

CDN Resource Laboratories Ltd.

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REFERENCE MATERIAL: CDN-CM-44

Recommended value and the "Between Laboratory" two standard deviations

Gold	1.352 g/t ± 0.123 g/t	Certified value	30g FA / Instrumental
Copper	3.80 % ± 0.12 %	Certified value	4 Acid / ICP
Copper	3.80 % ± 0.12 %	Certified value	Aqua Regia / ICP or MS

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: January 29th, 2020

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-CM-44 was prepared using ore from the Minto Mine (Minto Explorations) in Yukon, Canada, supplied as coarse reject from diamond drilling. Mineralization is primary chalcopyrite and bornite pervasively disseminated and as stringers within foliated granodiorite units rich in secondary biotite. Sulphide mineralization is typically accompanied by magnetite. Gold is intimately associated with the bornite mineralization and rarely observed as free gold.

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.
Cu: 4-acid digestion, AA or ICP finish and Aqua regia digestion and ICP-OES or MS finish
Whole rock analysis and 30 element ICP analysis (4-acid digestion) were also conducted on 5 samples.

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

Analyte	Percent	Analyte	Percent
SiO ₂	54.1	Na ₂ O	3.4
Al ₂ O ₃	14.6	MgO	1.2
Fe ₂ O ₃	10.5	K ₂ O	2.7
CaO	3.3	TiO ₂	0.4
MnO	<0.1	LOI	5.4
Total S	4.6	Total C	0.5

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.

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														
CM-44-1	1.31	1.41	1.310	1.385	1.345	1.40	1.426	1.330	1.475	1.390	1.39	1.392	1.27	1.300	1.335
CM-44-2	1.27	1.45	1.335	1.405	1.390	1.42	1.34	1.340	1.455	1.354	1.25	1.482	1.22	1.349	1.286
CM-44-3	1.33	1.45	1.375	1.410	1.390	1.40	1.346	1.339	1.385	1.306	1.39	1.35	1.36	1.316	1.323
CM-44-4	1.23	1.48	1.385	1.295	1.345	1.40	1.346	1.339	1.365	1.339	1.34	1.427	1.22	1.249	1.357
CM-44-5	1.31	1.51	1.285	1.285	1.450	1.44	1.449	1.330	1.430	1.329	1.39	1.365	1.27	1.350	1.351
CM-44-6	1.29	1.43	1.325	1.360	1.350	1.46	1.352	1.369	1.455	1.377	1.32	1.33	1.33	1.274	1.317
CM-44-7	1.26	1.35	1.240	1.250	1.310	1.36	1.456	1.355	1.490	1.377	1.27	1.403	1.39	1.263	1.279
CM-44-8	1.35	1.43	1.270	1.305	1.480	1.37	1.335	1.360	1.535	1.394	1.39	1.291	1.35	1.217	1.419
CM-44-9	1.26	1.39	1.380	1.415	1.405	1.38	1.364	1.346	1.370	1.374	1.36	1.409	1.24	1.199	1.255
CM-44-10	1.29	1.43	1.265	1.375	1.250	1.40	1.365	1.349	1.530	1.332	1.25	1.442	1.35	1.326	1.263
Mean	1.29	1.43	1.32	1.349	1.372	1.40	1.378	1.346	1.449	1.357	1.34	1.389	1.30	1.28	1.319
Std. Devn.	0.036	0.044	0.052	0.060	0.067	0.031	0.047	0.013	0.062	0.030	0.059	0.056	0.063	0.053	0.050
% RSD	2.807	3.098	3.942	4.425	4.870	2.179	3.405	0.947	4.251	2.182	4.430	4.064	4.852	4.112	3.806
Cu by 4 Acid digestion /Instrumental finish															
CM-44-1	3.75	3.85	3.78	3.64	3.72	3.79	3.739	3.89	3.67	3.929	3.811	3.88	3.75	3.77	3.798
CM-44-2	3.72	3.78	3.77	3.61	3.77	3.79	3.787	3.88	3.66	3.782	3.800	3.84	3.79	3.71	3.837
CM-44-3	3.68	3.77	3.78	3.65	3.78	3.78	3.742	3.89	3.67	3.889	3.850	3.84	3.82	3.74	3.828
CM-44-4	3.73	3.77	3.82	3.57	3.74	3.8	3.74	3.88	3.69	3.835	3.812	3.83	3.84	3.78	3.865
CM-44-5	3.76	3.82	3.85	3.67	3.67	3.78	3.744	3.87	3.71	3.933	3.778	3.77	3.88	3.74	3.887
CM-44-6	3.71	3.75	3.81	3.69	3.74	3.86	3.774	3.90	3.66	3.826	3.810	3.97	3.84	3.77	3.895
CM-44-7	3.76	3.80	3.78	3.58	3.70	3.79	3.826	3.89	3.69	3.849	3.864	3.82	3.83	3.74	3.930
CM-44-8	3.72	3.80	3.76	3.61	3.71	3.83	3.778	3.90	3.69	3.903	3.815	3.81	3.86	3.74	3.847
CM-44-9	3.73	3.81	3.77	3.64	3.73	3.78	3.834	3.88	3.81	3.886	3.804	3.93	3.82	3.76	3.859
CM-44-10	3.74	3.82	3.75	3.63	3.70	3.85	3.768	3.89	3.75	3.902	3.831	3.82	3.87	3.76	3.810
Mean	3.73	3.80	3.79	3.63	3.73	3.81	3.773	3.89	3.70	3.873	3.818	3.85	3.83	3.75	3.856
Std. Devn.	0.024	0.030	0.031	0.038	0.033	0.030	0.035	0.009	0.047	0.049	0.025	0.060	0.039	0.021	0.040
% RSD	0.657	0.786	0.807	1.035	0.896	0.796	0.919	0.244	1.274	1.259	0.653	1.551	1.007	0.554	1.049
Cu by Aqua Regia digestion /Instrumental finish															
CM-44-1	3.64	3.82	3.85	3.76	3.79	3.74	3.706	3.87	3.62	3.818	3.838	3.74	3.87		3.884
CM-44-2	3.73	3.86	3.78	3.74	3.73	3.75	3.783	3.85	3.81	3.828	3.808	3.75	3.83		3.897
CM-44-3	3.7	3.82	3.72	3.73	3.81	3.77	3.824	3.89	3.76	3.820	3.797	3.78	3.84		3.837
CM-44-4	3.73	3.78	3.73	3.76	3.86	3.7	3.798	3.87	3.79	3.803	3.794	3.84	3.86		3.946
CM-44-5	3.69	3.77	3.7	3.72	3.85	3.67	3.736	3.85	3.81	3.854	3.811	3.7	3.79		3.852
CM-44-6	3.85	3.83	3.74	3.66	3.89	3.87	3.767	3.88	3.73	3.866	3.814	3.77	3.85		3.827
CM-44-7	3.74	3.76	3.75	3.68	3.86	3.78	3.755	3.85	3.77	3.812	3.784	3.78	3.90		3.822
CM-44-8	3.74	3.76	3.89	3.76	3.9	3.74	3.885	3.88	3.80	3.880	3.799	3.75	3.80		3.767
CM-44-9	3.86	3.82	3.82	3.69	3.79	3.69	3.779	3.88	3.71	3.863	3.800	3.76	3.76		3.946
CM-44-10	3.8	3.74	3.85	3.83	3.88	3.73	3.830	3.87	3.69	3.862	3.772	3.73	3.70		3.886
Mean	3.75	3.80	3.78	3.73	3.84	3.74	3.786	3.87	3.75	3.841	3.802	3.76	3.82		3.866
Std. Devn.	0.070	0.039	0.065	0.049	0.054	0.056	0.051	0.014	0.062	0.027	0.018	0.037	0.059		0.056
% RSD	1.860	1.026	1.727	1.319	1.413	1.501	1.353	0.375	1.646	0.708	0.471	0.987	1.541		1.461

Notes:

Labs 15 did not report Cu assayed by Aqua Regia digestion with instrumental finish methods.

Cu results from Lab 4 utilizing 4 Acid digestion and Instrumental finish method were removed for failing the t test.


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

AGAT Labs, Ontario, Canada	Certimin S.A., Lima, Peru
ALS, Loughrea, Ireland	MS Analytical, Langley, BC, Canada
ALS, Lima, Peru	SGS, Vancouver, BC, Canada
ALS, Perth Australia	SGS, Lima, Peru
ALS Reno, USA	SGS, Lakefield, Ontario, Canada
ALS Canada, North Vancouver, BC, Canada	Skyline Assayers & Laboratories, AZ, USA
Bureau Veritas, Perth, Australia	TSL Laboratories Ltd., Saskatoon, SK, Canada
Bureau Veritas, Vancouver, BC, Canada	

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 
Duncan Sanderson, Certified Assayer of B.C.

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