# Certificate of Analysis MEG LLC

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## **MEG-Au.13.05**

**Geochemical Reference Material** 

# MEAN = 10.28 ppb Au

95% Confidence = 8.797 to 11.760

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

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

**Manufactured for:** MEG LABS **Date of Certification:** January 2, 2013

#### **Origin of Reference Material:**

Certified Reference Material MEG-Au.13.05 was created from Pediment gravels from Washoe Valley, Nevada, USA. This material is not intended to be matrix-matched to any specific ore lithology.

#### **Method of Preparation:**

Gravels from Washoe Valley pediments were dried at 100C, jaw crushed, and roll crushed to -400 um.

The batch was comminuted to powder in a ce

Sizing tests of the final product show greater than 93% pass -74um (-200 mesh).

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

### Method of Analysis:

Using the ICPMS capabilities of just one laboratory, homogeneity tests were done to estimate multielement distributions from a 4-acid digestion (0.5 gram) from each of 10 samples.

Then, 5 samples each to 10 laboratories were fire assayed on 30 gram subsamples with AAS finish, and these data were used to certify the material for gold concentration. Data from one lab was disregarded.

#### **Summarized Assay Results:**

PROJECT: MEG-Au.13.05 reported in ppb (parts per billion)

			PPB
DATA POINTS (LAB			9
MEAN (LABS)			10.28
STANDARD DEVIATION (LABS)			0.74
CV (% RSD)			7.21
RANGE OF VALUES - HIGH			11.79
RANGE OF VALUES - LOW			9.60
95% CONFIDENCE LIMITS	8.80	to	11.76

#### **Statistical Procedures:**

Acceptable assay limits are based on the results of 10 samples shipped to each of 9 laboratories.

The samples were submitted with other MEG standards in randomized order, so that as much as possible, real were obtained from the participating laboratories. All of the data were used to determine an acceptable range, and standard deviation of the "Lab Average Data". The acceptable reporting range is the "95% Confidence Limit", mean +/- 2 standard deviations. Other statistics are provided to help the user assign viable acceptance boundries.

Standards with an RSD (Relative Standard Deviation) of near or less than 5% are termed "Certified", while RSD's 5% to 15% are designated "Provisional". RSD's over 15% are "Informational".

#### **Instructions and Recommendations for Use:**

Submit the entire contents of one 50 g envelope in random locations in the submittal, approximately every 10-20 blanks (samples with "below detection" concentration of analyte) are also recommended, randomly placed every The analytical request should be the same as that used for the round robin assays that generated this certificate.

#### **Intended Use:**

The standard material can be used to validate the analysis of samples from gold ores with a similar grade. As a control sample in routine assay laboratory operations, it should behave within the limits as indicated in this certification. Its intended use is to monitor inter-laboratory and instrumental bias within these limits.

The recommended concentrations and limits for this material are based on multiple assays from several and reflect a consensus of the inherent chemical concentration. These values are a first attempt at a chemical to which later data may be added as experience with the material increases.

Slight variations in analytical procedures between laboratories will result in slight biases to the recommended statistical limits.

This standard material is not recommended for method development, nor instrumental calibration.

#### **Handling Instructions:**

The material is packaged in manila tin-top envelopes for easy open and close use. The material should be reblended just prior to use in the assay laboratory. This can be done with a micro-riffle splitter or rubber sheeting. Simple agitation and shaking is not sufficient to rehomogenize prior to use.

Normal safety precautions for handling powders are recommended. The use of safety glasses, dust inhalation gloves, and a laboratory coat are suggested.

#### **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 hazaardous chemical, under normal conditions of use. Use regular precautions as for any work with fine powder material.

#### **Legal Notice:**

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

#### Assay Data Used to Calculate "True" Gold Value:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10
	ppb Au									
Sample										
1	11.00	10.00	10.00	10.00	9.00	11.00	12.00	12.00	12.00	9.00
2	10.00	10.00	10.00	10.00	9.00	10.00	12.00	12.00	9.00	10.00
3	10.00	10.00	11.00	9.00	9.00	11.00	12.00	11.00	12.00	10.00
4	10.00	9.00	12.00	9.00	12.00	11.00	11.00	11.00	9.00	11.00
5	11.00	11.00	11.00	10.00	10.00	11.00	11.00	12.00	10.00	9.00
6	10.00	9.00	10.00	9.00	9.00		12.00	12.00	9.00	9.00
7	9.00	9.00	11.00	10.00	10.00		12.00	12.00		
8	11.00	9.00	11.00	10.00	9.00			13.00		
9	9.00	9.00	12.00	11.00	10.00			13.00		
10		10.00	11.00		10.00			12.00		
11								13.00		
12								10.00		
13								10.00		
LAB	40.44	0.70	10.00			10.00			404-	o
AVERAGE	10.11	9.60	10.90	9.78	9.70	10.80	11.71	11.77	10.17	9.67

Major Constituents as Ox	xides							
Average of 10 samples: 4	-ACID, ICI	PMS (Tota	l Digestion	)				
Raw Data:	Al%	Ca%	Fe%	K%	Mg%	Na%	Si%	
ICP/MS Data (n=10)	6.01	0.22	1.00	2.75	0.23	2.49		
Conversion Factor	1.8899	1.3992	1.4297	1.2046	1.6579	1.348	2.1392	
	Al02 CaO		Fe2O3	K2O	MgO	Na2O	SiO2	TOTAL
							estimated	
% Oxide:		3.17	1.47	1.68	0.38	3.82	76.49	100.00

# **Participating Laboratories:**

UltraTrace ALS-Omac
Inspectorate ALS-Vancouver
Florin Activation
Skyline Acme
Genalysis American Assay

Certified By:	
•	Ajeet Milliard Ph.D.