

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-2102

Recommended value and the "Between Laboratory" two standard deviations

Gold	3.238 g/t ± 0.178 g/t	Certified value	30g FA / AA or ICP Finish
Silver	71 g/t ± 5 g/t	Certified value	4 Acid digestion / AA or ICP
Copper	0.526 % ± 0.025 %	Certified value	4 Acid digestion / AA or ICP
Lead	0.336 % ± 0.013 %	Certified value	4 Acid digestion / AA or ICP
Zinc	0.549 % ± 0.022 %	Certified value	4 Acid digestion / AA or ICP

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Ali Alizadeh, MSc, MBA, P Geo
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: May 9th, 2022

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-ME-2102 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 blender. Splits were taken and sent to 15 commercial laboratories for round robin assaying.

ASSAY PROCEDURES:

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

Whole rock analysis and 30 element ICP analysis (4-acid digestion) were also conducted on 5 samples.

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 mean and standard deviation 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.

Our certified gold values are based on 30 g Fire Assay determinations. For optimal results, we strongly recommend you assay our standards with similar methods using "at least" 30 g of material. Using a smaller sample weight may result in erratic values.

Printed results from Round Robin Assaying is available in Appendix II and can be provided upon request.

Quality Assurance and Quality Control Procedures:

CDN completed a screening and a homogeneity study on CDN-ME-2102, based on ISO 13528 Annex B (Homogeneity and Stability of proficiency test items).

Screening Test: After completion of homogenization, three samples, 150g each of homogenized material was randomly collected and was re-screened by a testing sieve. Over size material of this standard and based on CDN's screening test was ~%2.7. (Appendix III).

During homogeneity test, 15 randomly selected samples from CDN-ME-2102 were sent to one of the round robin participating labs. Each sample was assaying twice and reported separately.

Assay results went through a statistical work-up by checking the mean, standard deviation, and %RSD. Based on performed statistical works outlined by ISO 13528; CDN-ME-2102 is statistically homogenized (Appendix III).

LEGAL NOTICE:

This certificate and the reference material described in it have been prepared with due care and attention. However, CDN Resource Laboratories Ltd. nor Barry Smee accept any 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, PhD, P. Geo.

APPENDIX I:

Whole rock analysis and 30 element ICP analysis (4-acid digestion) were also conducted on 3 samples.

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

Analyte	Percent	Analyte	Percent
SiO ₂	57.8	Na ₂ O	3.0
Al ₂ O ₃	13.0	MgO	2.7
Fe ₂ O ₃	9.0	K ₂ O	1.9
CaO	4.4	TiO ₂	0.5
MnO	0.2	LOI	5.4
Total S	2.7	Total C	0.7

PARTICIPATING LABORATORIES: (not in same order as table of assays)

Activation Labs, Ancaster, Ontario, Canada	Bureau Veritas, Perth, Australia
Activation Labs, Thunder Bay, Ontario, Canada	Bureau Veritas, Vancouver, BC, Canada
AGAT Labs, Ontario, Canada	Certimin S.A., Lima, Peru
ALS Lima, Peru	MS Analytical, Langley, BC, Canada
ALS, Johannesburg, South Africa	SGS Burnaby, BC, Canada
ALS, Loughrea, Ireland	SGS Lakefield, ON, Canada
ALS, Perth Australia	SRC, Saskatoon, SK, Canada
ALS Canada, North Vancouver, BC, Canada	

APPENDIX II:

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 by Fire Assay, 30g sample size and Instrumental finish														
CDN-ME-2102	3.16	3.21	3.57	3.19	3.13	3.19	3.28	3.36	3.455	3.303	3.22	3.126	3.20	3.24	1.59
	3.25	3.37	3.64	3.36	3.16	3.21	3.15	3.21	3.424	3.201	3.25	3.127	3.14	3.23	3.07
	3.32	3.25	3.42	3.37	3.28	3.24	2.99	3.16	3.245	3.292	3.16	3.133	3.18	3.35	3.29
	3.10	3.29	3.47	3.29	3.06	3.33	2.93	3.21	3.371	3.330	3.13	3.145	3.22	3.26	3.36
	3.22	3.40	3.56	3.51	3.08	3.20	3.16	3.13	3.428	3.314	3.25	3.208	3.25	3.30	3.20
	3.24	3.30	3.49	3.33	3.16	3.13	3.05	3.23	3.372	3.058	3.26	3.238	3.30	3.46	3.28
	3.14	3.24	3.39	3.26	3.31	3.20	3.11	3.34	3.258	3.370	3.32	3.230	3.08	3.33	3.24
	3.24	3.42	3.55	3.21	3.14	3.29	3.07	3.26	3.266	3.131	3.30	3.157	3.22	3.36	3.27
	3.21	3.34	3.52	3.24	3.08	3.30	3.28	3.31	3.364	3.211	3.15	3.232	3.24	3.27	3.23
	3.34	3.22	3.51	3.28	3.06	3.19	3.22	3.33	3.191	3.312	3.27	3.151	3.23	3.33	3.10
Mean	3.22	3.30	3.51	3.30	3.15	3.23	3.12	3.25	3.424	3.252	3.23	3.17	3.21	3.31	3.19
Std. Devn.	0.07	0.08	0.07	0.09	0.09	0.06	0.12	0.08	0.09	0.10	0.06	0.05	0.06	0.07	0.52
% RSD	2.33	2.29	2.10	2.84	2.78	1.90	3.76	2.43	2.65	3.04	2.00	1.47	1.91	2.08	16.45
	Ag (g/t) by 4 Acid digestion /Instrumental finish														
CDN-ME-2102	73	68	80.7	72	68	70	73	72	70	71	73.0	60.7	64	74	67.1
	71	74	79.1	70	68	72	75	70	71	72	71.0	61.2	64	76	70.5
	76	73	80.9	68	70	70	74	70	70	69	70.0	62.4	63	76	70.1
	74	70	80.5	71	70	71	70	72	68	69	72.0	60.5	68	81	70.5
	73	73	80.7	69	70	75	73	69	71	69	73.0	60.4	68	77	68.6
	73	72	80.1	72	71	71	70	68	72	70	72.5	60.5	65	73	68.0
	75	72	83.2	70	70	71	75	69	72	72	71.0	60.4	66	77	68.3
	73	70	81.5	70	67	72	71	70	69	72	70.5	60.7	67	75	65.0
	71	67	77.2	69	68	73	73	68	68	71	69.5	60.9	65	78	68.1
	73	71	83.4	73	71	71	74	73	67	70	73.0	61.6	64	76	70.1
Mean	73	71	80.7	70	69	72	73	70	70	71	71.6	61	65	76	68.6
Std. Devn.	1.55	2.26	1.81	1.58	1.42	1.51	1.87	1.73	1.75	1.27	1.32	0.64	1.78	2.21	1.75
% RSD	2.12	3.18	2.24	2.24	2.05	2.10	2.57	2.47	2.51	1.80	1.85	1.06	2.72	2.90	2.55
	Cu (%) by 4 Acid digestion /Instrumental finish														
CDN-ME-2102	0.544	0.484	0.522	0.520	0.502	0.514	0.534	0.512	0.517	0.544	0.516	0.482	0.530	0.508	0.546
	0.539	0.510	0.522	0.534	0.517	0.532	0.523	0.525	0.523	0.545	0.518	0.484	0.532	0.512	0.546
	0.542	0.510	0.531	0.535	0.522	0.522	0.519	0.530	0.508	0.541	0.510	0.491	0.538	0.507	0.545
	0.532	0.506	0.522	0.540	0.521	0.518	0.520	0.531	0.503	0.540	0.511	0.488	0.529	0.516	0.555
	0.538	0.512	0.540	0.527	0.534	0.521	0.537	0.527	0.520	0.535	0.509	0.482	0.538	0.503	0.554
	0.539	0.506	0.538	0.539	0.513	0.520	0.535	0.519	0.522	0.534	0.512	0.484	0.532	0.515	0.541
	0.546	0.493	0.537	0.534	0.523	0.523	0.537	0.529	0.519	0.538	0.513	0.482	0.539	0.521	0.553
	0.554	0.491	0.522	0.536	0.511	0.521	0.538	0.527	0.521	0.543	0.523	0.491	0.529	0.517	0.543
	0.543	0.487	0.517	0.529	0.509	0.516	0.540	0.525	0.513	0.523	0.517	0.486	0.532	0.505	0.543
	0.534	0.492	0.531	0.532	0.529	0.521	0.540	0.530	0.536	0.529	0.525	0.491	0.525	0.501	0.539
Mean	0.541	0.499	0.528	0.533	0.518	0.521	0.532	0.526	0.518	0.537	0.515	0.486	0.532	0.510	0.547
Std. Devn.	0.006	0.011	0.008	0.006	0.010	0.005	0.008	0.006	0.009	0.007	0.005	0.004	0.005	0.007	0.006
% RSD	1.161	2.140	1.556	1.120	1.863	0.927	1.559	1.121	1.737	1.313	1.056	0.796	0.864	1.291	1.029
	Pb (%) by 4 Acid digestion /Instrumental finish														
CDN-ME-2102	0.349	0.316	0.307	0.333	0.330	0.332	0.343	0.331	0.33	0.34	0.332	0.290	0.346	0.302	0.329
	0.343	0.330	0.308	0.339	0.323	0.337	0.339	0.333	0.33	0.34	0.335	0.289	0.342	0.305	0.330
	0.350	0.334	0.304	0.342	0.341	0.332	0.338	0.337	0.33	0.34	0.332	0.290	0.344	0.298	0.325
	0.342	0.329	0.305	0.338	0.338	0.329	0.336	0.337	0.32	0.34	0.337	0.294	0.343	0.302	0.332
	0.353	0.327	0.301	0.338	0.341	0.336	0.344	0.334	0.33	0.33	0.334	0.293	0.345	0.307	0.331
	0.346	0.329	0.307	0.340	0.338	0.332	0.344	0.325	0.34	0.34	0.336	0.294	0.350	0.302	0.331
	0.346	0.328	0.314	0.337	0.338	0.329	0.347	0.335	0.33	0.34	0.340	0.289	0.346	0.312	0.331
	0.344	0.322	0.307	0.340	0.332	0.332	0.344	0.332	0.33	0.34	0.337	0.293	0.344	0.305	0.326
	0.349	0.322	0.298	0.335	0.330	0.332	0.345	0.329	0.33	0.34	0.335	0.290	0.345	0.307	0.327
	0.350	0.320	0.308	0.338	0.341	0.333	0.344	0.347	0.33	0.33	0.340	0.292	0.336	0.303	0.326
Mean	0.347	0.326	0.306	0.338	0.335	0.332	0.342	0.334	0.33	0.34	0.336	0.291	0.344	0.304	0.329
Std. Devn.	0.004	0.005	0.004	0.003	0.006	0.003	0.004	0.006	0.005	0.004	0.003	0.002	0.004	0.004	0.003
% RSD	1.023	1.682	1.416	0.764	1.827	0.766	1.023	1.751	1.428	1.247	0.840	0.690	1.038	1.228	0.783

Zn (%) by 4 Acid digestion /Instrumental finish															
CDN-ME-2102	0.548	0.537	0.531	0.544	0.530	0.557	0.554	0.569	0.55	0.56	0.528	0.536	0.564	0.58	0.546
	0.535	0.557	0.531	0.551	0.533	0.562	0.545	0.572	0.54	0.57	0.533	0.545	0.564	0.58	0.550
	0.544	0.565	0.533	0.564	0.552	0.561	0.543	0.568	0.55	0.56	0.529	0.539	0.571	0.56	0.549
	0.537	0.554	0.527	0.567	0.544	0.553	0.545	0.567	0.53	0.56	0.528	0.537	0.562	0.56	0.565
	0.544	0.552	0.541	0.552	0.554	0.561	0.557	0.562	0.55	0.55	0.529	0.536	0.575	0.58	0.558
	0.542	0.556	0.546	0.561	0.540	0.554	0.556	0.553	0.56	0.56	0.531	0.538	0.561	0.57	0.552
	0.545	0.552	0.540	0.558	0.549	0.553	0.559	0.567	0.54	0.56	0.532	0.536	0.562	0.60	0.554
	0.543	0.543	0.529	0.561	0.542	0.555	0.557	0.562	0.54	0.56	0.538	0.547	0.557	0.60	0.548
	0.548	0.545	0.524	0.551	0.533	0.547	0.562	0.558	0.55	0.54	0.539	0.538	0.563	0.57	0.549
	0.544	0.541	0.539	0.553	0.553	0.554	0.559	0.576	0.54	0.55	0.536	0.537	0.553	0.58	0.548
Mean	0.543	0.550	0.534	0.556	0.543	0.556	0.554	0.565	0.55	0.56	0.532	0.539	0.563	0.58	0.552
Std. Devn.	0.004	0.009	0.007	0.007	0.009	0.005	0.007	0.007	0.008	0.008	0.004	0.004	0.006	0.014	0.006
% RSD	0.772	1.554	1.319	1.282	1.645	0.836	1.231	1.197	1.559	1.478	0.772	0.724	1.110	2.419	1.044

Notes:

Au results by Fire Assay from Lab 3 were removed for failing the t test.

Ag results from Labs 3 and 12 were removed for failing the t test.

Cu results from Lab 12 were removed for failing the t test.

Pb results from Labs 3, 12 and 14 were removed for failing the t test.

Zn results from Lab 14 were removed for failing the t test.

APPENDIX III: QAQC

Table below illustrates percentages of over size (+275 mesh) material in CDN-ME-2102.

Standard	Study Date	Total weight Screened (g)	Total weight Over size (g)	Percentage
CDN-ME-2102	10/27/2021	150	3.5	2.3%
CDN-ME-2102	10/27/2021	150	4	2.7%
CDN-ME-2102	10/27/2021	150	3.5	2.3%

CDN-ME-2102		Between Sample Variance	Sample Avg.	Stdev of Sample Avg	Within-Sample Std.	
Au Original	Au Repeat	Wt	Xt			
3.230	3.366	0.136	3.298	0.000		0.018
3.307	3.308	0.001	3.308	0.000		0.000
3.286	3.411	0.125	3.349	0.001		0.016
3.227	3.313	0.086	3.270	0.002		0.007
3.256	3.176	0.080	3.216	0.010		0.006
3.398	3.220	0.178	3.309	0.000		0.032
3.365	3.352	0.013	3.359	0.002		0.000
3.254	3.474	0.220	3.364	0.002		0.048
3.282	3.467	0.185	3.375	0.003		0.034
3.254	3.263	0.009	3.259	0.003		0.000
3.302	3.235	0.067	3.269	0.002		0.004
3.388	3.186	0.202	3.287	0.001		0.041
3.309	3.272	0.037	3.291	0.001		0.001
3.412	3.306	0.106	3.359	0.002		0.011
3.524	3.385	0.139	3.455	0.019		0.019
Statistics	Au Original	Au Repeat	Gavg	SX	SW	SS
Mean	3.320	3.316	3.318	0.059	0.089	0.022
SD	0.0826	0.0936	C	C SQRT		
RSD	2.489	2.822	0.0116	0.11		
Proof of Homogeneity (SS is < square root of C) Statically ME-2102 is homogenous						