

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-1306

Recommended values and the “Between Lab” Two Standard Deviations

Gold	0.919 g/t ± 0.112 g/t	Certified value
Silver	104 g/t ± 7 g/t	Certified value
Copper	0.398 % ± 0.018 %	Certified value
Lead	1.60 % ± 0.07 %	Certified value
Zinc	3.17 % ± 0.15 %	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 Smeet., Ph.D., P. Geo.

DATE OF CERTIFICATION: October 30, 2013

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-1306 was made from a variety of ores and concentrates.

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

	Percent			Percent
SiO ₂	57.5		MgO	3.1
Al ₂ O ₃	6.6		K ₂ O	0.9
Fe ₂ O ₃	13.4		TiO ₂	0.2
CaO	2.4		LOI	9.3
Na ₂ O	0.2		S	8.1

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 (30g sub-sample).

Ag, Cu, Pb, Zn: 4-acid digestion, AA or ICP finish.

REFERENCE MATERIAL CDN-ME-1306

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-1306-1	0.945	0.938	1.000	0.98	0.996	1.109	0.881	0.907	0.994	0.849	0.892	0.905	0.975	0.92	0.840
ME-1306-2	0.942	0.910	0.870	1.02	0.908	0.843	0.874	0.889	0.899	0.860	0.994	0.990	0.897	0.87	0.869
ME-1306-3	0.947	0.895	0.880	1.00	0.901	0.995	0.866	0.816	0.772	0.881	0.973	0.991	0.980	0.81	0.822
ME-1306-4	0.923	0.844	0.840	0.97	0.895	0.912	0.870	0.921	0.962	0.867	0.910	0.946	1.055	0.93	0.904
ME-1306-5	0.961	0.918	0.940	0.98	1.040	1.020	0.883	0.914	0.961	0.870	0.941	0.967	0.978	0.78	0.894
ME-1306-6	0.950	0.936	0.860	0.98	0.995	0.705	0.885	0.893	0.984	0.870	0.965	0.956	0.969	0.86	0.910
ME-1306-7	0.947	0.929	0.890	1.00	0.859	0.856	0.876	0.881	0.870	0.823	0.993	0.980	0.898	0.93	0.898
ME-1306-8	0.912	0.893	0.970	0.96	0.844	0.945	0.889	0.827	0.983	0.792	0.918	0.874	0.894	0.92	0.871
ME-1306-9	0.914	0.820	0.910	0.98	0.823	0.984	0.882	0.817	0.836	0.860	0.906	0.995	0.946	1.03	0.891
ME-1306-10	0.950	0.906	1.020	1.03	0.974	0.750	0.866	0.951	1.025	0.839	0.910	0.965	0.912	0.94	0.828
Mean	0.939	0.899	0.918	0.990	0.924	0.912	0.877	0.882	0.929	0.851	0.940	0.957	0.950	0.899	0.873
Std. Devn.	0.0167	0.0389	0.0618	0.0221	0.0735	0.1250	0.0081	0.0468	0.0811	0.0267	0.0383	0.0396	0.0514	0.0716	0.0324
% RSD	1.78	4.33	6.73	2.23	7.96	13.71	0.92	5.31	8.73	3.14	4.07	4.14	5.41	7.96	3.71
	Ag g/t														
ME-1306-1	106.9	104	97	97	102	109	103	109	102	97	106	100	101	102	102
ME-1306-2	105.4	103	95	99	102	111	104	111	104	97	104	102	102	110	101
ME-1306-3	105.4	103	96	101	104	112	103	109	104	99	106	103	102	111	102
ME-1306-4	106.4	104	99	102	103	109	106	109	105	100	107	101	103	107	101
ME-1306-5	105.5	104	97	100	104	108	102	110	104	101	109	102	103	107	101
ME-1306-6	106.8	102	97	98	104	111	102	111	105	100	105	103	102	104	102
ME-1306-7	106.4	102	101	101	104	109	103	109	105	102	109	105	102	109	98
ME-1306-8	106.2	104	100	99	102	110	105	109	102	99	104	103	102	109	102
ME-1306-9	104.8	103	102	100	101	109	103	109	106	98	105	103	104	107	103
ME-1306-10	105.9	103	97	100	100	108	107	110	103	101	102	101	102	108	100
Mean	106	103	98	100	103	110	104	110	104	99	106	102	102	107	101
Std. Devn.	0.6848	0.7888	2.2236	1.3568	1.4298	1.3499	1.6865	0.8433	1.3333	1.7887	2.2136	1.4181	0.8233	2.7162	1.3984
% RSD	0.65	0.76	2.27	1.36	1.39	1.23	1.62	0.77	1.28	1.80	2.09	1.39	0.80	2.53	1.38

REFERENCE MATERIAL CDN-ME-1306

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-1306-1	0.408	0.397	0.411	0.365	0.390	0.405	0.40	0.392	0.413	0.387	0.387	0.375	0.400	0.359	0.389
ME-1306-2	0.404	0.392	0.412	0.377	0.395	0.418	0.40	0.396	0.415	0.382	0.376	0.380	0.414	0.396	0.392
ME-1306-3	0.401	0.392	0.411	0.373	0.388	0.410	0.40	0.395	0.409	0.394	0.388	0.395	0.400	0.387	0.394
ME-1306-4	0.403	0.396	0.416	0.374	0.402	0.405	0.40	0.395	0.417	0.393	0.394	0.391	0.402	0.378	0.393
ME-1306-5	0.400	0.397	0.414	0.371	0.401	0.398	0.40	0.397	0.400	0.409	0.398	0.392	0.407	0.386	0.387
ME-1306-6	0.406	0.392	0.410	0.374	0.389	0.408	0.39	0.399	0.419	0.408	0.386	0.391	0.400	0.366	0.398
ME-1306-7	0.402	0.392	0.413	0.370	0.399	0.409	0.40	0.394	0.415	0.391	0.406	0.393	0.409	0.384	0.376
ME-1306-8	0.403	0.400	0.411	0.368	0.397	0.400	0.39	0.393	0.413	0.392	0.383	0.387	0.401	0.395	0.394
ME-1306-9	0.399	0.395	0.415	0.367	0.390	0.399	0.40	0.392	0.397	0.386	0.383	0.401	0.407	0.383	0.398
ME-1306-10	0.403	0.395	0.410	0.368	0.371	0.396	0.40	0.401	0.429	0.405	0.377	0.384	0.391	0.378	0.393
Mean	0.403	0.395	0.412	0.371	0.392	0.405	0.398	0.395	0.413	0.395	0.388	0.389	0.403	0.381	0.391
Std. Devn.	0.0028	0.0028	0.0021	0.0037	0.0091	0.0067	0.0042	0.0029	0.0092	0.0095	0.0093	0.0076	0.0064	0.0115	0.0064
% RSD	0.69	0.70	0.51	1.00	2.31	1.67	1.06	0.72	2.22	2.41	2.40	1.95	1.58	3.03	1.63
	% Pb														
ME-1306-1	1.66	1.59	1.55	1.54	1.60	1.63	1.63	1.63	1.54	1.63	1.55	1.52	1.57	1.55	1.61
ME-1306-2	1.64	1.56	1.63	1.59	1.59	1.62	1.61	1.64	1.56	1.60	1.52	1.54	1.59	1.69	1.61
ME-1306-3	1.64	1.57	1.60	1.60	1.68	1.61	1.63	1.63	1.55	1.62	1.57	1.58	1.60	1.66	1.62
ME-1306-4	1.65	1.57	1.67	1.59	1.59	1.61	1.61	1.62	1.58	1.62	1.60	1.55	1.59	1.65	1.64
ME-1306-5	1.63	1.57	1.65	1.61	1.63	1.60	1.60	1.63	1.57	1.64	1.60	1.55	1.61	1.65	1.61
ME-1306-6	1.64	1.56	1.54	1.56	1.60	1.62	1.59	1.65	1.56	1.61	1.58	1.56	1.58	1.58	1.65
ME-1306-7	1.64	1.55	1.68	1.58	1.63	1.62	1.61	1.62	1.58	1.59	1.64	1.58	1.58	1.62	1.56
ME-1306-8	1.64	1.56	1.55	1.55	1.61	1.62	1.61	1.63	1.53	1.58	1.55	1.58	1.59	1.69	1.63
ME-1306-9	1.63	1.57	1.50	1.60	1.55	1.61	1.63	1.63	1.59	1.58	1.54	1.59	1.61	1.59	1.65
ME-1306-10	1.63	1.58	1.64	1.59	1.49	1.60	1.61	1.63	1.54	1.62	1.51	1.57	1.60	1.61	1.63
Mean	1.64	1.57	1.60	1.58	1.60	1.61	1.61	1.63	1.56	1.61	1.57	1.56	1.59	1.63	1.62
Std. Devn.	0.0084	0.0117	0.0623	0.0239	0.0491	0.0097	0.0134	0.0085	0.0199	0.0218	0.0401	0.0220	0.0121	0.0465	0.0264
% RSD	0.51	0.74	3.89	1.51	3.08	0.60	0.83	0.52	1.28	1.35	2.56	1.41	0.76	2.85	1.63
	% Zn														
ME-1306-1	3.23	3.19	3.18	3.11	3.20	3.21	3.05	3.03	3.06	3.16	3.11	3.13	3.09	2.96	3.24
ME-1306-2	3.22	3.17	3.14	3.21	3.22	3.28	3.05	3.06	3.05	3.17	3.05	3.16	3.18	3.24	3.27
ME-1306-3	3.22	3.16	3.17	3.21	3.28	3.26	3.01	3.13	3.17	3.20	3.17	3.23	3.08	3.16	3.31
ME-1306-4	3.23	3.17	3.11	3.22	3.22	3.24	3.04	3.06	3.18	3.24	3.18	3.19	3.09	3.08	3.30
ME-1306-5	3.20	3.21	3.17	3.21	3.30	3.19	3.03	3.16	3.18	3.48	3.23	3.18	3.12	3.19	3.25
ME-1306-6	3.22	3.14	3.15	3.16	3.21	3.25	3.02	3.14	3.15	3.25	3.13	3.19	3.08	3.01	3.33
ME-1306-7	3.21	3.15	3.18	3.20	3.18	3.24	3.03	3.09	3.18	3.41	3.27	3.23	3.15	3.13	3.17
ME-1306-8	3.22	3.16	3.14	3.17	3.21	3.20	2.99	3.14	3.04	3.10	3.11	3.26	3.09	3.22	3.30
ME-1306-9	3.19	3.21	3.16	3.21	3.14	3.19	3.02	3.10	3.21	3.31	3.10	3.25	3.12	3.12	3.35
ME-1306-10	3.21	3.21	3.16	3.24	3.06	3.15	3.06	3.15	3.12	3.45	3.03	3.21	3.01	3.11	3.29
Mean	3.21	3.18	3.16	3.19	3.20	3.22	3.03	3.11	3.13	3.28	3.14	3.20	3.10	3.12	3.28
Std. Devn.	0.0136	0.0263	0.0217	0.0379	0.0686	0.0396	0.0211	0.0448	0.0626	0.1290	0.0754	0.0408	0.0458	0.0889	0.0515
% RSD	0.42	0.83	0.69	1.19	2.14	1.23	0.70	1.44	2.00	3.93	2.40	1.28	1.48	2.85	1.57

Notes: Cu results from laboratory 4 were removed for failing the t test.

REFERENCE MATERIAL CDN-ME-1306

Participating Laboratories:

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

Acme Analytical Laboratories Ltd., Vancouver, BC, Canada
Acme Analytical Laboratories Ltd., Santiago, Chile
Actlabs-Ancaster, Ontario, Canada
Actlabs-Thunder Bay, Ontario, Canada
Alex Stewart Argentina SA
ALS Canada, North Vancouver, BC, Canada
ALS, Loughrea, Ireland
ALS Reno, Nevada, USA
American Assay Laboratory, Nevada, USA
Certimin, Lima, Peru
Intertek Genalysis, Perth, Australia
Met-Solve Analytical Services, Langley, B.C., Canada
SGS – Lima, Peru
TSL Laboratories Ltd., Saskatoon, Saskatchewan, Canada
Ultra Trace, Perth, Australia

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Certified by



Duncan Sanderson, Certified Assayer of B.C.

Geochemist



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