

# 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)

## REFERENCE MATERIAL: CDN-ME-12

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<i>0.348 g/t</i>	<i>±</i>	<i>0.040 g/t</i>
<i>Silver</i>	<i>52.5 g/t</i>	<i>±</i>	<i>4.3 g/t</i>
<i>Copper</i>	<i>0.428 %</i>	<i>±</i>	<i>0.020 %</i>
<i>Lead</i>	<i>0.222 %</i>	<i>±</i>	<i>0.014 %</i>
<i>Zinc</i>	<i>0.275 %</i>	<i>±</i>	<i>0.018 %</i>

**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:** June 14, 2010

### **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 14 laboratories for round robin assaying.

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

This standard is made from a mixture of ores as well as a small amount of Cu, Pb and Zn concentrates..

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

	Percent		Percent
SiO <sub>2</sub>	65.8	MgO	1.3
Al <sub>2</sub> O <sub>3</sub>	13.0	K <sub>2</sub> O	4.8
Fe <sub>2</sub> O <sub>3</sub>	6.7	TiO <sub>2</sub>	0.5
CaO	0.9	LOI	4.0
Na <sub>2</sub> O	1.5	S	2.3
C	0.2		

### **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  $\pm 2$  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 (30g sub-sample).  
**Ag, Cu, Pb, Zn:** 4-acid digestion, AA or ICP finish.

**REFERENCE MATERIAL CDN-ME-12**

**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
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
CDN-ME-12-1	0.356	0.320	0.353	0.343	0.34	0.33	0.304	0.357	0.377	0.342	0.330	0.31	0.34	0.39
CDN-ME-12-2	0.352	0.348	0.334	0.330	0.35	0.34	0.309	0.332	0.371	0.326	0.350	0.37	0.33	0.38
CDN-ME-12-3	0.355	0.350	0.342	0.384	0.33	0.38	0.299	0.349	0.358	0.336	0.315	0.32	0.31	0.38
CDN-ME-12-4	0.302	0.316	0.379	0.320	0.36	0.34	0.313	0.353	0.364	0.331	0.355	0.34	0.34	0.38
CDN-ME-12-5	0.352	0.332	0.387	0.313	0.37	0.34	0.310	0.340	0.379	0.336	0.315	0.33	0.33	0.37
CDN-ME-12-6	0.339	0.324	0.384	0.377	0.34	0.41	0.324	0.345	0.360	0.340	0.345	0.34	0.34	0.38
CDN-ME-12-7	0.346	0.368	0.361	0.386	0.30	0.38	0.314	0.332	0.347	0.334	0.355	0.34	0.35	0.39
CDN-ME-12-8	0.312	0.324	0.354	0.321	0.32	0.34	0.299	0.356	0.360	0.327	0.370	0.33	0.34	0.36
CDN-ME-12-9	0.350	0.357	0.374	0.301	0.36	0.35	0.286	0.336	0.355	0.316	0.350	0.38	0.34	0.37
CDN-ME-12-10	0.310	0.353	0.340	0.348	0.39	0.36	0.284	0.343	0.348	0.328	0.340	0.34	0.32	0.36
Mean	0.337	0.339	0.361	0.342	0.346	0.357	0.304	0.344	0.362	0.332	0.343	0.341	0.334	0.377
Std. Devn.	0.0210	0.0181	0.0193	0.0308	0.0259	0.0254	0.0125	0.0094	0.0110	0.0077	0.0178	0.0204	0.0132	0.0113
% RSD	6.22	5.34	5.34	9.01	7.49	7.12	4.12	2.72	3.04	2.32	5.21	5.99	3.97	2.99
	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t
CDN-ME-12-1	53	50.8	50.4	50.7	50	53.2	55.9	52	51	46	55	49	53.8	54.7
CDN-ME-12-2	57	48.8	47.9	52.0	50	54.0	57.3	52	54	48	55	53	52.5	56.5
CDN-ME-12-3	52	50.9	50.2	51.8	51	54.1	55.3	51	55	41	55	54	52.6	52.7
CDN-ME-12-4	53	47.1	51.1	52.0	52	53.6	57.3	53	53	43	50	50	53.7	54.7
CDN-ME-12-5	53	49.5	49.7	50.5	50	52.9	56.8	55	52	44	50	51	54.7	53.4
CDN-ME-12-6	54	51.2	49.5	51.5	50	54.3	55.5	54	52	44	50	49	54.5	52.0
CDN-ME-12-7	52	49.8	50.4	49.6	50	54.9	57.8	55	52	43	55	51	52.8	54.5
CDN-ME-12-8	54	52.8	47.6	51.1	50	53.9	58.4	53	54	43	55	52	53.0	55.5
CDN-ME-12-9	52	49.4	48.1	49.6	50	54.6	55.8	51	55	45	55	49	52.7	52.1
CDN-ME-12-10	55	50.8	47.4	50.0	49	54.1	55.9	54	54	43	55	51	53.3	54.2
Mean	53.5	50.1	49.2	50.9	50.2	54.0	56.6	53.0	53.2	44.0	53.5	50.9	53.4	54.0
Std. Devn.	1.5811	1.5545	1.3549	0.9438	0.7888	0.6041	1.0656	1.4907	1.3984	1.9437	2.4152	1.7178	0.7925	1.4658
% RSD	2.96	3.10	2.75	1.85	1.57	1.12	1.88	2.81	2.63	4.42	4.51	3.38	1.49	2.71

**NOTE: Au data from Lab. 7 was excluded for failing the “t” test.  
Ag data from Lab. 10 was excluded for failing the “t” test.**

## REFERENCE MATERIAL CDN-ME-12

### 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
	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %	Cu %
CDN-ME-12-1	0.413	0.418	0.415	0.39	0.404	0.441	0.435	0.436	0.433	0.426	0.435	0.429	0.434	0.422
CDN-ME-12-2	0.431	0.410	0.426	0.39	0.411	0.437	0.444	0.429	0.426	0.429	0.421	0.425	0.436	0.422
CDN-ME-12-3	0.421	0.433	0.422	0.39	0.408	0.443	0.438	0.426	0.435	0.419	0.425	0.433	0.432	0.419
CDN-ME-12-4	0.420	0.417	0.418	0.39	0.406	0.437	0.439	0.430	0.436	0.416	0.428	0.419	0.434	0.423
CDN-ME-12-5	0.427	0.417	0.420	0.39	0.406	0.437	0.448	0.433	0.427	0.442	0.441	0.420	0.437	0.419
CDN-ME-12-6	0.423	0.435	0.418	0.39	0.395	0.441	0.450	0.437	0.428	0.418	0.435	0.425	0.430	0.420
CDN-ME-12-7	0.437	0.431	0.423	0.39	0.395	0.444	0.447	0.437	0.433	0.418	0.438	0.422	0.425	0.423
CDN-ME-12-8	0.430	0.435	0.418	0.39	0.409	0.440	0.449	0.423	0.426	0.423	0.424	0.425	0.427	0.420
CDN-ME-12-9	0.435	0.429	0.416	0.40	0.413	0.428	0.447	0.423	0.429	0.421	0.443	0.421	0.432	0.421
CDN-ME-12-10	0.453	0.429	0.414	0.39	0.409	0.438	0.444	0.423	0.429	0.410	0.431	0.423	0.435	0.420
Mean	0.429	0.425	0.419	0.391	0.406	0.439	0.444	0.430	0.430	0.422	0.432	0.424	0.432	0.421
Std. Devn.	0.0112	0.0090	0.0038	0.0032	0.0061	0.0044	0.0051	0.0058	0.0037	0.0087	0.0075	0.0043	0.0039	0.0015
% RSD	2.60	2.12	0.90	0.81	1.52	0.99	1.16	1.36	0.87	2.07	1.74	1.01	0.90	0.36
	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %	Pb %
CDN-ME-12-1	0.22	0.205	0.23	0.20	0.220	0.224	0.225	0.224	0.227	0.183	0.220	0.232	0.231	0.218
CDN-ME-12-2	0.23	0.202	0.23	0.20	0.222	0.220	0.234	0.223	0.226	0.190	0.220	0.226	0.234	0.220
CDN-ME-12-3	0.23	0.208	0.23	0.20	0.222	0.223	0.228	0.221	0.228	0.188	0.222	0.232	0.227	0.217
CDN-ME-12-4	0.23	0.203	0.22	0.20	0.221	0.217	0.230	0.229	0.223	0.179	0.222	0.226	0.230	0.218
CDN-ME-12-5	0.23	0.207	0.22	0.20	0.221	0.218	0.233	0.229	0.224	0.195	0.218	0.225	0.231	0.215
CDN-ME-12-6	0.23	0.215	0.22	0.21	0.217	0.212	0.231	0.225	0.221	0.180	0.218	0.230	0.238	0.219
CDN-ME-12-7	0.23	0.211	0.22	0.21	0.215	0.221	0.226	0.228	0.224	0.176	0.222	0.227	0.233	0.219
CDN-ME-12-8	0.23	0.212	0.23	0.21	0.218	0.215	0.233	0.221	0.221	0.179	0.216	0.228	0.232	0.220
CDN-ME-12-9	0.23	0.209	0.22	0.20	0.227	0.214	0.230	0.229	0.218	0.176	0.216	0.229	0.230	0.216
CDN-ME-12-10	0.24	0.211	0.22	0.21	0.220	0.218	0.232	0.225	0.223	0.175	0.218	0.227	0.228	0.216
Mean	0.230	0.208	0.224	0.204	0.220	0.218	0.230	0.225	0.224	0.182	0.219	0.228	0.231	0.218
Std. Devn.	0.0047	0.0041	0.0052	0.0052	0.0033	0.0039	0.0030	0.0032	0.0030	0.0068	0.0023	0.0025	0.0031	0.0018
% RSD	2.05	1.99	2.31	2.53	1.48	1.78	1.32	1.42	1.35	3.72	1.07	1.09	1.35	0.80
	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %	Zn %
CDN-ME-12-1	0.27	0.256	0.31	0.28	0.273	0.267	0.260	0.279	0.270	0.222	0.281	0.274	0.292	0.268
CDN-ME-12-2	0.29	0.253	0.30	0.27	0.276	0.279	0.272	0.280	0.272	0.226	0.276	0.270	0.298	0.267
CDN-ME-12-3	0.28	0.265	0.30	0.27	0.277	0.270	0.264	0.278	0.271	0.225	0.280	0.273	0.294	0.266
CDN-ME-12-4	0.28	0.255	0.30	0.28	0.277	0.268	0.265	0.284	0.267	0.215	0.276	0.265	0.296	0.267
CDN-ME-12-5	0.28	0.259	0.30	0.27	0.278	0.272	0.272	0.284	0.268	0.234	0.276	0.268	0.295	0.264
CDN-ME-12-6	0.28	0.268	0.30	0.28	0.276	0.271	0.269	0.281	0.265	0.216	0.276	0.275	0.300	0.268
CDN-ME-12-7	0.29	0.266	0.29	0.28	0.270	0.271	0.264	0.283	0.270	0.216	0.279	0.266	0.298	0.267
CDN-ME-12-8	0.28	0.265	0.30	0.28	0.267	0.277	0.268	0.278	0.267	0.218	0.278	0.269	0.294	0.265
CDN-ME-12-9	0.29	0.263	0.31	0.28	0.273	0.274	0.268	0.282	0.267	0.214	0.286	0.273	0.292	0.269
CDN-ME-12-10	0.29	0.266	0.31	0.28	0.264	0.278	0.268	0.281	0.270	0.214	0.278	0.270	0.291	0.263
Mean	0.283	0.262	0.302	0.277	0.273	0.273	0.267	0.281	0.269	0.220	0.279	0.270	0.295	0.266
Std. Devn.	0.0067	0.0054	0.0063	0.0048	0.0047	0.0042	0.0038	0.0023	0.0022	0.0066	0.0032	0.0034	0.0030	0.0019
% RSD	2.38	2.06	2.09	1.74	1.73	1.53	1.41	0.80	0.82	3.01	1.14	1.26	1.01	0.71

**NOTE:** Cu data from Lab. 4 was excluded for failing the “t” test.  
Pb data from Lab. 10 was excluded for failing the “t” test.  
Zn data from Lab. 10 was excluded for failing the “t” test.

**REFERENCE MATERIAL CDN-ME-12**

**Participating Laboratories:**

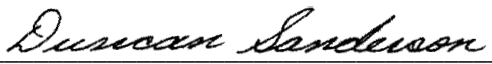
(not in same order as listed in table of results)

Acme Analytical Laboratories Ltd., Vancouver  
Actlabs-Ancaster, Ontario, Canada  
Actlabs-Thunder Bay, Ontario, Canada  
Alaska Assay Laboratory, Alaska, USA  
Alex Stewart Assayers, Mendoza, Argentina  
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Certified by

  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

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