

CDN Resource Laboratories Ltd.

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

REFERENCE MATERIAL: CDN-ME-1412

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<i>0.206 g/t</i>	\pm	<i>0.036 g/t</i>	<i>Provisional value</i>
<i>Silver</i>	<i>29.1 g/t</i>	\pm	<i>2.8 g/t</i>	<i>Certified value</i>
<i>Copper</i>	<i>0.652 %</i>	\pm	<i>0.026 %</i>	<i>Certified value</i>
<i>Lead</i>	<i>0.382 %</i>	\pm	<i>0.012 %</i>	<i>Certified value</i>
<i>Zinc</i>	<i>2.00 %</i>	\pm	<i>0.06 %</i>	<i>Certified value</i>

Note 1: 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: February 20, 2015

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 laboratories for round robin assaying.

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-ME-1412 is made from ore supplied by MMG (Minerals & Metals Group). The ore is described as massive to semi-massive sulphides from an archaic aged VMS deposit in the Slave structural province of Canada. It consists of pyrite, pyrrhotite, chalcocopyrite, sphalerite and minor galena. Gangue minerals include quartz, chlorite, feldspar, cordierite, biotite, magnetite, anthophyllite and grunerite.

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

	Percent		Percent
SiO ₂	52.4	MgO	6.4
Al ₂ O ₃	10.4	K ₂ O	1.8
Fe ₂ O ₃	15.7	TiO ₂	0.4
CaO	1.8	LOI	6.7
Na ₂ O	0.5	S	6.9
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 ± 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.

REFERENCE MATERIAL CDN-ME-1412

Assay Procedures:

Au: Fire assay pre-concentration, AA or ICP finish.
Ag, Cu, Pb, Zn: 4-acid digestion, AA or ICP finish.

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	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
ME-1412-1	0.240	0.190	0.213	0.169	0.186	0.186	0.219	0.211	0.200	0.220	0.188	0.230	0.205	0.217	0.220
ME-1412-2	0.265	0.206	0.200	0.179	0.168	0.204	0.216	0.174	0.187	0.233	0.191	0.255	0.244	0.226	0.230
ME-1412-3	0.220	0.180	0.224	0.209	0.176	0.185	0.220	0.201	0.194	0.183	0.211	0.213	0.215	0.196	0.210
ME-1412-4	0.202	0.168	0.209	0.199	0.191	0.194	0.219	0.242	0.194	0.230	0.222	0.253	0.201	0.201	0.230
ME-1412-5	0.192	0.181	0.215	0.212	0.196	0.214	0.217	0.197	0.187	0.189	0.196	0.214	0.212	0.222	0.190
ME-1412-6	0.203	0.197	0.221	0.174	0.214	0.197	0.224	0.182	0.192	0.245	0.228	0.226	0.219	0.204	0.190
ME-1412-7	0.242	0.211	0.221	0.164	0.178	0.209	0.221	0.174	0.204	0.229	0.214	0.231	0.188	0.203	0.210
ME-1412-8	0.223	0.210	0.240	0.173	0.192	0.185	0.226	0.189	0.216	0.195	0.198	0.195	0.201	0.226	0.220
ME-1412-9	0.195	0.203	0.214	0.216	0.183	0.195	0.221	0.184	0.186	0.196	0.233	0.217	0.224	0.227	0.230
ME-1412-10	0.206	0.232	0.211	0.173	0.204	0.191	0.216	0.190	0.198	0.179	0.187	0.211	0.211	0.208	0.220
Mean	0.219	0.198	0.217	0.187	0.189	0.196	0.220	0.194	0.196	0.210	0.207	0.225	0.212	0.213	0.215
Std. Devn.	0.0239	0.0187	0.0107	0.0199	0.0137	0.0102	0.0033	0.0204	0.0092	0.0240	0.0171	0.0188	0.0153	0.0119	0.0151
% RSD	10.90	9.44	4.93	10.66	7.25	5.19	1.49	10.48	4.72	11.42	8.26	8.36	7.20	5.58	7.02
	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	Ag g/t
ME-1412-1	29.2	30.0	28.0	28.0	29.2	27.9	29.0	29.0	32.0	29.0	28.0	28.0	27.8	28.7	28.5
ME-1412-2	27.8	31.0	29.0	28.0	31.4	28.8	31.0	31.0	32.0	28.0	28.0	28.0	27.5	28.9	28.5
ME-1412-3	28.3	31.0	28.0	27.0	31.5	27.5	31.0	27.0	32.0	28.0	29.0	29.0	28.0	28.4	28.5
ME-1412-4	28.5	31.0	29.0	26.0	31.3	29.5	30.0	29.0	31.0	26.0	28.0	28.0	28.4	29.0	28.0
ME-1412-5	28.8	32.0	28.0	26.0	30.5	28.0	30.0	28.0	30.0	28.0	29.0	27.0	28.7	28.9	29.5
ME-1412-6	29.0	31.0	29.0	28.0	32.4	28.0	30.0	32.0	30.0	29.0	28.0	28.0	28.0	29.3	28.5
ME-1412-7	28.8	32.0	30.0	27.0	31.4	28.4	30.0	31.0	31.0	28.0	30.0	28.0	27.4	28.7	30.0
ME-1412-8	28.3	31.0	28.0	27.0	31.9	28.4	31.0	31.0	33.0	28.0	29.0	27.0	28.2	29.3	28.0
ME-1412-9	29.1	31.0	29.0	26.0	30.6	29.2	30.0	29.0	31.0	27.0	28.0	28.0	26.2	29.8	28.5
ME-1412-10	28.8	30.0	28.0	27.0	31.8	29.9	30.0	32.0	31.0	27.0	28.0	28.0	26.9	29.2	28.0
Mean	28.7	31.0	28.6	27.0	31.2	28.6	30.2	29.9	31.3	27.8	28.5	27.9	27.7	29.0	28.6
Std. Devn.	0.4326	0.6667	0.6992	0.8165	0.9018	0.7734	0.6325	1.7288	0.9487	0.9189	0.7071	0.5676	0.7415	0.3967	0.6583
% RSD	1.51	2.15	2.44	3.02	2.89	2.71	2.09	5.78	3.03	3.31	2.48	2.03	2.68	1.37	2.30

REFERENCE MATERIAL CDN-ME-1412

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	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
ME-1412-1	0.647	0.671	0.645	0.640	0.653	0.644	0.657	0.633	0.660	0.638	0.658	0.620	0.670	0.640	0.665
ME-1412-2	0.625	0.671	0.651	0.643	0.681	0.650	0.652	0.633	0.660	0.660	0.662	0.650	0.680	0.631	0.660
ME-1412-3	0.625	0.669	0.646	0.640	0.688	0.645	0.648	0.632	0.660	0.640	0.659	0.640	0.670	0.650	0.672
ME-1412-4	0.652	0.668	0.652	0.641	0.679	0.644	0.638	0.637	0.660	0.637	0.659	0.630	0.690	0.658	0.665
ME-1412-5	0.649	0.669	0.650	0.637	0.679	0.651	0.651	0.632	0.690	0.650	0.660	0.640	0.700	0.640	0.667
ME-1412-6	0.636	0.685	0.651	0.641	0.676	0.636	0.655	0.661	0.660	0.651	0.656	0.610	0.700	0.642	0.670
ME-1412-7	0.652	0.668	0.644	0.638	0.690	0.653	0.662	0.660	0.660	0.635	0.660	0.630	0.680	0.642	0.667
ME-1412-8	0.653	0.676	0.648	0.642	0.672	0.653	0.656	0.655	0.660	0.642	0.657	0.630	0.690	0.640	0.666
ME-1412-9	0.652	0.664	0.649	0.641	0.653	0.650	0.662	0.657	0.660	0.643	0.656	0.640	0.690	0.656	0.665
ME-1412-10	0.649	0.670	0.646	0.646	0.674	0.657	0.654	0.646	0.670	0.630	0.661	0.630	0.680	0.655	0.673
Mean	0.644	0.671	0.648	0.641	0.675	0.648	0.654	0.645	0.664	0.643	0.659	0.632	0.685	0.645	0.667
Std. Devn.	0.0111	0.0057	0.0028	0.0025	0.0126	0.0059	0.0070	0.0125	0.0097	0.0088	0.0020	0.0114	0.0108	0.0088	0.0038
% RSD	1.73	0.86	0.44	0.39	1.87	0.92	1.08	1.94	1.45	1.38	0.31	1.80	1.58	1.36	0.57
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
ME-1412-1	0.373	0.390	0.389	0.379	0.365	0.374	0.387	0.372	0.377	0.377	0.380	0.380	0.400	0.380	0.392
ME-1412-2	0.366	0.390	0.378	0.381	0.383	0.375	0.387	0.377	0.384	0.379	0.380	0.400	0.390	0.377	0.396
ME-1412-3	0.369	0.390	0.381	0.379	0.401	0.374	0.387	0.379	0.377	0.378	0.382	0.390	0.390	0.380	0.399
ME-1412-4	0.376	0.390	0.387	0.384	0.396	0.374	0.398	0.379	0.381	0.368	0.383	0.390	0.400	0.380	0.381
ME-1412-5	0.378	0.400	0.388	0.383	0.390	0.379	0.384	0.377	0.390	0.382	0.384	0.380	0.410	0.379	0.386
ME-1412-6	0.375	0.400	0.387	0.381	0.392	0.373	0.385	0.387	0.373	0.381	0.378	0.370	0.400	0.382	0.376
ME-1412-7	0.378	0.390	0.383	0.380	0.402	0.376	0.382	0.385	0.382	0.377	0.385	0.370	0.400	0.381	0.385
ME-1412-8	0.383	0.390	0.387	0.383	0.388	0.379	0.378	0.384	0.379	0.381	0.379	0.390	0.400	0.381	0.388
ME-1412-9	0.383	0.390	0.382	0.379	0.381	0.384	0.391	0.382	0.378	0.375	0.378	0.380	0.400	0.387	0.386
ME-1412-10	0.381	0.390	0.382	0.381	0.389	0.390	0.385	0.385	0.379	0.373	0.380	0.380	0.400	0.384	0.391
Mean	0.376	0.392	0.384	0.381	0.389	0.378	0.386	0.381	0.380	0.377	0.381	0.383	0.399	0.381	0.388
Std. Devn.	0.0057	0.0042	0.0037	0.0018	0.0108	0.0054	0.0053	0.0047	0.0046	0.0043	0.0025	0.0095	0.0057	0.0029	0.0068
% RSD	1.51	1.08	0.95	0.48	2.78	1.42	1.38	1.23	1.22	1.13	0.65	2.48	1.42	0.76	1.76
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
ME-1412-1	1.96	2.02	2.01	1.99	2.03	1.97	1.98	1.96	1.97	1.97	2.05	1.89	1.98	1.98	2.06
ME-1412-2	1.94	2.02	2.00	2.00	2.11	2.04	1.98	1.97	1.99	2.04	2.05	1.97	1.99	1.97	2.02
ME-1412-3	1.94	2.01	2.00	1.98	2.11	2.02	1.96	1.97	1.98	1.98	2.04	1.96	1.99	1.98	2.03
ME-1412-4	1.99	2.03	2.02	1.99	2.06	2.02	1.94	1.99	1.98	1.95	2.05	1.92	2.05	1.99	2.02
ME-1412-5	2.00	2.01	2.00	2.00	2.13	2.03	1.96	1.96	1.87	2.01	2.04	1.98	2.06	1.97	2.05
ME-1412-6	2.01	2.07	2.01	1.99	2.11	1.95	1.98	2.02	2.00	2.00	2.05	1.85	2.07	1.99	2.05
ME-1412-7	2.01	2.01	2.00	1.98	2.12	1.98	1.96	2.03	1.97	1.96	2.04	1.92	2.01	1.98	2.01
ME-1412-8	1.97	2.04	2.02	2.00	2.11	2.01	1.98	2.00	1.98	1.98	2.04	1.93	2.04	1.98	2.01
ME-1412-9	2.00	2.00	2.00	1.98	2.04	2.00	1.97	2.02	1.96	1.98	2.05	1.96	2.05	2.01	2.02
ME-1412-10	1.98	2.03	1.98	2.00	2.13	2.01	1.96	1.99	2.00	1.94	2.06	1.92	2.03	2.00	2.03
Mean	1.98	2.02	2.00	1.99	2.10	2.00	1.97	1.99	1.97	1.98	2.05	1.93	2.03	1.98	2.03
Std. Devn.	0.0291	0.0201	0.0117	0.0088	0.0372	0.0276	0.0134	0.0271	0.0371	0.0307	0.0077	0.0397	0.0323	0.0111	0.0176
% RSD	1.47	0.99	0.59	0.44	1.78	1.38	0.68	1.36	1.88	1.55	0.38	2.06	1.60	0.56	0.87

Notes: **Cu data from laboratory 13 was removed for failing the t test.**
Pb data from laboratory 13 was removed for failing the t test.
Zn data from laboratory 5 was removed for failing the t test.

REFERENCE MATERIAL CDN-ME-1412

Participating Laboratories:

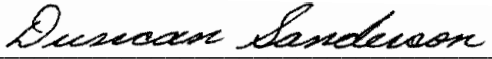
(not in same order as listed in table of results)

Bureau Veritas, Vancouver, BC, Canada
Actlabs, Ancaster, Ontario, Canada
Actlabs, Thunder Bay, Ontario, Canada
AGAT, Mississauga, Ontario, Canada
ALS Canada Inc., North Vancouver, BC, Canada
ALS, Loughrea, Ireland (Omac)
American Assay Laboratories, Nevada, USA
Certimin, Lima, Peru
Inspectorate, Lima, Peru
Met-Solve, Langley, B.C., Canada
SGS, Lima, Peru
SGS Canada Inc., Burnaby, BC, Canada
Skyline Assayers and Laboratories, Arizona, USA
TSL Laboratories Ltd., Saskatoon, Saskatchewan, Canada
Bureau Veritas, Perth, 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, Certified Assayer of B.C.

Geochemist


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