

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-1407

Recommended values and the “Between Lab” Two Standard Deviations

Gold	2.12 g/t ± 0.15 g/t	Certified value
Silver (FA)	245 g/t ± 12 g/t	Certified value
Silver (Inst)	246 g/t ± 7 g/t	Certified value
Copper	0.427 % ± 0.016 %	Certified value
Lead	3.97 % ± 0.17 %	Certified value
Zinc	0.536 % ± 0.024 %	Certified value

Note: 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: November 3, 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-1407 was made using a variety of different ores.

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

	Percent		Percent
SiO ₂	57.2	MgO	1.6
Al ₂ O ₃	14.2	K ₂ O	2.7
Fe ₂ O ₃	8.1	TiO ₂	0.5
CaO	2.7	LOI	5.4
Na ₂ O	1.5	S	2.8
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: Fire assay pre-concentration, AA or ICP finish.
Ag: Fire assay pre-concentration, gravimetric finish.
Ag, Cu, Pb, Zn: 4-acid digestion, AA or ICP finish.

REFERENCE MATERIAL CDN-ME-1407

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-1407-1	2.00	2.09	2.34	2.08	2.06	2.21	2.01	2.16	2.22	2.03	2.05	2.05	2.19	2.21	2.08
ME-1407-2	2.07	2.09	2.15	2.10	2.17	2.11	2.02	2.07	2.04	2.13	2.14	2.06	1.98	2.25	2.09
ME-1407-3	2.11	2.22	2.17	2.15	2.27	2.07	2.05	2.12	2.19	2.10	2.14	1.94	2.17	2.11	2.13
ME-1407-4	2.13	2.13	2.15	2.08	2.09	2.16	2.08	2.15	2.33	2.18	2.11	2.09	2.16	2.12	2.14
ME-1407-5	2.10	2.26	2.19	2.21	2.11	2.21	2.04	2.08	2.04	2.12	2.13	2.08	2.33	2.14	2.16
ME-1407-6	2.20	2.08	2.25	2.05	2.23	2.09	2.01	2.11	2.28	2.04	2.10	2.03	2.04	2.03	2.18
ME-1407-7	2.01	2.27	2.21	2.17	2.27	2.16	2.05	2.21	2.04	2.14	2.11	2.08	2.20	2.10	2.17
ME-1407-8	2.07	2.14	2.28	2.19	2.21	2.22	2.07	2.06	2.19	2.14	2.07	2.09	2.07	2.06	2.22
ME-1407-9	2.05	2.22	2.19	2.04	2.18	2.14	2.08	2.26	2.11	2.07	2.05	2.03	2.14	2.05	2.07
ME-1407-10	2.00	2.05	2.26	2.08	2.14	2.25	2.00	2.41	2.21	2.06	2.03	1.97	1.97	2.02	2.16
Mean	2.07	2.15	2.22	2.12	2.17	2.16	2.04	2.16	2.17	2.10	2.09	2.04	2.12	2.11	2.14
Std. Devn.	0.0638	0.0795	0.0621	0.0602	0.0732	0.0605	0.0288	0.1073	0.1036	0.0493	0.0409	0.0514	0.1115	0.0741	0.0481
% RSD	3.08	3.69	2.80	2.85	3.37	2.80	1.41	4.96	4.79	2.35	1.95	2.52	5.25	3.52	2.25
F/A	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-1407-1	236	239	253	248	254	250	248	240			246	259	239	238	
ME-1407-2	246	241	258	248	248	249	250	241			245	247	242	234	
ME-1407-3	247	244	254	244	238	249	248	240			245	248	252	235	
ME-1407-4	242	242	252	246	257	251	247	243			245	246	248	237	
ME-1407-5	234	237	252	250	249	249	246	244			245	245	236	237	
ME-1407-6	245	238	254	250	252	250	246	243			246	264	247	236	
ME-1407-7	234	235	254	252	245	251	246	241			248	254	236	227	
ME-1407-8	236	235	264	257	238	249	247	241			248	246	240	230	
ME-1407-9	240	240	262	256	241	251	247	241			246	247	233	235	
ME-1407-10	238	245	256	252	245	252	249	243			247	247	248	237	
Mean	240	240	256	250	247	250	247	242			246	250	242	235	
Std. Devn.	4.97	3.47	4.18	4.11	6.53	1.10	1.35	1.42			1.15	6.53	6.35	3.56	
% RSD	2.07	1.45	1.63	1.64	2.65	0.44	0.55	0.59			0.47	2.61	2.62	1.52	
MA/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	Ag g/t	Ag g/t
ME-1407-1		249	240	260	251	250	246		243	244	250	247		235	243
ME-1407-2		252	239	254	252	250	246		245	247	248	250		234	247
ME-1407-3		246	239	264	243	247	251		244	241	245	248		231	241
ME-1407-4		255	240	259	241	253	250		246	242	250	250		235	241
ME-1407-5		250	239	255	250	246	246		247	248	247	246		237	245
ME-1407-6		255	234	257	245	246	248		242	244	249	255		232	247
ME-1407-7		243	239	260	247	246	248		248	246	248	244		237	242
ME-1407-8		250	239	264	249	249	247		242	246	249	241		233	239
ME-1407-9		255	237	258	244	247	248		246	247	242	252		235	240
ME-1407-10		245	246	264	250	250	246		240	245	248	243		234	242
Mean		250	239	260	247	248	248		244	245	248	248		234	243
Std. Devn.		4.35	2.97	3.66	3.77	2.37	1.78		2.54	2.26	2.46	4.30		2.02	2.79
% RSD		1.74	1.24	1.41	1.52	0.95	0.72		1.04	0.92	0.99	1.74		0.86	1.15

Notes: Multi-acid / ICP Ag data from laboratories 4 and 14 was removed for failing the t test.

REFERENCE MATERIAL CDN-ME-1407

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-1407-1	0.392	0.423	0.417	0.420	0.432	0.428	0.42	0.419	0.443	0.422	0.432	0.432	0.430	0.382	0.427
ME-1407-2	0.399	0.422	0.413	0.411	0.443	0.431	0.42	0.417	0.435	0.421	0.430	0.436	0.450	0.388	0.434
ME-1407-3	0.396	0.424	0.412	0.421	0.425	0.424	0.42	0.420	0.441	0.421	0.428	0.446	0.440	0.393	0.433
ME-1407-4	0.381	0.435	0.412	0.424	0.424	0.416	0.43	0.421	0.431	0.425	0.427	0.440	0.450	0.390	0.431
ME-1407-5	0.388	0.426	0.407	0.416	0.433	0.408	0.43	0.416	0.436	0.429	0.428	0.444	0.450	0.395	0.432
ME-1407-6	0.399	0.430	0.408	0.417	0.426	0.421	0.43	0.422	0.457	0.429	0.432	0.437	0.430	0.387	0.431
ME-1407-7	0.398	0.428	0.410	0.426	0.425	0.428	0.43	0.422	0.440	0.433	0.427	0.449	0.450	0.399	0.428
ME-1407-8	0.402	0.425	0.414	0.422	0.431	0.427	0.42	0.414	0.433	0.437	0.434	0.430	0.450	0.394	0.429
ME-1407-9	0.385	0.434	0.409	0.413	0.426	0.421	0.43	0.416	0.431	0.431	0.431	0.453	0.430	0.395	0.437
ME-1407-10	0.403	0.429	0.424	0.422	0.437	0.424	0.42	0.425	0.430	0.430	0.425	0.450	0.440	0.398	0.437
Mean	0.394	0.428	0.413	0.419	0.430	0.423	0.425	0.419	0.438	0.428	0.429	0.442	0.442	0.392	0.432
Std. Devn.	0.0076	0.0045	0.0050	0.0048	0.0062	0.0067	0.0053	0.0034	0.0082	0.0054	0.0028	0.0079	0.0092	0.0052	0.0034
% RSD	1.94	1.04	1.21	1.15	1.45	1.60	1.24	0.82	1.88	1.27	0.66	1.79	2.08	1.34	0.80
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
ME-1407-1	3.86	3.96	4.00	4.03	4.08	3.94	4.25	3.94	4.08	4.00	3.92	3.87	4.06	3.83	3.94
ME-1407-2	3.87	4.08	3.98	4.03	4.14	3.94	4.26	3.92	4.00	3.94	3.94	4.02	3.97	3.83	4.11
ME-1407-3	3.94	4.02	3.98	4.06	4.07	3.90	4.24	3.91	4.03	3.87	3.96	4.02	3.91	3.78	4.08
ME-1407-4	3.90	4.18	3.96	4.09	3.94	4.00	4.22	3.98	4.04	3.89	3.92	3.92	4.01	3.82	4.04
ME-1407-5	3.80	4.04	3.96	4.02	4.13	3.91	4.24	3.92	3.97	3.97	3.95	3.84	4.08	3.85	4.08
ME-1407-6	3.86	4.17	3.95	4.01	4.08	3.87	4.22	3.95	3.91	3.97	3.99	3.89	4.03	3.79	3.99
ME-1407-7	3.85	3.95	3.93	4.08	3.97	3.93	4.23	3.98	4.12	3.94	3.93	3.93	4.07	3.88	3.99
ME-1407-8	3.89	4.10	3.99	4.13	4.11	3.95	4.23	3.90	3.98	3.92	4.00	3.81	4.02	3.80	3.99
ME-1407-9	3.83	4.13	3.89	4.03	4.18	3.88	4.24	3.94	4.03	3.94	3.96	3.88	3.87	3.82	3.94
ME-1407-10	3.91	4.09	4.08	4.09	4.01	3.96	4.26	3.98	3.98	3.94	3.93	3.77	4.04	3.80	4.05
Mean	3.87	4.07	3.97	4.06	4.07	3.93	4.24	3.94	4.01	3.94	3.95	3.90	4.01	3.82	4.02
Std. Devn.	0.0422	0.0796	0.0496	0.0392	0.0767	0.0374	0.0145	0.0301	0.0606	0.0382	0.0291	0.0815	0.0695	0.0304	0.0597
% RSD	1.09	1.95	1.25	0.97	1.88	0.95	0.34	0.76	1.51	0.97	0.74	2.09	1.73	0.80	1.49
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
ME-1407-1	0.538	0.530	0.518	0.567	0.533	0.553	0.520	0.560	0.549	0.522	0.531	0.534	0.550	0.526	0.531
ME-1407-2	0.569	0.530	0.512	0.543	0.550	0.556	0.530	0.555	0.535	0.516	0.523	0.525	0.530	0.527	0.536
ME-1407-3	0.567	0.530	0.517	0.553	0.528	0.545	0.530	0.555	0.543	0.520	0.533	0.533	0.540	0.520	0.531
ME-1407-4	0.543	0.550	0.513	0.550	0.535	0.552	0.530	0.559	0.528	0.523	0.537	0.535	0.540	0.527	0.528
ME-1407-5	0.546	0.540	0.513	0.543	0.543	0.537	0.540	0.550	0.531	0.532	0.536	0.527	0.560	0.530	0.521
ME-1407-6	0.564	0.540	0.509	0.548	0.529	0.542	0.530	0.562	0.560	0.530	0.544	0.544	0.520	0.522	0.532
ME-1407-7	0.524	0.540	0.518	0.553	0.541	0.550	0.530	0.567	0.538	0.531	0.530	0.532	0.550	0.533	0.529
ME-1407-8	0.543	0.540	0.508	0.550	0.531	0.554	0.520	0.552	0.521	0.541	0.532	0.526	0.540	0.522	0.527
ME-1407-9	0.550	0.550	0.517	0.538	0.534	0.537	0.540	0.553	0.527	0.531	0.526	0.553	0.520	0.528	0.522
ME-1407-10	0.550	0.550	0.533	0.543	0.539	0.549	0.540	0.564	0.526	0.533	0.529	0.544	0.540	0.524	0.522
Mean	0.549	0.540	0.516	0.549	0.536	0.547	0.531	0.558	0.536	0.528	0.532	0.535	0.539	0.526	0.528
Std. Devn.	0.0141	0.0082	0.0070	0.0081	0.0069	0.0069	0.0074	0.0056	0.0118	0.0075	0.0059	0.0091	0.0129	0.0041	0.0050
% RSD	2.56	1.51	1.36	1.47	1.29	1.26	1.39	1.00	2.21	1.41	1.12	1.70	2.39	0.78	0.94

Notes: Cu data from laboratories 1, 13 and 14 was removed for failing the t test.
Pb data from laboratory 7 was removed for failing the t test.

REFERENCE MATERIAL CDN-ME-1407

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
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
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.