

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-ME-2107

Recommended values and the “Between Lab” Two Standard Deviations

Gold	2.272 gpt	± 0.220 gpt	30 g FA, instrumental	Certified value
Silver	34 ppm	± 3 ppm	4 Acid / ICP	Certified value
Copper	1.424 %	± 0.055 %	4 Acid / ICP	Certified value
Lead	0.11 %	± 0.004 %	4 Acid / ICP	Certified value
Zinc	0.176 %	± 0.011 %	4 Acid / ICP	Certified value

Note 1: 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: Ali Alizadeh, MSc, MBA, P Geo

INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.

DATE OF CERTIFICATION: May 16th, 2022

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-ME-2107 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 mixer. 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.

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.

Quality Assurance and Quality Control Procedures:

Screening Test: After completion of homogenization, three samples, 300g 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 ~%1.0.

Homogeneity Test:

15 samples were selected selectively throughout the batch and were sent to an independent assay Laboratories for

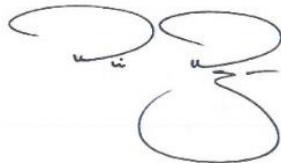
Homogeneity testing following directions of Annex B, Homogeneity and Stability of proficiency test items, ISO 13528:2015 Guidelines.

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-2107 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	54.9	Na ₂ O	2.2
Al ₂ O ₃	12.4	MgO	3.8
Fe ₂ O ₃	10.6	K ₂ O	2.0
CaO	5.8	TiO ₂	0.4
MnO	0.2	LOI	5.2
Total S	3.1	Total C	0.8

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, Brisbane, Australia	MS Analytical, Langley, BC, Canada
ALS, Perth, Australia	SGS Lakefield, ON, Canada
ALS Lima, Peru	SGS, Vancouver, BC, Canada
ALS, Loughrea, Ireland	
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	
	Au (g/t) by Fire Assay, 30g sample size and Instrumental finish														
ME-2107	2.31	2.38	2.36	2.71	2.26	2.13	2.24	2.35	2.26	2.355	2.339	2.229	2.21	2.36	
	2.13	2.45	2.29	2.33	2.27	2.07	2.27	2.06	2.49	2.354	2.357	2.162	2.24	2.38	
	2.16	2.17	2.18	2.36	2.38	2.08	2.33	2.34	2.25	2.441	2.387	2.011	2.23	2.09	
	2.28	2.45	2.50	2.57	2.38	2.18	2.36	2.27	2.29	2.182	2.440	2.129	2.21	2.49	
	2.22	2.37	2.35	2.48	2.23	2.24	2.24	2.41	2.28	2.494	2.332	2.127	2.32	2.25	
	2.16	2.27	2.35	2.10	2.15	2.22	2.18	2.26	2.08	2.250	2.402	2.175	2.23	2.39	
	2.18	2.20	2.22	2.26	2.13	2.08	2.18	2.40	2.16	2.368	2.395	2.150	2.24	2.39	
	2.16	2.27	2.19	2.33	2.15	2.17	2.38	2.53	2.30	2.209	2.391	2.070	2.26	2.43	
	2.12	2.32	2.29	2.46	2.23	2.08	2.24	2.38	2.17	2.423	2.378	2.072	2.16	2.42	
	2.30	2.36	2.30	2.31	2.35	2.09	2.33	2.29	2.28	2.301	2.377	2.179	2.24	2.19	
Mean	2.20	2.32	2.30	2.39	2.25	2.13	2.28	2.33	2.26	2.338	2.380	2.130	2.23	2.34	
Std. Devn.	0.07	0.10	0.10	0.17	0.09	0.06	0.07	0.12	0.11	0.10	0.03	0.06	0.04	0.12	
% RSD	3.22	4.14	4.13	7.15	4.17	3.00	3.14	5.30	4.83	4.36	1.33	3.00	1.82	5.28	
Ag (g/t) by 4 Acid digestion /Instrumental finish															
ME-2107	33	33	39	35	34	36	34	35	34.0	35	34	36	36	32	
	35	35	37	33	33	36	33	34	34.5	39	33	36	36	33	
	33	33	36	32	34	35	35	34	34.0	34	34	35	36	34	
	34	34	35	35	34	33	32	33	35.0	40	36	34	36	35	
	31	34	38	36	37	35	34	33	35.0	37	35	34	36	35	
	37	36	37	32	35	34	33	33	36.0	36	36	36	34	33	
	32	33	36	33	33	37	33	34	32.5	36	35	35	37	33	
	34	35	36	33	35	36	34	34	36.0	35	34	34	36	34	
	34	33	38	35	33	33	34	34	33.0	38	35	35	36	34	
	32	32	35	35	32	35	35	34	33.0	37	34	36	37	32	
Mean	34	34	37	34	34	35	34	34	34.3	37	35	35	36	34	
Std. Devn.	1.72	1.23	1.27	1.45	1.41	1.33	0.95	0.632	1.23	1.89	0.97	0.88	0.82	1.08	
% RSD	5.12	3.64	3.45	4.27	4.16	3.81	2.82	1.871	3.58	5.15	2.79	2.49	2.27	3.22	
Cu (%) by 4 Acid digestion Instrumental finish															
ME-2107	1.36	1.43	1.45	1.40	1.450	1.435	1.430	1.435	1.43	1.460	1.45	1.424	1.39	1.440	
	1.42	1.45	1.50	1.40	1.455	1.450	1.415	1.430	1.41	1.441	1.44	1.386	1.34	1.400	
	1.39	1.44	1.41	1.36	1.470	1.420	1.430	1.420	1.40	1.463	1.42	1.410	1.36	1.44	
	1.40	1.43	1.47	1.40	1.445	1.425	1.435	1.430	1.43	1.455	1.47	1.417	1.33	1.41	
	1.38	1.45	1.47	1.40	1.460	1.420	1.420	1.415	1.42	1.480	1.43	1.384	1.39	1.39	
	1.39	1.44	1.40	1.34	1.455	1.415	1.425	1.435	1.42	1.492	1.43	1.433	1.41	1.42	
	1.45	1.45	1.48	1.39	1.470	1.410	1.435	1.440	1.42	1.473	1.43	1.393	1.38	1.42	
	1.45	1.44	1.42	1.41	1.465	1.400	1.390	1.450	1.41	1.453	1.45	1.406	1.39	1.42	
	1.35	1.47	1.39	1.41	1.440	1.385	1.435	1.450	1.41	1.457	1.44	1.368	1.41	1.41	
	1.41	1.43	1.44	1.36	1.420	1.375	1.425	1.445	1.42	1.480	1.42	1.375	1.35	1.39	
Mean	1.40	1.44	1.44	1.39	1.453	1.414	1.424	1.435	1.42	1.465	1.44	1.400	1.38	1.41	
Std. Devn.	0.03	0.01	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.02	
% RSD	2.40	0.87	2.57	1.87	1.05	1.58	0.96	0.82	0.67	1.06	1.08	1.55	2.06	1.26	

Pb (%) by 4 Acid digestion Instrumental finish															
ME-2107	0.108	0.111	0.092	0.108	0.107	0.110	0.109	0.112	0.111	0.11	0.12	0.11	0.09	0.106	
	0.115	0.112	0.092	0.108	0.108	0.107	0.110	0.111	0.109	0.11	0.12	0.11	0.08	0.108	
	0.109	0.113	0.090	0.103	0.110	0.105	0.111	0.113	0.110	0.11	0.11	0.11	0.08	0.108	
	0.110	0.111	0.089	0.107	0.111	0.106	0.111	0.110	0.110	0.11	0.12	0.11	0.08	0.106	
	0.110	0.113	0.092	0.110	0.112	0.107	0.110	0.111	0.111	0.11	0.11	0.11	0.08	0.107	
	0.109	0.111	0.092	0.104	0.109	0.109	0.111	0.113	0.110	0.11	0.11	0.11	0.08	0.108	
	0.110	0.113	0.090	0.106	0.111	0.110	0.110	0.112	0.111	0.11	0.12	0.11	0.09	0.108	
	0.110	0.115	0.091	0.107	0.111	0.109	0.108	0.112	0.112	0.11	0.12	0.11	0.09	0.108	
	0.113	0.115	0.091	0.110	0.108	0.105	0.111	0.111	0.107	0.11	0.12	0.11	0.08	0.107	
	0.119	0.111	0.091	0.105	0.110	0.106	0.110	0.112	0.109	0.11	0.11	0.11	0.08	0.108	
Mean	0.111	0.113	0.091	0.107	0.110	0.107	0.110	0.112	0.110	0.11	0.12	0.11	0.08	0.107	
Std. Devn.	0.003	0.002	0.001	0.002	0.002	0.002	0.001	0.001	0.001	0.000	0.005	0.000	0.005	0.001	
% RSD	3.06	1.41	1.12	2.20	1.49	1.82	0.90	0.85	1.29	0.00	4.45	0.00	5.82	0.79	
Zn (%) by 4 Acid digestion Instrumental finish															
ME-2107	0.167	0.17 ₂	0.160	0.179	0.178	0.184	0.175	0.182	0.178	0.18	0.17	0.18	0.19	0.164	
	0.171	0.17 ₀	0.159	0.178	0.184	0.184	0.176	0.180	0.174	0.18	0.17	0.18	0.18	0.169	
	0.170	0.17 ₄	0.156	0.172	0.185	0.182	0.176	0.182	0.172	0.18	0.17	0.18	0.19	0.167	
	0.171	0.17 ₀	0.156	0.175	0.184	0.182	0.178	0.180	0.173	0.18	0.17	0.18	0.18	0.166	
	0.170	0.17 ₃	0.157	0.178	0.187	0.182	0.173	0.177	0.174	0.18	0.17	0.18	0.19	0.182	
	0.176	0.17 ₂	0.157	0.169	0.185	0.181	0.174	0.179	0.177	0.19	0.17	0.18	0.19	0.171	
	0.175	0.17 ₂	0.159	0.175	0.185	0.182	0.177	0.179	0.179	0.18	0.17	0.18	0.19	0.168	
	0.175	0.17 ₄	0.159	0.178	0.187	0.179	0.169	0.180	0.173	0.18	0.17	0.18	0.19	0.168	
	0.165	0.17 ₂	0.159	0.179	0.180	0.177	0.176	0.179	0.173	0.18	0.18	0.17	0.19	0.168	
	0.169	0.17 ₃	0.156	0.174	0.178	0.176	0.177	0.178	0.174	0.18	0.17	0.17	0.19	0.166	
Mean	0.171	0.17 ₂	0.158	0.176	0.183	0.181	0.175	0.180	0.175	0.18	0.17	0.18	0.19	0.169	
Std. Devn.	0.004	0.00 ₁	0.002	0.003	0.003	0.003	0.003	0.002	0.002	0.003	0.003	0.004	0.004	0.005	
% RSD	2.09	0.81	0.98	1.90	1.86	1.51	1.49	0.88	1.38	1.75	1.85	2.37	2.24	2.95	

Notes:

Pb results assayed by 4 Acid digestion with instrumental finish from Labs 3 and 14 were removed for failing the t test.

Zn results assayed by 4 Acid digestion with instrumental finish from Lab 3 were removed for failing the t test.

APPENDIX III: QAQC

Table below illustrates percentages of over size (+275 mesh) material in CDN-ME-2107

Standard	Study Date	Total weight Screened (g)	Total weight Over size (g)	Percentage
ME-2107	1/21/2022	300	3	1.0%
	1/21/2022	300	3.5	1.2%
	1/21/2022	300	3	1.0%

ME-2107	Au Original	Au Repeat	Between Sample Variance Wt	Sample Avg. Xt	Stdev of Sample Avg	Within-Sample Std.
	2.28	2.30	0.020	2.290	0.004	0.000
	2.18	2.13	0.050	2.155	0.005	0.003
	2.27	2.19	0.080	2.230	0.000	0.006
	2.25	2.37	0.120	2.310	0.007	0.014
	2.14	2.14	0.000	2.140	0.007	0.000
	2.20	2.16	0.040	2.180	0.002	0.002
	2.14	2.42	0.280	2.280	0.003	0.078
	2.25	2.21	0.040	2.230	0.000	0.002
	2.28	2.27	0.010	2.275	0.003	0.000
	2.17	2.21	0.040	2.190	0.001	0.002
	2.19	2.29	0.100	2.240	0.000	0.010
	2.14	2.18	0.040	2.160	0.004	0.002
	2.30	2.21	0.090	2.255	0.001	0.008
	2.25	2.31	0.060	2.280	0.003	0.004
	2.11	2.19	0.080	2.150	0.006	0.006
Statistics			Gavg	SX	SS	
Mean	2.210	2.239	2.224	0.058	0.032	
SD	0.0621	0.0849	C	C SQRT		
RSD	2.810	3.794	0.0088	0.09		
Proof of Homogeneity	Based on Statistical procedures outlined in Annex B, ISO 13528:2015 guidelines, If "SS is < square root of C" Standard is considered homogeneous. ME-2107 is statistically homogenous					