

# CDN Resource Laboratories Ltd.

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## REFERENCE MATERIAL: CDN-ME-4

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<i>2.61 g/t Au</i>	<i>±</i>	<i>0.30 g/t Au</i>
<i>Silver</i>	<i>402 g/t Ag</i>	<i>±</i>	<i>25 g/t Ag (FA / Grav)</i>
<i>Silver</i>	<i>414 g/t Ag</i>	<i>±</i>	<i>17 g/t Ag (Digestion, ICP)</i>
<i>Copper</i>	<i>1.83 % Cu</i>	<i>±</i>	<i>0.08% Cu</i>
<i>Lead</i>	<i>4.25 % Pb</i>	<i>±</i>	<i>0.24 % Pb</i>
<i>Zinc</i>	<i>1.10 % Zn</i>	<i>±</i>	<i>0.06 % 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:** August 20, 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 thirteen laboratories for round robin assaying.

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

This standard is made primarily from ore supplied by US Silver from the Coeur d' Alene mining district in northern Idaho. The mineralization occurs as veins hosted by weakly metamorphosed, siliceous sediments. Ag-Cu ore occurs as tetrahedrite, and variable amounts of pyrite and chalcopyrite. Minor Pb is associated with Ag-Cu veins. Other portions of the mineralized areas include Pb-Ag veins primarily consisting of galena and quartz. The standard was made by mixing 300 kg of US Silver ore with 110 kg of higher grade Au, Cu, Zn ore and 200 kg of a blank granitic material.

### **Approximate chemical composition is as follows:**

	Percent		Percent
SiO <sub>2</sub>	56.5	MgO	1.5
Al <sub>2</sub> O <sub>3</sub>	7.6	K <sub>2</sub> O	1.1
Fe <sub>2</sub> O <sub>3</sub>	17.5	TiO <sub>2</sub>	0.3
CaO	2.2	LOI	7.3
Na <sub>2</sub> O	1.6	S	3.7

### **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 (30g sub-sample).
- Ag:** Fire assay pre-concentration, gravimetric finish (30g sub-sample).
- Ag, Cu, Pb, Zn:** 4-acid digestion, AA or ICP finish.

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**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
	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
ME-4-1	2.67	2.23	2.50	2.67	2.65	2.56	2.64	3.10	2.73	2.62	2.88	2.33	2.71
ME-4-2	2.74	2.63	2.52	2.52	2.46	2.68	2.70	2.98	2.40	2.89	2.95	2.92	2.72
ME-4-3	2.64	2.52	2.70	2.55	2.57	2.59	2.78	2.45	2.33	2.79	2.50	2.37	2.69
ME-4-4	2.70	2.34	2.43	2.68	2.29	2.60	2.71	2.45	2.78	2.86	2.50	2.43	2.70
ME-4-5	2.57	2.64	2.61	2.52	2.24	2.71	2.75	2.44	2.37	2.83	2.61	2.59	2.72
ME-4-6	2.65	2.56	2.76	2.45	2.43	2.62	2.78	2.50	2.76	2.88	2.71	2.40	2.72
ME-4-7	2.77	2.53	2.42	2.40	2.53	2.73	2.83	2.45	2.28	3.13	2.61	2.66	2.70
ME-4-8	2.47	2.43	2.66	2.60	2.44	2.78	2.85	2.61	2.87	2.66	2.43	2.47	2.70
ME-4-9	2.45	2.57	2.51	2.73	2.53	2.82	2.85	2.49	2.57	2.83	2.71	2.21	2.71
ME-4-10	2.59	2.21	2.47	2.55	2.47	2.55	2.72	2.94	2.56	2.59	2.43	2.59	2.70
Mean	2.63	2.47	2.56	2.57	2.46	2.66	2.76	2.64	2.57	2.81	2.63	2.50	2.70
Std. Devn.	0.1063	0.1571	0.1175	0.1041	0.1232	0.0942	0.0706	0.2600	0.2125	0.1579	0.1802	0.2011	0.0101
% RSD	4.05	6.37	4.60	4.06	5.01	3.54	2.56	9.85	8.28	5.62	6.84	8.05	0.37
(FA / Grav.)	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
ME-4-1	399	406	420.2	421	393	400	421.9	398	387	394	394		
ME-4-2	404	400	420.7	414	396	406	428.0	398	383	393	373		
ME-4-3	393	402	417.6	408	398	401	414.1	398	384	395	387		
ME-4-4	407	399	416.9	415	403	401	414.7	399	389	392	380		
ME-4-5	389	394	413.2	418	398	408	427.1	393	387	393	381		
ME-4-6	404	403	414.4	413	395	376	420.8	415	384	392	380		
ME-4-7	404	412	412.5	407	403	390	426.9	416	375	393	373		
ME-4-8	406	406	413.0	412	394	393	423.1	416	373	395	379		
ME-4-9	398	409	420.1	414	397	401	411.2	416	376	395	390		
ME-4-10	399	401	411.1	411	400	395	426.5	404	381	391	390		
Mean	400.3	403.2	416.0	413.3	397.7	397.1	421.4	405.3	381.9	393.3	382.7		
Std. Devn.	5.851	5.224	3.583	4.218	3.466	9.243	6.128	9.370	5.527	1.418	7.243		
% RSD	1.46	1.30	0.86	1.02	0.87	2.33	1.45	2.31	1.45	0.36	1.89		
Digestion / ICP	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
ME-4-1		405	410.5	410	424	423	424.6		388		435	384	418
ME-4-2		405	412.0	399	414	421	429.7		407		420	384	422
ME-4-3		422	420.2	397	398	420	426.2		396		419	380	418
ME-4-4		415	410.0	400	411	418	421.9		406		421	368	420
ME-4-5		391	414.7	398	410	419	425		411		410	366	413
ME-4-6		403	418.7	409	411	422	421.6		394		412	392	415
ME-4-7		410	411.6	400	414	424	424.5		403		421	374	421
ME-4-8		406	409.1	402	410	422	426.5		412		425	384	417
ME-4-9		410	412.8	407	413	417	429.7		399		414	376	418
ME-4-10		408	407.4	403	422	428	420.9		406		422	382	420
Mean		407.5	412.7	402.5	412.7	421.4	425.1		402.2		419.9	379.0	418.2
Std. Devn.		8.073	4.098	4.649	7.103	3.204	3.095		7.772		7.125	8.014	2.741
% RSD		1.98	0.99	1.15	1.72	0.76	0.73		1.93		1.70	2.11	0.66

**NOTE:** Labs 12, 13 were unable to provide FA/ Grav. data for Ag.  
Labs 1, 8, 10 were unable to provide Digestion / ICP data for Ag.  
Ag data (Digestion / ICP) from Lab. 12 was excluded for failing the “t” test.

**REFERENCE MATERIAL CDN-ME-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
	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
ME-4-1	1.88	1.86	1.72	1.86	1.87	1.83	1.81	1.87	1.77	1.84	1.77	1.87	1.71
ME-4-2	1.82	1.85	1.76	1.86	1.86	1.84	1.83	1.75	1.80	1.81	1.78	1.86	1.72
ME-4-3	1.81	1.84	1.76	1.86	1.87	1.85	1.84	1.76	1.78	1.83	1.77	1.83	1.72
ME-4-4	1.88	1.80	1.74	1.86	1.83	1.86	1.83	1.85	1.82	1.81	1.76	1.82	1.72
ME-4-5	1.90	1.84	1.78	1.85	1.83	1.90	1.85	1.81	1.82	1.81	1.77	1.85	1.72
ME-4-6	1.86	1.85	1.76	1.88	1.85	1.87	1.84	1.79	1.76	1.85	1.77	1.91	1.73
ME-4-7	1.87	1.86	1.78	1.86	1.80	1.91	1.84	1.84	1.77	1.86	1.78	1.87	1.71
ME-4-8	1.88	1.85	1.73	1.86	1.82	1.86	1.86	1.85	1.81	1.83	1.77	1.92	1.73
ME-4-9	1.93	1.87	1.73	1.86	1.85	1.85	1.79	1.88	1.78	1.84	1.77	1.83	1.72
ME-4-10	1.88	1.83	1.76	1.87	1.87	1.82	1.81	1.82	1.79	1.82	1.78	1.83	1.73
Mean	1.87	1.84	1.75	1.86	1.85	1.86	1.83	1.82	1.79	1.83	1.77	1.86	1.72
Std. Devn.	0.0361	0.0215	0.0210	0.0079	0.0242	0.0285	0.0204	0.0444	0.0216	0.0176	0.0072	0.0345	0.0056
% RSD	1.93	1.17	1.20	0.42	1.31	1.53	1.12	2.44	1.21	0.96	0.41	1.85	0.32
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
ME-4-1	4.54	4.23	4.12	4.19	4.41	4.28	4.23	4.15	4.00	4.28	4.30	4.41	4.29
ME-4-2	4.51	4.23	4.12	4.15	4.29	4.21	4.14	3.97	4.07	4.26	4.32	4.41	4.27
ME-4-3	4.43	4.18	4.06	4.15	4.28	4.31	4.41	4.03	3.95	4.31	4.32	4.44	4.21
ME-4-4	4.56	4.11	4.04	4.12	4.50	4.28	4.25	4.17	4.10	4.31	4.29	4.40	4.28
ME-4-5	4.57	4.20	4.14	4.09	4.42	4.31	4.34	4.09	4.05	4.27	4.32	4.43	4.27
ME-4-6	4.47	4.21	4.12	4.10	4.66	4.21	4.21	4.05	3.95	4.30	4.36	4.46	4.23
ME-4-7	4.47	4.23	4.04	4.08	4.63	4.33	4.34	4.15	4.03	4.36	4.31	4.46	4.19
ME-4-8	4.44	4.20	4.15	4.20	4.54	4.23	4.39	4.17	4.18	4.29	4.31	4.43	4.23
ME-4-9	4.49	4.24	4.15	4.24	4.58	4.30	4.42	4.23	3.99	4.31	4.32	4.42	4.28
ME-4-10	4.39	4.21	4.10	4.16	4.76	4.31	4.31	4.11	4.06	4.30	4.31	4.41	4.23
Mean	4.49	4.20	4.10	4.15	4.51	4.28	4.30	4.11	4.04	4.30	4.32	4.43	4.25
Std. Devn.	0.0587	0.0378	0.0427	0.0518	0.158	0.0445	0.0933	0.078	0.0707	0.0277	0.018	0.0211	0.0339
% RSD	1.31	0.90	1.04	1.25	3.51	1.04	2.17	1.90	1.75	0.64	0.42	0.48	0.80
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
ME-4-1	1.15	1.10	1.05	1.09	1.15	1.08	1.05	1.10	1.04	1.07	1.12	1.15	1.15
ME-4-2	1.13	1.10	1.12	1.07	1.14	1.07	1.05	1.05	1.07	1.08	1.11	1.12	1.19
ME-4-3	1.13	1.08	1.08	1.05	1.13	1.08	1.07	1.06	1.05	1.08	1.12	1.12	1.19
ME-4-4	1.15	1.06	1.11	1.06	1.13	1.08	1.08	1.10	1.09	1.08	1.11	1.12	1.19
ME-4-5	1.16	1.08	1.09	1.10	1.13	1.09	1.05	1.07	1.09	1.08	1.12	1.12	1.14
ME-4-6	1.14	1.10	1.10	1.06	1.14	1.07	1.05	1.06	1.05	1.09	1.11	1.14	1.18
ME-4-7	1.16	1.10	1.06	1.09	1.12	1.09	1.05	1.09	1.07	1.10	1.13	1.14	1.16
ME-4-8	1.15	1.08	1.10	1.07	1.12	1.08	1.06	1.09	1.09	1.08	1.11	1.14	1.13
ME-4-9	1.18	1.10	1.09	1.05	1.12	1.08	1.06	1.10	1.05	1.07	1.11	1.12	1.13
ME-4-10	1.15	1.08	1.07	1.08	1.16	1.10	1.04	1.08	1.07	1.08	1.11	1.11	1.19
Mean	1.15	1.09	1.09	1.07	1.13	1.08	1.06	1.08	1.07	1.08	1.11	1.13	1.16
Std. Devn.	0.0149	0.0122	0.0221	0.0177	0.0135	0.0092	0.0103	0.0189	0.0189	0.0088	0.0076	0.0132	0.026
% RSD	1.30	1.12	2.04	1.65	1.19	0.85	0.97	1.75	1.77	0.81	0.68	1.17	2.24

**NOTE:** Cu data from Lab. 13 was excluded for failing the “t” test.  
Pb data from Lab. 5 was excluded for failing the “t” test.

## REFERENCE MATERIAL CDN-ME-4

### Participating Laboratories:

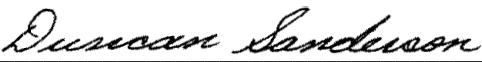
(not in same order as listed in table of results)

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Certified by

  
Duncan Sanderson, Certified Assayer of B.C.

Geochemist

  
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