

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-CM-17

Recommended values and the “Between Lab” Two Standard Deviations

<i>Gold</i>	<i>1.37 g/t ± 0.13 g/t</i>	<i>Certified value</i>	<i>30g FA / ICP or AA</i>
<i>Copper</i>	<i>0.791 % ± 0.040 %</i>	<i>Certified value</i>	<i>4-acid / ICP or AA</i>
<i>Copper</i>	<i>0.798 % ± 0.034 %</i>	<i>Certified value</i>	<i>Aqua regia / ICP or AA</i>
<i>Molybdenum</i>	<i>0.075 % ± 0.008 %</i>	<i>Certified value</i>	<i>4-acid / ICP or AA</i>
<i>Molybdenum</i>	<i>0.073 % ± 0.014 %</i>	**Provisional**	<i>Aqua regia / ICP or AA</i>
<i>Silver</i>	<i>14.4 g/t ± 1.4 g/t</i>	<i>Certified value</i>	<i>4-acid / ICP or AA</i>
<i>Silver</i>	<i>14.9 g/t ± 1.4 g/t</i>	<i>Certified value</i>	<i>Aqua regia / ICP or AA</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: December 8, 2011

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 laboratories for round robin assaying.

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-CM-17 was prepared using 770 kg of a granitic rock blended with 29 kg of a Cu-Au-Mo concentrate and 5 kg of a high grade Ag ore.

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

	Percent		Percent
SiO ₂	68.0	MgO	2.1
Al ₂ O ₃	11.8	K ₂ O	1.1
Fe ₂ O ₃	6.8	TiO ₂	0.6
CaO	3.3	LOI	2.0
Na ₂ O	2.8	S	1.0
C	0.1		

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.

REFERENCE MATERIAL CDN-CM-17

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
	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
CM-17-1	1.35	1.29	1.20	1.43	1.38	1.36	1.36	1.32	1.43	1.40	1.33	1.41	1.30	1.41	1.45
CM-17-2	1.40	1.23	1.29	1.39	1.28	1.35	1.41	1.34	1.42	1.39	1.33	1.42	1.37	1.38	1.33
CM-17-3	1.35	1.17	1.21	1.42	1.34	1.26	1.33	1.26	1.45	1.49	1.32	1.42	1.35	1.42	1.31
CM-17-4	1.43	1.45	1.26	1.41	1.33	1.29	1.44	1.23	1.35	1.47	1.32	1.44	1.34	1.42	1.30
CM-17-5	1.42	1.39	1.32	1.36	1.41	1.31	1.32	1.31	1.42	1.40	1.30	1.45	1.43	1.40	1.34
CM-17-6	1.48	1.25	1.41	1.42	1.32	1.24	1.44	1.27	1.53	1.36	1.36	1.45	1.29	1.42	1.37
CM-17-7	1.45	1.34	1.40	1.37	1.42	1.28	1.40	1.28	1.40	1.36	1.33	1.44	1.55	1.40	1.34
CM-17-8	1.33	1.29	1.56	1.39	1.26	1.33	1.35	1.28	1.45	1.46	1.30	1.41	1.45	1.42	1.29
CM-17-9	1.37	1.47	1.24	1.43	1.37	1.27	1.42	1.32	1.48	1.49	1.34	1.45	1.29	1.40	1.39
CM-17-10	1.44	1.34	1.22	1.45	1.31	1.38	1.45	1.31	1.42	1.34	1.30	1.45	1.38	1.40	1.32
Mean	1.40	1.32	1.31	1.41	1.34	1.30	1.39	1.29	1.44	1.42	1.32	1.44	1.38	1.41	1.35
Std. Devn.	0.0498	0.0958	0.1160	0.0292	0.0526	0.0470	0.0483	0.0336	0.0479	0.0568	0.0195	0.0175	0.0825	0.0123	0.0473
% RSD	3.55	7.27	8.84	2.08	3.92	3.61	3.47	2.60	3.34	4.01	1.47	1.22	6.00	0.88	3.51
Total	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
CM-17-1	14	13.1	14.6	14.4	14.0	15.5	15	15	14.2	13.5	14.3	15.0		13.8	16
CM-17-2	14	14.1	14.6	14.3	14.2	14.9	14	15	14.9	13.4	15.7	14.9		13.9	17
CM-17-3	15	14.1	14.1	14.0	14.0	15.5	14	15	14.7	13.9	14.4	15.3	16.6	13.7	16
CM-17-4	14	13.3	14.4	14.1	13.8	15.0	15	13	15.0	14.2	15.1	15.2	14.7	13.9	16
CM-17-5	15	12.4	14.6	13.9	13.7	14.5	14	13	14.2	14.2	13.4	15.2	16.2	13.8	17
CM-17-6	14	12.7	14.7	14.7	14.2	15.1	14	13	14.7	13.7	14.2	15.2	15.8	14.3	16
CM-17-7	14	12.9	14.6	14.1	14.4	15.2	14	15	15.0	13.3	15.3	15.1	15.1	14.4	15
CM-17-8	14	13.5	14.3	14.7	14.0	14.3	13	14	14.6	14.7	13.7	15.0	16.1	13.7	15
CM-17-9	14	12.9	14.7	13.8	14.1	15.8	15	15	14.8	13.7	14.6	14.8	15.2	14.5	13
CM-17-10	15	12.8	14.0	14.2	13.8	14.8	14	14	14.5	13.9	13.4	15.0	17.4	14.3	14
Mean	14.3	13.2	14.5	14.2	14.0	15.1	14.2	14.2	14.7	13.9	14.4	15.1	15.9	14.0	15.5
Std. Devn.	0.4830	0.5731	0.2503	0.3084	0.2150	0.4648	0.6325	0.9189	0.2914	0.4275	0.7866	0.1567	0.8854	0.3173	1.2693
% RSD	3.38	4.35	1.73	2.17	1.53	3.09	4.45	6.47	1.99	3.09	5.46	1.04	5.57	2.26	8.19
Aqua Regia	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
CM-17-1	15	14.8	15.0	14.0	13.9	16.2	13	15	14.9	15.6	16	14.8		14.5	16.0
CM-17-2	16	14.9	14.7	14.1	14.3	15.9	15	15	15.6	14.9	17	14.9		13.7	15.8
CM-17-3	15	14.6	14.4	14.9	13.9	15.6	15	15	15.1	14.7	16	14.8	14.0	14.0	14.8
CM-17-4	15	14.8	15.0	15.6	14.2	15.4	14	15	15.2	14.4	16	15.1	14.2	13.9	14.6
CM-17-5	16	14.5	14.5	13.3	13.7	15.3	14	15	14.8	13.7	17	14.7	14.3	13.9	17.2
CM-17-6	15	15.9	14.1	14.4	13.8	15.2	14	15	15.1	15.6	16	15.1	13.4	13.1	16.0
CM-17-7	15	14.8	14.6	15.0	14.5	15.9	14	15	14.8	13.7	17	15.0	13.7	14.0	14.6
CM-17-8	16	14.2	14.5	15.1	14.3	15.7	14	15	14.8	15.7	16	15.0	15.0	13.7	15.8
CM-17-9	16	14.6	14.9	14.3	14.6	16.5	13	15	14.9	15.5	16	14.8	13.6	14.2	14.6
CM-17-10	16	16.0	14.3	14.7	14.0	15.9	13	15	14.9	15.2	16	14.8	13.5	13.1	15.8
Mean	15.5	14.9	14.6	14.5	14.1	15.8	13.9	15.0	15.0	14.9	16.3	14.9	14.0	13.8	15.5
Std. Devn.	0.5270	0.5840	0.3018	0.6586	0.3048	0.4061	0.7379	0.0000	0.2514	0.7630	0.4830	0.1414	0.5165	0.4413	0.8548
% RSD	3.40	3.92	2.07	4.53	2.16	2.58	5.31	0.00	1.68	5.12	2.96	0.95	3.70	3.20	5.51

REFERENCE MATERIAL *CDN-CM-17*

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
Total	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
CM-17-1	0.766	0.759	0.81	0.789	0.80	0.812	0.780	0.767	0.802	0.756	0.809	0.83		0.785	0.777
CM-17-2	0.780	0.762	0.79	0.791	0.81	0.801	0.788	0.790	0.804	0.754	0.798	0.82		0.786	0.792
CM-17-3	0.780	0.760	0.80	0.795	0.80	0.806	0.766	0.796	0.789	0.755	0.777	0.83	0.859	0.788	0.777
CM-17-4	0.785	0.755	0.83	0.786	0.81	0.805	0.785	0.791	0.801	0.768	0.798	0.81	0.827	0.785	0.789
CM-17-5	0.790	0.763	0.82	0.790	0.82	0.795	0.783	0.769	0.792	0.750	0.804	0.80	0.848	0.783	0.808
CM-17-6	0.785	0.767	0.83	0.796	0.82	0.800	0.786	0.788	0.792	0.744	0.780	0.83	0.854	0.778	0.807
CM-17-7	0.775	0.751	0.78	0.795	0.80	0.796	0.768	0.757	0.798	0.765	0.812	0.81	0.810	0.785	0.803
CM-17-8	0.778	0.779	0.83	0.793	0.81	0.793	0.775	0.770	0.810	0.766	0.775	0.82	0.816	0.788	0.798
CM-17-9	0.803	0.753	0.80	0.794	0.81	0.808	0.762	0.781	0.802	0.759	0.800	0.82	0.791	0.793	0.789
CM-17-10	0.795	0.748	0.80	0.796	0.82	0.809	0.762	0.767	0.807	0.749	0.777	0.82	0.820	0.786	0.786
Mean	0.784	0.760	0.809	0.793	0.810	0.803	0.776	0.778	0.800	0.757	0.793	0.819	0.828	0.786	0.793
Std. Devn.	0.0105	0.0090	0.0179	0.0034	0.0082	0.0065	0.0102	0.0132	0.0069	0.0080	0.0143	0.0099	0.0235	0.0039	0.0113
% RSD	1.34	1.18	2.22	0.43	1.01	0.81	1.32	1.70	0.86	1.06	1.80	1.21	2.84	0.49	1.42
Aqua Regia	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
CM-17-1	0.816	0.790	0.78	0.820	0.80	0.792	0.745	0.802	0.819	0.836	0.792	0.82		0.654	0.817
CM-17-2	0.810	0.788	0.81	0.773	0.81	0.801	0.740	0.792	0.813	0.809	0.789	0.81		0.626	0.797
CM-17-3	0.791	0.799	0.74	0.787	0.80	0.785	0.775	0.811	0.813	0.820	0.755	0.82	0.799	0.643	0.778
CM-17-4	0.810	0.795	0.74	0.777	0.81	0.813	0.753	0.791	0.818	0.814	0.798	0.81	0.790	0.666	0.780
CM-17-5	0.808	0.792	0.76	0.773	0.80	0.815	0.745	0.789	0.816	0.828	0.778	0.80	0.803	0.670	0.745
CM-17-6	0.775	0.800	0.75	0.774	0.81	0.804	0.750	0.791	0.815	0.814	0.781	0.81	0.798	0.630	0.762
CM-17-7	0.799	0.787	0.78	0.789	0.81	0.821	0.750	0.757	0.810	0.826	0.781	0.81	0.793	0.620	0.758
CM-17-8	0.805	0.782	0.80	0.785	0.81	0.814	0.750	0.801	0.816	0.842	0.789	0.81	0.803	0.635	0.791
CM-17-9	0.795	0.783	0.79	0.773	0.81	0.803	0.754	0.785	0.814	0.814	0.810	0.80	0.799	0.652	0.772
CM-17-10	0.811	0.799	0.80	0.792	0.81	0.826	0.759	0.781	0.815	0.819	0.800	0.80	0.792	0.662	0.786
Mean	0.802	0.792	0.775	0.784	0.807	0.807	0.752	0.790	0.815	0.822	0.787	0.809	0.797	0.646	0.779
Std. Devn.	0.0123	0.0066	0.0259	0.0146	0.0048	0.0128	0.0096	0.0146	0.0026	0.0107	0.0150	0.0074	0.0051	0.0175	0.0208
% RSD	1.53	0.84	3.35	1.86	0.60	1.59	1.28	1.84	0.32	1.30	1.91	0.91	0.63	2.71	2.67
Total	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo
CM-17-1	0.073	0.075	0.07	0.072	0.082	0.074	0.077	0.080	0.074	0.074	0.079	0.07		0.075	0.074
CM-17-2	0.074	0.075	0.07	0.071	0.080	0.073	0.078	0.079	0.073	0.074	0.079	0.07		0.075	0.076
CM-17-3	0.075	0.076	0.07	0.073	0.084	0.072	0.076	0.079	0.074	0.075	0.078	0.07	0.085	0.076	0.074
CM-17-4	0.074	0.074	0.07	0.072	0.082	0.071	0.076	0.077	0.073	0.076	0.080	0.07	0.081	0.076	0.076
CM-17-5	0.074	0.075	0.07	0.072	0.083	0.071	0.074	0.079	0.074	0.075	0.078	0.07	0.084	0.077	0.083
CM-17-6	0.074	0.077	0.07	0.070	0.082	0.071	0.079	0.079	0.074	0.075	0.075	0.07	0.084	0.075	0.076
CM-17-7	0.076	0.073	0.07	0.071	0.084	0.071	0.076	0.081	0.073	0.076	0.077	0.07	0.081	0.076	0.074
CM-17-8	0.076	0.075	0.07	0.072	0.083	0.072	0.077	0.084	0.073	0.076	0.077	0.07	0.081	0.076	0.075
CM-17-9	0.076	0.072	0.07	0.072	0.083	0.073	0.076	0.081	0.074	0.074	0.081	0.07	0.078	0.076	0.076
CM-17-10	0.075	0.071	0.07	0.072	0.082	0.073	0.075	0.080	0.075	0.075	0.078	0.07	0.081	0.076	0.074
Mean	0.075	0.074	0.070	0.072	0.083	0.072	0.076	0.080	0.074	0.075	0.078	0.070	0.082	0.076	0.076
Std. Devn.	0.0011	0.0017	0.0000	0.0008	0.0012	0.0011	0.0014	0.0019	0.0007	0.0009	0.0017	0.0000	0.0023	0.0004	0.0026
% RSD	1.42	2.30	0.00	1.15	1.43	1.53	1.87	2.32	0.92	1.17	2.16	0.00	2.83	0.59	3.42
Aqua Regia	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo
CM-17-1	0.076	0.054	0.07	0.072	0.082	0.063	0.078	0.077	0.066	0.085	0.075	0.07		0.050	0.078
CM-17-2	0.075	0.051	0.07	0.071	0.083	0.054	0.080	0.076	0.068	0.084	0.074	0.07		0.046	0.075
CM-17-3	0.075	0.054	0.07	0.071	0.083	0.056	0.079	0.078	0.068	0.082	0.069	0.07	0.074	0.046	0.074
CM-17-4	0.075	0.052	0.07	0.073	0.082	0.055	0.078	0.078	0.065	0.084	0.074	0.07	0.071	0.049	0.073
CM-17-5	0.076	0.053	0.07	0.071	0.082	0.059	0.080	0.075	0.067	0.084	0.072	0.06	0.073	0.049	0.069
CM-17-6	0.073	0.056	0.07	0.071	0.082	0.057	0.079	0.076	0.068	0.083	0.072	0.06	0.077	0.048	0.070
CM-17-7	0.075	0.051	0.07	0.070	0.083	0.059	0.080	0.075	0.067	0.083	0.073	0.06	0.074	0.050	0.071
CM-17-8	0.074	0.053	0.07	0.071	0.081	0.058	0.078	0.076	0.067	0.086	0.071	0.07	0.076	0.046	0.078
CM-17-9	0.075	0.054	0.07	0.071	0.082	0.063	0.081	0.076	0.069	0.084	0.075	0.07	0.076	0.046	0.074
CM-17-10	0.076	0.054	0.08	0.072	0.081	0.061	0.079	0.076	0.067	0.083	0.072	0.06	0.073	0.048	0.071
Mean	0.075	0.053	0.071	0.071	0.082	0.059	0.079	0.076	0.067	0.084	0.073	0.066	0.074	0.048	0.073
Std. Devn.	0.0009	0.0015	0.0032	0.0008	0.0007	0.0031	0.0010	0.0011	0.0011	0.0010	0.0019	0.0052	0.0017	0.0015	0.0031
% RSD	1.26	2.78	4.45	1.15	0.90	5.36	1.30	1.39	1.69	1.19	2.60	7.82	2.33	3.17	4.17

Note: Both Cu and Mo aqua regia data from Lab 14 was excluded for failing the t test.

REFERENCE MATERIAL CDN-CM-17

Participating Laboratories:

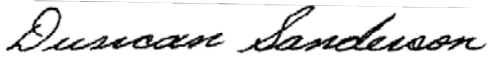
(not in same order as listed in table of results)

Acme Analytical Laboratories Ltd., Vancouver, B.C., Canada
Actlabs, Ancaster, Ontario, Canada
Actlabs, Stewart, B.C., Canada
Actlabs, Thunder Bay, Ontario, Canada
ALS Chemex Laboratories, North Vancouver, B.C., Canada
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AHK, Alaska, USA
Alex Stewart Argentina SA
Stewart Group, Kamloops, B.C., Canada
CIMM, Lima, Peru
Inspectorate, Richmond, B.C., Canada
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Certified by


Duncan Sanderson, Certified Assayer of B.C.

Geochemist


Dr. Barry Smee, Ph.D., P. Geo.