

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-1410

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<i>0.542 g/t</i>	\pm	<i>0.048 g/t</i>	<i>Certified value</i>
<i>Silver</i>	<i>69.0 g/t</i>	\pm	<i>3.8 g/t</i>	<i>Certified value</i>
<i>Copper</i>	<i>3.80 %</i>	\pm	<i>0.17 %</i>	<i>Certified value</i>
<i>Lead</i>	<i>0.248 %</i>	\pm	<i>0.012 %</i>	<i>Certified value</i>
<i>Zinc</i>	<i>3.682 %</i>	\pm	<i>0.084 %</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.

Note 2: Standard CDN-ME-1410 is a high sulphide sample and has been pre-packaged in kraft bags which have been individually vacuum-sealed in nylon bags in either 60g or 100g quantities. It is available for purchase in lots of either 10 x 60g or 10 x 100g. High sulphide samples will stay valid indefinitely while vacuum sealed and should stay that way until the lab is ready to analyse the standard. After opening we cannot guarantee their accuracy for any length of time but resealing and storing in a cold dark place should reduce the oxidation rate.

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 17, 2014

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-1410 is made from ore supplied by MMG (Minerals & Metals Group). The ore is described as massive to semi-massive sulphides from an archean aged VMS deposit in the Slave structural province of Canada. It consists of pyrite, pyrrhotite, chalcopyrite, 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	24.2	MgO	3.7
Al ₂ O ₃	2.5	K ₂ O	0.2
Fe ₂ O ₃	43.8	TiO ₂	0.1
CaO	1.3	LOI	16.7
Na ₂ O	0.1	S	27.2
C	1.2		

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-1410

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-1410-1	0.547	0.571	0.602	0.549	0.552	0.535	0.544	0.528	0.52	0.533	0.541	0.554	0.574	0.532	0.52
ME-1410-2	0.525	0.509	0.604	0.549	0.517	0.573	0.560	0.564	0.53	0.583	0.516	0.512	0.537	0.527	0.49
ME-1410-3	0.565	0.543	0.629	0.512	0.579	0.527	0.557	0.509	0.50	0.568	0.544	0.573	0.570	0.531	0.50
ME-1410-4	0.584	0.508	0.615	0.590	0.561	0.586	0.548	0.602	0.50	0.557	0.524	0.522	0.572	0.504	0.55
ME-1410-5	0.515	0.591	0.601	0.549	0.519	0.588	0.555	0.512	0.56	0.579	0.515	0.553	0.563	0.529	0.54
ME-1410-6	0.535	0.549	0.604	0.588	0.528	0.581	0.543	0.520	0.60	0.505	0.524	0.581	0.511	0.514	0.53
ME-1410-7	0.522	0.511	0.578	0.568	0.576	0.568	0.536	0.497	0.53	0.540	0.520	0.512	0.576	0.526	0.55
ME-1410-8	0.514	0.573	0.608	0.546	0.516	0.527	0.541	0.564	0.56	0.533	0.537	0.567	0.577	0.527	0.54
ME-1410-9	0.550	0.539	0.578	0.533	0.606	0.542	0.558	0.524	0.55	0.548	0.538	0.538	0.607	0.528	0.50
ME-1410-10	0.562	0.525	0.578	0.527	0.534	0.566	0.544	0.505	0.49	0.539	0.532	0.568	0.569	0.542	0.57
Mean	0.542	0.542	0.600	0.551	0.549	0.559	0.549	0.533	0.534	0.549	0.529	0.548	0.566	0.526	0.529
Std. Devn.	0.0236	0.0294	0.0171	0.0250	0.0311	0.0242	0.0083	0.0334	0.0341	0.0238	0.0106	0.0256	0.0256	0.0103	0.0260
% RSD	4.36	5.42	2.84	4.54	5.67	4.34	1.51	6.28	6.38	4.34	2.01	4.67	4.53	1.96	4.92
	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-1410-1	67.4	70	71	68	67.0	68	71	69	69	69	70	66	71	67.1	65.5
ME-1410-2	65.3	72	67	67	70.1	68	74	70	70	71	69	69	70	67.2	65.0
ME-1410-3	73.6	70	67	70	68.6	69	73	66	76	70	70	69	69	67.9	67.5
ME-1410-4	71.3	69	68	67	69.8	69	72	69	68	72	69	64	69	68.3	65.0
ME-1410-5	68.4	68	66	66	67.8	69	71	68	71	69	71	70	70	67.6	68.0
ME-1410-6	66.8	68	67	69	67.4	68	73	67	72	69	70	68	67	68.0	66.5
ME-1410-7	69.2	70	71	71	69.7	68	73	67	71	69	70	68	67	68.9	64.0
ME-1410-8	71.1	70	67	71	68.0	68	72	72	71	67	70	69	69	68.0	64.5
ME-1410-9	65.3	71	68	69	69.5	69	71	70	70	70	72	69	68	65.9	65.5
ME-1410-10	63.0	73	65	67	67.8	70	71	71	71	70	69	72	72	67.8	65.5
Mean	68.1	70.1	67.7	68.5	68.6	68.6	72.1	68.9	70.9	69.6	70.0	68.4	69.2	67.7	65.7
Std. Devn.	3.243	1.595	1.947	1.780	1.123	0.699	1.101	1.912	2.132	1.350	0.943	2.171	1.556	0.808	1.274
% RSD	4.76	2.28	2.88	2.60	1.64	1.02	1.53	2.77	3.01	1.94	1.35	3.17	2.25	1.19	1.94

Notes: Au data from laboratory 3 was removed for failing the t test.

REFERENCE MATERIAL CDN-ME-1410

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-1410-1	3.75	3.79	3.65	3.93	3.80	3.82	3.67	3.87	4.11	3.79	3.79	3.70	3.78	3.98	3.94
ME-1410-2	3.71	3.81	3.74	3.91	3.85	3.81	3.70	3.83	4.08	3.81	3.77	3.74	3.72	3.92	3.82
ME-1410-3	3.65	3.75	3.64	4.02	3.84	3.72	3.69	3.75	4.16	3.85	3.77	3.64	3.68	4.05	3.81
ME-1410-4	4.07	3.78	3.72	3.96	3.86	3.81	3.69	3.78	4.02	3.83	3.78	3.79	3.70	3.95	3.89
ME-1410-5	3.91	3.75	3.83	3.86	3.75	3.77	3.71	3.79	3.95	3.81	3.77	3.76	3.69	4.04	3.81
ME-1410-6	3.88	3.82	3.89	3.98	3.78	3.75	3.69	3.79	4.02	3.80	3.77	3.90	3.73	4.01	3.83
ME-1410-7	3.89	3.79	3.79	3.97	3.76	3.89	3.67	3.84	4.03	3.83	3.79	3.78	3.72	3.94	3.91
ME-1410-8	4.11	3.85	3.82	3.78	3.88	3.88	3.70	3.91	4.19	3.77	3.77	3.72	3.68	4.02	3.84
ME-1410-9	3.67	3.86	3.88	3.96	3.79	3.76	3.69	3.82	3.95	3.80	3.77	3.86	3.78	4.02	3.90
ME-1410-10	3.76	3.83	3.67	3.94	3.70	3.81	3.70	3.82	4.15	3.83	3.77	3.78	3.77	4.01	3.82
Mean	3.84	3.80	3.76	3.93	3.80	3.80	3.69	3.82	4.07	3.81	3.78	3.77	3.73	3.99	3.86
Std. Devn.	0.1596	0.0379	0.0926	0.0682	0.0565	0.0562	0.0129	0.0464	0.0827	0.0235	0.0089	0.0751	0.0395	0.0439	0.0481
% RSD	4.16	1.00	2.46	1.74	1.49	1.48	0.35	1.22	2.03	0.62	0.24	1.99	1.06	1.10	1.25
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
ME-1410-1	0.221	0.25	0.241	0.242	0.241	0.248	0.254	0.251	0.245	0.252	0.230	0.24	0.26	0.255	0.239
ME-1410-2	0.223	0.25	0.242	0.241	0.243	0.247	0.251	0.248	0.252	0.252	0.237	0.24	0.26	0.250	0.240
ME-1410-3	0.216	0.26	0.240	0.245	0.240	0.250	0.248	0.247	0.255	0.249	0.239	0.24	0.26	0.249	0.242
ME-1410-4	0.232	0.26	0.246	0.244	0.249	0.255	0.250	0.251	0.244	0.250	0.250	0.25	0.26	0.251	0.237
ME-1410-5	0.240	0.25	0.243	0.238	0.245	0.247	0.250	0.253	0.253	0.249	0.242	0.24	0.26	0.253	0.240
ME-1410-6	0.237	0.26	0.247	0.243	0.246	0.253	0.259	0.249	0.249	0.247	0.238	0.26	0.26	0.254	0.240
ME-1410-7	0.238	0.25	0.251	0.243	0.247	0.252	0.251	0.246	0.246	0.253	0.230	0.25	0.27	0.252	0.239
ME-1410-8	0.232	0.26	0.250	0.244	0.245	0.252	0.251	0.251	0.248	0.245	0.240	0.24	0.26	0.254	0.243
ME-1410-9	0.220	0.26	0.249	0.242	0.250	0.249	0.247	0.244	0.251	0.248	0.241	0.25	0.27	0.254	0.242
ME-1410-10	0.205	0.26	0.238	0.242	0.246	0.256	0.247	0.247	0.248	0.251	0.239	0.25	0.27	0.255	0.241
Mean	0.226	0.256	0.245	0.242	0.245	0.251	0.251	0.249	0.249	0.250	0.239	0.246	0.263	0.253	0.240
Std. Devn.	0.0113	0.0052	0.0045	0.0020	0.0032	0.0032	0.0036	0.0028	0.0035	0.0025	0.0058	0.0070	0.0048	0.0023	0.0018
% RSD	4.98	2.02	1.85	0.81	1.30	1.26	1.43	1.12	1.40	1.00	2.42	2.84	1.84	0.89	0.74
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
ME-1410-1	3.39	3.77	3.60	3.63	3.61	3.66	3.63	3.74	3.88	3.65	3.67	3.66	3.74	3.68	3.70
ME-1410-2	3.36	3.77	3.57	3.65	3.65	3.68	3.64	3.70	3.93	3.67	3.68	3.64	3.77	3.67	3.74
ME-1410-3	3.35	3.76	3.54	3.69	3.65	3.69	3.65	3.67	4.00	3.71	3.66	3.57	3.73	3.66	3.71
ME-1410-4	3.66	3.77	3.57	3.68	3.69	3.81	3.64	3.69	3.78	3.66	3.67	3.72	3.69	3.65	3.75
ME-1410-5	3.54	3.73	3.65	3.62	3.69	3.73	3.66	3.70	3.93	3.64	3.67	3.63	3.70	3.64	3.74
ME-1410-6	3.44	3.75	3.70	3.65	3.57	3.72	3.65	3.72	3.82	3.63	3.68	3.72	3.70	3.66	3.74
ME-1410-7	3.49	3.80	3.71	3.67	3.58	3.73	3.66	3.69	3.89	3.65	3.66	3.73	3.70	3.64	3.73
ME-1410-8	3.74	3.80	3.73	3.69	3.64	3.70	3.63	3.72	3.97	3.64	3.67	3.57	3.66	3.66	3.70
ME-1410-9	3.40	3.81	3.70	3.65	3.77	3.66	3.65	3.63	3.90	3.71	3.67	3.80	3.71	3.67	3.74
ME-1410-10	3.35	3.71	3.57	3.65	3.68	3.75	3.64	3.64	3.98	3.64	3.67	3.66	3.71	3.68	3.73
Mean	3.47	3.77	3.63	3.66	3.65	3.71	3.65	3.69	3.91	3.66	3.67	3.67	3.71	3.66	3.73
Std. Devn.	0.1368	0.0316	0.0717	0.0239	0.0591	0.0471	0.0108	0.0350	0.0710	0.0287	0.0059	0.0732	0.0300	0.0140	0.0181
% RSD	3.94	0.84	1.97	0.65	1.62	1.27	0.30	0.95	1.82	0.78	0.16	1.99	0.81	0.38	0.49

Notes: Cu data from laboratory 9 was removed for failing the t test.
Pb data from laboratory 1 was removed for failing the t test.
Zn data from laboratories 1 and 9 was removed for failing the t test.

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Participating Laboratories:

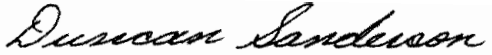
(not in same order as listed in table of results)

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
Intertek - Genalysis, Perth, Australia
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
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Certified by


Duncan Sanderson, Certified Assayer of B.C.

Geochemist


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