

830489

REPORT ON CHIP SAMPLING  
OF APRIL, 1991  
ON THE  
MACKTUSH PROPERTY

Alberni Mining Division  
British Columbia

Latitude 49°08' North  
Longitude 124°52' West

NTS 92F-2W

For SYMC Resources Ltd.

By John Wilson, FGAC

May, 1991

### **Introduction**

The Macktush property, owned by SYMC Resources Ltd., is located south of Port Alberni, B.C. It consists of ten Modified Grid mineral claims, of which the COPPER 102 claim (record #1911), with an expiry date of Oct. 31, 1991 has received exploration and other studies since 1982 (Carter, 1990).

This report, prepared at the request of SYMC Resources Ltd., is based on mapping and chip sampling by the writer at an excavated site beside road M-100 on April 30, 1991.

### **Chip Sampling Report**

The accompanying figure shows the location of work, a geological plan and a section illustrating the road cut / excavation.

The excavation is centered on a shear zone cutting an extensive Jurassic Island Intrusion exposure of diorite to quartz diorite. The shear has a true width of nearly six metres, strikes 035°, and dips 60° to 80° easterly. The zone has a deeply weathered centre that contains quartz veinlets, silicified patches and a few boulder sized intrusive remnants. Edges of the shear are marked by grey gouge bands up to one metre wide that contain quartz veins. Disseminated pyrite to 3% occurs throughout the entire zone but normally is less than 1%. Beyond the shear zone, the intrusive is nearly fresh.

One line of continuous chip sampling was taken across the zone and into country rock on both sides. It consisted of ten samples collected by the writer.

Locations of sampling is shown on the accompanying figure.

Geological descriptions of the ten samples follow. The intrusive is a borderline diorite-quartz diorite.

W-1: fairly fresh intrusive.

W-2: fractured intrusive, some brecciation, silicification, rusty veinlets.

W-3: interlayered gouge and sheared intrusive. Gouge is grey with quartz veins and veinlets. Disseminated pyrite reaches 3% but is usually less than 1%. Sheared rock is chloritic with lesser sericite.

W-4, W-5, W-6 and W-7: brecciated, sheared and deeply weathered intrusive. Some boulder sized intrusive remnants. Silicified in places. Some irregular quartz veins to 10 cm. Rusty fractures. Disseminated pyrite to 2%, usually less than 1%.

W-8: grey gouge with quartz veining to 20 cm. Silicified intrusive fragments. Disseminated pyrite to 3%, usually less than 1%.

W-9: fractured, sheared intrusive. Chloritic, sericitic. With 20cm quartz vein.

W-10: fairly fresh intrusive.

The certified analyses by Min En Laboratories (attached) are:

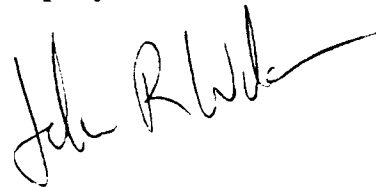
sample number	width (metres)	Au ppb	Ag ppm	Cu ppm
W-1	1.0	5	1.9	28
W-2	2.0	15	1.1	9
W-3	2.0	20	1.3	6
W-4	2.0	5	0.9	8
W-5	2.0	5	0.8	10
W-6	2.0	5	0.7	5
W-7	2.0	5	0.8	7
W-8	1.0	5	0.8	24
W-9	1.0	5	0.9	53
W-10	1.0	5	0.9	41

#### Conclusions and Recommendations

While no high analyses were found, the structure is significant because there are known gold bearing quartz veins nearby (Carter, 1990). The shear-vein system should be mapped and sampled along strike as part of a geological mapping and exploration program over the entire mineral property.

#### References

Carter, N.C. (1990): Geological Report on the Macktush Property. Private report for SYMC Resources Ltd.





**MIN-EN LABORATORIES**  
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**SPECIALISTS IN MINERAL ENVIRONMENTS**  
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705 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 980-5814 OR (604) 988-4524  
FAX (604) 980-9621

**THUNDER BAY LAB.:**  
TELEPHONE (807) 622-8958  
FAX (807) 623-5931

**SMITHERS LAB.:**  
TELEPHONE/FAX (604) 847-3004

Geochemical Analysis Certificate

1V-0386-RG1

Company: **JOHN WILSON**  
Project: **MACKTUSH**  
Attn: **HERB MCMASTER/JOHN WILSON**

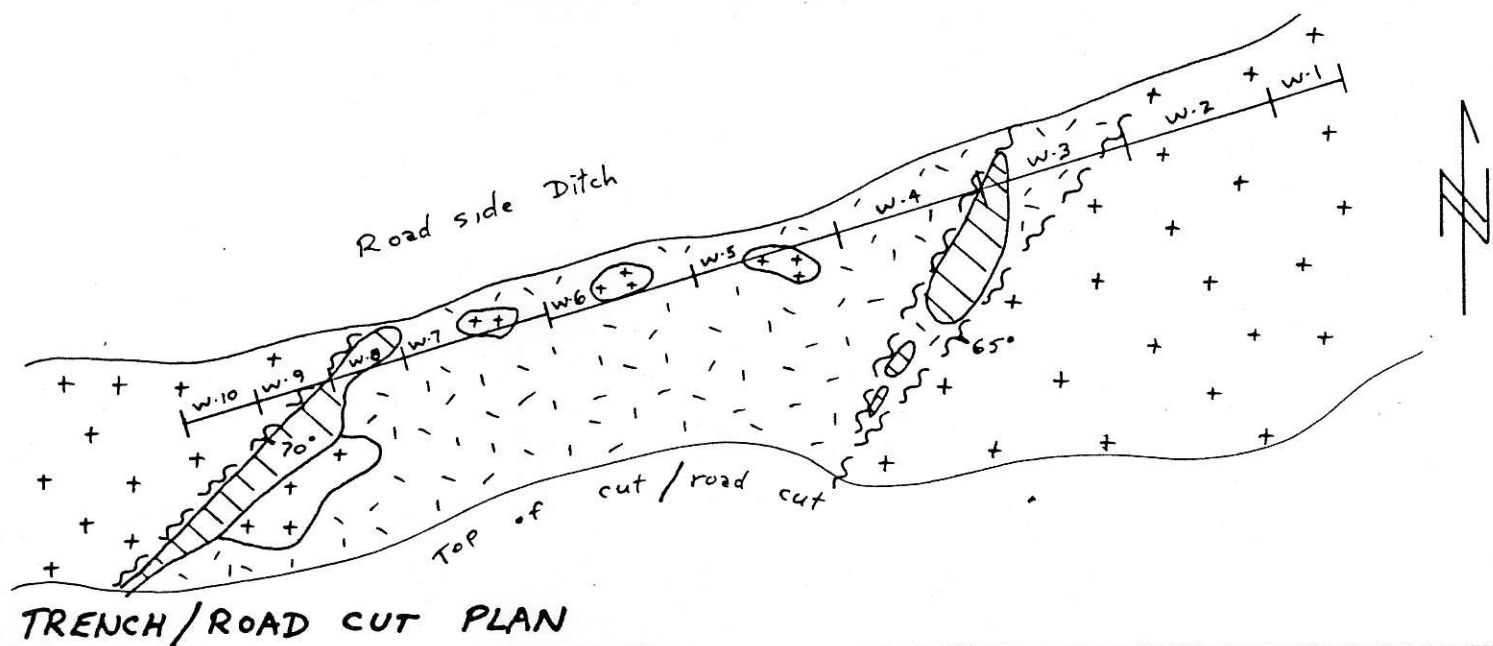
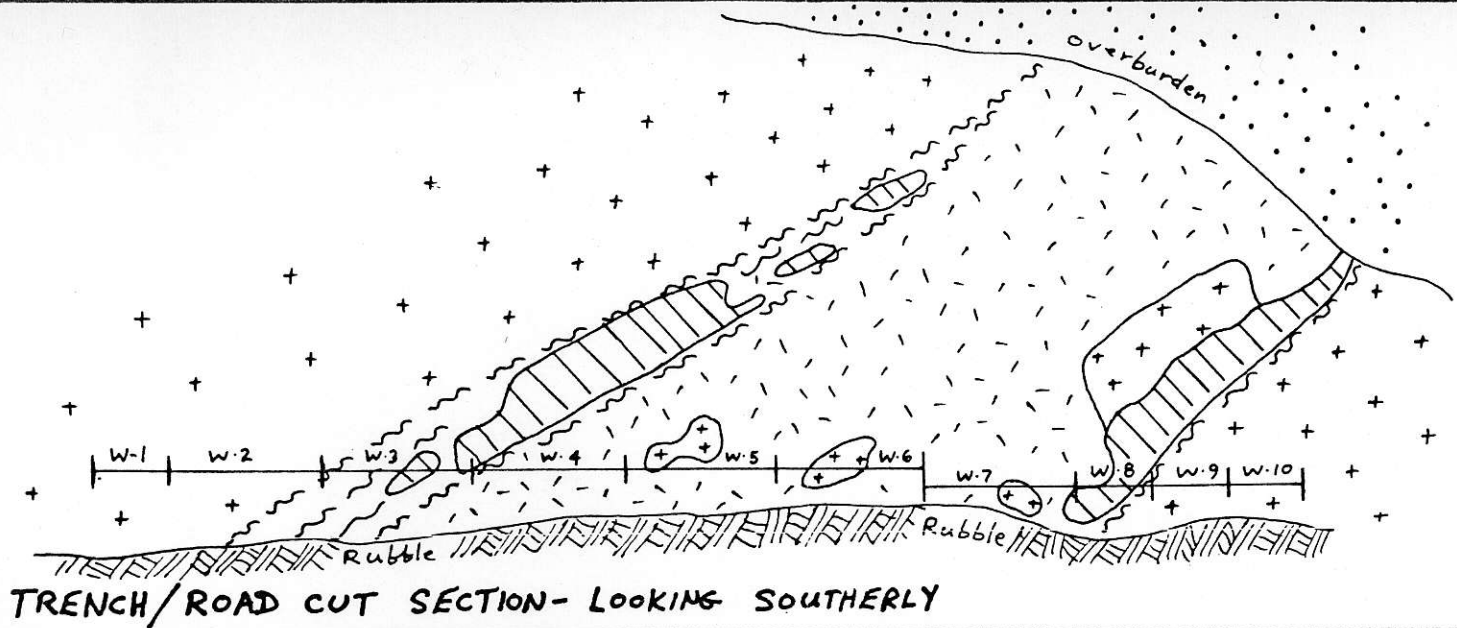
Date: **MAY-06-91**  
Copy 1. SYNC RES, PORT ALBERNI, B.C.  
2. JOHN WILSON, MERVILLE, B.C.

*We hereby certify* the following Geochemical Analysis of 10 ROCK samples submitted APR-02-91 by JOHN WILSON.

Sample Number	AU-WET PPB	AG PPM	CU PPM
W-1	5	1.9	28
W-2	18	1.1	9
W-3	20	1.3	6
W-4	5	.9	8
W-5	5	.8	10
W-6	5	.7	5
W-7	5	.8	7
W-8	5	.8	24
W-9	5	.9	53
W-10	5	.9	41

Certified by \_\_\_\_\_

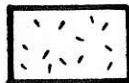
MIN-EN LABORATORIES



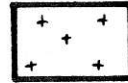
**LEGEND**



grey gouge,  
some quartz veining



deeply weathered  
diorite, quartz diorite



fresh  
diorite, quartz diorite

Scale 1:100 0 1 2 3 4 5 metres

Scale 1:5000 0 100 200 300 metres

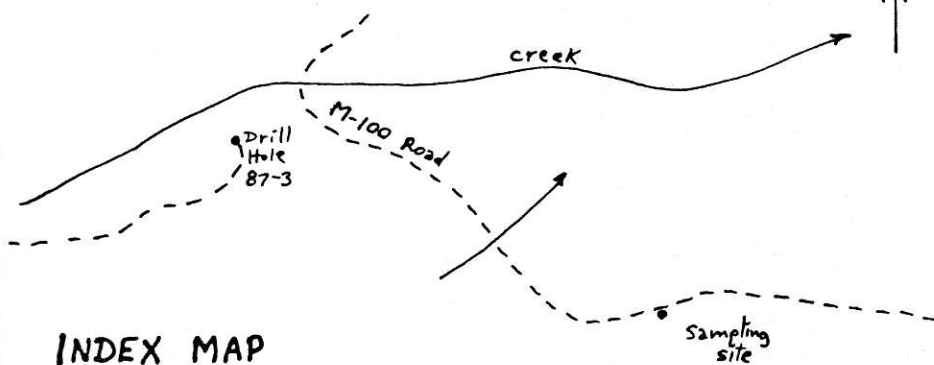
**SYMBOLS**



fault, shear



chip sample location, number



SYMC RESOURCES LTD  
 MACKTUSH PROPERTY  
 Chip Sampling on M-100 Road  
 Copper 102 claim  
 NTS: 92F-2W  
 Date of work: April 30/1991  
 By: John Wilson

**APPENDIX II**  
Diamond Drilling Data

# DIAMOND DRILL RECORD

PROPERTY MACKTUSH

HOLE No. 88-05

DIP TEST		
		Angle
Footage	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 1 Lat. 2770.8 Total Depth 53.24m  
 Section \_\_\_\_\_ Dep. 1238.5 Logged By N.C. Carter  
 Date Begun \_\_\_\_\_ Bearing -45° @ 330° Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar 607.8m Core Size BQ  
 Date Logged June 24, 1990

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE							
FROM	TO													
0	4.88		CASING											
4.88	14.60		QUARTZ DIORITE - medium grained, grey, uniform appearance; occasional 2 cm quartz veins @ 45° to core axis (CA)											
14.60	20.00		ANDESITE - DIORITE DYKE - chilled contacts; occasional dark grey, rounded inclusions											
20.00	30.00		QUARTZ DIORITE as previous; quartz-carbonate stringers near end of section											
30.00	30.20		GOUGE ZONE											
30.20	33.00		QUARTZ DIORITE cut by narrow basic dykes; silicified zones with pyrite in QD, also some bleaching - basic dykes not affected; post mineral											
33.00	46.05		QUARTZ DIORITE - increasing disseminated pyrite and quartz stringers - inclusions of basic Karmutsen volcanics also cut by quartz stringers.											
46.05	46.94		QUARTZ DIORITE - argillic alteration of feldspars; 1-3 cm qtz-carb strs @ 40° to CA Minor disseminated pyrite in matrix; Dissem. pyrite-pyrrhotite in qtz veins and in 0.5 cm veinlets - 2 stages qtz veining											

# DIAMOND DRILL RECORD

PROPERTY MACKTUSH

HOLE No. 88-05

DIP TEST		
Footage	Angle	
	Reading	Corrected

Hole No. \_\_\_\_\_ Sheet No. 2 Lat. \_\_\_\_\_ Total Depth \_\_\_\_\_  
 Section \_\_\_\_\_ Dep. \_\_\_\_\_ Logged By \_\_\_\_\_  
 Date Begun \_\_\_\_\_ Bearing \_\_\_\_\_ Claim \_\_\_\_\_  
 Date Finished \_\_\_\_\_ Elev. Collar \_\_\_\_\_ Core Size \_\_\_\_\_  
 Date Logged \_\_\_\_\_

DEPTH		RECOVERY	DESCRIPTION	SAMPLE No.	FROM	TO	WIDTH OF SAMPLE		Au (ppb)	Ag (ppm)	Cu (ppm)
FROM	TO										
46.94	47.22		KARMUTSEN PX PORPHYRY - 0.5 cm qtz str @ 45° to CA								
47.22	47.50		DIORITE - bleached to buff colour; original texture destroyed; clay-carbonate alt'n; 1 cm qtz str; dissem pyrite-pyrrhotite possible MoS <sub>2</sub>	20776	46.33	47.22	0.89		76	1.5	217
47.50	49.50		QUARTZ VEIN - some brown carbonate; drusy cavities in part - multiple stages of quartz. Disseminated pyrite-pyrrhotite, minor chalcopyrite. Sulphides to 3%. Good qtz vein to 48.80 then argillically alt'd diorite with 0.5 cm qtz str to 49.32, qtz vein to end of section. Dissem py in alt'd diorite	20777	47.22	48.00	0.78		155	2.2	276
				20778	48.00	48.80	0.80		281	3.7	106
				20779	48.80	49.50	0.70		62	1.3	27
49.50	51.46		DIORITE - medium grained, alternating clay-carbonate alt'n	20780	49.50	50.40	0.90		12	1.2	19
51.46	53.10		KARMUTSEN BASIC VOLCANIC inclusions to 52.02; 52.65-end of section; qtz veining to 52.21; 4 cm gouge zone @ 52.02 @ 70° to CA followed by qtz vein to 52.21	20781	52.02	52.21	0.19		81	1.7	35
53.10	54.50		BASIC DYKE								
54.50	57.50		QUARTZ DIORITE - bleached with gouge zones occ qtz stringers								
57.50	60.0		QUARTZ DIORITE - unaltered								



COMP: N.C.CARTER  
 PROJ: MACKTUSH PROPERTY  
 ATTN: N.C.CARTER

**MIN-EN LABS — ICP REPORT**  
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2  
 (604)980-5814 OR (604)988-4524

FILE NO: OV-0774-RJ1  
 DATE: 90/07/02  
 \* CORE \* (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPB
20772 (ROCK)	8.1	6130	47	3	49	.7	1	710	.1	12	1286	28270	1430	4	4150	121	33	50	29	210	37	1	2	1	1	24.9	20	1	1	4	137	22000
20773 (ROCK)	.2	2130	32	1	25	.3	1	580	.1	7	88	12220	770	1	1220	123	31	60	3	80	22	1	1	1	1	7.4	9	1	1	4	143	2450
20774 (ROCK)	.3	7370	18	2	21	.5	1	7350	.2	5	37	16760	1720	2	4860	528	13	50	3	130	20	1	1	1	1	14.9	22	1	1	5	151	696
20775 (ROCK)	1.4	3460	36	2	18	.3	1	750	.5	5	26	11240	1530	1	930	52	17	50	4	180	22	1	1	1	1	9.7	8	1	1	3	119	817
20776 (CORE)	1.5	20250	1	8	163	1.1	3	40420	1.1	16	217	32440	1950	13	19400	741	8	180	36	480	34	1	1	1	1	170.2	42	6	1	6	164	76
20777 (CORE)	2.2	4050	56	5	15	.6	2	48730	1.0	10	276	21030	1100	10	6040	595	10	70	12	230	29	36	1	1	1	25.8	38	3	1	5	140	155
20778 (CORE)	3.7	3530	71	3	19	.6	2	11250	1.8	10	106	19620	1500	6	2960	274	29	60	10	170	303	19	1	1	1	16.6	292	2	1	22	560	281
20779 (CORE)	1.3	6430	21	7	44	.9	3	17800	.9	15	27	25440	2320	22	6300	406	12	80	10	450	88	2	4	1	1	31.4	42	2	1	4	126	62
20780 (CORE)	1.2	16110	1	7	203	1.2	4	30350	.7	16	19	36460	2320	11	15560	761	3	470	4	610	33	1	14	1	1	92.8	44	5	1	3	74	12
20781 (CORE)	1.7	9580	18	8	121	.8	2	12000	.1	16	35	24940	2680	35	4040	389	7	110	5	390	86	6	6	1	1	39.2	35	2	1	6	169	81

20776-20781 - Drill Hole 5

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: MAR 17 1988  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED: *Mar 21/88*

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

ASSAYER: *C. Leong* D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

H. MCMASTER PROJECT-SYMC File # 87-3963R

SAMPLE#	CU	AG	AU
	%	OZ/T	OZ/T
P 0512	.03	.06	.174

Drill Hole 1

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: MAR 17 1988  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED: *Mar 21/88*

ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp

ASSAYER: *C. Leung* ..... D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

H. MCMASTER File # 87-5229R

SAMPLE#	CU	AG	AU
	%	OZ/T	OZ/T
E 60357	.80	.48	.112
E 60358	.95	5.04	1.290

Drill Hole 3 - second split (quarter core)

ACME ANALYTICAL LABORATORIES LTD.      DATE RECEIVED: MAR 17 1988  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE (604) 253-3158    FAX (604) 253-1716    DATE REPORT MAILED: *Mar 21/88*

**ASSAY CERTIFICATE**

- SAMPLE TYPE: Pulp

ASSAYER: *C. Leong* ..... D. TOYE OR C. LEONG, CERTIFIED B.C. ASSAYERS

H. MCMASTER      File # 87-5772R

SAMPLE#	CU %	AG OZ/T	AU OZ/T
- P 0565	.01	.06	.116
[ E 60354	.03	.05	.290 ]

Drill Hole 8

DIAMOND DRILL CORE LOGGING REPORT  
for  
Drill Holes 87-1, 87-3 and 87-8

on the  
MACKTUSH PROPERTY

Alberni Mining Division

Latitude: 49° 08' North  
Longitude: 124° 52' West

NTS: 92F/2W

for  
SYMC Resources Ltd.

By John Wilson, F.G.A.C.

May 21, 1991

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### APPENDIX I

Diamond Drill Logs for Holes 87-1, 87-3 and 87-8

### APPENDIX II

Letter to Frank Loring, P.Eng. from J. Wilson, April, 1991.

Letter to Herb McMaster from Frank Loring, P.Eng., May, 1991.

Table of footage measurements and metric equivalents.

### APPENDIX III

Previously reported core sample intervals.

### APPENDIX IV

Table of "true width" sampling information.

**John R. Wilson, F.G.A.C.**  
**Consulting Geologist**

## **Introduction**

The Macktush property, south of Port Alberni, B.C. is owned by SYMC Resources Ltd. It consists of ten Modified Grid mineral claims in the Alberni Mining Division. Exploration and other studies have taken place on the property since 1982, largely on the COPPER 102 claim (record number 1911) which has an expiry date of October 31, 1991. This report presents recent diamond drill logs for holes numbered 1,3 and 8, which were drilled and split in 1987.

## **History of Diamond Drilling Reports**

In April of 1990 the writer, at the request of SYMC Resources Ltd., compiled results from diamond drilling, trenching and chip sampling that had been undertaken during the previous few years (Wilson, 1990). The compilation included a field survey of positions of drill hole collars, trenches and portals. No exploration reports were available for the compilation and some of the data provided by SYMC Resources Ltd. was verbal. For example, some drill hole collars and trenches were located and surveyed in the field; other sites, under snow at the time, were identified by the president of SYMC Resources Ltd. and then surveyed. Assays were provided by certified commercial laboratory reports dated 1988. A table of sample information (Appendix IV), provided by SYMC Resources Ltd., listed chip sample and drill core assays across true widths. The true width measurements were used in the compilation for chip sampling information but could not be used to plot intersections on drill hole cross-sections. Instead, the sampling interval for drill core from holes 87-1, 87-3 and 87-8 was provided verbally by the president of SYMC Resources Ltd (Appendix III).

In June of 1990, core from drill hole 88-5 was logged and sampled by N.C. Carter, Ph.D, P.Eng. for part of a geological report on the property (Carter, 1990).

In December, 1990, at the request of SYMC Resources Ltd, the writer logged core from drill holes 87-1, 87-3 and 87-8. This report describes the drill core geology and the probable intervals of split core.

## **Core Logging Background**

Following drilling in 1987, most of the core boxes were stored on the mineral claims. Boxes containing split sections from holes 87-1 and 87-3 were stored at the Port Alberni premises of SYMC Resources Ltd. In the ensuing years some of the contents of boxes stored on the claims had been lost when they tipped over while unattended. On December 12, 1990 Herb McMaster of SYMC Resources Ltd. and the writer moved the remaining boxes of core to the Port Alberni premises of SYMC Resources Ltd. for the purpose of geological logging. All boxes were weather beaten from being stored outside.

Boxes from Hole 87-1 were all found to be labelled with hole number and footage. Of the 24 boxes that comprise the hole, core was found in boxes numbered 2 and 13 to 24. A brief examination of the pile of jumbled, loose core at the field storage site revealed only quartz diorite with occasional inclusions of andesitic volcanic; no significant veining, alteration or mineralization was apparent.

All seven boxes comprising Hole 87-3 were found to be labelled with hole number and footage. Very minor core was missing.

**John R. Wilson, F.G.A.C.  
Consulting Geologist**

All 19 boxes comprising Hole 87-8 were found to be labelled with hole number and footage except box 13 which had no readable markings. Minor core was missing from the boxes. The designation of an unlabelled box as the thirteenth of Hole 87-8 was based on:

1. the geological continuity of drill core between the unmarked box and adjacent boxes
2. the position of a split section in the unmarked box which approximates the interval reported by Frank Loring, P.Eng. (Appendix II)
3. a statement from the president of SYMC Resources Ltd., identifying it as the thirteenth box

### **Drill Core Geology**

Holes 87-1, 87-3 and 87-8 were drilled to depths of approximately 133, 41 and 106 metres respectively. Drill logs for the three holes are in Appendix I. Figures showing locations of the drill holes are in a report by Carter (1990) after a compilation map by Wilson (1990).

Split sections of core containing quartz veining, usually with fragments of silicified andesitic volcanic and minor quartz diorite, are from each hole. Veining is grey and white, multistaged, banded and brecciated with some open spaces. Split sections normally have 2% disseminated pyrite but sometimes have 5%. Minor disseminated chalcopyrite and malachite occur in some split sections. Thinner quartz veining to several centimetres, unassociated with brecciated country rock, occurs unsplit in Holes 87-1 and 87-8.

Core in the three holes consists of mainly quartz diorite with lesser andesitic volcanic inclusions in places.

Quartz diorite is medium grained and usually has a fresh appearance with white feldspar, pale grey quartz and black mafics. Sections of quartz diorite that carry andesitic volcanic inclusions have a mottled, chloritic green-grey character. Occasional thin clay-carbonate altered zones occur close to the sampled quartz veining. Sheared core with gouge is found in Holes 87-1 and 87-8.

### **Split Core**

Split intervals measured during core logging (Appendix I) were found to differ from the intervals that had been reported earlier (Appendix III). They were closer to the "true width" intervals of Appendix IV. In April of 1991 a written request was made to Frank Loring, P.Eng., the supervisor of sampling in 1987, to provide a statement describing the split intervals and any other relevant information. This letter and the response is included in Appendix II.

Using the writer's core logging measurements described in Appendix I and the statement by Frank Loring, P.Eng. (Appendix II) a new series of sample intervals is proposed. Each of the three drill logs in Appendix I contains the reasoning which led the writer to believe the following sample intervals are more accurate than previous tabulations.



Hole number	Split interval (metres)
87-1	109.58-110.72
87-3	33.50-34.29 36.58-40.39
87-8	71.63-72.88

### Conclusions

Core from Holes 87-1, 87-3 and 87-8 contain the same rock type: quartz diorite with inclusions of andesitic volcanic in variable proportions. Split sections in the three holes consist of quartz veining in a silicified country rock mixture of quartz diorite and andesite. Pyrite and occasional chalcopyrite or malachite are disseminated in the split sections of veined, silicified country rock.

Based on core logging by the writer and documentation provided by Frank Loring, P.Eng., the supervisor of sampling in 1987, the intervals of split core have been revised. It is believed that the intervals listed above and in Appendix I are more accurate than those reported earlier and listed in Appendices II, III and IV.

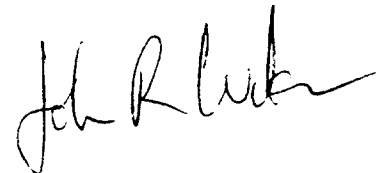
### References

- Carter, N.C. (1990): Geological Report on the Macktush Property. Private report for SYMC Resources Ltd.
- Wilson, J. (1990): Compilation of Sampling and Diamond Drilling on the Macktush Property, private compilation for SYMC Resources Ltd. consisting of map, sections and tables.

### Certificate

I, John Wilson, of Merville, British Columbia hereby certify that:

1. I am a graduate of the University of British Columbia with a BSc. (honours geology), 1972.
2. I am a Fellow of the Geological Association of Canada.
3. I have worked as a professional mineral exploration geologist in B.C. and eastern North America every year since 1972.



**John R. Wilson, F.G.A.C.  
Consulting Geologist**

APPENDIX I

Diamond Drill Logs for Holes 87-1, 87-3 and 87-8

**John R. Wilson, F.G.A.C.**  
**Consulting Geologist**

# SYMC Resources

## Diamond Drill Record

Property Macktush Claim Copper 102 Hole no. 87-1 Page no. 1  
 North 2679.5 Bearing N 030° W Purpose Testing Fred vein  
 East 1165.5 Dip -045° Date logged Dec 14, 1990  
 Elev. 683 metres Length 132.58 metres Logged by J. Wilson  
 Core size NO

*John R. Wilson*

from (metres)	to	description	sample from to	sample no.	Au	Ag	Cu
0-8.23		CASING and missing core.					
8.23-14.03		QUARTZ DIORITE. Medium grained; white with black mafics. Fairly fresh appearance.					
14.03-69.19		Core missing.					
69.19-73.46		QUARTZ DIORITE. As above.					
73.46-96.62		QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Dark greenish-grey. Minor quartz veining to 1 cm at 20°-40° to core axis (CA). Occasional epidote and hematite in veinlets.					
96.62-98.15		QUARTZ DIORITE. As above. Fairly broken core; sheared in places; weakly chloritic. Quartz stockworks common. Minor disseminated and veinlet pyrite.					
98.15- 99.21		QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. As above. White and grey veinlets throughout. Some chloritic slip surfaces and alteration. Minor disseminated fine grained pyrite. Very broken core.					
		98.75-99.21 m: strongest quartz veining in interval; mainly white quartz cut by chloritic veinlets. Up to 1% disseminated pyrite.					
99.21-100.58		ANDESITIC VOLCANIC. Chloritic; sheared with some gouge. Minor quartz veins to 1 cm at 15° to CA.					

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
100.58-104.85		<p>QUARTZ DIORITE. Crumbly core. Chloritic alteration of mafics. Intense quartz-carbonate stockworks. Up to 3% disseminated pyrite in places. Occasional 1 cm quartz veins at 15°-25° to CA.</p> <p>103.33-104.85 m: sheared, broken and crumbly with quartz veinlets and veins. Disseminated and veinlet pyrite to 1%.</p>						
104.85-106.22		<p>ANDESITIC VOLCANIC.</p> <p>104.85-105.46 m: very sheared, with quartz veinlets and minor pyrite.</p> <p>105.46-106.22 m: solid core, chloritic with strong quartz stockworks.</p>						
106.22-109.58		<p>QUARTZ DIORITE with minor ANDESITIC VOLCANIC INCLUSIONS. As above. Mainly solid and fresh-looking. Occasional quartz-calcite veinlets.</p>						
109.58-110.72		<p><i>Split section.</i> Silicified ANDESITIC VOLCANIC and possible minor QUARTZ DIORITE. Many grey and white pyritic quartz veins to several cm. Quartz veins exhibit banding, brecciation, multiple stages. Veins are cut by minor chloritic veinlets. Quartz-carbonate veinlets occur throughout. Disseminated pyrite to 5% in patches but average is 2%. Veining angle is 35°-50° to CA.</p> <p><u>Note:</u> Approximately 35% of the split core remains in the tray. It occupies 1.6 metres of space and is bounded above and below by solid core.</p> <p>The split section was logged by the writer as 109.48-111.25 metres but these measurements were rough because no footage marker blocks were in the tray; the measurements were based on footage marker blocks in adjacent boxes and on the footage summary inscribed at the end of the tray. Further errors may have been induced by lost core.</p>						

from (metres)	to description	sample from to	sample no.	Au	Ag	Cu
110.72-132.58  End of Hole	<p>The true interval of the split section is believed to be 109.58-110.72 metres as indicated by Frank Loring, P. Eng. (Appendix II). The variance is likely due to missing markers, shifting core within the tray and minor lost core.</p> <p>QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Fairly fresh appearance. Minor quartz-calcite veinlets.</p> <p><u>Note:</u> Core boxes were weather beaten from being stored in the field. Some boxes had been tipped over while in storage and the contents jumbled. A brief examination of the pile of loose core revealed only quartz diorite with occasional inclusions of andesitic volcanic; no significant veining, alteration or mineralization was apparant. All boxes were found to be labelled with hole number and footages. Of the 24 boxes that comprise hole #87-1, core was found and logged in boxes numbered 2 and 13 to 24. Logging indicated core recovery to be 100%.</p>					

# SYMC Resources

## Diamond Drill Record

Property Macktush Claim Copper 102 Hole no. 87-3 Page no. 1  
 North 2787.4 Bearing N 030° W Purpose Testing Fred vein  
 East 1253.4 Dip -045° Date logged Dec 14, 1990  
 Elev. 598 metres Length 41.06 metres Logged by J. Wilson  
 Core size NO

*John R. Webb*

from to (metres)	description	sample from to	sample no	Au	Ag	Cu
0-2.74 m	CASING					
2.74-5.49	QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Fractured and broken in places, but generally solid core.					
5.49-19.81	QUARTZ DIORITE. Medium grained. White with black mafics. Mostly fractured and broken above 14.32 m.  10.06-13.11 m: quartz-calcite stockworks and veinlets common.					
19.81-33.50	QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS. Occasional 5 to 10 cm rusty weathered fracture zones. Occasional soft, buff coloured clay-carbonate alteration zones cut by 1 cm buff stained quartz veins.					
33.50-34.29	<i>Split section.</i> Silicified QUARTZ DIORITE and ANDESITIC VOLCANIC cut by grey and white quartz veins to several cm. Minor malachite. Disseminated fine pyrite to 2 %. Sharp contacts with enclosing core. No obvious gradation or alteration in country rock adjacent to vein zone.  <u>Note:</u> Approximately 35% of the split section remains in the tray, occupying 79 cm of space. It is bounded above and below by solid core. No gaps indicative of lost core are evident in the box.					

from (metres)	to description	sample from to	sample no.	Au	Ag	Cu
	<p>Loring (Appendix II) reports the sampling interval here to be from 33.53 to 34.29 metres. The variance could have been induced during conversion from feet to metres and from rounding-off discrepancies during measurement.</p>					
34.29-36.58	<p>QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS.</p>					
36.58-40.39	<p><i>Split section.</i> 40% QUARTZ VEINS and 60% ANDESITIC VOLCANIC with minor QUARTZ DIORITE. Quartz veining occurs throughout the section but a one metre wide quartz-vein rich zone is in the middle of the interval. Quartz veining is white and grey, often banded and carries minor disseminated pyrite as 2 mm crystals. Some veins contain open spaces filled with quartz crystals. Veining cuts very rusty, iron stained, greenish andesite and some quartz diorite. The country rock contains traces of disseminated pyrite varying up to 5% across 15 cm in places. Occasional quartz stockworks cross the andesite and quartz diorite.</p> <p><u>Note:</u> Approximately 25% of the split core section (quartered?) remains in the tray and occupies the first 3.81 metres of core box space. It is followed by 67 cm of solid core which marks the end of the hole. Loring (Appendix II) reports the sampling interval here to be from 37.19 to 41.00 metres, a length of 3.81 metres, which is equivalent to the sample width the writer measured.</p>					
40.39-41.06	<p>QUARTZ DIORITE. Medium grained; white with black mafics. Weak to strongly iron stained / weathered.</p>					
End of Hole	<p><u>Note:</u> Core boxes were weather beaten from being stored in the field but all boxes had readable labels indicating hole number and footage. Minor core was missing from the boxes, apparently due to tipping over while in storage. All seven boxes that comprise hole #87-3 were logged. Core recovery appeared to be 95-100%, normally the latter.</p>					

**SYMC**

## Diamond Drill Record

Property Macktush Claim Copper 102 Hole no. 87-8 Page no. 1  
 North 2725.0 Bearing N 030° W Purpose Testing Fred vein  
 East 1188.5 Dip -045° Date logged Dec 14, 1990  
 Elev. 644 metres Length 105.77 metres Logged by J. Wilson  
 Core size NO

*J. Wilson*

from to (metres)	description	sample from to	sample no.	Au	Ag	Cu
0-2.14	CASING.					
2.14-14.93	QUARTZ DIORITE. Medium grained. White with black mafics. Fairly fresh appearance, although exhibiting a reddish iron stain throughout due to weathering. Weathering is strongest in top 9 m, gradually weakening with depth. Minor chlorite on fractures. Rare quartz-calcite veining to 1 cm wide at 0° to 10° to core axis (CA).					
14.93-64.31	QUARTZ DIORITE with sections of ANDESITIC VOLCANIC INCLUSIONS. The quartz diorite is as above but seldom with a pink weathered tinge. The weathering is restricted to obvious fracture zones. Volcanic inclusions are often dominant, giving core a mottled, dark character with indistinct green-gray crystals with weak chloritic alteration. Calcite-quartz stockworks are common in volcanic-rich sections. Especially strong 0.5 to 3 cm quartz veining at 20-40° to CA is at 35.7 to 64.31 m. Strong quartz stockworks with minor, patchy chloritization of mafics, some argillic alteration and minor red iron weathering at 57.0 to 61.0 m.  31.09-34.14 m: occasional shear and gouge 35.05 m: shear at 50° to CA; poor core recovery; chloritic and possibly epidote alteration. 35.36 m: 3 cm banded quartz vein at 45° to CA; 15% pyrite crystals to 3 mm are within a grey quartz band cut by later 1 cm apparently barren white quartz veining. 40.48 m: 1 cm white quartz vein at 25° to CA.					



from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
64.31-71.63		<p>41.76 m: 5 mm white quartz vein at 20° to CA.  43.89 m: 3 cm banded quartz vein with trace pyrite in grey quartz at 40° to CA.  51.82 m: shearing and quartz-calcite veinlets at 15° to CA.</p> <p>QUARTZ DIORITE and some ANDESITIC VOLCANIC INCLUSIONS. Medium-grained quartz diorite as above, but much less veined and altered. Minor 0.5-1 cm quartz-calcite veining. Minor epidote veinlets in lower 2m.</p>						
71.63-72.88		<p><i>Split Section.</i> QUARTZ VEIN. Multi-stage, banded and brecciated. Some open spaces and quartz crystals. Some buff coloured, iron stained patches. Total sulphides (pyrite and trace chalcopyrite) is 3-5%.</p> <p><u>Notes:</u>  The split section is in core box #13 which, unlike adjacent boxes, contains no footage marker blocks or inscriptions describing footage, hole number or box number.</p> <p>The designation of this box as number 13 of hole 87-8 is based on:  1. the statement of Herb McMaster, president of SYMC Resources Ltd., identifying it as such.  2. the geological continuity of drill core between box #13 and adjacent boxes  3. the position of the observed split section which approximates the interval recorded by Frank Loring, P.Eng. (Appendix II).</p> <p>Accurate measurements of core intervals in box #13 are hindered by missing footage markers, some missing core and the broken, apparently quartered nature of the split section.</p>						

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
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72.88-76.66		<p>An estimated 120 cm of split core remains in the tray. Based on the nearest footage markers, core box #13 begins with solid core from 69.49 to 71.63 m. The next section, measured from 71.63 to 74.68 m, consists of split core and a probable gap of missing core. The end of the box contains solid core from 74.68 to 76.20 m.</p> <p>The true interval of the split section is believed to be 71.63 to 72.88 m. The letter by Frank Loring, P. Eng. (Appendix II) describes a zone of quartz with chalcopyrite and molybdenite starting at 71.63 metres. It is followed by quartz containing pyrite starting at 71.93 metres, which is followed by more quartz containing chalcopyrite and molybdenite from 72.72 to 72.88 metres. The latter interval corresponds with his sample number 60354. It is assumed that the split section was from 71.63 to 72.88 metres based on:</p> <ol style="list-style-type: none"> <li>1. the coincidence of Loring's and the writer's 71.63 metre measurement.</li> <li>2. an estimated 120 centimetres of split core remaining in the tray (nearly equivalent to the assumed split interval).</li> <li>3. the sample section ends at 72.88 metres, according to Loring.</li> </ol> <p>The variance with the interval measured during logging is likely due to missing markers, shifting core within the tray and missing core.</p> <p><b>QUARTZ DIORITE with ANDESITIC VOLCANIC INCLUSIONS.</b> Mottled, mixed grey-green appearance. Minor pinkish iron stain. Many quartz veinlets, both white and grey. Up to 5% disseminated and veinlet pyrite in patches but 0.5-1% pyrite is usual.</p> <p>75.4 m: 2 cm banded white and grey quartz vein with 2% pyrite at 15° to CA. Up to 5% disseminated pyrite in adjacent 10 cm of silicified country rock.</p> <p>75.9 m: 2 cm banded white and grey quartz vein with 1% pyrite at 20° to CA. Up to 5% disseminated pyrite in 10 cm zone of adjacent country rock.</p>						
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from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
76.66-78.03		QUARTZ DIORITE. Mostly broken with shearing and quartz-calcite veinlets throughout. Top few cm are more strongly sheared and contain some gouge.						
78.03-78.33		ANDESITIC VOLCANIC INCLUSION. No significant veining, alteration or mineralization.						
78.33-79.86		QUARTZ DIORITE. Medium grained, well fractured and broken.						
79.86-85.65		ANDESITIC VOLCANIC INCLUSIONS in QUARTZ DIORITE. Grey-green colour. Quartz-calcite veinlets are fairly common.						
85.65-87.17		QUARTZ DIORITE. Minor ANDESITIC VOLCANIC INCLUSIONS. Intense quartz-calcite veinlets. Core often broken.						
87.17-105.77		QUARTZ DIORITE. Minor ANDESITIC VOLCANIC INCLUSIONS. Fairly fresh-looking quartz diorite. Solid core. Rare quartz-calcite veinlets.  87.48 m: 3 mm hematite-quartz veinlet at 35° to CA. 95.86 m: iron stained fracture 97.23-97.84 m: intense, buff coloured, bleached (?), clay-carbonate alteration. Minor 1 cm buff stained quartz veins. 104.85 m: two 1cm banded white-grey quartz veins at 0° to 35° to CA. No visible mineralization.						
End of Hole								

from (metres)	to	description	sample from	to	sample no.	Au	Ag	Cu
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		<p><u>Note:</u> Core boxes were weather beaten from being stored in the field. Some had been tipped over in the past and minor core lost. All boxes were found to be labelled with sometimes barely visible markings of hole number and footage except box #13 which had no readable markings (see previous "Note"). All 19 of the boxes that comprise hole 87-8 were logged. Some minor gaps in the core are presumed due to loss while in storage. Reduced core recovery attributable to drilling is 85% at 31.09 to 34.14 m and 90% at 76.2 to 79.86 m. Core recovery elsewhere appears to be 100%.</p>						
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