

889902

FLOTATION CONCENTRATION TESTS

Dauntless Deposit

for

SYMC RESOURCES LIMITED

Prepared by:

CANADIAN ENVIRONMENTAL AND METALLURGICAL INC.

1636 West 75th Avenue

Vancouver, B.C.

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1.0 INTRODUCTION

SYMC Resources Ltd.'s Dauntless Deposit property located on Vancouver Island, BC, Canada has shown very high grade of copper (greater than 16% copper) in the ore containing 0.007 oz/t of gold, and 1.0 oz/t silver. Both the copper and silver are easy to recover using a simple flotation circuit. The property is located in close proximity to a city, which makes transportation to and from the ore deposit very easy. The flotation is very effective in concentrating the sulfur into the concentrate making the tailings relatively low in sulfur content. In addition to the Dauntless deposit, other deposits have been found at the same property reported separately. The preliminary scoping tests were based on previous testwork done on the property using lower grade material in the late 1980's. The testwork undertaken to establish copper and silver recovery from a samples hand delivered to Canadian Environmental and Metallurgical Inc. (CEMI) by Mr. Herb McMasters of SYMC Resources Limited.

1.1 Objectives

The primary objective of the test program was to determine copper, gold, and silver recovery by flotation using standard laboratory equipment.

1.2 Terms of Reference and Scope of Work

The terms of reference and scope of the work were outlined in discussions between Mr. Herb McMasters of SYMC Resources Ltd. and Mr. Sohan Basra of CEMI in June 1999.

The objectives of the scoping testwork summarized herein were to determine the copper, gold and silver recovery based upon previous testwork completed on the ore from the same property.

2.0 METHODS AND PROCEDURES

2.1 Sample Description and Preparation

The samples were in large plastic bags ranging in size from 1 inch to approximately 5 inches weighing a total of 25 kilograms per sample. Two separate samples were prepared and tested according to the procedures described. The samples were crushed in a laboratory jaw crusher to minus ½ inch and homogenised using a floor standing riffle. The sample was riffled in 2 kilogram sub-samples and put into plastic bags for testing. A sub-sample from each sample was riffled out for head analysis in duplicate.

2.2 Sample Analyses

2.2.1 Head Assays

Head assays and flotation products (flotation concentrate and flotation tailings) were analyzed by Acme labs of Vancouver. Head analysis of MC deposit sample was done in duplicate. The head analysis is presented in the following table 1 below.

Table 1 - Head Assays

Sample	Cu %	Au oz/t	Ag oz/t	St %	Fe %
Sample 1(H)	17.60	.007	1.07	21.11	24.79
Sample 2 (L)	16.24	.007	0.98	19.89	23.70

2.2.3 Bond Work Index

The Bond Work Index was not determined, however a similar ore treated in the same equipment at similar grind times and identical sample charge with the following result;

Bond Work Index (kWh/T basis) 13.76

The bond work index for the Dauntless Deposit ore is expected to be less than 13.76 kWh/T.

2.2.4 Mineralogical Analysis

Mineralogy analysis was not requested as previous testwork has identified the minerals present.

2.3 Test Procedures

2.3.1 Flotation Test

The ore as received was crushed to 1/2" in the jaw crusher. Grind time was selected based on previous work done reported elsewhere and ground at 60 percent solids in an eight inch diameter laboratory rod mill. Grind times of 18 minutes was used. The contents of the grinding mill were washed into a 5 liter flotation cell and made up to the appropriate volume and floated using a Denver flotation machine. Test conditions are provided in the attached metallurgical balance sheets in the Appendix.

2.3.2 Acid Base Accounting

Modified Sobek Acid Base Accounting was carried out on 2 samples received in January 2002 labeled as Foot Wall Dauntless and Hanging Dauntless. The results are representative of samples supplied by SYMC and CEMI is not responsible for the collection or advisement of collecting such samples.

3.0 TEST RESULTS

3.1 Summary of Results

A single test on each sample indicates a very high recovery of copper, gold and silver is possible using a very simple conventional grinding and flotation circuit. A copper recovery of over 99%, gold recovery of over 85% and silver recovery of over 98% was obtained at a grind of 96% passing 200 mesh (75 microns). The flotation tailings contain less than 0.2% sulfur.

Two samples were submitted in January of 2002 labeled as Foot Wall Dantless and Hanging Wall Dantless for acid base accounting. Both samples are low in sulfur content (0.19% and 0.26% sulfur) and the acid potential is low as well with neutralization potential of greater than four times than the acid potential. The samples tested also have a high paste pH indicating that it is alkaline.

3.2 Acid Base Accounting

The results of acid base accounting are provided in the Appendix. The Acid Potential of the samples tested is very low and the samples do have contained neutralization potential. The samples tested are not acid generating.

4.0 CONCLUSIONS

The following conclusions are reasonably drawn from the flotation tests.

- The assayed and calculated head grade of 17.61/16.24% copper, 0.007 oz/t gold and 1.0 oz/t silver.
- A recovery of over 99% copper, over 85% gold, and over 98% silver was obtained at a grind of 96% passing 200 mesh.
- The hardness of the ore is estimated to be less than 14 (kWh/T basis) based upon similar ore testwork.
- The results presented in this report are representative of the samples received at the laboratory.

5.0 RECOMMENDATIONS

- Further testing should be carried out to improve gold recovery, optimize grinding requirements and reagent requirements.

APPENDIX I – FLOTATION TEST RESULTS

CLIENT: SYMC Resources Ltd.
TEST: SYMC F2
SAMPLE: Dauntless Deposit - SAMPLE 1 (HIGH GRADE)
GRIND: 18 minutes 95.7% passing 75 µm (200 mesh)

I) METALLURGICAL BALANCE

PRODUCT	wt (g)	wt %	ASSAY					DISTRIBUTION				
			Au (oz/t)	Ag (oz/t)	Cu (%)	Fe (%)	S (%)	Au (%)	Ag (%)	Cu (%)	Fe (%)	S (%)
Ro. conc. 991020	1442.6	72.2	0.011	1.78	26.51	29.75	27.70	85.09	98.72	99.73	81.1	99.8
Tails 991021	556.1	27.8	0.005	0.060	0.19	17.96	0.11	14.91	1.28	0.27	18.88	0.15
Totals	1998.7							100.0	100.0	100.0	100.0	100.0
Assay Head	990989/90		0.007	1.07	17.61	24.79	21.11					
Calc. Head			0.009	1.30	19.18	26.47	20.02					

II) TEST CONDITIONS

PRODUCTS	REAGENTS (g/t)				Time (minutes)		
	PAX	Aero 3477	DF 250	MIBC	Grind	Cond	Float
Grind	-	-	-	-	18		
Ro. conc. Stage 1	300	6	4			2	5
Ro. conc. Stage 2	200	6	5			2	3
Ro. Conc Stage 3	150	6	2			2	5

CLIENT: SYMC Resources Ltd.
TEST: SYMC F3
SAMPLE: DAUNTLESS - SAMPLE 2 (L)
GRIND: 18 minutes 95.7% passing 75 µm (200 mesh)

I) METALLURGICAL BALANCE

PRODUCT	wt (g)	wt %	ASSAY					DISTRIBUTION				
			Au (oz/t)	Ag (oz/t)	Cu (%)	Fe (%)	S (%)	Au (%)	Ag (%)	Cu (%)	Fe (%)	S (%)
Ro. conc. #1	1307.6	66.0	0.011	1.56	26.82	29.98	29.00	81.9	93.5	99.0	78.5	98.9
Ro. conc. #2	50.7	2.6	0.026	2.310	4.38	25.86	6.36	7.5	5.4	0.6	2.6	0.8
Tails # 991024	622.8	31.4	0.003	0.040	0.24	15.19	0.13	10.63	1.14	0.4	18.93	0.21
Totals	1981.1							100.0	100.0	100.0	100.0	100.0
Assay Head Calc. Head	# 990991/92		0.007 0.009	0.98 1.10	16.24 17.89	23.70 25.22	19.89 19.34					

991022 Ro. Conc 1 and # 991023 Ro. Conc. 2

II) TEST CONDITIONS

PRODUCTS	REAGENTS (g/l)				Time (minutes)		
	PAX	Aero 3477	DF 250	MIBC	Grind	Cond	Float
Grind	-	-	-	-	18		
Ro. conc. #1	303	6		4		2	5
Ro. conc. #2	202	6	2			2	6

CEM Inc.

ACID-BASE ACCOUNTING RESULT SHEET

Client : SYMC
Project :
Project No. : 9918
Test : Standard Sobek Method Acid-Base Accounting
Date : January 10, 2002

SAMPLE	PASTE pH	Volume HCl added (mL)	pH BEFORE TITRATION	S(T) %	AP	NP	NET NP	NP/AP
Foot Wall Dauntless	9.2	20	3.14	0.19	5.9	24.9	18.9	4.2
Hanging Wall Dauntless	9.2	40	2.72	0.26	8.1	38.8	30.6	4.8

AP = ACID POTENTIAL IN TONNES CaCO₃ EQUIVALENT PER 1000 TONNES OF MATERIAL

AP IS BASED ON THE TOTAL SULPHUR ASSAY.

NP = NEUTRALIZATION POTENTIAL IN TONNES CaCO₃ EQUIVALENT PER 1000 TONNES OF MATERIAL.

NET NP = NET NEUTRALIZATION POTENTIAL = TONNES CaCO₃ EQUIVALENT PER 1000 TONNES OF MATERIAL.

NOTE - WHERE S(T) AND/OR S(SO₄) IS REPORTED AS <0.01%, IT IS ASSUMED TO BE ZERO FOR THE AP CALCULATION.

Client : SYMC
Project :
Project No. : 9918
Test : Head Sample Analyses
Date : January 10, 2002

Sample:		Foot Wall Dauntless 12906	Hanging Wall Dauntless 12908
Element			
Mo	ppm	1	1
Cu	ppm	96	167
Pb	ppm	4	16
Zn	ppm	44	56
Ag	ppm	< .3	< .3
Ni	ppm	68	63
Co	ppm	28	27
Mn	ppm	654	669
Fe	%	5.22	5.46
As	ppm	3	8
U	ppm	< 8	8
Au	ppm	< 2	< 2
Th	ppm	< 2	< 2
Sr	ppm	43	50
Cd	ppm	0.5	0.6
Sb	ppm	< 3	< 3
Bi	ppm	< 3	< 3
V	ppm	226	239
Ca	%	2.54	2.46
P	%	0.057	0.070
La	ppm	4	5
Cr	ppm	160	166
Mg	%	2.61	2.52
Ba	ppm	46	82
Ti	%	0.56	0.57
B	ppm	12	11
Al	%	3.13	2.85
Na	%	0.10	0.10
K	%	0.04	0.04
W	ppm	< 2	< 2

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(ISO 9002 Accredited Co.)



300 W. HASTINGS ST. VANCOUVER BC V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716

ASSAY CERTIFICATE

SYMC (David Holding Ltd) File # 9902157
3009 Kingsway, Port Alberni BC V9Y 1X7 Submitted by: CEM Inc.



SAMPLE#	Cu %	Fe %	Ag** oz/t	Au** oz/t	TOT/S %
990989	17.674	24.79	1.07	.007	21.11
990990	17.554	24.79	1.06	.006	19.89
990991	16.512	23.76	1.00	.007	20.20
990992	15.966	23.64	.95	.007	19.58
RE 990992	16.049	23.84	.93	.007	-

1.000 GM SAMPLE DIGESTED IN 30 ML AQUA - REGIA, DILUTE TO 100 ML, ANALYSIS BY ICP. TOTAL S BY LECO.

SAMPLE TYPE: ROCK CHIP AG** & AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE. Samples beginning 'RE' are Rejects and 'BRE' are Reject Rejects.

DATE RECEIVED: JUL 12 1999 DATE REPORT MAILED: July 21/99 SIGNED BY: C. [Signature] D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Date: RA [Signature]

** TOTAL PHSE.002 **

ASSAY CERTIFICATE

SYMC (David Holding Ltd) File # 9902278
3009 Kingsway, Port Alberni BC V9Y 1K7 Submitted by: CEN Inc.

SAMPLE#	Cu %	Fe %	Ag** oz/t	Au** oz/t	TOT/S %
991017	22.172	35.43	9.76	.286	33.90
991018	3.005	41.82	11.43	.365	20.80
991019	.338	20.43	1.15	.031	.45
991020	26.507	29.75	1.78	.011	27.70
991021	.185	17.96	.06	.005	.11
991022	26.817	29.89	1.55	.011	29.00
RE 991022	26.803	30.15	1.58	.012	29.30
991023	4.376	25.66	2.31	.026	6.36
991024	.235	15.19	.04	.003	.13

.250 GM SAMPLE DIGESTED IN 30 ML AQUA - REGIA, DILUTE TO 100 ML, ANALYSIS BY ICP.
TOTAL S BY LECO.

- SAMPLE TYPE: CONCENTRATE AG** & AU** BY FIRE ASSAY FROM 1 A.F. SAMPLE.
Samples beginning 'RE' are Returns and 'RRE' are Reject Returns.

DATE RECEIVED: Jul 16 1999 DATE REPORT MAILED: *Aug 9/99* SIGNED BY: *C. Hoye* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

REVISED COPY *Correction for sample 991019*

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GEOCHEMICAL ANALYSIS CERTIFICATE



CEM Inc. File # A200079

1636 W. 75th Ave, Vancouver BC V6P 6G2 Submitted by: Kyo Jibiki

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W TOT/S ppm	%
12906	1	96	4	44	<.3	68	28	654	5.22	3	<8	<2	<2	43	.5	<3	<3	226	2.54	.057	4	160	2.61	46	.56	12	3.13	.10	.04	<2	.19
12907	5	11	6	25	<.3	10	14	380	3.46	7	<8	<2	2	52	.4	<3	<3	145	1.90	.066	7	189	1.16	62	.14	23	2.66	.20	.09	<2	<.01
12908	1	167	16	56	<.3	63	27	669	5.46	8	8	<2	<2	50	.6	<3	<3	239	2.46	.070	5	166	2.52	82	.57	11	2.85	.10	.04	<2	.26
12909	4	14	10	31	<.3	10	15	402	3.52	6	<8	<2	2	52	.3	<3	<3	140	1.94	.065	7	174	1.23	121	.15	18	2.71	.19	.09	<2	.01
STANDARD DS3/CSB	9	119	35	148	.3	36	11	818	3.13	31	8	<2	3	28	5.4	5	6	74	.54	.091	17	177	.58	152	.09	5	1.71	.04	.16	5	5.32

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
TOTAL S GROUP 2A BY LECO.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: JAN 10 2002

DATE REPORT MAILED:

Jan 18/02

SIGNED BY: *C. Leong*

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS