

CDN Resource Laboratories Ltd.

Certificate of Analysis

REFERENCE MATERIAL: CDN-ME-2404

Recommended values and the "Between Lab" Two Standard Deviations

Precious Metals and Targeted Major Base Metals				
Gold	1.186 gpt	±	0.103 gpt	Certified value
Silver	74 gpt	±	3 gpt	
Arsenic	200 ppm	±	15 ppm	
Copper	0.268 %	±	0.011 %	
Molybdenum	440 ppm	±	15 ppm	
Lead	3.20 %	±	0.18 %	
Zinc	11.10 %	±	0.51 %	
Silver	74 gpt	±	3 gpt	
Copper	0.268 %	±	0.007 %	
Molybdenum	439 ppm	±	25 ppm	
Lead	3.23 %	±	0.09 %	Certified value
Zinc	11.05 %	±	0.45 %	

Major and Minor Base Metals				
Aluminum	3.33 %	±	0.11 %	Certified value
Cadmium	792 ppm	±	61 ppm	
Calcium	1.4 %	±	0.1 %	
Cobalt	68.7 ppm	±	5.3 ppm	
Iron	7.96 %	±	0.40 %	
Gallium	11.5 ppm	±	1.2 ppm	
Potassium	0.81 %	±	0.01 %	
Magnesium	0.49 %	±	0.01 %	
Manganese	391 ppm	±	28 ppm	
Nickel	402.6 ppm	±	16.3 ppm	
Sodium	1.03 %	±	0.02%	
Phosphorus	980 ppm	±	33 ppm	
Scandium	5.1 ppm	±	0.5 ppm	
Strontium	232 ppm	±	22 ppm	
Titanium	0.13 %	±	0.01%	
Sulfur	12.55 %	±	0.59%	
Vanadium	64 ppm	±	6 ppm	

Major Oxides				Certified value
SiO ₂	46.25 %	±	2.94 %	
Al ₂ O ₃	6.37 %	±	0.50 %	
Fe ₂ O ₃	11.5 %	±	0.8 %	
MgO	0.82 %	±	0.07 %	
K ₂ O	1.02 %	±	0.09 %	
Total S	13.12 %	±	0.57 %	
Total C	0.34 %	±	0.03 %	

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, FGC
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., FGC
DATE OF CERTIFICATION: July 17th, 2025

ORIGIN OF REFERENCE MATERIAL: Standard CDN-ME-2404 was prepared from approximately 4200Kg of Tech Resources, Red Dog ore with approximately 26kg of high-grade gold ore supplied by Teuton Resources from their Clone gold property in B.C., Canada.

The Red Dog Mine, operated by Teck Resources in Alaska's Brooks Range, is one of the world's largest zinc-lead-silver SEDEX (Sedimentary Exhalative) deposits. The ore is hosted in Mississippian-age black shale and carbonate rocks of the Kuna Formation, within a structurally complex basin setting. Mineralization occurs in multiple stages of sphalerite (zinc sulfide), accompanied by galena, barite, and pyrite, with ore textures showing replacement, vein, and breccia features. Silicification is the dominant alteration style, and thick barite caps are common above sulfide zones. These features reflect a hydrothermal system that precipitated metals through mixing and cooling near the seafloor, followed by later structural overprinting.

Mineralization of Clone gold property is localized within highly silicified semi-massive to massive specular hematite. Gold occurs as fine dissemination and is associated with oxide mineralization. The major lithology is light grey to green andesitic pyroclastic intercalated with fine grained to aphanitic andesite.

Specific Gravity of this material was analyzed by 4 labs with **Provisional mean of 3.23 +/- 0.08**.

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 submitted to 18 commercial and mine laboratories for round-robin assaying.

Assay Procedures:

Au: Fire assay, AA or ICP finish.
Major and Minor Base Metals: 4-acid digestion and Aqua regia digestion instrumental finish
Major Oxides Fusion, XRF finish

Statistical Procedures:

Final limits were calculated by first assessing whether the data fell within the expected variance range for comparable methods used by reputable laboratories. Data from any one laboratory was removed from further calculations when the means of all analyses from that laboratory failed at 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 database. 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: Three samples, 300g each of homogenized material, were randomly collected and **were** re-screened using a testing sieve. Based on CDN's screening test, the oversize material in this standard was approximately 1.5%.

Homogeneity Test:

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

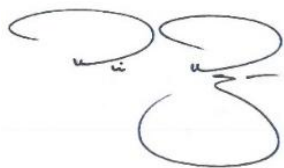
Homogeneity testing following directions of Annex B, Homogeneity and Stability of proficiency test items, ISO 13528:2015 Guidelines.

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-2205 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 Smeed 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., FGC

Geochemist



Dr. Barry Smeed, PhD, FGC

APPENDIX I: Results from round-robin assaying:

	Lab 1	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 15	Lab 16	Lab 17	Lab 18	Lab 19	Lab 20	Lab 21
ME-2404	Au by Fire Assay. ICP or AA finish															
	1.173	1.112	1.279	1.205	1.17	1.16	1.18	1.14	1.235	1.235	1.229	1.129	1.264	1.231	1.33	1.20
	1.126	1.115	1.223	1.235	1.15	1.12	1.16	1.18	1.185	1.233	1.237	1.077	1.170	1.223	1.28	1.27
	1.225	0.994	1.240	1.200	1.19	1.19	1.18	1.16	1.103	1.236	1.171	1.100	1.193	1.231	1.18	1.23
	1.198	0.994	1.152	1.180	1.18	1.10	1.18	1.18	1.159	1.237	1.187	1.121	1.215	1.452	1.27	1.23
	1.176	1.141	1.218	1.165	1.19	1.13	1.22	1.11	1.078	1.231	1.181	1.140	1.296	1.250	1.30	1.23
	1.167	1.100	1.229	1.180	1.16	1.11	1.18	1.13	1.135	1.234	1.240	1.106	1.196	1.201	1.19	1.23
	1.174	1.136	1.233	1.200	1.18	1.17	1.18	1.20	1.151	1.238	1.205	1.102	1.265	1.294	1.19	1.17
	1.218	0.999	1.165	1.190	1.17	1.08	1.20	1.16	1.083	1.235	1.207	1.075	1.228	1.331	1.35	1.23
Mean	1.182	1.074	1.217	1.194	1.17	1.13	1.19	1.16	1.141	1.235	1.207	1.106	1.228	1.276	1.26	1.22
Std. Devn.	0.03	0.07	0.04	0.02	0.01	0.04	0.02	0.03	0.05	0.00	0.03	0.02	0.04	0.08	0.07	0.03
% RSD	2.66	6.16	3.36	1.77	1.20	3.41	1.50	2.56	4.68	0.17	2.19	2.10	3.52	6.46	5.30	2.35

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 10	Lab 14	Lab 15	Lab 18	Lab 20	Lab 21
ME-2404	Ag (ppm) by 4Acid Digestion ICP or ICP/MS finish												
	72.3	74	73	76	74	-	78.05	73.17	76	76.76	73.75	73	68.4
	72.0	75	74	75	75	-	78.69	69.79	73	76.80	73.13	73	69.1
	72.3	74	72	76	74	-	79.14	71.54	74	76.63	74.17	72	69.6
	72.8	76	72	75	72	-	81.51	72.81	76	76.49	73.41	71	65.1
	72.5	75	73	74	72	-	80.90	72.66	73	76.63	74.71	73	64.1
	72.6	75	73	75	73	-	79.86	71.70	75	76.86	77.16	70	66.6
	72.1	74	73	75	74	-	83.17	71.93	77	76.52	77.03	72	67.7
	72.4	76	74	77	73	-	81.27	71.10	73	76.67	75.29	72	68.5
Mean	72.4	75	73	75	73	-	80.32	71.84	75	76.67	74.83	72	67.4
Std. Devn.	0.26	0.83	0.76	0.92	1.06	-	1.70	1.09	1.60	0.13	1.56	1.07	1.96
% RSD	0.36	1.11	1.04	1.22	1.45	-	2.12	1.51	2.14	0.17	2.08	1.48	2.91

	Ag (ppm) by Aqua Regia Digestion ICP or ICP/MS finish												
ME-2404	-	77	75	76	74	-	-	74.44	69	76.04	>10	76	-
	-	76	74	73	74	-	-	73.30	69	75.95	>10	72	-
	-	76	74	73	72	-	-	73.25	71	75.05	>10	73	-
	-	75	74	73	72	-	-	74.10	72	75.46	>10	73	-
	-	76	73	75	72	-	-	76.02	72	75.30	>10	73	-
	-	74	74	73	73	-	-	75.49	69	75.07	>10	75	-
	-	75	72	74	72	-	-	76.38	70	75.16	>10	73	-
	-	76	74	73	73	-	-	76.21	66	76.05	>10	73	-
Mean	-	76	74	74	73	-	-	74.90	70	75.51	-	74	-
Std. Devn.	-	0.92	0.89	1.16	0.89	-	-	1.29	1.98	0.44	-	1.31	-
% RSD	-	1.21	1.20	1.58	1.22	-	-	1.72	2.84	0.58	-	1.78	-

APPENDIX I: Results from round-robin assaying-Continue:

Cu (ppm) by 4 Acid digestion Instrumental Finish													
ME-2404	0.266	0.268	0.263	0.272	0.274	0.255	0.279	0.258	0.270	0.266	0.284	0.27	0.269
	0.262	0.269	0.266	0.278	0.274	0.253	0.273	0.261	0.260	0.268	0.281	0.26	0.265
	0.266	0.268	0.253	0.272	0.275	0.256	0.278	0.261	0.267	0.266	0.284	0.27	0.266
	0.266	0.271	0.263	0.271	0.275	0.257	0.277	0.266	0.268	0.267	0.285	0.26	0.267
	0.266	0.267	0.266	0.274	0.274	0.252	0.273	0.259	0.272	0.267	0.287	0.27	0.266
	0.265	0.273	0.269	0.272	0.276	0.254	0.271	0.264	0.272	0.268	0.295	0.26	0.268
	0.266	0.265	0.266	0.272	0.270	0.254	0.280	0.259	0.275	0.269	0.286	0.27	0.264
	0.266	0.264	0.270	0.271	0.276	0.255	0.279	0.266	0.266	0.269	0.287	0.27	0.266
Mean	0.265	0.268	0.265	0.273	0.274	0.254	0.276	0.262	0.269	0.267	0.286	0.27	0.266
Std. Devn.	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
% RSD	0.54	1.10	1.99	0.85	0.70	0.61	1.23	1.30	1.72	0.43	1.47	1.94	0.62
Cu (ppm) by Aqua Regia digestion Instrumental Finish													
ME-2404	-	0.267	0.270	0.272	0.274	-	-	0.263	0.252	0.269	0.290	0.27	-
	-	0.266	0.269	0.267	0.272	-	-	0.265	0.261	0.265	0.291	0.26	-
	-	0.268	0.270	0.262	0.265	-	-	0.264	0.271	0.267	0.290	0.27	-
	-	0.261	0.269	0.267	0.265	-	-	0.266	0.277	0.263	0.289	0.27	-
	-	0.263	0.269	0.273	0.266	-	-	0.272	0.273	0.266	0.290	0.27	-
	-	0.257	0.269	0.264	0.270	-	-	0.273	0.254	0.269	0.286	0.27	-
	-	0.264	0.270	0.264	0.268	-	-	0.270	0.266	0.269	0.286	0.27	-
	-	0.263	0.273	0.263	0.267	-	-	0.273	0.252	0.270	0.302	0.27	-
Mean	-	0.264	0.270	0.267	0.268	-	-	0.268	0.263	0.267	0.290	0.27	-
Std. Devn.	-	0.00	0.00	0.00	0.00	-	-	0.00	0.01	0.00	0.01	0.00	-
% RSD	-	1.34	0.50	1.54	1.24	-	-	1.58	3.79	0.90	1.79	1.32	-
Mo (ppm) by 4 Acid digestion Instrumental Finish													
ME-2404	404	440	440	440	440	-	422.9	431.5	470	410.3	450.07	460	433
	409	440	440	440	450	-	419.7	440.6	460	406.1	447.54	450	428
	410	490	430	440	450	-	424.1	444.5	470	406.5	449.09	470	428
	407	440	440	440	440	-	437.8	460.3	480	409.9	451.98	450	435
	404	440	440	440	440	-	430.4	436.9	480	411.9	474.10	470	426
	405	440	450	440	440	-	425.2	451.2	480	411.2	471.91	450	437
	405	440	440	440	440	-	446.0	439.4	480	410.8	464.70	470	430
	409	440	450	440	440	-	434.0	437.2	480	420.3	456.28	460	432
Mean	407	446	441	440	443	-	430.0	442.7	475	410.9	458.21	460	431
Std. Devn.	2.45	17.678	6.409	0.000	4.629	-	8.84	9.18	7.559	4.36	10.61	9.26	3.80
% RSD	0.60	3.96	1.45	0.00	1.05	-	2.05	2.07	1.59	1.06	2.32	2.01	0.88
Mo (ppm) by Aqua Regia digestion Instrumental Finish													
ME-2404	-	440	450	430	440	-	-	446.3	400	422.52	445.09	440	-
	-	440	450	450	440	-	-	445.0	400	423.82	419.54	430	-
	-	450	450	450	420	-	-	452.2	420	417.90	454.54	440	-
	-	440	450	420	430	-	-	447.7	420	419.48	450.11	430	-
	-	440	450	430	430	-	-	460.0	420	425.00	449.75	440	-
	-	440	440	460	430	-	-	461.5	400	426.31	451.43	440	-
	-	450	450	440	430	-	-	452.1	420	421.91	448.35	440	-
	-	440	450	450	430	-	-	453.9	390	422.77	417.59	440	-
Mean	-	443	449	441	431	-	-	452.3	409	422.46	442.05	438	-
Std. Devn.	-	4.63	3.54	13.56	6.41	-	-	6.06	12.46	2.76	14.75	4.63	-
% RSD	-	1.05	0.79	3.07	1.49	-	-	1.34	3.05	0.65	3.34	1.06	-

APPENDIX I: Results from round-robin assaying-Continue:

Pb (ppm) by 4 Acid digestion Instrumental Finish													
ME-2404	3.118	3.24	3.18	3.29	3.18	-	3.188	3.262	3.22	3.037	2.996	3.25	>1
	3.147	3.25	3.19	3.29	3.19	-	3.224	3.312	3.10	3.030	2.990	3.24	>1
	3.135	3.22	3.11	3.32	3.11	-	3.180	3.353	3.23	3.042	3.015	3.30	>1
	3.129	3.24	3.17	3.27	3.17	-	3.281	3.313	3.21	3.053	3.040	3.21	>1
	3.125	3.22	3.19	3.27	3.19	-	3.085	3.341	3.27	3.040	3.062	3.30	>1
	3.155	3.22	3.25	3.32	3.25	-	3.217	3.330	3.28	3.038	3.189	3.20	>1
	3.156	3.23	3.22	3.30	3.22	-	3.062	3.282	3.29	3.041	3.182	3.32	>1
Mean	3.137	3.23	3.20	3.30	3.20	-	3.173	3.315	3.23	3.040	3.065	3.26	-
Std. Devn.	0.01	0.01	0.05	0.02	0.05	-	0.07	0.03	0.06	0.01	0.08	0.04	-
% RSD	0.46	0.40	1.44	0.61	1.44	-	2.30	0.91	1.86	0.21	2.56	1.36	-
Pb (ppm) by Aqua Regia digestion Instrumental Finish													
ME-2404	-	3.29	3.22	3.19	3.22	-	-	>0.5	3.101	-	3.201	3.273	-
	-	3.27	3.22	3.17	3.22	-	-	>0.5	3.125	-	3.103	3.196	-
	-	3.30	3.25	3.17	3.25	-	-	>0.5	3.281	-	3.198	3.251	-
	-	3.26	3.24	3.13	3.24	-	-	>0.5	3.285	-	3.204	3.259	-
	-	3.25	3.25	3.21	3.25	-	-	>0.5	3.297	-	3.183	3.272	-
	-	3.23	3.20	3.16	3.20	-	-	>0.5	3.102	-	3.180	3.277	-
	-	3.28	3.21	3.16	3.21	-	-	>0.5	3.213	-	3.191	3.271	-
Mean	-	3.27	3.23	3.17	3.23	-	-	-	3.177	-	3.182	3.257	-
Std. Devn.	-	0.02	0.02	0.02	0.02	-	-	-	0.11	-	0.03	0.03	-
% RSD	-	0.71	0.62	0.77	0.62	-	-	-	3.37	-	1.04	0.81	-
Zn (ppm) by 4 Acid digestion Instrumental Finish													
ME-2404	11.14	11.4	10.95	10.70	10.95	10.96	10.88	11.24	11.20	11.49	10.00	10.87	>1
	11.16	11.5	10.95	10.85	10.95	11.07	10.85	11.42	10.90	11.32	9.85	10.86	>1
	11.19	11.5	10.70	10.75	10.70	11.12	10.83	11.54	11.21	11.27	9.98	10.99	>1
	11.18	11.5	10.80	10.75	10.80	11.08	11.29	11.42	11.21	11.27	10.19	10.78	>1
	11.15	11.4	10.95	10.75	10.95	11.07	10.61	11.56	11.35	11.21	10.17	11.00	>1
	11.16	11.3	11.20	10.70	11.20	10.95	10.74	11.49	11.41	11.27	10.53	10.72	>1
	11.13	11.3	11.05	10.70	11.05	11.14	10.02	11.37	11.44	11.40	10.37	11.14	>1
Mean	11.16	11.4	10.97	10.74	10.97	11.07	10.74	11.45	11.24	11.31	10.14	10.90	-
Std. Devn.	0.02	0.09	0.17	0.05	0.17	0.07	0.35	0.11	0.17	0.09	0.22	0.13	-
% RSD	0.19	0.78	1.52	0.46	1.52	0.66	3.30	0.92	1.52	0.80	2.21	1.23	-
Zn (ppm) by Aqua Regia digestion Instrumental Finish													
ME-2404	-	11.4	11.05	11.05	11.05	-	-	>2	10.594	10.915	10.206	>10.00	-
	-	11.4	11.10	10.85	11.10	-	-	>2	10.695	10.848	10.148	>10.00	-
	-	11.5	11.20	10.80	11.20	-	-	>2	11.170	10.926	10.220	>10.00	-
	-	11.4	11.10	10.85	11.10	-	-	>2	11.193	10.797	10.478	>10.00	-
	-	11.4	11.15	11.10	11.15	-	-	>2	11.245	10.865	10.202	>10.00	-
	-	11.3	11.00	10.85	11.00	-	-	>2	10.637	10.882	10.290	>10.00	-
	-	11.4	11.05	10.75	11.05	-	-	>2	11.011	10.745	10.224	>10.00	-
Mean	-	11.4	11.11	10.88	11.11	-	-	-	10.856	10.856	10.282	-	-
Std. Devn.	-	0.09	0.08	0.13	0.08	-	-	-	0.35	0.06	0.13	-	-
% RSD	-	0.78	0.75	1.20	0.75	-	-	-	3.18	0.55	1.26	-	-

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 1	Lab 6	Lab 7	Lab 10	Lab 15	Lab 18	Lab 20	Lab 21
ME-2404	As (ppm) by 4Acid Digestion ICP or ICP/MS finish							
	203	-	198.4	193.8	-	206.72	200	88.5
	203	-	202.3	191.0	-	144.74	202	85.1
	207	-	207.4	188.8	-	195.18	206	84.9
	205	-	195.9	194.0	-	214.96	201	85.2
	210	-	199.6	188.3	-	193.13	206	89.1
	208	-	197.9	185.9	-	208.64	204	81.0
	205	-	203.2	187.1	-	178.61	211	83.8
	204	-	201.3	186.8	-	138.38	197	82.8
Mean	206	-	200.8	189.5	-	185.05	203	85.1
Std. Devn.	2.50	-	3.61	3.14	-	29.11	4.34	2.71
% RSD	1.22	-	1.80	1.66	-	15.73	2.13	3.19
Al (%) by 4Acid Digestion ICP or ICP/MS finish								
ME-2404	3.31	-	3.45	3.33	3.39	3.00	3.32	3.23
	3.30	-	3.43	3.37	3.35	2.97	3.34	3.30
	3.32	-	3.43	3.33	3.32	2.96	3.27	3.24
	3.35	-	3.58	3.34	3.39	2.95	3.25	3.24
	3.34	-	3.52	3.36	3.34	3.01	3.34	3.24
	3.31	-	3.45	3.33	3.35	3.29	3.38	3.35
	3.36	-	3.63	3.31	3.34	3.27	3.36	3.32
	3.30	-	3.53	3.32	3.33	3.09	3.22	3.23
Mean	3.32	-	3.50	3.34	3.35	3.07	3.31	3.27
Std. Devn.	0.03	-	0.08	0.02	0.03	0.14	0.06	0.05
% RSD	0.78	-	2.16	0.56	0.78	4.51	1.72	1.45
Ca (%) by 4 Acid digestion Instrumental Finish								
ME-2404	1.47	-	1.44	1.41	1.42	1.36	1.4	1.46
	1.47	-	1.45	1.42	1.42	1.34	1.5	1.47
	1.48	-	1.46	1.41	1.41	1.36	1.4	1.47
	1.45	-	1.50	1.41	1.42	1.35	1.4	1.46
	1.45	-	1.47	1.42	1.41	1.37	1.4	1.47
	1.46	-	1.46	1.40	1.42	1.38	1.4	1.46
	1.46	-	1.52	1.40	1.42	1.43	1.4	1.46
	1.48	-	1.48	1.41	1.42	1.37	1.4	1.47
Mean	1.47	-	1.47	1.41	1.42	1.37	1.4	1.47
Std. Devn.	0.01	-	0.03	0.01	0.00	0.03	0.04	0.01
% RSD	0.82	-	1.73	0.57	0.15	1.99	2.50	0.36
Cd (ppm) by 4 Acid digestion Instrumental Finish								
ME-2404	762.50	-	915.67	803.46	772.70	810.05	820	780.1
	749.38	-	904.40	790.10	779.73	803.71	826	769.8
	747.00	-	907.87	799.19	773.37	804.05	839	765.6
	758.38	-	906.79	827.81	773.12	811.44	821	773.5
	756.00	-	902.37	821.36	775.24	837.55	847	758.1
	759.00	-	900.77	803.80	775.86	849.36	853	772.1
	746.50	-	906.74	811.77	777.95	830.03	882	770.0
	749.00	-	907.82	811.33	777.42	808.57	817	756.1
Mean	753.47	-	906.55	808.60	775.67	819.35	838	768.2
Std. Devn.	6.21	-	4.51	12.13	2.55	17.28	22.17	7.98
% RSD	0.82	-	0.50	1.50	0.33	2.11	2.65	1.04

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 1	Lab 6	Lab 7	Lab 10	Lab 15	Lab 18	Lab 20	Lab 21
ME-2404	Co (ppm) by 4Acid Digestion ICP or ICP/MS finish							
	69	52.70	69.8	66.9	69.6	64.1	71.3	64.3
	69	53.28	70.2	66.1	69.9	64.3	73.1	64.8
	68	52.81	70.4	67.5	69.7	64.4	72.4	65.0
	70	54.84	74.4	67.7	69.6	65.2	72.0	66.5
	67	51.32	71.6	64.9	69.8	68.8	73.7	65.9
	69	56.84	70.2	66.9	69.9	68.6	73.9	67.7
	70	55.41	73.6	65.4	69.3	66.9	73.9	67.4
	69	51.58	71.0	67.2	69.5	66.2	70.3	67.9
Mean	69	53.60	71.4	66.6	69.7	66.0	72.6	66.2
Std. Devn.	0.99	1.93	1.73	1.01	0.22	1.88	1.32	1.40
% RSD	1.44	3.60	2.42	1.52	0.32	2.85	1.82	2.12
Fe (%) by 4Acid Digestion ICP or ICP/MS finish								
ME-2404	8.10	-	7.72	8.11	7.66	7.73	8.13	7.95
	8.11	-	7.61	8.20	7.62	7.69	8.17	8.03
	8.10	-	7.74	8.12	7.63	7.75	7.97	7.97
	8.19	-	7.91	8.16	7.67	7.76	7.96	8.01
	8.10	-	7.89	8.19	7.66	7.84	8.10	7.98
	8.11	-	7.73	8.13	7.64	8.20	8.24	8.05
	8.18	-	7.90	8.09	7.69	8.22	8.30	7.98
	8.14	-	7.93	8.15	7.66	7.85	7.89	8.05
Mean	8.13	-	7.80	8.14	7.65	7.88	8.10	8.00
Std. Devn.	0.04	-	0.12	0.04	0.02	0.21	0.14	0.04
% RSD	0.46	-	1.53	0.47	0.29	2.67	1.78	0.48
Ga (ppm) by 4 Acid digestion Instrumental Finish								
ME-2404	12	-	12.81	11.27	11.66	9.79	12	12
	12	-	13.80	11.06	11.50	9.77	12	12
	11	-	13.54	11.02	11.54	9.62	12	12
	12	-	14.27	11.49	11.89	10.05	12	12
	12	-	13.81	10.85	11.43	10.63	12	11
	13	-	14.16	10.90	11.66	10.76	12	12
	13	-	14.18	11.00	11.90	10.23	12	11
	12	-	12.77	11.04	11.27	10.07	12	11
Mean	12	-	13.67	11.08	11.61	10.12	12	12
Std. Devn.	0.64	-	0.59	0.21	0.22	0.41	0.00	0.52
% RSD	5.29	-	4.34	1.87	1.87	4.04	0.00	4.45
K (%) by 4 Acid digestion Instrumental Finish								
ME-2404	0.826	-	0.788	0.819	0.814	0.76	-	0.82
	0.806	-	0.804	0.822	0.816	0.75	-	0.82
	0.806	-	0.815	0.818	0.814	0.75	-	0.82
	0.806	-	0.837	0.816	0.813	0.76	-	0.81
	0.820	-	0.819	0.827	0.815	0.77	-	0.82
	0.806	-	0.766	0.815	0.812	0.81	-	0.80
	0.806	-	0.852	0.813	0.819	0.80	-	0.81
	0.806	-	0.840	0.820	0.819	0.76	-	0.81
Mean	0.810	-	0.815	0.819	0.815	0.77	-	0.81
Std. Devn.	0.01	-	0.03	0.00	0.00	0.02	-	0.01
% RSD	1.01	-	3.52	0.52	0.30	2.95	-	0.91

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 1	Lab 6	Lab 7	Lab 10	Lab 15	Lab 18	Lab 20	Lab 21
ME-2404	Mg (%) by 4Acid Digestion ICP or ICP/MS finish							
	0.48	-	0.479	0.487	0.488	0.468	-	0.49
	0.48	-	0.480	0.491	0.489	0.470	-	0.49
	0.48	-	0.476	0.489	0.490	0.467	-	0.49
	0.48	-	0.496	0.490	0.488	0.468	-	0.49
	0.48	-	0.488	0.490	0.490	0.476	-	0.49
	0.48	-	0.481	0.488	0.491	0.501	-	0.50
	0.48	-	0.495	0.486	0.488	0.500	-	0.49
	0.48	-	0.486	0.489	0.491	0.482	-	0.49
Mean	0.48	-	0.485	0.489	0.489	0.479	-	0.49
Std. Devn.	0.00	-	0.01	0.00	0.00	0.01	-	0.00
% RSD	0.00	-	1.53	0.33	0.22	3.02	-	0.72
Mn (ppm) by 4Acid Digestion ICP or ICP/MS finish								
ME-2404	403.0	376.38	537	390	387.53	364.68	-	402
	404.6	370.84	528	395	380.70	373.61	-	414
	406.3	373.45	526	393	382.28	376.07	-	407
	403.8	378.31	564	391	386.28	373.70	-	413
	401.2	381.83	525	395	382.36	368.98	-	413
	404.6	381.80	558	390	381.56	387.32	-	418
	405.5	382.02	519	391	385.07	396.10	-	417
	405.5	380.87	559	390	386.28	376.04	-	414
Mean	404.3	378.19	540	392	384.01	377.06	-	412
Std. Devn.	1.62	4.27	18.02	2.17	2.58	10.08	-	5.28
% RSD	0.40	1.13	3.34	0.55	0.67	2.67	-	1.28
Na (%) by 4 Acid digestion Instrumental Finish								
ME-2404	1.030	-	1.289	1.018	1.033	1.060	-	1.02
	1.030	-	1.288	1.031	1.039	1.010	-	1.02
	1.020	-	1.303	1.019	1.037	1.010	-	1.02
	1.029	-	1.390	1.025	1.033	1.040	-	1.02
	1.020	-	1.327	1.029	1.031	1.090	-	1.02
	1.030	-	1.324	1.022	1.036	1.340	-	1.02
	1.030	-	1.375	1.014	1.032	1.320	-	1.02
	1.029	-	1.351	1.021	1.035	1.220	-	1.03
Mean	1.027	-	1.331	1.023	1.034	1.136	-	1.02
Std. Devn.	0.00	-	0.04	0.01	0.00	0.14	-	0.00
% RSD	0.44	-	2.88	0.57	0.25	12.06	-	0.35
Ni (ppm) by 4 Acid digestion Instrumental Finish								
ME-2404	408.0	282.54	409.82	396.5	402.6	407.10	426	396.2
	410.0	384.36	411.35	403.4	406.0	407.13	431	395.6
	406.0	387.21	405.91	401.2	405.4	407.27	436	394.6
	406.0	398.75	424.95	408.2	404.5	400.59	448	394.9
	406.0	380.71	412.41	394.6	407.8	400.00	441	391.6
	407.0	386.52	406.54	404.1	403.7	420.09	457	399.4
	408.0	392.97	422.22	393.1	403.4	431.28	457	389.7
	407.0	387.32	412.39	405.8	407.3	409.85	431	396.8
Mean	407.3	375.05	413.20	400.9	405.1	410.41	441	394.9
Std. Devn.	1.39	37.78	6.90	5.53	1.89	10.46	12.02	3.02
% RSD	0.34	10.07	1.67	1.38	0.47	2.55	2.73	0.77

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 1	Lab 6	Lab 7	Lab 10	Lab 15	Lab 18	Lab 20	Lab 21
ME-2404	P (ppm) by 4Acid Digestion ICP or ICP/MS finish							
	-	-	987	969	-	970.00	-	980
	-	-	986	981	-	965.86	-	980
	-	-	994	979	-	967.61	-	970
	-	-	1032	976	-	968.18	-	970
	-	-	1009	979	-	961.22	-	970
	-	-	992	970	-	1018.72	-	980
	-	-	1049	964	-	1023.26	-	970
	-	-	1012	970	-	973.13	-	970
Mean	-	-	1008	974	-	981.00	-	974
Std. Devn.	-	-	22.83	6.07	-	24.94	-	5.18
% RSD	-	-	2.27	0.62	-	2.54	-	0.53
S (%) by 4Acid Digestion ICP or ICP/MS finish								
ME-2404	12.30	-	12.90	12.26	12.59	>5	-	>10
	12.27	-	12.94	12.55	12.48	>5	-	>10
	12.27	-	12.91	12.60	12.60	>5	-	>10
	12.28	-	13.37	12.36	12.55	>5	-	>10
	12.25	-	13.23	12.54	12.42	>5	-	>10
	12.27	-	13.01	12.42	12.57	>5	-	>10
	12.26	-	13.60	12.34	12.73	>5	-	>10
	12.23	-	13.26	12.64	12.37	>5	-	>10
Mean	12.27	-	13.15	12.46	12.54	-	-	-
Std. Devn.	0.02	-	0.26	0.14	0.11	-	-	-
% RSD	0.18	-	1.95	1.10	0.89	-	-	-
Sb (ppm) by 4 Acid digestion Instrumental Finish								
ME-2404	221	-	238.9	243.6	228.4	242.22	-	225.7
	219	-	242.9	235.5	228.2	237.80	-	221.1
	224	-	244.7	245.0	225.2	238.93	-	221.0
	218	-	251.7	244.2	226.6	243.94	-	224.5
	218	-	246.0	238.9	224.4	250.11	-	218.4
	222	-	241.2	244.0	225.3	237.15	-	222.4
	217	-	249.3	238.7	224.2	147.02	-	222.8
	219	-	250.5	239.9	224.9	186.39	-	218.4
Mean	220	-	245.6	241.2	225.9	222.95	-	221.8
Std. Devn.	2.38	-	4.61	3.44	1.66	36.51	-	2.62
% RSD	1.08	-	1.88	1.42	0.73	16.37	-	1.18
Sc (ppm) by 4 Acid digestion Instrumental Finish								
ME-2404	5	-	-	5.2	4.8	4.98	-	5.5
	5	-	-	5.2	5.0	4.88	-	5.6
	5	-	-	5.1	4.9	4.90	-	5.6
	5	-	-	5.2	4.8	4.95	-	5.5
	5	-	-	5.0	4.9	5.37	-	5.6
	5	-	-	4.9	4.9	5.54	-	5.7
	5	-	-	5.1	4.9	5.32	-	5.6
	5	-	-	4.9	4.9	5.06	-	5.5
Mean	5	-	-	5.1	4.9	5.13	-	5.6
Std. Devn.	0.00	-	-	0.13	0.06	0.25	-	0.07
% RSD	0.00	-	-	2.53	1.32	4.87	-	1.27

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 1	Lab 6	Lab 7	Lab 10	Lab 15	Lab 18	Lab 20	Lab 21
ME-2404	Ti (%) by 4Acid Digestion ICP or ICP/MS finish							
	0.14	-	0.13	0.136	0.137	0.13	-	0.133
	0.14	-	0.13	0.136	0.133	0.13	-	0.134
	0.14	-	0.13	0.135	0.135	0.13	-	0.133
	0.14	-	0.13	0.136	0.131	0.13	-	0.136
	0.14	-	0.13	0.137	0.136	0.13	-	0.136
	0.14	-	0.13	0.137	0.133	0.14	-	0.134
	0.14	-	0.13	0.136	0.135	0.14	-	0.136
	0.14	-	0.13	0.135	0.136	0.13	-	0.134
Mean	0.14	-	0.13	0.136	0.134	0.13	-	0.135
Std. Devn.	0.00	-	0.00	0.00	0.00	0.00	-	0.00
% RSD	0.00	-	1.77	0.43	1.41	3.49	-	0.97
V (ppm) by 4Acid Digestion ICP or ICP/MS finish								
ME-2404	72	-	67.04	65	61.80	61.16	-	65
	72	-	66.45	65	61.63	59.38	-	65
	71	-	67.26	65	62.05	59.79	-	66
	73	-	69.99	65	62.80	61.20	-	67
	71	-	69.14	65	62.22	59.61	-	66
	72	-	67.75	64	62.23	61.69	-	67
	74	-	70.59	64	62.38	61.43	-	68
	73	-	68.40	64	62.94	59.50	-	68
Mean	72	-	68.33	65	62.26	60.47	-	67
Std. Devn.	1.04	-	1.47	0.52	0.45	0.98	-	1.20
% RSD	1.43	-	2.16	0.80	0.73	1.62	-	1.80
ME-2404	Total S (%) LECO							
	-	-	13.13	14.3	13.48	13.0	13.00	12.62
	-	-	13.35	14.4	13.57	13.0	12.95	12.71
	-	-	13.22	14.2	13.72	13.3	13.01	12.75
	-	-	13.35	14.6	13.32	12.7	12.98	12.81
	-	-	13.52	14.4	13.60	13.2	13.16	12.57
	-	-	13.32	14.4	13.77	13.1	12.96	12.79
	-	-	13.20	14.5	13.30	13.2	13.08	12.77
	-	-	13.40	14.7	13.37	13.2	12.97	12.86
Mean	-	-	13.31	14.4	13.52	13.1	13.01	12.74
Std. Devn.	-	-	0.12	0.16	0.18	0.19	0.07	0.10
% RSD	-	-	0.94	1.11	1.32	1.44	0.55	0.77
Total C (%) LECO								
ME-2404	-	-	0.40	0.32	0.34	0.38	0.33	0.35
	-	-	0.41	0.32	0.35	0.38	0.33	0.35
	-	-	0.41	0.30	0.35	0.39	0.33	0.34
	-	-	0.41	0.32	0.35	0.35	0.33	0.35
	-	-	0.39	0.32	0.35	0.36	0.33	0.34
	-	-	0.41	0.32	0.35	0.37	0.33	0.36
	-	-	0.39	0.32	0.35	0.37	0.32	0.35
	-	-	0.39	0.34	0.34	0.35	0.33	0.35
Mean	-	-	0.40	0.32	0.35	0.37	0.33	0.35
Std. Devn.	-	-	0.01	0.01	0.00	0.01	0.00	0.01
% RSD	-	-	3.02	3.34	1.33	3.95	0.86	1.84

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 6	Lab 7	Lab 18	Lab 20
ME-2404	SiO ₂ (%) XRF			
	39.70	46.67	47.3	44.55
	39.05	46.09	47.2	44.60
	39.58	47.06	46.8	44.52
	39.37	45.66	47.3	44.50
	39.90	48.94	47.2	43.94
	40.21	46.65	47.6	44.46
	40.21	48.47	47.3	44.56
	39.90	46.39	47.8	44.42
Mean	39.74	46.99	47.3	44.44
Std. Devn.	0.40	1.14	0.29	0.21
% RSD	1.01	2.43	0.62	0.48
Al ₂ O ₃ (%) XRF				
ME-2404	6.20	6.64	6.43	6.11
	6.30	6.62	6.62	6.13
	6.14	6.79	6.65	6.12
	6.17	6.45	6.41	6.12
	6.06	6.97	6.63	6.06
	6.18	6.57	6.55	6.12
	6.20	6.88	6.54	6.13
	6.19	6.59	6.68	6.10
Mean	6.18	6.69	6.56	6.11
Std. Devn.	0.07	0.17	0.10	0.02
% RSD	1.08	2.59	1.53	0.38
Fe ₂ O ₃ (%) XRF				
ME-2404	10.88	11.53	11.8	11.73
	11.15	11.37	11.7	11.71
	11.15	11.64	11.5	11.71
	11.08	11.42	11.9	11.76
	10.74	12.19	11.7	11.75
	10.73	11.52	11.8	11.71
	10.60	11.94	11.7	11.76
	10.70	11.39	11.9	11.66
Mean	10.88	11.62	11.8	11.72
Std. Devn.	0.22	0.29	0.13	0.03
% RSD	2.02	2.52	1.11	0.29
K ₂ O (%) XRF				
ME-2404	0.984	1.00	1.07	0.98
	0.986	1.02	1.06	1.00
	0.982	1.03	1.04	0.98
	0.983	1.06	1.09	0.99
	0.987	1.04	1.10	0.98
	0.983	0.97	1.09	0.98
	0.980	1.08	1.07	0.99
	0.981	1.06	1.08	0.99
Mean	0.983	1.03	1.08	0.99
Std. Devn.	0.00	0.04	0.02	0.01
% RSD	0.24	3.52	1.79	0.75

APPENDIX I: Results from round-robin assaying-Continue:

	Lab 6	Lab 7	Lab 18	Lab 20
ME-2404	MgO (%) XRF			
	0.815	0.86	0.77	0.80
	0.815	0.85	0.80	0.81
	0.830	0.87	0.94	0.80
	0.796	0.84	0.81	0.81
	0.825	0.90	0.85	0.80
	0.796	0.86	0.72	0.81
	0.810	0.89	0.77	0.81
	0.814	0.87	0.73	0.80
Mean	0.813	0.87	0.80	0.81
Std. Devn.	0.01	0.02	0.07	0.01
% RSD	1.49	2.28	8.89	0.66
ME-2404	P2O5 (%) XRF			
	0.190	0.25	0.28	0.22
	0.185	0.25	0.28	0.22
	0.194	0.25	0.29	0.22
	0.185	0.32	0.28	0.22
	0.180	0.35	0.30	0.22
	0.210	0.34	0.29	0.22
	0.194	0.35	0.28	0.23
	0.220	0.29	0.29	0.23
Mean	0.195	0.30	0.29	0.22
Std. Devn.	0.01	0.04	0.01	0.00
% RSD	7.00	14.29	2.60	2.08

Notes: Highlighted assay results were removed for failing the t-test.

APPENDIX II:

Participating Laboratories: (not in same order as table of assays)

Actlabs Ancaster	MSA, Langley, Canada
AL Amri Labs, Saudi Arabia	QKR Navachab Gold Mine Laboratory, Namibia
ALS OMAC, Ireland	QLS Saudi Arabia
ALS Vancouver	SGS Burnaby, BC Canada
Bureau Veritas, Vancouver, BC, Canada	SGS Geosol Laboratories Ltda (Brazil)
Dallaglio Pickstone Peerless Laboratory Zimbabwe	SGS Kalgoorlie WA, Australia
Geoangol, Angola	SGS South Africa (Pty) Ltd - Barberton
Intertek Mineral Tarkwa Ghana	SGS Tarkwa, Ghana
Intertek Minerals (Orezone Lab), Burkina Faso	Shiva Analytical India
Intertek Perth, Australia	Skyline Assayers and Labs, Az, USA

APPENDIX III: QAQC

The table below illustrates percentages of over size (+200 mesh) material in CDN-ME-2404

Standard	Study Date	Total weight Screened (g)	Total weight Over size (g)	Percentage
ME-2404	8/23/2024	300	3.5	1.2%
	8/23/2024	300	4	1.3%
	8/23/2024	300	4.5	1.5%

ME-2404	Au Original	Au Repeat	Between Sample Variance Wt	Sample Avg. Xt	Stdev of Sample Avg	Within-Sample Std.
	1.142	1.164	0.022	1.153	0.002	0.000
	1.218	1.282	0.064	1.250	0.002	0.004
	1.242	1.182	0.060	1.212	0.000	0.004
	1.156	1.244	0.088	1.200	0.000	0.008
	1.189	1.253	0.064	1.221	0.000	0.004
	1.238	1.170	0.068	1.204	0.000	0.005
	1.205	1.107	0.098	1.156	0.002	0.010
	1.293	1.262	0.031	1.278	0.006	0.001
	1.125	1.153	0.028	1.139	0.004	0.001
	1.202	1.226	0.024	1.214	0.000	0.001
	1.241	1.174	0.067	1.208	0.000	0.004
	1.184	1.168	0.016	1.176	0.001	0.000
	1.204	1.177	0.027	1.191	0.000	0.001
	1.218	1.207	0.011	1.213	0.000	0.000
1.218	1.192	0.026	1.205	0.000	0.001	
Statistics			Gavg	SX	SS	
Mean	1.205	1.197	1.201	0.036	0.024	
SD	0.0427	0.0475	C	C SQRT		
RSD	3.541	3.968	0.0032	0.06		
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-2404 is statistically homogenous					

APPENDIX IV: General Notes

Intended Use

This Certified Reference Material, fits for use as a control sample in routine assay laboratory quality control when inserted within runs of test samples and measured in parallel to test samples. This material can also be used for method development, use as independent calibration verification check standard or for validation of accuracy in a method validation exercise.

This CRM can also be used to assess inter-laboratory or instrument bias and establish within-laboratory precision and within-laboratory reproducibility. The certified concentrations and expanded uncertainty for this material are property values based on an inter-laboratory measurement campaign and reflect consensus results from the laboratories that took part in the exercise.

Handling

Do not use the product if the seal is broken or there are any signs of contamination.

The material is packaged in either Tin Tie envelopes, foil envelopes or jars that must be shaken before use.

Storage information

The material should be stored in a dry place, in such a way that it does not compromise the integrity of the CRM. The material should be stored in conditions which will ensure it does not absorb moisture.

The certificate is not valid if re-packaged by a third party.

Metrological Traceability

The values quoted herein are based on the consensus values derived from statistical analysis of the data from an inter-laboratory measurement program. Traceability to SI units is via the standards used by the individual laboratories, all of which are accredited to the ISO17025 general requirements for the competence of testing and calibration laboratories and who have maintained measurement traceability during the analytical process.

Period of Validity

The certified values are valid for this product, while still sealed in its original packaging, until notification to the contrary. The material's stability will undergo regular testing every five years throughout its inventory duration. Should product stability become an issue, all customers will be notified and notification to that effect will be placed on the <http://www.cdnlabs.com/> website.

Minimum Sample Size

Most of the laboratory's reporting used a 0.5g sample size for the ICP and a 30g sample size for the fire assay. 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" 30g of material. Using a smaller sample weight may result in erratic values. These are the recommended minimum sample sizes for the use of this material.