

# **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-7**

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<b>0.219</b>	<i>g/t Au</i>	$\pm$	<b>0.024</b>	<i>g/t Au</i>
<i>Silver</i>	<b>150.7</b>	<i>g/t Ag</i>	$\pm$	<b>8.7</b>	<i>g/t Ag</i>
<i>Copper</i>	<b>0.227</b>	<i>% Cu</i>	$\pm$	<b>0.016</b>	<i>% Cu</i>
<i>Lead</i>	<b>4.95</b>	<i>% Pb</i>	$\pm$	<b>0.30</b>	<i>% Pb</i>
<i>Zinc</i>	<b>4.84</b>	<i>% Zn</i>	$\pm$	<b>0.17</b>	<i>% Zn</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:** November 30, 2009

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

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

The ore is from the Bell District of Mineral County, Nevada. The primary ore minerals are galena and sphalerite enclosed in a dark-grey, fine-grained aggregate of quartz and jasperoid, the result of the replacement of limestone by quartz. Pyrite and arsenopyrite are subordinate metallic minerals; calcite and limestone occur as gangue minerals.

Approximate chemical composition is as follows:

	Percent			Percent
SiO <sub>2</sub>	41.1		MgO	1.3
Al <sub>2</sub> O <sub>3</sub>	9.1		K <sub>2</sub> O	2.3
Fe <sub>2</sub> O <sub>3</sub>	8.8		TiO <sub>2</sub>	0.3
CaO	23.1		LOI	8.2
Na <sub>2</sub> O	0.4		S	6.6

### **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-7

**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-7-1	0.189	0.205	0.233	0.23	0.219	0.223	0.215	0.252	0.209	0.22	0.255	0.22	0.18	0.196	0.229
ME-7-2	0.197	0.221	0.226	0.23	0.208	0.237	0.215	0.231	0.205	0.23	0.280	0.22	0.22	0.239	0.219
ME-7-3	0.201	0.205	0.224	0.22	0.205	0.210	0.220	0.244	0.228	0.22	0.270	0.23	0.22	0.184	0.238
ME-7-4	0.215	0.219	0.230	0.22	0.208	0.212	0.205	0.227	0.217	0.20	0.255	0.21	0.22	0.223	0.225
ME-7-5	0.215	0.220	0.232	0.23	0.211	0.210	0.235	0.233	0.207	0.22	0.250	0.23	0.21	0.215	0.245
ME-7-6	0.218	0.207	0.231	0.23	0.215	0.207	0.220	0.209	0.207	0.21	0.255	0.23	0.21	0.197	0.220
ME-7-7	0.215	0.242	0.244	0.24	0.214	0.203	0.233	0.255	0.198	0.21	0.260	0.24	0.22	0.198	0.233
ME-7-8	0.212	0.201	0.225	0.25	0.209	0.204	0.229	0.246	0.206	0.23	0.260	0.24	0.22	0.184	0.239
ME-7-9	0.222	0.216	0.221	0.22	0.207	0.207	0.225	0.208	0.220	0.20	0.265	0.24	0.21	0.224	0.257
ME-7-10	0.203	0.229	0.232	0.23	0.208	0.210	0.211	0.255	0.238	0.22	0.250	0.23	0.21	0.228	0.254
Mean	0.209	0.217	0.230	0.226	0.210	0.212	0.221	0.236	0.214	0.214	0.260	0.229	0.212	0.209	0.236
Std. Devn.	0.0106	0.0127	0.0064	0.0090	0.0043	0.0103	0.0097	0.0175	0.0122	0.0088	0.0094	0.0099	0.0123	0.0194	0.0133
% RSD	5.08	5.84	2.80	3.97	2.06	4.84	4.40	7.43	5.71	4.10	3.63	4.34	5.80	9.31	5.62
	Ag g/t														
ME-7-1	151	154	166.1	146	154	156	148.7	141	145	152	148.2	153	151	147.9	145.3
ME-7-2	149	152	164.9	147	154	157	142.7	141	140	152	152.3	157	155	144.8	143.7
ME-7-3	152	156	165.9	149	152	151	147.0	139	151	153	149.2	167	152	144.3	143.7
ME-7-4	152	155	164.4	147	152	145	145.1	143	143	153	158.1	159	154	147.9	143.8
ME-7-5	147	157	164.1	150	157	152	146.7	139	148	154	157.0	154	152	140.6	145.0
ME-7-6	149	153	164.5	148	156	153	145.8	140	148	153	154.4	154	151	146.0	145.5
ME-7-7	149	158	163.7	149	153	148	145.3	140	147	153	153.3	159	152	146.9	144.8
ME-7-8	150	153	163.2	147	156	151	142.7	140	148	156	146.1	158	152	145.8	145.7
ME-7-9	149	158	163.8	148	156	151	150.5	139	149	154	159.8	160	153	137.9	146.4
ME-7-10	150	157	163.0	146	157	150	147.8	137	146	154	150.3	163	153	142.3	148.1
Mean	149.8	155.3	164.4	147.7	154.7	151.4	146.2	139.9	146.5	153.4	152.9	158.4	152.4	144.4	145.2
Std. Devn.	1.549	2.214	1.039	1.337	1.947	3.502	2.469	1.595	3.171	1.174	4.509	4.326	1.416	3.275	1.369
% RSD	1.03	1.43	0.63	0.91	1.26	2.31	1.69	1.14	2.16	0.77	2.95	2.73	0.93	2.27	0.94

**NOTE:** Au data from Lab. 11 was excluded for failing the "t" test.  
 Ag data from Labs 3 and 8 was excluded for failing the "t" test.

## **REFERENCE MATERIAL CDN-ME-7**

**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
	% Cu														
ME-7-1	0.218	0.234	0.240	0.221	0.220	0.222	0.232	0.229	0.209	0.226	0.228	0.234	0.229	0.247	0.197
ME-7-2	0.218	0.231	0.237	0.220	0.217	0.231	0.224	0.229	0.204	0.227	0.229	0.237	0.234	0.254	0.188
ME-7-3	0.219	0.238	0.238	0.219	0.218	0.220	0.230	0.243	0.216	0.228	0.228	0.241	0.230	0.249	0.198
ME-7-4	0.225	0.233	0.233	0.221	0.219	0.219	0.228	0.230	0.207	0.229	0.230	0.233	0.235	0.239	0.204
ME-7-5	0.216	0.234	0.234	0.217	0.223	0.219	0.222	0.229	0.214	0.230	0.227	0.235	0.228	0.248	0.196
ME-7-6	0.223	0.232	0.244	0.223	0.217	0.225	0.230	0.247	0.216	0.227	0.230	0.232	0.230	0.236	0.186
ME-7-7	0.222	0.238	0.242	0.219	0.222	0.216	0.228	0.238	0.213	0.230	0.230	0.234	0.229	0.251	0.192
ME-7-8	0.220	0.232	0.230	0.219	0.227	0.219	0.226	0.254	0.215	0.231	0.229	0.232	0.231	0.246	0.197
ME-7-9	0.220	0.236	0.236	0.219	0.225	0.217	0.233	0.244	0.216	0.229	0.231	0.234	0.232	0.250	0.184
ME-7-10	0.220	0.238	0.238	0.220	0.228	0.217	0.229	0.245	0.211	0.233	0.228	0.235	0.233	0.238	0.186
Mean	0.220	0.235	0.237	0.220	0.222	0.221	0.228	0.239	0.212	0.229	0.229	0.235	0.231	0.246	0.193
Std. Devn.	0.0026	0.0027	0.0042	0.0016	0.0041	0.0045	0.0034	0.0091	0.0041	0.0021	0.0012	0.0027	0.0023	0.0061	0.0066
% RSD	1.20	1.16	1.78	0.71	1.83	2.05	1.50	3.81	1.94	0.92	0.54	1.14	1.01	2.47	3.42
	% Pb														
ME-7-1	4.76	4.89	5.50	4.93	4.72	4.69	5.43	4.65	5.006	4.94	4.97	3.83	5.16	5.35	5.02
ME-7-2	4.75	4.83	5.50	4.87	4.94	4.92	5.21	4.69	4.994	4.93	4.94	4.42	5.09	5.40	4.93
ME-7-3	4.80	4.93	5.30	4.94	4.88	4.32	5.13	4.70	5.028	4.96	4.93	4.34	5.07	5.30	5.02
ME-7-4	4.87	4.91	5.60	4.85	4.78	4.31	5.42	4.81	5.025	4.98	4.93	4.47	5.11	5.30	4.97
ME-7-5	4.69	4.95	5.30	4.92	5.00	4.85	5.30	4.65	4.997	4.98	4.90	4.49	5.06	5.40	5.03
ME-7-6	4.87	4.82	5.30	4.92	4.92	4.51	5.55	4.64	5.018	4.92	4.97	4.29	5.05	5.10	4.93
ME-7-7	4.83	4.97	5.50	4.93	4.89	4.49	5.54	4.71	4.904	4.93	4.94	4.22	5.06	5.30	4.91
ME-7-8	4.82	4.90	5.30	4.86	4.95	4.48	5.42	4.77	5.038	4.96	4.95	4.20	5.07	5.10	5.05
ME-7-9	4.77	5.00	5.40	4.87	4.94	4.79	5.37	4.95	5.029	4.93	4.99	4.15	5.13	5.25	4.97
ME-7-10	4.79	4.99	5.30	4.89	5.07	4.34	5.12	4.54	5.019	4.92	4.94	4.08	5.09	5.40	4.99
Mean	4.80	4.92	5.40	4.90	4.91	4.57	5.35	4.71	5.01	4.95	4.95	4.25	5.09	5.29	4.98
Std. Devn.	0.0558	0.0617	0.1155	0.0310	0.1008	0.2273	0.1550	0.1119	0.0384	0.0232	0.0255	0.2009	0.0366	0.1125	0.0484
% RSD	1.16	1.25	2.14	0.63	2.05	4.97	2.90	2.38	0.77	0.47	0.52	4.73	0.72	2.13	0.97
	% Zn														
ME-7-1	4.87	4.87	5.10	4.86	4.64	4.81	5.75	4.76	4.848	4.75	4.91	4.88	4.80	5.20	4.92
ME-7-2	4.91	4.81	5.00	4.89	4.65	4.99	5.85	4.80	4.875	4.76	4.86	4.90	4.88	5.15	4.86
ME-7-3	4.82	4.97	5.00	4.86	4.61	4.77	5.94	4.81	4.879	4.75	4.84	4.90	4.77	5.05	4.96
ME-7-4	4.94	4.88	5.10	4.88	4.61	4.80	5.98	4.89	4.847	4.74	4.86	4.87	4.88	5.05	4.87
ME-7-5	4.76	4.96	5.00	4.86	4.71	4.74	5.93	4.77	4.882	4.76	4.84	4.88	4.79	5.10	4.90
ME-7-6	4.80	4.86	5.00	4.87	4.66	4.90	6.02	4.77	4.834	4.73	4.88	4.87	4.74	5.20	4.90
ME-7-7	4.79	4.96	5.10	4.86	4.59	4.68	5.98	4.81	4.854	4.74	4.87	4.81	4.77	5.20	4.81
ME-7-8	4.66	4.88	5.10	4.88	4.65	4.76	6.03	4.90	4.828	4.77	4.89	4.82	4.81	5.00	4.91
ME-7-9	4.68	4.98	5.00	4.87	4.61	4.75	6.12	5.07	4.911	4.76	4.90	4.87	4.85	5.10	4.90
ME-7-10	4.71	5.00	5.00	4.89	4.70	4.70	5.79	4.63	4.845	4.74	4.89	4.88	4.82	5.25	4.89
Mean	4.79	4.92	5.04	4.87	4.64	4.79	5.94	4.82	4.86	4.75	4.87	4.87	4.81	5.13	4.89
Std. Devn.	0.0945	0.0641	0.0516	0.0113	0.0397	0.0932	0.1140	0.1150	0.0255	0.0125	0.0241	0.0301	0.0465	0.0823	0.0399
% RSD	1.97	1.30	1.02	0.23	0.86	1.95	1.92	2.39	0.52	0.26	0.50	0.62	0.97	1.60	0.81

**NOTE: Cu data from Labs 14 and 15 was excluded for failing the “t” test.**

**Pb data from Labs 3 and 12 was excluded for failing the “t” test.**

**Zn data from Labs 7 and 14 was excluded for failing the “t” test.**

## **REFERENCE MATERIAL CDN-ME-7**

### **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  
ALS Chemex Laboratories, North Vancouver  
Assayers Canada Ltd., Vancouver  
Eco Tech, B.C., Canada  
Genalysis Laboratory, Australia  
Inspectorate America, Sparks, Nevada, USA  
IPL, Richmond, B.C., Canada  
Labtium Laboratory, Finland  
Omac Laboratories Ltd., Ireland  
SGS Toronto, Ontario, Canada  
Skyline Laboratories, Arizona, USA  
TSL Laboratories Ltd., Saskatoon  
Ultra Trace Analytical Laboratories, Australia

### **Legal Notice:**

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Certified by

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

Geochemist

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