

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-1604

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<i>2.51 g/t</i>	\pm	<i>0.12 g/t</i>	<i>30 g FA, instrumental</i>	<i>Certified value</i>
<i>Silver</i>	<i>299 ppm</i>	\pm	<i>15 ppm</i>	<i>30 g FA, gravimetric</i>	<i>Certified value</i>
<i>Silver</i>	<i>309 ppm</i>	\pm	<i>15 ppm</i>	<i>4-Acid / ICP</i>	<i>Certified value</i>
<i>Copper</i>	<i>0.733 %</i>	\pm	<i>0.030 %</i>	<i>4 Acid / ICP</i>	<i>Certified value</i>
<i>Lead</i>	<i>4.83 %</i>	\pm	<i>0.15 %</i>	<i>4 Acid / ICP</i>	<i>Certified value</i>
<i>Zinc</i>	<i>0.72 %</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-1604 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-1604-1	2.51	2.58	2.56	2.43	2.46	2.48	2.55	2.50	2.37	2.42	2.57	2.34	2.45	2.53	2.62
ME-1604-2	2.46	2.54	2.53	2.40	2.43	2.44	2.52	2.55	2.31	2.47	2.50	2.49	2.43	2.56	2.56
ME-1604-3	2.52	2.64	2.60	2.54	2.52	2.42	2.51	2.54	2.37	2.45	2.48	2.45	2.50	2.64	2.59
ME-1604-4	2.48	2.47	2.60	2.36	2.53	2.67	2.64	2.49	2.45	2.56	2.58	2.36	2.51	2.61	2.44
ME-1604-5	2.52	2.52	2.50	2.59	2.54	2.44	2.55	2.57	2.48	2.50	2.51	2.50	2.54	2.46	2.52
ME-1604-6	2.50	2.59	2.58	2.53	2.47	2.50	2.53	2.61	2.49	2.49	2.53	2.34	2.45	2.56	2.49
ME-1604-7	2.49	2.66	2.56	2.50	2.51	2.47	2.49	2.54	2.39	2.40	2.54	2.48	2.51	2.64	2.45
ME-1604-8	2.51	2.66	2.52	2.67	2.42	2.45	2.48	2.49	2.35	2.44	2.54	2.43	2.42	2.53	2.60
ME-1604-9	2.51	2.52	2.54	2.48	2.39	2.55	2.49	2.52	2.43	2.57	2.52	2.35	2.40	2.64	2.54
ME-1604-10	2.51	2.49	2.59	2.60	2.47	2.67	2.55	2.52	2.39	2.51	2.53	2.43	2.50	2.48	2.51
Mean	2.50	2.57	2.56	2.51	2.47	2.51	2.53	2.53	2.40	2.48	2.53	2.42	2.47	2.57	2.53
Std. Devn.	0.0184	0.0698	0.0346	0.0963	0.0500	0.0924	0.0465	0.0377	0.0581	0.0552	0.0302	0.0643	0.0481	0.0664	0.0616
% RSD	0.74	2.72	1.35	3.84	2.02	3.68	1.84	1.49	2.42	2.23	1.19	2.66	1.95	2.59	2.43
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-1604-1	303	317	294	296	293	303		293	286	299	297	307	295	301	309
ME-1604-2	305	320	287	297	289	293		297	290	301	295	317	292	298	352
ME-1604-3	304	314	296	296	302	306		298	290	304	297	309	305	295	357
ME-1604-4	305	305	297	293	295	310		295	294	302	296	317	293	297	355
ME-1604-5	304	321	297	293	289	304		293	288	303	296	315	290	304	351
ME-1604-6	303	316	301	281	288	308		301	285	305	295	308	287	300	352
ME-1604-7	302	312	301	293	287	314		300	286	302	294	309	289	300	316
ME-1604-8	306	311	295	297	291	300		296	288	304	296	318	289	300	318
ME-1604-9	303	312	295	299	287	332		293	289	303	303	305	288	305	316
ME-1604-10	302	315	298	294	292	300		294	295	300	301	310	291	308	314
Mean	304	314	296	294	291	307		296	289	302	297	312	292	301	334
Std. Devn.	1.337	4.668	3.923	4.977	4.596	10.562		2.944	3.315	1.847	2.828	4.767	5.195	3.910	20.645
% RSD	0.44	1.49	1.33	1.69	1.58	3.44		0.99	1.15	0.61	0.95	1.53	1.78	1.30	6.18
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-1604-1	294	314	310	304	314	305	305		303	323	305	300	316	302	321
ME-1604-2	303	315	309	306	313	303	304		304	320	304	296	315	307	321
ME-1604-3	302	313	312	309	308	307	304		306	322	299	303	308	321	320
ME-1604-4	299	315	310	312	311	305	306		300	320	296	306	309	317	324
ME-1604-5	297	313	311	307	308	311	305		301	321	306	304	308	326	322
ME-1604-6	304	308	310	311	313	312	304		302	326	304	297	311	313	327
ME-1604-7	296	320	310	307	308	313	303		298	322	306	309	310	312	322
ME-1604-8	301	315	313	308	311	301	307		303	331	305	315	310	316	322
ME-1604-9	295	313	314	310	318	304	305		302	321	302	308	315	313	322
ME-1604-10	297	315	313	311	317	301	305		297	314	280	316	318	320	325
Mean	299	314	311	309	312	306	305		302	322	301	305	312	315	323
Std. Devn.	3.521	2.961	1.884	2.550	3.604	4.417	1.135		2.716	4.372	7.959	6.835	3.651	6.961	2.119
% RSD	1.18	0.94	0.61	0.83	1.15	1.44	0.37		0.90	1.36	2.65	2.24	1.17	2.21	0.66

Notes: Laboratory 7 did not report fire assay, gravimetric data for Ag.
 Laboratory 8 did not report 4-acid instrumental data for Ag.

Ag fire assay, gravimetric data from laboratory 15 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-1604-1	0.720	0.745	0.732	0.718	0.749	0.766	0.757	0.711	0.738	0.752	0.734	0.710	0.75	0.692	0.712
ME-1604-2	0.720	0.720	0.726	0.733	0.738	0.710	0.759	0.712	0.738	0.745	0.740	0.750	0.74	0.718	0.742
ME-1604-3	0.720	0.715	0.722	0.719	0.736	0.776	0.762	0.711	0.733	0.750	0.717	0.720	0.74	0.711	0.727
ME-1604-4	0.720	0.724	0.722	0.725	0.742	0.757	0.757	0.716	0.733	0.756	0.727	0.740	0.74	0.720	0.725
ME-1604-5	0.720	0.743	0.727	0.711	0.729	0.754	0.763	0.712	0.728	0.747	0.730	0.760	0.73	0.742	0.724
ME-1604-6	0.710	0.735	0.730	0.727	0.735	0.761	0.758	0.702	0.733	0.752	0.730	0.720	0.74	0.746	0.722
ME-1604-7	0.720	0.726	0.727	0.716	0.743	0.789	0.759	0.721	0.735	0.751	0.742	0.730	0.74	0.710	0.729
ME-1604-8	0.720	0.739	0.719	0.729	0.739	0.764	0.756	0.720	0.729	0.754	0.729	0.740	0.74	0.729	0.713
ME-1604-9	0.710	0.746	0.731	0.719	0.753	0.717	0.750	0.711	0.736	0.749	0.743	0.730	0.75	0.735	0.726
ME-1604-10	0.720	0.732	0.734	0.732	0.752	0.756	0.751	0.718	0.728	0.751	0.729	0.740	0.75	0.734	0.689
Mean	0.718	0.733	0.727	0.723	0.742	0.755	0.757	0.713	0.733	0.751	0.732	0.734	0.742	0.724	0.721
Std. Devn.	0.0042	0.0109	0.0048	0.0074	0.0078	0.0243	0.0042	0.0056	0.0038	0.0032	0.0079	0.0151	0.0072	0.0166	0.0140
% RSD	0.59	1.49	0.66	1.02	1.05	3.22	0.55	0.79	0.52	0.43	1.08	2.05	0.97	2.30	1.94
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
ME-1604-1	4.83	4.92	4.858	4.76	4.85	4.89	5.14	4.711	4.76	4.951	4.73	4.66	4.86	4.56	4.91
ME-1604-2	4.79	4.79	4.831	4.79	4.86	4.82	5.13	4.697	4.83	4.874	4.77	4.79	4.85	4.72	4.80
ME-1604-3	4.82	4.89	4.878	4.82	4.80	4.94	5.14	4.741	4.85	4.837	4.69	4.79	4.83	4.84	4.78
ME-1604-4	4.74	4.96	4.841	4.84	4.82	4.90	5.14	4.737	4.78	4.844	4.68	4.78	4.81	4.82	4.64
ME-1604-5	4.76	4.90	4.875	4.79	4.80	4.96	5.15	4.693	4.80	4.840	4.79	4.73	4.84	4.95	4.64
ME-1604-6	4.79	4.91	4.876	4.86	4.88	4.99	5.15	4.728	4.84	4.957	4.86	4.73	4.86	4.78	4.85
ME-1604-7	4.79	4.83	4.876	4.75	4.81	5.02	5.13	4.746	4.79	4.953	4.77	4.62	4.82	4.76	4.72
ME-1604-8	4.79	5.05	4.917	4.83	4.87	4.81	5.14	4.723	4.80	4.954	4.77	4.82	4.84	4.82	4.55
ME-1604-9	4.73	4.86	4.936	4.79	4.94	4.83	5.12	4.759	4.82	4.889	4.81	4.63	4.92	4.75	4.93
ME-1604-10	4.77	4.94	4.959	4.86	4.96	4.80	5.13	4.719	4.78	4.864	4.59	4.80	4.97	4.97	4.92
Mean	4.78	4.91	4.88	4.81	4.86	4.90	5.14	4.73	4.81	4.90	4.75	4.74	4.86	4.80	4.77
Std. Devn.	0.0318	0.0720	0.0408	0.0390	0.0561	0.0796	0.0095	0.0213	0.0292	0.0519	0.0766	0.0741	0.0491	0.1165	0.1332
% RSD	0.66	1.47	0.84	0.81	1.15	1.63	0.18	0.45	0.61	1.06	1.61	1.57	1.01	2.43	2.79
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
ME-1604-1	0.69	0.714	0.706	0.719	0.73	0.726	0.73	0.693	0.729	0.726	0.702	0.71	0.72	0.618	0.638
ME-1604-2	0.68	0.708	0.704	0.707	0.73	0.707	0.75	0.692	0.725	0.729	0.706	0.72	0.73	0.631	0.645
ME-1604-3	0.69	0.701	0.707	0.717	0.72	0.737	0.76	0.694	0.720	0.732	0.685	0.72	0.74	0.629	0.645
ME-1604-4	0.69	0.708	0.699	0.718	0.73	0.721	0.74	0.695	0.715	0.727	0.690	0.72	0.72	0.638	0.651
ME-1604-5	0.69	0.708	0.704	0.716	0.72	0.716	0.74	0.682	0.714	0.725	0.705	0.71	0.72	0.656	0.644
ME-1604-6	0.69	0.707	0.697	0.732	0.73	0.719	0.74	0.691	0.717	0.722	0.703	0.71	0.73	0.646	0.639
ME-1604-7	0.70	0.709	0.687	0.718	0.73	0.740	0.75	0.702	0.717	0.733	0.705	0.72	0.72	0.633	0.649
ME-1604-8	0.69	0.701	0.692	0.730	0.73	0.733	0.75	0.688	0.718	0.736	0.698	0.73	0.74	0.635	0.644
ME-1604-9	0.67	0.697	0.698	0.726	0.74	0.710	0.75	0.694	0.722	0.731	0.705	0.71	0.74	0.641	0.644
ME-1604-10	0.69	0.700	0.699	0.731	0.74	0.717	0.76	0.692	0.709	0.729	0.685	0.72	0.72	0.638	0.620
Mean	0.69	0.71	0.70	0.72	0.73	0.72	0.75	0.69	0.72	0.73	0.70	0.72	0.73	0.64	0.64
Std. Devn.	0.0079	0.0053	0.0065	0.0081	0.0067	0.0112	0.0095	0.0051	0.0057	0.0042	0.0085	0.0067	0.0092	0.0102	0.0086
% RSD	1.15	0.74	0.92	1.12	0.91	1.55	1.27	0.74	0.80	0.57	1.22	0.94	1.26	1.60	1.34

Notes:

**Pb data from laboratory 7 was removed for failing the t-test.
Zn data from laboratories 14 and 15 was removed for failing the t-test.**

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Participating Laboratories:

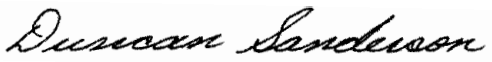
(not in same order as listed in table of results)

Activation Laboratories, Ancaster, Ontario, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada
AGAT, Mississauga, Ontario, Canada
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
SGS, Lima, Peru
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TSL Laboratories Ltd., Saskatoon, SK, Canada


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Certified by


Duncan Sanderson, Certified Assayer of B.C.

Geochemist


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