

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-2003

Recommended values and the “Between Lab” Two Standard Deviations

Gold	1.301 gpt	± 0.135 gpt	30 g FA, instrumental	Certified value
Silver	108 ppm	± 6 ppm	30 g FA, gravimetric	Certified value
Silver	106 ppm	± 9 ppm	4 Acid / ICP	Certified value
Copper	0.656 %	± 0.018 %	4 Acid / ICP	Certified value
Lead	0.475 %	± 0.016 %	4 Acid / ICP	Certified value
Zinc	1.05 %	± 0.05 %	4 Acid / ICP	Certified value

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: January 25th, 2021

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-ME-2003 was prepared by combining miscellaneous ores.

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 commercial laboratories for round robin assaying.

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

	Percent		Percent
SiO ₂	51.5	Na ₂ O	2.4
Al ₂ O ₃	12.1	MgO	3.0
Fe ₂ O ₃	12.6	K ₂ O	1.8
CaO	4.5	TiO ₂	0.6
MnO	0.1	LOI	8.3
Total S	6.2	Total C	0.5

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, Ag: 30 gr. fire assay pre-concentration, AA or ICP finish.
Ag, Cu, Pb, Zn: 4-acid digestion, AA or ICP finish.

Results from round-robin assaying:

Sample	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) by Fire Assay, 30g sample size and Instrumental finish														
ME-2003-1	1.30	1.30	1.22	1.41	1.300	1.535	1.31	1.358	1.286	1.256	1.276	1.31	1.21	1.265	1.355
ME-2003-2	1.39	1.19	1.40	1.30	1.325	1.305	1.32	1.202	1.235	1.314	1.311	1.36	1.31	1.273	1.375
ME-2003-3	1.24	1.19	1.27	1.24	1.210	1.350	1.26	1.535	1.280	1.185	1.228	1.30	1.26	1.269	1.395
ME-2003-4	1.24	1.27	1.32	1.27	1.200	1.345	1.31	1.381	1.242	1.368	1.269	1.21	1.39	1.269	1.405
ME-2003-5	1.28	1.27	1.22	1.23	1.570	1.250	1.39	1.222	1.282	1.186	1.329	1.41	1.38	1.357	1.300
ME-2003-6	1.25	1.25	1.29	1.32	1.275	1.235	1.24	1.247	1.238	1.321	1.259	1.35	1.40	1.234	1.260
ME-2003-7	1.41	1.27	1.30	1.14	1.215	1.455	1.26	1.415	1.243	1.125	1.366	1.34	1.22	1.299	1.295
ME-2003-8	1.18	1.24	1.39	1.28	1.390	1.365	1.24	1.368	1.250	1.258	1.282	1.38	1.40	1.203	1.315
ME-2003-9	1.24	1.21	1.33	1.32	1.335	1.360	1.23	1.36	1.278	1.122	1.253	1.44	1.32	1.297	1.330
ME-2003-10	1.36	1.19	1.30	1.22	1.530	1.385	1.28	1.37	1.241	1.287	1.275	1.31	1.30	1.236	1.400
ME-2003-11	1.20	1.20	1.32	1.35	1.330	1.240	1.25	1.439	1.284	1.190	1.289	1.45	1.27	1.269	1.365
ME-2003-12	1.46	1.38	1.31	1.19	1.330	1.250	1.38	1.146	1.246	1.162	1.414	1.37	1.38	1.337	1.335
ME-2003-13	1.20	1.32	1.39	1.32	1.320	1.335	1.31	1.402	1.238	1.399	1.373	1.34	1.35	1.311	1.265
ME-2003-14	1.43	1.28	1.22	1.34	1.385	1.285	1.22	1.425	1.266	1.134	1.413	1.36	1.19	1.282	1.410
ME-2003-15	1.43	1.20	1.27	1.25	1.325	1.475	1.19	1.332	1.283	1.204	1.349	1.29	1.39	1.339	1.385
Mean	1.31	1.25	1.30	1.28	1.336	1.345	1.28	1.347	1.259	1.234	1.312	1.348	1.32	1.283	1.346
Std. Devn.	0.097	0.056	0.059	0.069	0.104	0.090	0.057	0.103	0.021	0.089	0.059	0.061	0.074	0.042	0.051
% RSD	7.385	4.477	4.536	5.402	7.807	6.706	4.456	7.614	1.628	7.188	4.470	4.532	5.599	3.280	3.752
Ag (g/t) by 4 Acid digestion /Instrumental finish															
ME-2003-1	115	130	115	108	112	107	111	118	106	104	105	108	111	109.3	112
ME-2003-2	109	119	109	107	107	107	109	121	106	104	104	101	108	110.6	112
ME-2003-3	107	119	113	109	108	108	109	113	105	104	106	108	108	104.8	114
ME-2003-4	115	127	116	110	106	105	103	112	104	107	106	112	110	106.5	108
ME-2003-5	113	127	116	110	107	104	109	114	106	103	103	110	109	107.7	113
ME-2003-6	114	125	114	109	106	106	109	108	105	105	104	108	111	112.3	111
ME-2003-7	112	127	115	105	106	104	107	111	105	105	104	110	110	107.9	111
ME-2003-8	111	124	107	105	110	110	103	111	106	103	103	109	110	109.8	110
ME-2003-9	109	121	113	111	109	106	101	113	106	103	105	110	113	109.2	112
ME-2003-10	108	119	120	107	105	112	102	113	105	107	107	109	108	109.1	107
ME-2003-11	110	120	111	109	113	108	107	111	103	107	107	110	111	108.3	108
ME-2003-12	112	138	112	106	108	112	113	113	104	107	105	113	112	110.0	108
ME-2003-13	110	132	113	105	110	106	109	113	105	106	106	110	112	108.6	113
ME-2003-14	108	128	118	107	109	106	105	112	105	105	104	111	111	107.7	110
ME-2003-15	110	120	110	109	110	108	103	112	106	105	106	109	110	109.0	109
Mean	111	125	113	108	108	107	107	113	105	105	105	109	110	108.7	111
Std. Devn.	2.56	5.60	3.42	1.97	2.32	2.49	3.62	3.047	0.92	1.51	1.26	2.68	1.53	1.76	2.17
% RSD	2.31	4.48	3.01	1.83	2.14	2.32	3.39	2.697	0.87	1.44	1.20	2.45	1.39	1.62	1.96

Ag (g/t) by Fire Assay /Gravimetric finish

ME-2003-1	106	109	110	102	117	97		103	104	101	103.5	102	109	112	100
ME-2003-2	109	111	114	103	120	107		103	102	104	105.4	109	105	111	103
ME-2003-3	109	109	119	99	116	95		108	103	105	105.7	107	110	113	103
ME-2003-4	103	104	114	100	115	100		102	105	104	108.0	104	108	112	101
ME-2003-5	107	119	112	100	116	102		115	103	105	109.7	104	108	111	100
ME-2003-6	107	116	112	102	114	100		104	104	102	108.1	105	103	112	100
ME-2003-7	107	106	114	102	118	104		104	102	108	104.8	101	99	114	103
ME-2003-8	104	110	118	103	115	103		106	103	95	107.2	106	99	114	101
ME-2003-9	108	114	114	102	114	100		105	103	98	107.7	106	102	122	110
ME-2003-10	107	110	113	103	112	102		104	102	101	106.8	102	99	116	105
ME-2003-11	108	109	116	108	109	103		103	102	100	105.6	108	97	112	104
ME-2003-12	110	115	108	105	112	104		122	102	99	103.4	106	100	109	95
ME-2003-13	109	110	113	103	119	96		107	103	100	103.6	108	104	112	102
ME-2003-14	104	107	108	102	111	109		112	103	101	105.7	108	112	112	102
ME-2003-15	113	113	111	100	114	106		105	103	98	108.5	102	112	114	102
Mean	107	111	113	102	115	102		107	103	101	106.2	105	104	113	102
Std. Devn.	2.558	3.986	3.150	2.219	3.028	3.980		5.502	0.884	3.355	1.952	2.597	5.097	2.963	3.195
% RSD	2.382	3.597	2.786	2.170	2.638	3.907		5.148	0.859	3.309	1.837	2.468	4.879	2.621	3.131

Cu (%) by 4 Acid digestion Instrumental finish

ME-2003-1	0.703	0.660	0.661	0.670	0.654	0.654	0.642	0.677	0.66	0.669	0.656	0.654	0.65	0.638	0.656
ME-2003-2	0.697	0.663	0.675	0.649	0.645	0.664	0.643	0.672	0.65	0.659	0.651	0.691	0.65	0.624	0.662
ME-2003-3	0.701	0.676	0.668	0.664	0.635	0.662	0.647	0.668	0.65	0.658	0.650	0.648	0.65	0.635	0.663
ME-2003-4	0.692	0.651	0.657	0.667	0.630	0.637	0.651	0.662	0.66	0.674	0.656	0.644	0.66	0.631	0.655
ME-2003-5	0.692	0.660	0.671	0.669	0.651	0.648	0.642	0.665	0.66	0.664	0.654	0.647	0.65	0.629	0.661
ME-2003-6	0.690	0.645	0.669	0.667	0.642	0.636	0.638	0.660	0.66	0.654	0.651	0.687	0.65	0.627	0.665
ME-2003-7	0.692	0.659	0.669	0.641	0.641	0.622	0.647	0.653	0.66	0.680	0.652	0.654	0.66	0.626	0.659
ME-2003-8	0.684	0.677	0.655	0.649	0.647	0.633	0.644	0.657	0.66	0.672	0.653	0.654	0.66	0.642	0.654
ME-2003-9	0.693	0.658	0.654	0.662	0.660	0.627	0.638	0.659	0.66	0.650	0.656	0.650	0.65	0.629	0.659
ME-2003-10	0.695	0.668	0.672	0.663	0.638	0.666	0.640	0.666	0.65	0.655	0.655	0.650	0.65	0.625	0.660
ME-2003-11	0.702	0.661	0.677	0.672	0.664	0.642	0.650	0.662	0.66	0.659	0.654	0.658	0.65	0.624	0.666
ME-2003-12	0.701	0.643	0.653	0.647	0.665	0.672	0.643	0.660	0.66	0.655	0.651	0.685	0.65	0.632	0.658
ME-2003-13	0.691	0.654	0.667	0.653	0.664	0.651	0.645	0.666	0.66	0.650	0.654	0.671	0.65	0.632	0.658
ME-2003-14	0.673	0.678	0.662	0.658	0.654	0.639	0.645	0.652	0.66	0.655	0.652	0.655	0.66	0.629	0.657
ME-2003-15	0.687	0.637	0.667	0.666	0.651	0.648	0.644	0.659	0.65	0.656	0.657	0.655	0.65	0.634	0.659
Mean	0.693	0.659	0.665	0.660	0.649	0.647	0.644	0.663	0.66	0.661	0.653	0.660	0.65	0.630	0.659
Std. Devn.	0.008	0.012	0.008	0.010	0.011	0.015	0.004	0.007	0.005	0.009	0.002	0.016	0.005	0.005	0.003
% RSD	1.132	1.858	1.159	1.467	1.694	2.300	0.591	1.012	0.696	1.380	0.325	2.349	0.701	0.826	0.525

Pb (%) by 4 Acid digestion Instrumental finish

ME-2003-1	0.497	0.482	0.466	0.483	0.482	0.464	0.482	0.47	0.48	0.47	0.4745	0.500	0.47	0.430	0.474
ME-2003-2	0.493	0.477	0.470	0.471	0.481	0.464	0.475	0.48	0.47	0.47	0.4688	0.512	0.47	0.431	0.478
ME-2003-3	0.500	0.477	0.470	0.478	0.468	0.470	0.482	0.47	0.48	0.46	0.4688	0.481	0.47	0.435	0.475
ME-2003-4	0.500	0.471	0.465	0.482	0.467	0.450	0.486	0.47	0.47	0.49	0.4748	0.478	0.48	0.443	0.475
ME-2003-5	0.494	0.478	0.474	0.481	0.480	0.459	0.480	0.48	0.48	0.46	0.4725	0.482	0.48	0.444	0.478
ME-2003-6	0.494	0.457	0.472	0.476	0.476	0.450	0.479	0.47	0.47	0.47	0.4747	0.514	0.47	0.443	0.475
ME-2003-7	0.498	0.478	0.464	0.464	0.469	0.446	0.490	0.48	0.47	0.47	0.4729	0.480	0.48	0.441	0.476
ME-2003-8	0.493	0.475	0.465	0.470	0.477	0.452	0.479	0.47	0.48	0.47	0.4729	0.489	0.48	0.448	0.471
ME-2003-9	0.493	0.476	0.461	0.473	0.492	0.449	0.479	0.47	0.47	0.46	0.4740	0.478	0.47	0.445	0.473
ME-2003-10	0.493	0.476	0.476	0.479	0.468	0.478	0.481	0.47	0.47	0.47	0.4742	0.489	0.47	0.451	0.473
ME-2003-11	0.498	0.470	0.474	0.483	0.492	0.455	0.487	0.47	0.47	0.47	0.4733	0.471	0.48	0.442	0.475
ME-2003-12	0.498	0.469	0.455	0.470	0.490	0.481	0.486	0.47	0.47	0.47	0.4706	0.521	0.48	0.447	0.471
ME-2003-13	0.495	0.469	0.469	0.477	0.492	0.466	0.479	0.48	0.47	0.47	0.4745	0.512	0.48	0.462	0.471
ME-2003-14	0.487	0.480	0.470	0.478	0.481	0.454	0.480	0.47	0.47	0.46	0.4737	0.488	0.48	0.444	0.471
ME-2003-15	0.491	0.466	0.475	0.477	0.484	0.458	0.480	0.48	0.46	0.46	0.4790	0.480	0.47	0.464	0.469
Mean	0.495	0.473	0.468	0.476	0.480	0.460	0.482	0.47	0.47	0.47	0.4733	0.492	0.48	0.445	0.474
Std. Devn.	0.004	0.006	0.006	0.006	0.009	0.011	0.004	0.005	0.006	0.008	0.003	0.016	0.005	0.009	0.003
% RSD	0.722	1.362	1.234	1.161	1.894	2.310	0.818	1.031	1.188	1.655	0.535	3.245	1.086	2.128	0.568

Zn (%) by 4 Acid digestion Instrumental finish

ME-2003-1	1.06	1.03	1.01	1.080	1.045	1.055	1.02	1.09	1.05	1.05	1.0342	1.09	1.08		1.065
ME-2003-2	1.06	1.02	1.02	1.040	1.025	1.070	1.02	1.09	1.06	1.03	1.0364	1.13	1.07		1.070
ME-2003-3	1.06	1.03	1.00	1.060	1.015	1.075	1.02	1.08	1.05	1.03	1.0326	1.08	1.06		1.075
ME-2003-4	1.07	1.01	0.99	1.070	1.000	1.030	1.02	1.07	1.05	1.07	1.0440	1.08	1.06		1.060
ME-2003-5	1.07	1.03	1.03	1.080	1.040	1.050	1.02	1.08	1.05	1.03	1.0353	1.08	1.06		1.070
ME-2003-6	1.07	0.99	1.01	1.070	1.020	1.035	1.01	1.07	1.05	1.03	1.0430	1.13	1.09		1.070
ME-2003-7	1.07	1.03	0.99	1.030	1.010	1.010	1.04	1.06	1.04	1.03	1.0371	1.10	1.08		1.070
ME-2003-8	1.07	1.03	1.00	1.040	1.035	1.030	1.02	1.07	1.04	1.04	1.0428	1.11	1.06		1.050
ME-2003-9	1.07	1.02	1.00	1.055	1.045	1.020	1.01	1.08	1.05	1.02	1.0403	1.09	1.06		1.065
ME-2003-10	1.06	1.03	1.02	1.060	1.010	1.085	1.01	1.08	1.05	1.04	1.0394	1.09	1.10		1.060
ME-2003-11	1.06	1.01	1.03	1.075	1.055	1.045	1.02	1.07	1.05	1.04	1.0365	1.09	1.08		1.070
ME-2003-12	1.07	1.00	0.99	1.045	1.055	1.085	1.02	1.07	1.04	1.04	1.0309	1.16	1.07		1.055
ME-2003-13	1.07	1.01	1.01	1.050	1.065	1.055	1.01	1.08	1.04	1.04	1.0441	1.15	1.10		1.060
ME-2003-14	1.06	1.03	1.01	1.055	1.040	1.035	1.01	1.06	1.05	1.02	1.0425	1.08	1.06		1.060
ME-2003-15	1.06	1.00	1.01	1.060	1.035	1.045	1.02	1.08	1.03	1.03	1.0474	1.07	1.08		1.060
Mean	1.07	1.02	1.01	1.058	1.033	1.048	1.02	1.08	1.05	1.04	1.0391	1.10	1.07		1.064
Std. Devn.	0.005	0.015	0.013	0.015	0.019	0.023	0.008	0.009	0.007	0.012	0.005	0.028	0.015		0.007
% RSD	0.485	1.443	1.310	1.438	1.846	2.176	0.761	0.851	0.691	1.199	0.464	2.525	1.354		0.645

Notes:

- Lab 7 did not report Ag by fire assay with gravimetric finish
- Lab 13 did not report Zn by 4 Acid digestion with instrumental finish as it was more than their detection limit.
- Cu results assayed by 4 Acid digestion with instrumental finish from Labs 1 and 14 were removed for failing the t test.
- Ag results assayed by fire assay with gravimetric finish from Lab 2 were removed for failing the t test.
- Pb results assayed by 4 Acid digestion with instrumental finish from Lab 14 were removed for failing the t test.

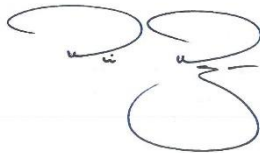
Participating Laboratories: (not in same order as table of assays)

Activation Labs, Ancaster, ON, Canada	Bureau Veritas, Vancouver, BC, Canada
Activation Labs, Thunder bay, ON, Canada	Certimin S.A., Lima, Peru
AGAT Labs, ON, Canada	MS Analytical, Langley, BC, Canada
ALS Canada, North Vancouver, BC, Canada	SGS, Lake field, ON, Canada
ALS, Loughrea, Ireland	SGS, Vancouver, BC, Canada
ALS, Perth Australia	Skyline Assayers & Laboratories, AZ, USA
ALS, Reno, USA	TSL Laboratories Ltd., Saskatoon, SK, 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



Ali Alizadeh, MSc, MBA, P.Geo.

Geochemist



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