

# ***CDN Resource Laboratories Ltd.***

#2, 20148 – 102<sup>nd</sup> Ave, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 ([www.cdnlabs.com](http://www.cdnlabs.com))

## **REFERENCE MATERIAL: CDN-ME-1501**

Recommended values and the “Between Lab” Two Standard Deviations

<b>Gold</b>	<b>1.38 g/t</b>	<b>± 0.11 g/t</b>	<b>30 g FA, instrumental</b>	<b>Certified value</b>
<b>Silver</b>	<b>34.6 ppm</b>	<b>± 2.3 ppm</b>	<b>4-Acid / ICP</b>	<b>Certified value</b>
<b>Copper</b>	<b>0.292 %</b>	<b>± 0.010 %</b>	<b>4 Acid / ICP</b>	<b>Certified value</b>
<b>Lead</b>	<b>0.385 %</b>	<b>± 0.018 %</b>	<b>4 Acid / ICP</b>	<b>Certified value</b>
<b>Zinc</b>	<b>0.253 %</b>	<b>± 0.010 %</b>	<b>4 Acid / ICP</b>	<b>Certified value</b>

**Note:** Standards with an RSD of near or less than 5% are certified; RSD's of between 5% and 15% are Provisional; RSD's over 15% are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.

**PREPARED BY:** CDN Resource Laboratories Ltd.

**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia

**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.

**DATE OF CERTIFICATION:** January, 2016

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone mixer. Splits were taken and sent to 15 commercial laboratories for round robin assaying.

### **ORIGIN OF REFERENCE MATERIAL:**

Standard CDN-ME-1501 is made from a composite of various ores.

**Approximate chemical composition (from whole rock analysis) is as follows:**

	Percent			Percent
SiO <sub>2</sub>	59.0		K <sub>2</sub> O	1.5
Al <sub>2</sub> O <sub>3</sub>	10.3		TiO <sub>2</sub>	0.3
Fe <sub>2</sub> O <sub>3</sub>	12.8		LOI	9.5
CaO	1.7		S	4.9
Na <sub>2</sub> O	0.2		C	1.1
MgO	3.3			

### **Statistical Procedures:**

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual “between-laboratory” standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

### **Assay Procedures:**

**Au:** Fire assay pre-concentration, AA or ICP finish.

**Ag, Cu, Pb, Zn:** 4-acid digestion, AA or ICP finish.

## **REFERENCE MATERIAL CDN-ME-1501 (page 2 of 4)**

### **Results from round-robin assaying:**

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Au g/t														
ME-1501-1	1.50	1.36	1.23	1.32	1.35	1.43	1.35	1.35	1.44	1.40	1.38	1.56	1.29	1.38	1.46
ME-1501-2	1.50	1.55	1.24	1.28	1.30	1.47	1.39	1.34	1.44	1.44	1.33	1.38	1.18	1.34	1.43
ME-1501-3	1.44	1.45	1.38	1.27	1.31	1.43	1.34	1.42	1.41	1.45	1.43	1.47	1.40	1.32	1.32
ME-1501-4	1.46	1.44	1.28	1.34	1.41	1.48	1.41	1.30	1.42	1.40	1.45	1.43	1.31	1.39	1.22
ME-1501-5	1.46	1.40	1.30	1.28	1.42	1.49	1.34	1.33	1.41	1.46	1.39	1.24	1.43	1.36	1.43
ME-1501-6	1.41	1.38	1.39	1.36	1.37	1.47	1.40	1.32	1.41	1.40	1.31	1.40	1.29	1.37	1.39
ME-1501-7	1.48	1.40	1.36	1.31	1.42	1.43	1.34	1.44	1.42	1.39	1.40	1.59	1.39	1.31	1.41
ME-1501-8	1.59	1.48	1.30	1.32	1.36	1.43	1.38	1.44	1.43	1.41	1.39	1.41	1.32	1.35	1.40
ME-1501-9	1.35	1.39	1.23	1.34	1.32	1.44	1.35	1.36	1.41	1.42	1.43	1.29	1.32	1.39	1.37
ME-1501-10	1.55	1.37	1.36	1.31	1.47	1.43	1.38	1.31	1.41	1.37	1.36	1.27	1.33	1.37	1.41
Mean	1.47	1.42	1.31	1.31	1.37	1.45	1.37	1.36	1.42	1.41	1.39	1.40	1.33	1.36	1.38
Std. Devn.	0.0693	0.0601	0.0616	0.0295	0.0564	0.0253	0.0284	0.0536	0.0103	0.0284	0.0445	0.1166	0.0704	0.0281	0.0690
% RSD	4.71	4.23	4.70	2.24	4.10	1.75	2.07	3.95	0.72	2.01	3.21	8.31	5.31	2.07	4.99
	Ag g/t														
ME-1501-1	34.0	34.0	35.2	37.0	34.0	33.0	34.4	32.0	33.8	36.0	36.3	34.0	36.0	33.0	33.9
ME-1501-2	34.0	34.0	33.0	36.0	35.0	32.7	33.8	35.0	34.8	36.0	36.5	35.0	35.0	34.2	34.6
ME-1501-3	36.0	35.0	33.4	34.5	33.0	33.0	33.6	35.0	34.4	37.0	36.9	34.0	35.0	34.3	33.3
ME-1501-4	35.0	36.0	33.4	35.0	35.0	32.8	34.3	35.0	33.8	35.0	37.0	35.0	36.0	34.2	33.3
ME-1501-5	34.0	34.0	34.2	34.5	31.0	32.9	33.1	36.0	34.6	34.0	36.9	34.0	33.0	33.5	34.4
ME-1501-6	34.0	34.0	33.7	36.5	34.0	32.8	34.5	35.0	33.2	34.0	37.4	36.0	34.0	34.7	33.8
ME-1501-7	35.0	36.0	34.1	35.0	36.0	32.1	34.0	36.0	34.8	36.0	37.6	33.0	36.0	35.6	33.3
ME-1501-8	35.0	35.0	34.2	36.0	34.0	32.4	34.9	35.0	33.8	35.0	36.1	34.0	35.0	38.9	33.2
ME-1501-9	36.0	36.0	34.2	35.5	34.0	31.8	34.1	34.0	33.8	35.0	35.2	34.0	34.0	36.8	32.6
ME-1501-10	34.0	35.0	33.9	36.0	34.0	32.6	34.2	37.0	33.9	34.0	35.4	35.0	34.0	36.9	33.8
Mean	34.7	34.9	33.9	35.6	34.0	32.6	34.1	35.0	34.1	35.2	36.5	34.4	34.8	35.2	33.6
Std. Devn.	0.8233	0.8756	0.6093	0.8433	1.3333	0.3882	0.5043	1.3333	0.5301	1.0328	0.7945	0.8433	1.0328	1.8284	0.5996
% RSD	2.37	2.51	1.80	2.37	3.92	1.19	1.48	3.81	1.55	2.93	2.17	2.45	2.97	5.19	1.78
	% Cu														
ME-1501-1	0.284	0.293	0.288	0.296	0.306	0.293	0.290	0.284	0.289	0.291	0.295	0.288	0.286	0.293	0.291
ME-1501-2	0.294	0.296	0.287	0.307	0.303	0.295	0.284	0.268	0.290	0.287	0.298	0.285	0.292	0.295	0.293
ME-1501-3	0.300	0.295	0.291	0.297	0.305	0.296	0.286	0.300	0.296	0.284	0.286	0.283	0.294	0.295	0.291
ME-1501-4	0.290	0.299	0.296	0.308	0.307	0.296	0.291	0.287	0.294	0.297	0.292	0.283	0.293	0.294	0.289
ME-1501-5	0.293	0.298	0.292	0.302	0.289	0.296	0.285	0.291	0.302	0.281	0.294	0.285	0.293	0.292	0.293
ME-1501-6	0.291	0.290	0.294	0.298	0.304	0.295	0.293	0.285	0.299	0.283	0.286	0.290	0.288	0.292	0.288
ME-1501-7	0.284	0.294	0.298	0.296	0.303	0.292	0.288	0.291	0.303	0.295	0.286	0.282	0.291	0.293	0.289
ME-1501-8	0.286	0.298	0.295	0.296	0.304	0.296	0.291	0.284	0.310	0.293	0.293	0.288	0.292	0.292	0.287
ME-1501-9	0.297	0.298	0.296	0.301	0.297	0.291	0.284	0.295	0.302	0.283	0.287	0.285	0.292	0.292	0.287
ME-1501-10	0.281	0.296	0.293	0.295	0.299	0.294	0.292	0.283	0.308	0.278	0.284	0.290	0.294	0.294	0.293
Mean	0.290	0.296	0.293	0.300	0.302	0.294	0.288	0.287	0.299	0.287	0.290	0.286	0.292	0.293	0.290
Std. Devn.	0.0062	0.0028	0.0036	0.0047	0.0054	0.0019	0.0035	0.0086	0.0071	0.0064	0.0048	0.0029	0.0026	0.0012	0.0026
% RSD	2.13	0.94	1.24	1.58	1.79	0.65	1.21	2.99	2.36	2.24	1.67	1.02	0.89	0.42	0.88

**REFERENCE MATERIAL CDN-ME-1501 (page 3 of 4)**

	% Pb														
ME-1501-1	0.386	0.381	0.382	0.400	0.340	0.371	0.381	0.376	0.360	0.380	0.397	0.384	0.387	0.379	0.397
ME-1501-2	0.393	0.381	0.379	0.405	0.340	0.373	0.373	0.393	0.340	0.370	0.394	0.375	0.393	0.382	0.413
ME-1501-3	0.386	0.381	0.383	0.407	0.340	0.371	0.378	0.378	0.345	0.370	0.388	0.374	0.390	0.380	0.388
ME-1501-4	0.386	0.387	0.389	0.399	0.340	0.377	0.377	0.397	0.342	0.370	0.395	0.379	0.391	0.378	0.397
ME-1501-5	0.389	0.380	0.387	0.400	0.310	0.375	0.380	0.399	0.351	0.370	0.399	0.383	0.388	0.379	0.405
ME-1501-6	0.390	0.379	0.390	0.404	0.340	0.371	0.377	0.400	0.356	0.380	0.392	0.383	0.388	0.377	0.393
ME-1501-7	0.382	0.382	0.393	0.404	0.350	0.369	0.380	0.400	0.342	0.380	0.385	0.373	0.388	0.383	0.392
ME-1501-8	0.394	0.384	0.388	0.405	0.340	0.372	0.383	0.397	0.352	0.370	0.393	0.386	0.391	0.378	0.393
ME-1501-9	0.402	0.384	0.394	0.405	0.330	0.369	0.378	0.389	0.334	0.380	0.383	0.376	0.389	0.377	0.394
ME-1501-10	0.390	0.382	0.391	0.411	0.340	0.372	0.385	0.376	0.347	0.370	0.382	0.383	0.393	0.381	0.385
Mean	0.390	0.382	0.388	0.404	0.337	0.372	0.379	0.391	0.347	0.374	0.391	0.380	0.390	0.379	0.396
Std. Devn.	0.0056	0.0023	0.0048	0.0036	0.0106	0.0026	0.0034	0.0101	0.0079	0.0052	0.0060	0.0048	0.0021	0.0021	0.0082
% RSD	1.44	0.61	1.23	0.90	3.14	0.71	0.91	2.59	2.28	1.38	1.52	1.26	0.55	0.54	2.08
	% Zn														
ME-1501-1	0.249	0.256	0.251	0.250	0.260	0.247	0.251	0.256	0.249	0.257	0.258	0.254	0.256	0.250	0.256
ME-1501-2	0.255	0.259	0.250	0.254	0.250	0.250	0.247	0.247	0.252	0.242	0.259	0.253	0.258	0.251	0.258
ME-1501-3	0.260	0.256	0.253	0.248	0.260	0.242	0.249	0.274	0.258	0.240	0.253	0.252	0.259	0.247	0.247
ME-1501-4	0.251	0.260	0.255	0.255	0.260	0.245	0.247	0.263	0.254	0.244	0.255	0.253	0.260	0.247	0.253
ME-1501-5	0.255	0.260	0.253	0.250	0.240	0.249	0.246	0.263	0.249	0.255	0.256	0.249	0.257	0.249	0.261
ME-1501-6	0.251	0.253	0.255	0.247	0.260	0.243	0.250	0.261	0.255	0.240	0.253	0.252	0.257	0.246	0.254
ME-1501-7	0.247	0.256	0.258	0.249	0.260	0.243	0.251	0.266	0.251	0.264	0.249	0.247	0.259	0.244	0.248
ME-1501-8	0.260	0.259	0.257	0.249	0.260	0.249	0.251	0.261	0.256	0.253	0.251	0.255	0.261	0.249	0.246
ME-1501-9	0.267	0.260	0.259	0.255	0.250	0.241	0.248	0.270	0.253	0.244	0.247	0.248	0.256	0.251	0.245
ME-1501-10	0.256	0.258	0.257	0.249	0.250	0.247	0.252	0.253	0.254	0.254	0.243	0.255	0.258	0.249	0.254
Mean	0.255	0.258	0.255	0.251	0.255	0.246	0.249	0.261	0.253	0.249	0.252	0.252	0.258	0.248	0.252
Std. Devn.	0.0060	0.0024	0.0031	0.0030	0.0071	0.0033	0.0021	0.0079	0.0029	0.0083	0.0050	0.0029	0.0017	0.0023	0.0055
% RSD	2.36	0.92	1.21	1.18	2.77	1.35	0.85	3.03	1.15	3.35	1.99	1.14	0.64	0.91	2.16

Notes: Pb data from laboratories 5 and 9 was removed for failing the t-test.

## **REFERENCE MATERIAL CDN-ME-1501 (4 of 4)**

### **Participating Laboratories:**

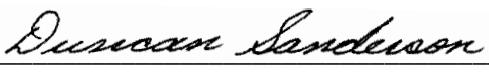
(not in same order as listed in table of results)

American Assay Laboratories Inc., Sparks, Nevada, USA  
Activation Laboratories, Ancaster, Ontario, Canada  
Activation Laboratories, Thunder Bay, Ontario, Canada  
AGAT, Mississauga, Ontario, Canada  
Argetest, Ankara, Turkey  
ALS South America, Lima, Peru  
ALS Loughrea (Omac), Ireland  
ALS Canada, North Vancouver, BC, Canada  
Bureau Veritas (Acme), Vancouver, BC, Canada  
Bureau Veritas (Ultra Trace), Perth Australia  
Certimin, Lima, Peru  
Met-Solve Analytical Services, Langley, BC, Canada  
SGS, Lima, Peru  
SGS, Vancouver, BC, Canada  
TSL Laboratories Ltd., Saskatoon, SK, Canada

### **Legal Notice:**

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. or Barry Smee accept no liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by

  
\_\_\_\_\_  
Duncan Sanderson  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

  
\_\_\_\_\_  
Dr. Barry Smee, Ph.D., P. Geo.