

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-1603

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<i>0.995 g/t</i>	\pm	<i>0.066 g/t</i>	<i>30 g FA, instrumental</i>	<i>Certified value</i>
<i>Silver</i>	<i>81 ppm</i>	\pm	<i>10 ppm</i>	<i>30 g FA, gravimetric</i>	Provisional value
<i>Silver</i>	<i>86 ppm</i>	\pm	<i>3 ppm</i>	<i>4-Acid / ICP</i>	<i>Certified value</i>
<i>Copper</i>	<i>0.279 %</i>	\pm	<i>0.014 %</i>	<i>4 Acid / ICP</i>	<i>Certified value</i>
<i>Lead</i>	<i>1.34 %</i>	\pm	<i>0.05 %</i>	<i>4 Acid / ICP</i>	<i>Certified value</i>
<i>Zinc</i>	<i>0.45 %</i>	\pm	<i>0.03 %</i>	<i>4 Acid / ICP</i>	<i>Certified value</i>

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: October 17, 2016

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.

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-ME-1603 was prepared by combining a variety of low and high grade ores.

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

	Percent		Percent
SiO ₂	58.2	K ₂ O	1.9
Al ₂ O ₃	12.3	TiO ₂	0.5
Fe ₂ O ₃	11.7	LOI	3.7
CaO	3.5	S	3.3
Na ₂ O	1.6	C	0.3
MgO	3.8		

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

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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
Instrumental	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-1603-1	0.981	0.994	0.993	1.045	0.975	1.025	0.990	0.967	1.010	1.000	1.060	1.010	1.009	1.130	0.931
ME-1603-2	1.007	1.040	0.979	0.966	0.987	1.065	0.980	0.980	0.975	0.965	0.990	0.950	0.976	0.982	1.050
ME-1603-3	0.982	0.932	0.973	0.980	0.976	1.090	1.030	0.985	1.010	0.975	0.990	0.980	0.963	0.988	1.020
ME-1603-4	0.978	0.937	1.000	0.979	0.957	1.040	1.020	0.955	1.030	0.974	1.010	0.990	0.947	0.914	0.968
ME-1603-5	1.001	0.966	1.030	0.993	1.097	0.939	1.010	1.022	0.983	1.033	0.960	0.950	1.095	0.964	1.100
ME-1603-6	0.987	0.998	1.029	1.020	0.968	0.932	0.990	0.984	1.030	1.003	1.000	1.020	0.976	1.010	0.964
ME-1603-7	1.014	1.040	1.038	0.986	1.044	0.972	1.020	1.000	0.973	1.027	0.980	0.990	1.035	1.060	1.090
ME-1603-8	1.002	0.937	0.990	0.951	1.033	1.015	0.980	0.972	1.070	1.000	1.050	0.950	1.087	1.040	1.050
ME-1603-9	1.001	0.969	1.018	0.963	0.955	0.903	1.000	0.994	1.035	1.081	0.990	0.940	0.948	0.974	1.020
ME-1603-10	0.971	0.966	0.982	1.015	1.032	1.035	1.010	0.969	1.035	0.961	1.060	0.940	1.008	1.070	0.992
Mean	0.992	0.978	1.003	0.990	1.002	1.002	1.003	0.983	1.015	1.002	1.009	0.972	1.004	1.013	1.019
Std. Devn.	0.0143	0.0397	0.0237	0.0291	0.0467	0.0619	0.0177	0.0192	0.0311	0.0371	0.0354	0.0297	0.0535	0.0625	0.0554
% RSD	1.45	4.06	2.36	2.94	4.66	6.18	1.76	1.95	3.07	3.70	3.51	3.06	5.33	6.17	5.44
Gravimetric	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-1603-1		88	75	80	77	89		78	77	90	82	85	76	85	108
ME-1603-2		86	80	86	76	80		78	81	88	82	85	74	85	106
ME-1603-3		84	76	80	75	84		79	80	88	82	84	75	87	103
ME-1603-4		85	79	81	73	85		77	83	88	83	87	74	94	104
ME-1603-5		89	73	82	73	80		79	83	88	82	83	74	91	101
ME-1603-6		88	80	83	73	82		79	77	90	84	85	73	86	103
ME-1603-7		88	78	84	76	84		79	77	92	82	84	75	87	90
ME-1603-8		89	79	81	75	85		80	72	87	83	85	76	88	92
ME-1603-9		85	77	81	72	80		78	76	87	82	83	75	93	88
ME-1603-10		88	79	82	73	84		78	70	89	86	87	72	86	96
Mean		87	77	82	74	83		79	78	89	83	85	74	88	99
Std. Devn.		1.826	2.329	1.886	1.703	2.869		0.850	4.326	1.377	1.317	1.398	1.265	3.293	7.078
% RSD		2.10	3.01	2.30	2.29	3.44		1.08	5.57	1.55	1.59	1.65	1.70	3.73	7.14
Instrumental	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-1603-1	84	90	88	88	87	87	86	83	82	88	86	90	86	89	86
ME-1603-2	82	86	87	86	86	89	86	85	83	88	86	87	88	92	87
ME-1603-3	83	86	86	86	88	85	85	84	84	87	86	87	87	92	87
ME-1603-4	86	87	85	86	88	85	85	83	84	88	82	88	86	95	86
ME-1603-5	84	85	87	87	85	86	86	85	84	88	84	86	87	94	86
ME-1603-6	81	87	87	85	88	85	86	85	84	87	85	83	88	94	86
ME-1603-7	86	89	85	89	87	86	85	83	84	87	85	81	85	94	87
ME-1603-8	86	86	86	86	86	87	85	83	83	89	86	84	85	94	86
ME-1603-9	82	85	85	86	84	87	85	82	85	87	85	87	85	96	84
ME-1603-10	83	87	86	86	83	85	85	83	83	89	85	87	84	92	83
Mean	84	87	86	87	86	86	85	84	84	88	85	86	86	93	86
Std. Devn.	1.829	1.483	1.028	1.179	1.751	1.317	0.516	1.075	0.843	0.685	1.247	2.625	1.370	1.969	1.342
% RSD	2.18	1.71	1.19	1.36	2.03	1.53	0.60	1.29	1.01	0.78	1.47	3.05	1.59	2.12	1.57

Notes: Laboratories 1 and 7 did not report fire assay, gravimetric data for Ag.

Ag fire assay, gravimetric data from laboratory 15 was removed for failing the t-test.

Ag fire assay, instrumental data from laboratory 14 was removed for failing the t-test.

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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-1603-1	0.27	0.283	0.276	0.275	0.285	0.296	0.285	0.271	0.275	0.299	0.274	0.27	0.276	0.272	0.278
ME-1603-2	0.27	0.275	0.275	0.276	0.284	0.295	0.286	0.274	0.271	0.293	0.276	0.27	0.285	0.283	0.280
ME-1603-3	0.28	0.279	0.274	0.274	0.286	0.292	0.285	0.272	0.273	0.297	0.273	0.27	0.283	0.278	0.279
ME-1603-4	0.28	0.278	0.277	0.275	0.289	0.293	0.286	0.268	0.267	0.294	0.273	0.27	0.290	0.289	0.278
ME-1603-5	0.28	0.275	0.280	0.274	0.280	0.294	0.285	0.268	0.275	0.296	0.278	0.28	0.283	0.288	0.280
ME-1603-6	0.28	0.271	0.273	0.275	0.285	0.287	0.285	0.272	0.270	0.294	0.276	0.27	0.281	0.291	0.282
ME-1603-7	0.29	0.277	0.272	0.276	0.278	0.288	0.285	0.273	0.275	0.292	0.275	0.27	0.280	0.286	0.281
ME-1603-8	0.28	0.275	0.273	0.274	0.280	0.294	0.284	0.271	0.273	0.302	0.278	0.28	0.283	0.281	0.278
ME-1603-9	0.28	0.272	0.272	0.274	0.280	0.290	0.276	0.269	0.271	0.294	0.279	0.28	0.284	0.274	0.274
ME-1603-10	0.28	0.278	0.269	0.276	0.279	0.296	0.284	0.272	0.273	0.304	0.275	0.26	0.285	0.284	0.273
Mean	0.279	0.276	0.274	0.275	0.283	0.293	0.284	0.271	0.272	0.297	0.276	0.272	0.283	0.283	0.278
Std. Devn.	0.0057	0.0035	0.0029	0.0009	0.0037	0.0032	0.0029	0.0021	0.0026	0.0040	0.0021	0.0063	0.0037	0.0064	0.0029
% RSD	2.03	1.27	1.07	0.32	1.29	1.10	1.03	0.76	0.95	1.35	0.77	2.33	1.29	2.25	1.03
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
ME-1603-1	1.32	1.36	1.38	1.33	1.37	1.38	1.41	1.30	1.30	1.43	1.30	1.39	1.35	1.38	1.34
ME-1603-2	1.32	1.32	1.37	1.33	1.38	1.40	1.41	1.33	1.31	1.42	1.32	1.33	1.38	1.39	1.31
ME-1603-3	1.31	1.32	1.35	1.33	1.40	1.35	1.42	1.31	1.31	1.42	1.30	1.30	1.38	1.34	1.31
ME-1603-4	1.33	1.33	1.36	1.32	1.39	1.36	1.41	1.31	1.31	1.42	1.28	1.33	1.40	1.35	1.30
ME-1603-5	1.32	1.33	1.37	1.33	1.36	1.36	1.42	1.31	1.31	1.41	1.31	1.36	1.37	1.35	1.30
ME-1603-6	1.32	1.33	1.37	1.33	1.38	1.34	1.42	1.32	1.31	1.43	1.32	1.33	1.40	1.35	1.33
ME-1603-7	1.38	1.34	1.35	1.34	1.36	1.35	1.41	1.31	1.32	1.42	1.32	1.34	1.37	1.34	1.31
ME-1603-8	1.33	1.32	1.35	1.34	1.35	1.36	1.41	1.30	1.30	1.45	1.31	1.37	1.38	1.35	1.32
ME-1603-9	1.32	1.35	1.34	1.32	1.35	1.37	1.42	1.31	1.31	1.43	1.33	1.38	1.36	1.37	1.32
ME-1603-10	1.33	1.35	1.33	1.34	1.36	1.37	1.42	1.31	1.31	1.45	1.31	1.30	1.37	1.32	1.31
Mean	1.33	1.34	1.36	1.33	1.37	1.36	1.42	1.31	1.31	1.43	1.31	1.34	1.38	1.35	1.32
Std. Devn.	0.0193	0.0143	0.0163	0.0062	0.0170	0.0170	0.0053	0.0107	0.0047	0.0120	0.0141	0.0313	0.0158	0.0207	0.0127
% RSD	1.45	1.07	1.20	0.47	1.24	1.25	0.37	0.82	0.36	0.84	1.08	2.33	1.15	1.53	0.97
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
ME-1603-1	0.44	0.45	0.45	0.47	0.46	0.48	0.45	0.43	0.46	0.45	0.43	0.45	0.45	0.41	0.42
ME-1603-2	0.43	0.44	0.45	0.47	0.46	0.48	0.47	0.44	0.46	0.46	0.44	0.45	0.47	0.43	0.42
ME-1603-3	0.43	0.45	0.44	0.47	0.47	0.48	0.46	0.44	0.47	0.45	0.43	0.44	0.46	0.42	0.42
ME-1603-4	0.43	0.45	0.45	0.47	0.47	0.48	0.46	0.43	0.46	0.46	0.43	0.45	0.45	0.44	0.42
ME-1603-5	0.43	0.44	0.45	0.47	0.46	0.48	0.46	0.43	0.47	0.46	0.44	0.46	0.45	0.43	0.42
ME-1603-6	0.43	0.44	0.44	0.47	0.46	0.47	0.47	0.43	0.46	0.46	0.44	0.45	0.46	0.44	0.42
ME-1603-7	0.44	0.45	0.44	0.47	0.45	0.47	0.46	0.43	0.47	0.46	0.44	0.45	0.47	0.43	0.42
ME-1603-8	0.43	0.44	0.45	0.47	0.45	0.48	0.46	0.43	0.46	0.46	0.44	0.45	0.46	0.43	0.42
ME-1603-9	0.43	0.45	0.44	0.47	0.46	0.48	0.46	0.43	0.46	0.46	0.44	0.45	0.45	0.42	0.42
ME-1603-10	0.44	0.46	0.44	0.47	0.46	0.48	0.45	0.43	0.47	0.46	0.44	0.46	0.46	0.43	0.40
Mean	0.43	0.45	0.44	0.47	0.46	0.48	0.46	0.43	0.46	0.46	0.44	0.45	0.46	0.43	0.42
Std. Devn.	0.0048	0.0061	0.0044	0.0026	0.0067	0.0045	0.0067	0.0027	0.0041	0.0029	0.0045	0.0057	0.0079	0.0073	0.0054
% RSD	1.12	1.36	0.99	0.56	1.45	0.95	1.45	0.62	0.88	0.63	1.04	1.26	1.72	1.71	1.30

Notes:

Pb data from laboratories 7 and 10 was removed for failing the t-test.

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Participating Laboratories:

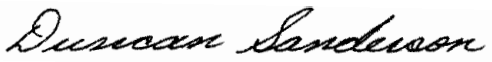
(not in same order as listed in table of results)

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Andes Analytical Assay Ltda., Santiago, Chile
Argetest, Ankara, Turkey
ALS South America, Lima, Peru
ALS Loughrea (Omac), Ireland
ALS Canada, North Vancouver, BC, Canada
Bureau Veritas (Acme), Vancouver, BC, Canada
Certimin, Lima, Peru
MS Analytical, Langley, BC, Canada
SGS, Lakefield, Ontario, Canada
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Certified by


Duncan Sanderson, Certified Assayer of B.C.

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