

# CDN Resource Laboratories Ltd.

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## ORE REFERENCE STANDARD: CDN-CGS-14

Recommended values and the “Between Lab” Two Standard Deviations

*Copper concentration: 1.013 ± 0.043 %*  
*Gold concentration 1.42 ± 0.13 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.  
**DATE OF CERTIFICATION:** May 7, 2007

### **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 double-cone blender. Splits were taken and sent to 12 laboratories for round robin assaying.

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

The ore was supplied by Pacific Sentinel from the Casino Property and bcMetals Corporation from the Red Chris property, both in British Columbia. The Casino ore is described as follows: copper-gold-molybdenum mineralization is genetically related to a breccia and microbreccia pipe of fine grained quartz monzonites, intrusion breccias, and plagioclase-porphyratic intrusions that may be subvolcanic in origin, comprising part of the 72-74 Ma Casino Intrusive Complex. Roughly centred on the microbreccia pipe, both the alteration and mineralization are zoned. Innermost is the potassic alteration suite consisting of K-feldspar, biotite, magnetite, anhydrite, gypsum, and pyrite, chalcopyrite, molybdenite, and gold. In the case of the Red Chris ore most of the mineralization is closely associated with individual and sheeted quartz (±carbonate) veining and quartz (±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.

Standard CDN-CGS-14 was prepared using 470 kg of Casino ore, 317 kg of Red Chris ore as well as 17 kg of an Au-Cu concentrate.

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

	Percent			Percent
SiO <sub>2</sub>	60.7		MgO	1.7
Al <sub>2</sub> O <sub>3</sub>	14.1		K <sub>2</sub> O	4.8
Fe <sub>2</sub> O <sub>3</sub>	7.1		TiO <sub>2</sub>	0.5
CaO	2.3		LOI	5.9
Na <sub>2</sub> O	0.9		S	2.7

### **Statistical Procedures:**

The mean and standard deviation for all data was calculated. Outliers were defined as samples beyond the mean ± 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 Confidence Limits published on other standards.

## **STANDARD REFERENCE MATERIAL CDN-CGS-14**

### **Results from round-robin assaying:**

**Assay Procedures:**    **Au:** Fire assay pre-concentration, AA or ICP finish (30g sub-sample).  
                                   **Cu:** 4-acid digestion, AA or ICP finish.

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	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)
CGS14-1	1.31	1.51	1.34	1.48	1.47	1.51	1.30	1.41	1.41	1.57	1.33	1.43
CGS14-2	1.47	1.47	1.36	1.46	1.32	1.40	1.39	1.49	1.41	1.52	1.60	1.43
CGS14-3	1.42	1.48	1.37	1.49	1.46	1.42	1.38	1.38	1.40	1.54	1.39	1.38
CGS14-4	1.33	1.23	1.34	1.46	1.39	1.46	1.43	1.59	1.42	1.41	1.56	1.42
CGS14-5	1.42	1.44	1.35	1.47	1.40	1.58	1.33	1.40	1.42	1.50	1.36	1.43
CGS14-6	1.32	1.38	1.31	1.46	1.37	1.57	1.32	1.49	1.41	1.47	1.35	1.44
CGS14-7	1.34	1.55	1.38	1.45	1.48	1.41	1.36	1.54	1.42	1.48	1.40	1.46
CGS14-8	1.34	1.41	1.41	1.42	1.48	1.49	1.39	1.63	1.41	1.51	1.45	1.38
CGS14-9	1.36	1.31	1.42	1.42	1.48	1.55	1.33	1.47	1.41	1.45	1.35	1.42
CGS14-10	1.37	1.37	1.32	1.47	1.36	1.43	1.28	1.43	1.41	1.58	1.37	1.38
Mean	1.37	1.41	1.36	1.46	1.42	1.48	1.35	1.48	1.41	1.50	1.42	1.42
Std. Dev.	0.052	0.095	0.036	0.023	0.060	0.068	0.047	0.083	0.007	0.053	0.093	0.028
%RSD	3.82	6.76	2.64	1.58	4.22	4.60	3.48	5.61	0.48	3.51	6.58	1.97
	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)	Cu (%)
CGS14-1	1.01	1.02	0.984	0.992	0.996	1.10	0.992	1.04	1.08	1.07	1.02	0.99
CGS14-2	1.02	1.02	0.933	0.998	0.991	1.08	1.006	1.03	1.05	1.01	1.03	0.98
CGS14-3	1.02	1.03	0.974	1.001	0.992	1.09	0.991	1.03	1.06	1.03	1.03	1.01
CGS14-4	1.00	1.01	0.959	1.002	0.985	1.08	0.998	1.02	1.07	1.03	1.03	1.00
CGS14-5	1.01	1.02	0.953	0.994	0.999	1.07	0.997	1.04	1.09	1.05	1.03	1.01
CGS14-6	1.01	1.02	0.971	0.992	1.001	1.05	0.996	1.03	1.06	1.06	1.02	0.98
CGS14-7	1.01	1.02	0.972	0.998	1.001	1.06	0.996	1.03	1.07	1.03	1.03	0.98
CGS14-8	0.99	1.02	1.014	0.996	1.001	1.06	0.991	1.03	1.08	1.04	1.03	1.04
CGS14-9	1.00	1.02	0.996	0.998	0.996	1.06	1.008	1.02	1.04	1.06	1.02	1.02
CGS14-10	1.02	1.02	1.008	1.004	1.000	1.06	1.003	1.02	1.07	1.06	1.03	1.00
Mean	1.01	1.02	0.98	1.00	1.00	1.07	1.00	1.03	1.07	1.04	1.03	1.00
Std. Dev.	0.009	0.005	0.025	0.004	0.005	0.016	0.006	0.007	0.015	0.018	0.004	0.020
%RSD	0.94	0.53	2.56	0.41	0.54	1.49	0.61	0.72	1.40	1.76	0.38	1.97

**Note:** "Cu" data from laboratory 6 were excluded from the calculations for failing the "t" test.

**STANDARD REFERENCE MATERIAL CDN-CGS-14**

**Participating Laboratories:**

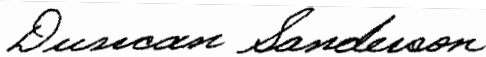
(not in same order as listed in table of results)

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Certified by



Duncan Sanderson, Certified Assayer of B.C.

Geochemist



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