

Certificate of Analysis

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GEOCHEMICAL REFERENCE STANDARD: Cu.2

COPPER MEAN = 0.190%
95% CONFIDENCE LIMITS = 0.174% to 0.206%
LEAD MEAN = 269.16 ppm
95% CONFIDENCE LIMITS = 240.09 to 298.22 ppm
ZINC MEAN = 1.15%
95% CONFIDENCE LIMITS = 1.02 to 1.27%
SILVER MEAN = 7.68 ppm
95% CONFIDENCE LIMITS = 6.82 to 8.54 ppm

Prepared By: Shea Clark Smith / Minerals Exploration & Environmental Geochemistry

Certified By: Shea Clark Smith, MSc.(Geochemistry), P.G.

Manufactured for: MEG Labs, Inc.

Date of Certification: February 1, 2007

Origin of Reference Material:

Geochemical Reference Standard Cu.2 was prepared from typical porphyry material from Arizona.

Method of Preparation:

The composites were dried at 100C for 24 hours, jaw crushed, and roll crushed to -420 um.

The entire amount was ball milled together for 10 hours.

Sizing tests of the final product show >95% pass -105 um (-140 mesh).

Five samples of the final product were submitted to 5 laboratories for round robin total concentrations by 4-acid digestion and ICP-ES finish. Data reported in g/T (ppm).

The standard was returned to Frontier in 50 g envelopes, each envelope with a removable sticky-label.

Summarized Assay Results:

PROJECT: Cu.2

COPPER (%)

DATA POINTS (LAB DATA)	5
MEAN (LABS)	0.190
STANDARD DEVIATION (LABS)	0.008
CV (% RSD)	4.28
RANGE OF VALUES - HIGH	0.204
RANGE OF VALUES - LOW	0.180
95% CONFIDENCE LIMITS	0.174 to 0.206

LEAD (ppm)

DATA POINTS (LAB DATA)	5
MEAN (LABS)	269.16
STANDARD DEVIATION (LABS)	14.53
CV (% RSD)	5.40
RANGE OF VALUES - HIGH	284.13
RANGE OF VALUES - LOW	246.80
95% CONFIDENCE LIMITS	240.09 to 298.22

ZINC (%)

DATA POINTS (LAB DATA)	3
MEAN (LABS)	1.15
STANDARD DEVIATION (LABS)	0.06
CV (% RSD)	5.38
RANGE OF VALUES - HIGH	1.22
RANGE OF VALUES - LOW	1.07
95% CONFIDENCE LIMITS	1.02 to 1.27

SILVER (ppm)

DATA POINTS (LAB DATA)	4
MEAN (LABS)	7.68
STANDARD DEVIATION (LABS)	0.43
CV (% RSD)	5.59
RANGE OF VALUES - HIGH	8.20
RANGE OF VALUES - LOW	7.14
95% CONFIDENCE LIMITS	6.82 to 8.54

Trace Metal Data (Not Certified): ALS Chemex ME-MS61 (one sample)

Al	As	Ba	Ca	Cd	Fe	K	Mn
%	ppm	ppm	%	ppm	%	%	ppm
6.6	5.7	692	1.9	15.1	6.6	1.6	823.2
Mo	S	Sb	Se	U	W		
ppm	%	ppm	ppm	ppm	ppm		
4.1	0.4	0.8	9	4	2.5		

Statistical Procedures:

Acceptable assay limits for gold are based on the results of 5 samples shipped to each of 5 laboratories located in North America. The samples were submitted with other FGS standards in randomized order, so that as much as possible, real operating conditions were obtained from the participating laboratories. All of the data were used to determine an acceptable range, based on the mean and standard deviation of the "Lab Average Data". The acceptable reporting range is the "95% Confidence Limit", which is the mean +/- 2 standard deviations. Other statistics are provided to help the user assign viable acceptance boundaries.

Instructions and Recommendations for Use:

Submit the entire contents of one 50 g envelope in random locations in the submittal, approximately every 20-30 samples. Use of blanks (samples with "below detection" concentration of analyte) are also recommended, randomly placed every 30-40 samples. The analytical request should be the same as that used for the round robin assays that generated this certificate.

Major Constituents as Oxides (Not Certified)

Average of 1 sample: ALS Chemex ME-MS61

Raw Data:	Al%	Ca%	Fe%	K%	Mg%	Na%	S%	Ti%	Si%
ICP/MS Data (1)	6.6	1.9	6.6	1.6	1.52	1.9	0.37	0.33	
Conversion Factor	1.8899	1.3992	1.4297	1.2046	1.6579	1.348	2.4953	1.6681	2.1392
	Al ₂ O ₃	CaO	Fe ₂ O ₃	K ₂ O	MgO	Na ₂ O	SO ₃	TiO ₂	SiO ₂ estimated
% Oxide:	12.47	2.66	9.44	1.93	2.52	2.56	0.92	0.55	66.95

Participating Laboratories:

Acme Analytical Laboratories Ltd. (Vancouver, BC)

ALS Chemex (Reno, NV)

IPL (Richmond, BC)

ECO TECH Lab Ltd (BC)

Florin Analytical (Sparks, NV)

Legal Notice:

This certificate and the referenced material have been prepared with due care and attention. However, Minerals Exploration & Environmental Geochemistry (MEG Labs), and Shea Clark Smith, MSc, P.G., accept no liability for any decisions or actions taken following the use of this geochemical reference material.

Safety Notice:

A Material Safety Data Sheet (MSDS) is not required for this material. This material will not release or otherwise result in exposure to a hazardous chemical, under normal conditions of use. Use regular precautions as for any work with fine powder material.

Certified By: _____ Shea Clark Smith, MSc., P.G.