

# CDN Resource Laboratories Ltd.

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## REFERENCE MATERIAL: CDN-GEO-1901

Recommended value and the "Between Laboratory" two standard deviations

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee, PhD, P Geo  
**DATE OF CERTIFICATION:** January 29<sup>th</sup>, 2020

Gold by Fire Assay & Base Metals-4Acid digestion Instrumental finish- All values are in ppm				
Au	0.036	±	0.008	Provisional mean
Ag	1.0	±	0.3	
Co	18.8	±	1.3	Certified value
Cu	635	±	46	
Mo	22.2	±	2.3	
Pb	31	±	3	
As	15.2	±	4.4	Provisional mean
Zn	68	±	9	
Ni	25	±	8	Indicated Mean
Sc	18	±	2	

Trace and Intermediate Level Elements-Lithium Boron Fusion Instrumental finish- All values are in ppm				
Ba	1122.5	±	77.1	Certified value
Ce	19.2	±	1.43	
Cs	2.3	±	0.2	
Dy	2.94	±	0.22	
Er	1.8	±	0.1	
Ga	17.7	±	1.6	
Gd	3.0	±	0.2	
Ho	0.6	±	0.05	
La	9.1	±	0.8	
Lu	0.28	±	0.03	
Nd	11.4	±	0.9	
Pr	2.6	±	0.2	
Rb	48.3	±	2.5	
Sm	2.8	±	0.3	
Sr	533	±	39	
Tb	0.48	±	0.04	
Th	2.75	±	0.30	
Tm	0.27	±	0.03	
U	1.60	±	0.14	
V	199	±	14	
Y	16.7	±	1.1	
Yb	1.82	±	0.16	
Zr	83	±	7	
Eu	0.87	±	0.12	Provisional mean
Hf	2.4	±	0.4	
Nb	2.8	±	0.4	
W	5	±	1	
Sn	1.1	±	0.7	Indicated Mean
Ta	0.2	±	0.1	

ICP-AES Instrumental finish All values are in %				
SiO <sub>2</sub>	53.0	±	1.0	Certified value
Al <sub>2</sub> O <sub>3</sub>	15.59	±	0.33	
BaO	0.13	±	0.01	
CaO	8.48	±	0.23	
Fe <sub>2</sub> O <sub>3</sub>	6.40	±	0.17	
K <sub>2</sub> O	2.08	±	0.10	
MgO	4.15	±	0.20	
MnO	0.12	±	0.01	
Na <sub>2</sub> O	3.23	±	0.18	
P <sub>2</sub> O <sub>5</sub>	0.24	±	0.02	
TiO <sub>2</sub>	0.61	±	0.02	
Cr <sub>2</sub> O <sub>3</sub>	0.008	±	0.001	
SrO	0.06	±	0.02	

#### ORIGIN OF REFERENCE MATERIAL:

Standard CDN-GEO-1901 was provided from a copper-gold porphyry project, located in south-central British Columbia. The deposit represents a large regional depositional belt commonly dominated by alkalic volcanic units and related volcanoclastic lithologies and hosts both alkaline and calc-alkaline porphyry copper+/-gold+/-molybdenum deposits.

In this large regional depositional belt alkali-porphyry deposits typically are hosted in basalts and andesitic flows, fragmental rocks and alkalic intrusive complexes. They are generally mineralized with gold and copper and do not have large quantities of pyrite. Sulfide mineralization is developed adjacent to and within concentrically-zoned alkalic plutons

#### 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 blender. Splits were taken and sent to 12 commercial laboratories for round robin assaying.

#### ASSAY PROCEDURES:

**Au:** 30 gr Fire assay pre-concentration, Instrumental finish.  
**Ag, As, Co, Cu, Mo, Ni, Pb, Sc, Zn:** 4 Acid Digestion with Instrumental finish.  
**Major Oxides:** ICP-AES Instrumental finish.  
**Trace Elements:** Li Borate Fusion Instrumental finish.

#### 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  $\pm 2$  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.

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

Activation Labs Ancaster, ON, Canada	Bureau Veritas, Vancouver, BC, Canada
Activation Labs Thunder Bay, ON, Canada	Bureau Veritas, Perth, Australia
ALS Canada, North Vancouver, BC, Canada	SGS, Lima, Peru
ALS, Loughrea, Ireland	SGS, Lakefield, Ontario, Canada
ALS, Lima, Peru	SGS, Vancouver, BC, Canada
ALS, Perth, Australia	MS Analytical, Langley, 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

  
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Duncan Sanderson, Certified Assayer of B.C.

Geochemist

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