

# CDN Resource Laboratories Ltd.

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## ORE REFERENCE STANDARD: CDN-CGS-3

Recommended values and 95% Confidence Intervals

Copper concentration:  $0.646 \pm 0.031 \%$

Gold concentration  $0.53 \pm 0.048 \text{ g/t}$

**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.

### **METHOD OF PREPARATION:**

Reject ore material was dried, crushed, pulverized and then passed through a 200 mesh screen. The +200 material was discarded. The -200 material was mixed for 7 days in a rotary mixer. After internal assaying to test for homogeneity, splits were taken and sent to 9 laboratories for round robin assaying.

### **ORIGIN OF REFERENCE MATERIAL:**

The ore was supplied by bcMetals Corporation from the Red Chris Property in British Columbia. Most of the mineralization is closely associated with individual and sheeted quartz ( $\pm$ carbonate) veining and quartz ( $\pm$ carbonate) stockwork zones. It occurs as disseminations and fracture coatings. Pyrite, chalcopyrite and lesser bornite are the principal sulphide minerals. Gold occurs as electrum spatially and genetically associated with the copper mineralization.

### **Approximate chemical composition is as follows:**

	Percent			Percent
SiO <sub>2</sub>	56.5		MgO	1.7
Al <sub>2</sub> O <sub>3</sub>	11.4		K <sub>2</sub> O	3.7
Fe <sub>2</sub> O <sub>3</sub>	13.7		TiO <sub>2</sub>	0.3
CaO	2.8		LOI	8.4
Na <sub>2</sub> O	0.4			

### **Statistical Procedures:**

The mean and standard deviation for all data was calculated. Outliers were defined as samples beyond the mean  $\pm 2$  Standard Deviations from all data. These outliers were removed from the data and a new mean and standard deviation was determined. 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 Certified Limits published on other standards.

### **Results from round-robin assaying are presented on the following page:**

### **Assay Procedures:**

**Au:** Fire assay pre-concentration, AA or ICP finish (30g sub-sample).

**Cu:** 4-acid digestion, AA or ICP finish.

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	Lab. 1	Lab. 2	Lab. 3	Lab. 4	Lab. 5	Lab. 6	Lab. 7	Lab. 8	Lab. 9
	Au (gpt)	Au (gpt)	Au (gpt)	Au (gpt)	Au (gpt)	Au (gpt)	Au (gpt)	Au (gpt)	Au (gpt)
	0.49	0.51	0.55	0.52	0.56	0.59	0.53	0.53	0.53
	0.49	0.49	0.53	0.52	0.54	0.56	0.57	0.53	0.5
	0.48	0.52	0.53	0.54	0.57	0.58	0.51	0.54	0.53
	0.51	0.54	0.51	0.53	0.54	0.57	0.52	0.53	0.55
	0.49	0.51	0.55	0.57	0.56	0.56	0.53	0.55	0.55
	0.51	0.54	0.50	0.54	0.58	0.57	0.54	0.53	0.54
	0.46	0.50	0.51	0.52	0.55	0.57	0.53	0.56	0.55
	0.50	0.52	0.52	0.55	0.59	0.56	0.53	0.52	0.53
	0.50	0.55	0.51	0.54	0.56	0.56	0.53	0.56	0.57
	0.48	0.51	0.50	0.55	0.56	0.56	0.49	0.52	0.56
Mean	0.49	0.52	0.52	0.54	0.56	0.57	0.53	0.54	0.54
Std. Devn.	0.015	0.019	0.019	0.017	0.016	0.009	0.020	0.015	0.020
%RSD	3.10	3.68	3.56	3.10	2.83	1.62	3.87	2.78	3.64
	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)
	0.654	0.660	0.625	0.640	0.650	0.650	0.61	0.65	0.66
	0.659	0.653	0.627	0.635	0.644	0.648	0.60	0.66	0.66
	0.658	0.648	0.606	0.637	0.643	0.640	0.61	0.69	0.66
	0.656	0.656	0.622	0.639	0.644	0.657	0.62	0.68	0.66
	0.649	0.649	0.628	0.641	0.644	0.644	0.63	0.67	0.65
	0.657	0.641	0.616	0.643	0.653	0.652	0.63	0.70	0.66
	0.653	0.654	0.602	0.645	0.650	0.651	0.62	0.71	0.66
	0.654	0.655	0.620	0.659	0.646	0.651	0.62	0.70	0.66
	0.656	0.655	0.615	0.663	0.646	0.652	0.62	0.68	0.65
	0.651	0.660	0.611	0.650	0.643	0.646	0.63	0.68	0.66
Mean	0.655	0.653	0.617	0.645	0.646	0.649	0.619	0.681	0.658
Std. Devn.	0.003	0.006	0.009	0.009	0.003	0.005	0.010	0.018	0.004
%RSD	0.48	0.89	1.43	1.45	0.54	0.74	1.61	2.62	0.65

**STANDARD REFERENCE MATERIAL CDN-CGS-3**

**Participating Laboratories:**


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

Acme Analytical Laboratories Ltd., Vancouver  
Assayers Canada Ltd., Vancouver  
ALS Chemex Laboratories, North Vancouver  
GTK Lab. (Geological Survey of Finland)  
International Plasma Laboratories Ltd., Vancouver  
Loring Laboratories Ltd., Calgary  
OMAC Laboratory, Ireland  
SGS-XRAL Laboratories Ltd., Toronto  
TSL Laboratories Ltd., Saskatoon


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This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. or Barry Smee accept no 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.