & hem blebs. py on frac ! chl ± ser locally 32.35-34.45. mod patchy phy alt. 38.00-64.31. Frac every 5-10cm. except 51.21-52.00 which is also fresher					
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										



DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY	
					Al	Prop	Phy	Arg	R		
					A	B	C	D	E		
5.1				27.73-64.31 GRDR (cont) cont 51:00; 3cm pink aplite dyklet @ 25° 55.10 } 0.5 cm frac zone w py blebs & vlets 57.38; <0.5cm glz vlet @ 30° to c.a. w diss py. - slicken slides on frac surface. 63.00-64.31: 1-2cm wide pink aplite dyklet parallel to c.a. - Chlorite increases towards lower contact. Plag is variably ser alt. <0.5% py.							
6.0		RHY/D	0	64.31-66.20 RHY/D: Light green-tan Rhy weakly bx, minor flow banding 15-35° to c.a. Tr diss py & py on frac, minor glz vlets, x-cutting flow banding, with tr diss py & tr fine grained grey sulfides U. contact not exposed, L.C. sharp @ 30° no phenos.							
7.0				66.20-91.32 GRDR: Green prop alt, frac every <5-10 cm. dl hbl, py & ep locally on some frac. Calcite fractures local hem feldspars, magnetic commonly frac 25-45° to c.a. w all ± local clay or ser. ground core 71.63-85; 72.85-73m 85.34-91.32: Epidotized feldspars tr py diss. 91.32v, sharp contact, no shearing or alt.							
8.0											
9.0											



DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					Sil A	Prop B	Phy C	Arg D	Po E	
1-10		GROR	AND/D	<p>91.32-105.52 AND/D: Green, fresh, porphyritic and locally amygdales dyke.</p> <p>V.C. @ 45° W 2cm chill margin</p> <p>L.C. @ 45° E 1cm chill margin</p> <p>± minor string @ 30° @ 105.16-105.32</p> <p>5% phenos of 1-2mm indistinct matrics</p> <p>1-2% calcite amygdales, increase downhole</p> <p>minor hairline calcite vnlts, trace hem.</p> <p>Some amygdales aligned @ 30° to c.a.</p> <p>97.82 &lt; 1cm calcite vnlts/gouge @ 40°</p> <p>V. weakly magnetic throughout</p>						
105.52-107.44		GROR	~	<p>GROR: Green, sch. brecciated, weak ser</p> <p>~ 1.0% diss py., Non magnetic, frac</p> <p>@ 30° W ell. calcite, py coatings. Trace</p> <p>fine gr. sulfides in 1mm frac fillings</p>						
107.44-115.73		AND/D	Δ	<p>AND/D: Green, shrd &amp; bx but otherwise</p> <p>as 91.32-105.52</p> <p>shrd W gouge at 109.20</p> <p>V.C. @ 45°? L.C. @ 50°, 10cm calcite</p> <p>filled crackle bx - weakly bleached at</p> <p>contacts. Dyke strongly fine W</p> <p>calcite fillings/coatings</p> <p>Bx &amp; fine adjacent to 109.20 weakly</p> <p>bleached.</p>						
115.72-120.51		GROR	Δ	<p>GROR: Green phyllicly altered with</p> <p>interstitial calcite, 1-3% diss py &amp;</p> <p>py blebs. Core-free &amp; broken, clay</p> <p>ser &amp; calcite on frac. Trace fine</p> <p>grained <sup>thick</sup> sulfides</p> <p>Fine &amp; string + ser content increase</p> <p>downhole</p> <p>1cm gouge at 117.50 &amp; 3cm @ 117.80</p> <p>contacts @ ~ 35°</p>						





Handwritten notes at top left corner.

DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					Sil A	Py B	Plg C	Arg D	Ps E	
120	35	GRDR	SD	120.51-121.06 GRDR; strongly sh'd @ 40-60° to c.A. clasts of rounded <1-3mm grey gtz (4%) in a green-grey ser-chl-chy matrix (60%), 1% diss py in matrix.						
1		GRDR	SD							
2		RHY/D	SD	121.06-122.62 RHY/D; light green willy sh'd, med bx ser alt RHY wispy irregular 1-2mm py-chl-gouge vlets (<2%) t/d						
3	76	RHY/D	SD	122.62-123.66 RHY-GRDR-Qtz Bx; Irregular subrounded clasts aligned at 30-40° to c.A. in a chl-ser-py-gouge matrix - <2% fine gr diss py, 1% py vlets, ?% fine gr sx						
4		RHY/D	SD	123.66-124.12 RHY/D; light green (as 121.06-122.62) sh'd gongy contacts @ 35° to c.A.						
125	100	QVSX	SD	124.12-125.72 QVSX; white - light grey bx gtz, frac f bx irregular-angular ch'ls <3cm, sh'd 10° to c.A. 10% ser lithic ch'ls f bands. ~10% py filling frac & diss, 1% diss qtz on frac, 5% fine gr gn on frac & as blebs, blebs py <3cm, tr sp?; L.C. SS						
6		RHY/D	SD							
7		GRDR	SD							
8	70	GRDR	SD	125.72-126.62 RHY/D; as above						
9		RHY/D	SD	126.62-127.20 GRDR; Bx f sh'd @ 30°, 30% gtz clasts w tr gn (<1%), U.C. - 5cm py-chl-gtz w 1% sp f gn						
10	125	GRDR	SD	127.20-127.78 QVSX; white - light grey gtz (more white gtz f less bx than 124.12-125.72), 5-10% py as diss f 3cm blebs, 2% gn w py on frac f as filling, tr sp? 0.5% aspy filling frac						
120		GRDR	SD							
1	73	GRDR	SD	127.78-129.31 RHY/D Bx f sh'd w 15% alt GRDR f 10% gtz clasts (w 5% py f tr gn) in a dark grey chl-py-gouge (milk) matrix, sh'd 30-50°						
2		GRDR	SD							
3		GRDR	SD	129.31-130.15 GRDR; Bx f sh'd @ 45°, strongly alt. - 1% fine gr py diss f as rare vlets.						
4	72	GRDR	SD	130.15-131.30 GRDR; Bx f sh'd 30-50° w 20% grey fine gtz clasts (<4cm) in milk GRDR - chl-py matrix (5%) bands of chl-py-gouge (<35%), 5-10% diss py f fine gr blk sulfides, U.C. @ 35°, L.C. broken f gongy.						
135										
6										
7		GRDR	SD	131.30-132.36 GRDR; strongly - med phyllic alt 5% alt remnant matrix, medium grained, ser alt plag, <1% diss py f py vlets; chl, ser-clay on numerous frac + py, tr gr, minor thin <0.5cm gtz vlets, vent. cal.						
8		GRDR	SD							
9				131.45-131.60; Irregular gtz vlet, bx gtz flooding w 10% blebby py, 4% gn f 1% sp on fractures.						
140										



DEPTH (METRES)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY
					Si	Py	Phy	Arg	Ps	
					A	B	C	D	E	
14.1		alt GRDR		131.30-142.36 GRDR (con't)						
2				(con't) 133.45-133.55: sh @ 35°, w/ky silicified						
3				with 5% py & tr gn						
4				Lower contact gradational over ~30						
5				cm w decrease in py, chl-ser shears						
6				lesser bleaching						
7				140.65: sh with 1cm ganga 1.2mm py						
8				@ 30° to ca.						
15.1				142.36-156.67 GRDR: as above but fresher, mafics						
2				all but not bleached sericitized.						
3				Plag x-tals are ser alt. Minor						
4				zoned ser alt, shearing &						
5				rare qtz, py veinlets, 1% diss py						
6				143.30: 3mm qtz unlet @ ~35° with						
7				py						
8				151.08-151.70: Leucocratic bx aplite						
9				v.c. irregular; L.C @ 40° with ser. chl						
10				<0.5% diss py						
16.1				152.14-152.24: Andesite dyke, contacts						
2				at 40°, chilled margins.						
3				153.28-154.28: Aplite, pink, chl & ser on frac.						
4				irregular diffuse contacts, tr diss py						
5				156.67-157.35 AND/D: Green, aphanitic, 2-5% diss						
6				py, v.c. obscured - broken, L.C. @						
7				25°, X/cut by 1-3mm calcite unlets.						
8				157.35-167.45 GRDR: as above 142.36-156.67;						
9				patches of white - light green clay-ser						
10				alt plag x-tals, 1% diss py						
17.0				163.37 - 164.29. GROUND core & lost core						
1				167.45-171.83 GRDR: Altered as 131.30-142.36, Bleached						
2				all, ser & py on frac. 168.10, py qtz unlet						
3				167.50: 1cm qtz unlet @ 25° poss fine gr py						
4				Local patches of grey v. fine gr sulfides						
5				171.83-178.72 AND/D: Green, fine grained - aphanitic						
6				locally 5% diffuse mafic phenos, v.c. @ 30°						
7				171.83-173.43 ~ 1% diss py						
8				173.43-178.72 horn or frac & in calcite						
9				unlets - horn increase downhole. Local						
10				porph - mod gr zones in lower 1/2 of sect.						



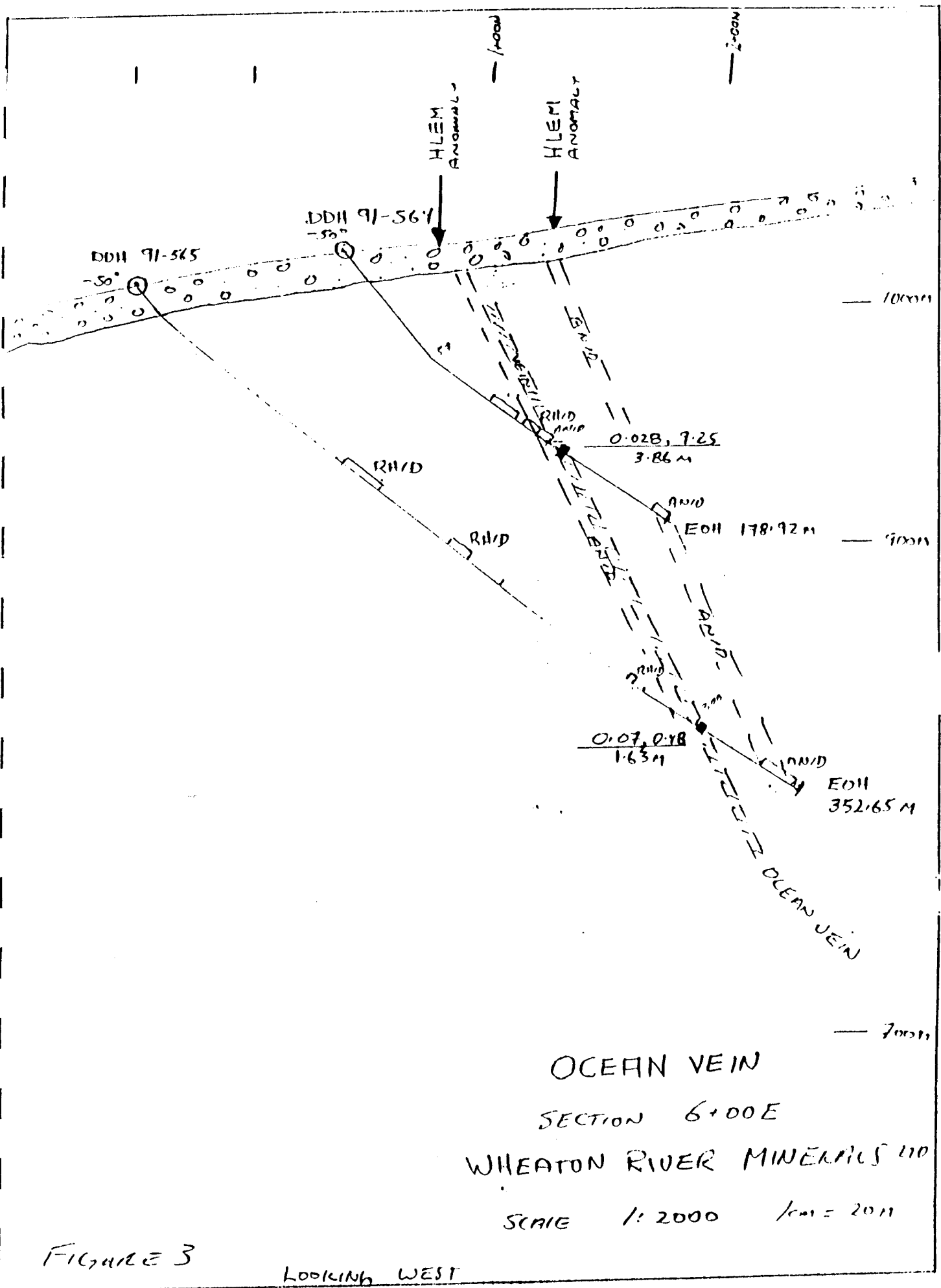


FIGURE 3

LOOKING WEST

OCEAN VEIN  
 SECTION 6+00E  
 WHEATON RIVER MINERALS LTD  
 SCALE 1:2000 Jan = 2011

## **ANALYTICAL RESULTS**

September 5, 1991

Work Order # 13365

Aurum Geological Consultants Inc.  
P.O. Box 5179  
Whitehorse, Yukon  
Y1A 4S3

File #13365a

Project #88

Assay Certificate for Samples Provided

DD1191-564

Sample #	Au oz/ton	Ag ppm	Pb %	Zn %	As ppm
83589	0.002	0.7	0.012	0.019	112
83590	0.002	0.7	0.007	0.003	49
83591	<0.002	0.2	0.001	0.011	117
83592	<0.002	0.6	0.023	0.023	95
83593	<0.002	0.4	0.003	0.011	149
83594	<0.002	1.6	0.010	0.011	88
83595	<0.002	1.0	0.001	0.005	49
83596	<0.002	0.8	0.006	0.014	89
83597	0.002	5.1	0.067	0.076	165
83598	<0.002	3.6	0.072	0.125	241
83599	<0.002	0.1	0.001	0.010	146
83600	0.008	0.1	0.001	0.004	60
83601	0.002	1.0	0.018	0.036	171

Certified by Chyokki



**STATEMENT OF COSTS**





August 19, 1991  
Invoice #2940  
Drill: #69-5

IN ACCOUNT WITH:

Wheaton River Minerals Ltd.  
Suite 1400, 25 Adelaide Street East,  
Toronto, Ontario  
M5C 1Y2

Drilling Charges August 14 to 19, 1991 (Wheaton)

Hole: 91-564/-50/HQ-NQ

Moving

30 man hrs. @ \$33.00 per hr. = \$ 990.00

Casing & Triconing

31 man hrs. @ \$33.00 per hr. = \$ 1,023.00

15.5 machine hrs. @ \$21.00 per hr. = \$ 325.50 \$ 1,348.50

Waterline

11 man hrs. @ \$33.00 per hr. = \$ 363.00

Testing

4 man hrs. @ \$33.00 per hr. = \$ 132.00

2 machine hrs. @ \$21.00 per hr. = \$ 42.00 \$ 174.00

Travelling Time

4 man hrs. @ \$33.00 per hr. = \$ 132.00

Coring

54 - 84 = 30 ft. @ \$19.00 per ft. = \$ 570.00

84 - 587 = 503 ft. @ \$18.00 per ft. = \$ 9,054.00 \$ 9,624.00 \$12,631.50

Items Consumed & Chargeable

1 bag Kwik Seal @ \$40.00 each = \$ 40.00

4 pails rod grease @ \$66.25 each = \$ 265.00

2 HWL rods @ \$150.00 each = \$ 300.00 \$ 605.00

Sub Total \$13,236.50

G.S.T. R101557122 @ 7% \$ 926.55

Total Invoice \$14,163.05



## STATEMENT OF QUALIFICATIONS (RAD)

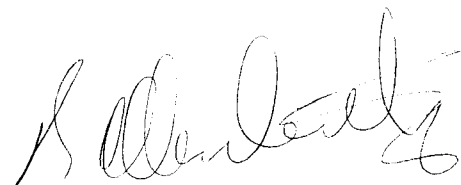
I, R. Allan Doherty with business address:

Aurum Geological Consultants Inc.  
P.O. Box 4367  
Whitehorse, Yukon  
Y1A 3T5

do hereby certify that:

1. I am a geologist with AURUM GEOLOGICAL CONSULTANTS INC.
2. I am a graduate of the University of New Brunswick, with a degree in geology (Hons. B.Sc., 1977) and that I attended graduate school at Memorial University of Newfoundland, 1978-81. I have been involved in geological mapping and mineral exploration continuously since then.
3. I am a member of the Yukon Association of Professional Geoscientists and the CIMM.
4. I am the author of this report on the Chieftain Hill area, Whitehorse Mining District, Yukon, which is based on my personal examination of the ground during July, 1991 and on referenced sources.
5. I have no direct or indirect interests in the properties of Wheaton River Minerals Ltd.
6. I consent to the use of this report in a company report or statement, provided that no portion is used out of context in such a manner as to convey a meaning differing materially from that set out in the whole.

January 10, 1992



R. Allan Doherty, B.Sc.