

# **CDN Resource Laboratories Ltd.**

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## **REFERENCE MATERIAL: CDN-ME-16**

Recommended values and the “Between Lab” Two Standard Deviations

<b>Gold</b>	<b>1.48</b>	<b>g/t</b>	<b>±</b>	<b>0.14</b>	<b>g/t</b>
<b>Silver</b>	<b>30.8</b>	<b>g/t</b>	<b>±</b>	<b>2.2</b>	<b>g/t</b>
<b>Copper</b>	<b>0.671</b>	<b>%</b>	<b>±</b>	<b>0.036</b>	<b>%</b>
<b>Lead</b>	<b>0.879</b>	<b>%</b>	<b>±</b>	<b>0.040</b>	<b>%</b>
<b>Zinc</b>	<b>0.807</b>	<b>%</b>	<b>±</b>	<b>0.040</b>	<b>%</b>

**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 31, 2011

### **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.

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

	Percent			Percent
SiO <sub>2</sub>	47.8		MgO	3.9
Al <sub>2</sub> O <sub>3</sub>	14.0		K <sub>2</sub> O	1.2
Fe <sub>2</sub> O <sub>3</sub>	14.6		TiO <sub>2</sub>	0
CaO	9.0		LOI	5.3
Na <sub>2</sub> O	1.2		S	6.5
C	0.8			

### **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-16**

**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-16-1	1.56	1.50	1.51	1.55	1.55	1.53	1.47	1.16	1.27	1.50	1.29	1.46	1.48	1.45	1.48
ME-16-2	1.47	1.42	1.51	1.52	1.50	1.62	1.46	1.46	1.23	1.55	1.52	1.48	1.45	1.43	1.50
ME-16-3	1.51	1.42	1.46	1.56	1.52	1.46	1.43	1.28	1.26	1.55	1.29	1.36	1.55	1.37	1.45
ME-16-4	1.58	1.46	1.50	1.52	1.54	1.69	1.54	1.25	1.18	1.51	1.50	1.34	1.54	1.40	1.59
ME-16-5	1.40	1.46	1.51	1.51	1.48	1.58	1.25	1.32	1.35	1.59	1.46	1.47	1.57	1.45	1.53
ME-16-6	1.43	1.39	1.42	1.45	1.58	1.49	1.47	1.22	1.18	1.35	1.29	1.32	1.51	1.46	1.48
ME-16-7	1.42	1.49	1.51	1.65	1.51	1.51	1.50	1.31	1.10	1.46	1.52	1.37	1.46	1.51	1.52
ME-16-8	1.56	1.42	1.49	1.37	1.45	1.64	1.48	1.18	1.31	1.55	1.35	1.45	1.55	1.49	1.54
ME-16-9	1.56	1.47	1.50	1.58	1.57	1.52	1.69	1.51	1.15	1.68	1.24	1.46	1.55	1.42	1.45
ME-16-10	1.53	1.45	1.48	1.43	1.54	1.52	1.53	1.45	1.29	1.42	1.50	1.38	1.52	1.45	1.48
Mean	1.50	1.45	1.49	1.51	1.52	1.56	1.48	1.31	1.23	1.52	1.40	1.41	1.52	1.44	1.50
Std. Devn.	0.0673	0.0364	0.0292	0.0804	0.0409	0.0725	0.1089	0.1208	0.0790	0.0912	0.1138	0.0606	0.0418	0.0408	0.0437
% RSD	4.48	2.52	1.96	5.31	2.69	4.66	7.34	9.20	6.41	6.02	8.15	4.30	2.76	2.83	2.91
	Ag g/t														
ME-16-1	32.9	32	30.0	31	30.0	30.4	32	30.9	26.2	30.6	31.2	31	30	29.4	30.8
ME-16-2	33.0	29	31.0	31	31.2	30.0	32	30.6	25.7	30.5	34.7	29	30	30.2	31.1
ME-16-3	32.5	29	29.5	30	31.9	30.3	32	31.2	24.8	30.0	29.1	31	30	29.7	31.6
ME-16-4	32.0	30	31.5	30	30.3	29.9	32	31.6	25.4	30.4	38.7	32	29	31.1	31.3
ME-16-5	32.8	30	30.5	30	31.1	30.0	33	30.0	27.4	29.8	29.2	31	29	30.1	31.1
ME-16-6	32.7	30	32.0	30	30.4	28.8	32	30.0	27.5	30.0	29.3	30	30	28.9	30.8
ME-16-7	32.4	33	30.5	30	30.2	33.0	32	33.2	28.1	30.4	29.5	32	31	31.6	30.8
ME-16-8	32.5	33	30.0	30	31.0	31.4	32	32.4	28.4	32.0	39.0	31	30	29.5	30.5
ME-16-9	33.9	30	30.0	32	30.8	30.0	32	31.6	27.0	31.7	23.3	32	30	30.4	32.0
ME-16-10	32.6	31	30.5	31	30.7	30.2	31	31.9	26.8	30.7	29.7	30	30	29.3	30.4
Mean	32.7	30.7	30.6	30.5	30.8	30.4	32.0	31.3	26.7	30.6	31.4	30.9	29.9	30.0	31.0
Std. Devn.	0.4990	1.4944	0.7619	0.7071	0.5728	1.1106	0.4714	1.0309	1.1842	0.7138	4.8146	0.9944	0.5676	0.8417	0.4926
% RSD	1.52	4.87	2.49	2.32	1.86	3.65	1.47	3.29	4.43	2.33	15.35	3.22	1.90	2.80	1.59

**Note: Both Au and Ag results from Laboratory 9 were removed for failing the “t” test.**

## **REFERENCE MATERIAL CDN-ME-16**

**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-16-1	0.70	0.688	0.676	0.684	0.674	0.68	0.681	0.69	0.687	0.680	0.654	0.656	0.652	0.670	0.645
ME-16-2	0.71	0.680	0.651	0.664	0.675	0.68	0.679	0.69	0.673	0.657	0.661	0.605	0.653	0.664	0.648
ME-16-3	0.68	0.675	0.648	0.666	0.677	0.69	0.698	0.70	0.656	0.655	0.691	0.636	0.662	0.685	0.647
ME-16-4	0.70	0.680	0.678	0.664	0.669	0.70	0.696	0.71	0.649	0.667	0.692	0.631	0.661	0.675	0.640
ME-16-5	0.70	0.684	0.652	0.657	0.675	0.69	0.694	0.68	0.718	0.657	0.666	0.634	0.660	0.671	0.648
ME-16-6	0.68	0.672	0.655	0.665	0.660	0.68	0.699	0.70	0.725	0.660	0.639	0.627	0.652	0.669	0.645
ME-16-7	0.69	0.679	0.657	0.675	0.670	0.69	0.691	0.67	0.711	0.665	0.653	0.655	0.657	0.674	0.647
ME-16-8	0.69	0.683	0.646	0.659	0.672	0.68	0.690	0.69	0.726	0.666	0.653	0.651	0.639	0.679	0.651
ME-16-9	0.69	0.680	0.663	0.662	0.675	0.68	0.692	0.70	0.698	0.679	0.658	0.666	0.643	0.683	0.647
ME-16-10	0.69	0.692	0.667	0.663	0.674	0.68	0.690	0.70	0.684	0.666	0.642	0.632	0.645	0.672	0.651
Mean	0.693	0.681	0.659	0.666	0.672	0.685	0.691	0.693	0.693	0.665	0.661	0.639	0.652	0.674	0.647
Std. Devn.	0.0095	0.0058	0.0113	0.0078	0.0048	0.0071	0.0066	0.0116	0.0277	0.0085	0.0180	0.0178	0.0079	0.0065	0.0032
% RSD	1.37	0.86	1.72	1.17	0.72	1.03	0.96	1.67	4.00	1.28	2.72	2.79	1.22	0.97	0.49
	% Pb														
ME-16-1	0.94	0.861	0.870	0.882	0.884	0.88	0.890	0.88	0.948	0.902	0.898	0.906	0.889	0.87	0.883
ME-16-2	0.93	0.849	0.867	0.852	0.902	0.85	0.880	0.88	0.936	0.906	0.903	0.826	0.897	0.87	0.877
ME-16-3	0.94	0.836	0.879	0.847	0.901	0.87	0.890	0.87	0.912	0.904	0.943	0.858	0.901	0.89	0.889
ME-16-4	0.95	0.853	0.906	0.860	0.883	0.87	0.890	0.84	0.901	0.914	0.962	0.859	0.891	0.86	0.872
ME-16-5	0.95	0.852	0.890	0.846	0.888	0.86	0.890	0.89	1.008	0.893	0.903	0.854	0.895	0.87	0.888
ME-16-6	0.96	0.837	0.892	0.857	0.896	0.85	0.890	0.87	1.011	0.910	0.881	0.845	0.903	0.86	0.880
ME-16-7	0.95	0.852	0.885	0.878	0.890	0.86	0.880	0.91	0.990	0.904	0.876	0.881	0.901	0.87	0.893
ME-16-8	0.95	0.847	0.873	0.858	0.899	0.86	0.880	0.90	1.040	0.907	0.860	0.886	0.879	0.85	0.892
ME-16-9	0.96	0.841	0.867	0.848	0.901	0.86	0.880	0.89	0.973	0.923	0.880	0.862	0.904	0.88	0.888
ME-16-10	0.95	0.860	0.880	0.852	0.901	0.86	0.880	0.90	0.949	0.905	0.892	0.870	0.898	0.85	0.877
Mean	0.948	0.849	0.881	0.858	0.894	0.862	0.885	0.883	0.967	0.907	0.900	0.844	0.896	0.867	0.884
Std. Devn.	0.0092	0.0087	0.0126	0.0125	0.0075	0.0092	0.0053	0.0200	0.0454	0.0081	0.0311	0.0459	0.0077	0.0125	0.0072
% RSD	0.97	1.02	1.43	1.46	0.84	1.07	0.60	2.27	4.69	0.89	3.46	5.44	0.86	1.44	0.81
	% Zn														
ME-16-1	0.78	0.830	0.78	0.840	0.800	0.83	0.850	0.81	0.750	0.819	0.871	0.820	0.801	0.81	0.797
ME-16-2	0.77	0.816	0.80	0.828	0.801	0.82	0.850	0.81	0.737	0.798	0.865	0.761	0.816	0.81	0.792
ME-16-3	0.78	0.807	0.80	0.825	0.800	0.83	0.850	0.79	0.724	0.808	0.885	0.776	0.804	0.82	0.786
ME-16-4	0.79	0.824	0.81	0.827	0.802	0.83	0.870	0.77	0.719	0.821	0.933	0.776	0.796	0.81	0.793
ME-16-5	0.80	0.827	0.79	0.816	0.802	0.82	0.870	0.81	0.792	0.803	0.835	0.780	0.804	0.81	0.783
ME-16-6	0.80	0.809	0.80	0.827	0.801	0.81	0.870	0.80	0.799	0.803	0.842	0.772	0.819	0.80	0.799
ME-16-7	0.79	0.825	0.80	0.848	0.800	0.83	0.850	0.83	0.786	0.812	0.810	0.799	0.803	0.83	0.793
ME-16-8	0.79	0.821	0.78	0.823	0.803	0.82	0.850	0.82	0.793	0.811	0.781	0.803	0.807	0.82	0.796
ME-16-9	0.79	0.822	0.78	0.825	0.807	0.82	0.850	0.82	0.778	0.819	0.791	0.781	0.800	0.82	0.784
ME-16-10	0.79	0.835	0.79	0.829	0.802	0.82	0.850	0.81	0.760	0.810	0.831	0.784	0.792	0.81	0.791
Mean	0.788	0.822	0.793	0.829	0.802	0.823	0.856	0.807	0.764	0.810	0.844	0.785	0.804	0.814	0.791
Std. Devn.	0.0092	0.0088	0.0106	0.0090	0.0021	0.0067	0.0097	0.0170	0.0300	0.0076	0.0459	0.0173	0.0082	0.0084	0.0055
% RSD	1.17	1.07	1.34	1.08	0.26	0.82	1.13	2.11	3.93	0.93	5.44	2.20	1.03	1.04	0.69

Note: Pb data from Laboratory 9 was removed for failing the "t" test.

## **REFERENCE MATERIAL CDN-ME-16**

### **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  
AGAT Laboratories, Ontario, Canada  
AHK Geochem, Alaska, USA  
ALS Chemex Laboratories, North Vancouver  
Genalysis Laboratory, Australia  
Inspectorate, Richmond, B.C. Canada  
Omac Laboratories Ltd., Ireland  
Skyline Assayers and Laboratories, Arizona, USA  
SGS – Vancouver, B.C., Canada  
Stewart Group, Kamloops, B.C., Canada  
Alex Stewart Argentina SA  
TSL Laboratories Ltd., Saskatoon  
Ultra Trace Analytical Laboratories, Australia

### **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*  
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Duncan Sanderson, Certified Assayer of B.C.

Geochemist

*Barry Smee*  
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