

# CDN Resource Laboratories Ltd.

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## REFERENCE MATERIAL: CDN-SS-2203

Recommended value and the "Between Laboratory" two standard deviations

Gold	0.041g/t ± 0.008 g/t	Provisional mean	30g FA / AA or ICP Finish
Silver	134 g/t ± 6 g/t	Certified value	4 Acid Digestion/ ICP or AA Finish
Silver	126 g/t ± 10 g/t	Certified value	Fire Assay/ Gravimetric Finish

**PREPARED BY:** CDN Resource Laboratories Ltd.  
**CERTIFIED BY:** Ali Alizadeh, MSc, MBA, P Geo  
**INDEPENDENT GEOCHEMIST:** Dr. Barry Smee., Ph.D., P. Geo.  
**DATE OF CERTIFICATION:** March 6<sup>th</sup>, 2023

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

Standard CDN-SS-2203 was prepared using the ore that was supplied by Apollo Silver Corporation from their Waterloo silver deposit, on their Calico Silver Project in California, USA.

Waterloo is a silver-dominated, low-temperature hot-spring (epithermal) style precious metal deposit hosted in mid-Miocene (~19-17 Ma) aged siltstones and sandstones of the Barstow Formation. The silver mineralization occurs in the lower stratigraphic horizons of the Barstow where it is in conformable contact with the underlying felsic volcanics of the mid Miocene (~24-19 Ma) Pickhandle Formation. Silver mineralization is supergene enriched and oxidized, with silver mineralization comprising native silver, silver salts and acanthite. The deposit hosts both silver and gold, however these are spatially distinct, each hosted by separate stratigraphic horizons in the tilted sedimentary package and associated with different mineral and alteration assemblages. The silver dominant horizons are primarily siltstones and sandstones that are strongly silicified, variably baritized, moderately potassic (adularia) and weakly sericite altered. The gold dominant horizon comprises the lowermost Barstow package, represented by fine to medium grained pebbly sandstone conglomerate which is variably brecciated and shows strong steam heated alteration. The gold horizon is associated with elevated iron oxides, galena and sphalerite relative to the silver dominant horizons.

### **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.  
**Ag:** Four Acids digestion, ICP or AA finish  
**Ag:** Fire assay pre-concentration, Gravimetric finish.

30 element ICP analysis (4-acid digestion) were also conducted on 10 samples.  
Whole Rock analysis by Fusion XRF was completed on 10 samples by 5 labs.

**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.

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.

Printed results from Round Robin Assaying is available in Appendix II and can be provided upon request.

**Quality Assurance and Quality Control Procedures:**

CDN completed a screening on CDN-SS-2203.

**Screening Test:** After completion of homogenization, three samples, 300g each of homogenized material was randomly collected and was re-screened by a testing sieve. Over size material of this standard and based on CDN's screening test was ~%1.0. (Appendix III).

**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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Ali Alizadeh, MSc, MBA, P.Geo.

Geochemist



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Dr. Barry Smee, PhD, P. Geo.

**APPENDIX I:****APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):**

Analyte	Percent	Analyte	Percent
SiO <sub>2</sub>	78.7	Na <sub>2</sub> O	0.1
Al <sub>2</sub> O <sub>3</sub>	5.6	MgO	0.1
Fe <sub>2</sub> O <sub>3</sub>	2.3	K <sub>2</sub> O	4.4
CaO	1.8	TiO <sub>2</sub>	0.3
MnO	0.2	LOI	2.0
SO <sub>3</sub>	1.3	BaO	2.4

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

Activation Labs, Ancaster, Ontario, Canada	Bureau Veritas, Perth, Australia
Activation Labs, Thunder/ Bay, Ontario, Canada	Bureau Veritas, Vancouver, BC, Canada
AGAT Labs, Ontario, Canada	Certimin S.A., Lima, Peru
ALS Canada, North Vancouver, BC, Canada	MS Analytical, Langley, BC, Canada
ALS Lima, Peru	SGS Burnaby, BC, Canada
ALS, Brisbane, Australia	SGS Lakefield, ON, Canada
ALS, Loughrea, Ireland	Saskatchewan research council, SRC, Saskatoon, Canada
ALS, Perth Australia	

**APPENDIX II: QAQC**

Table below illustrates percentages of over size (+275 mesh) material in CDN-SS-2203.

Standard	Study Date	Total weight Screened (g)	Total weight Over size (g)	Percentage
SS-2203	12/14/2022	300	1	0.3%
SS-2203	12/14/2022	300	1	0.3%
SS-2203	12/14/2022	300	1	0.3%

**APPENDIX III:**

**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
<b>Au (g/t) by Fire Assay, 30g sample size and Instrumental finish</b>															
CDN-SS-2203	0.041	0.027	0.041	0.043	0.038	0.055	0.035	0.052	0.039	0.050	0.039	0.043	0.078	0.044	0.04
	0.039	0.039	0.041	0.047	0.036	0.045	0.041	0.040	0.039	0.041	0.035	0.039	0.077	0.049	0.06
	0.035	0.055	0.040	0.044	0.047	0.040	0.042	0.043	0.036	0.042	0.037	0.038	0.073	0.044	0.05
	0.042	0.040	0.040	0.040	0.040	0.044	0.035	0.037	0.041	0.043	0.039	0.035	0.081	0.040	0.05
	0.038	0.045	0.050	0.039	0.046	0.037	0.042	0.039	0.040	0.070	0.037	0.041	0.082	0.040	0.04
	0.037	0.047	0.039	0.041	0.039	0.058	0.035	0.043	0.036	0.049	0.038	0.042	0.079	0.043	0.04
	0.030	0.048	0.035	0.039	0.040	0.046	0.043	0.044	0.039	0.047	0.041	0.041	0.076	0.046	0.04
	0.040	0.040	0.040	0.041	0.039	0.042	0.037	0.047	0.039	0.046	0.042	0.049	0.078	0.048	0.04
	0.040	0.037	0.037	0.040	0.040	0.040	0.037	0.042	0.037	0.042	0.037	0.044	0.075	0.044	0.04
0.040	0.039	0.040	0.041	0.033	0.039	0.036	0.050	0.042	0.043	0.036	0.036	0.078	0.038	0.04	
<b>Mean</b>	0.038	0.042	0.040	0.042	0.040	0.045	0.038	0.044	0.039	0.047	0.038	0.041	0.078	0.044	0.04
<b>Std. Devn.</b>	0.004	0.008	0.004	0.003	0.004	0.007	0.003	0.005	0.002	0.009	0.002	0.004	0.003	0.004	0.007
<b>% RSD</b>	9.22	18.12	9.65	6.04	10.45	15.47	8.62	10.90	5.13	18.11	5.73	10.06	3.43	8.11	15.89
<b>Ag (g/t) by 4Acid digestion ICP or AA finish</b>															
CDN-SS-2203	135	132	140	134	132	135	133	131	143	134	133	105		130	125
	135	134	142	134	134	135	137	135	144	139	134	138	133	129	126
	136	134	141	134	132	136	137	132	142	142	133	137	132	126	122
	135	136	141	133	134	133	137	133	145	138	131	138	132	135	125
	135	134	138	134	136	134	131	132	148	I.S.	131	132	135	131	124
	134	134	141	136	135	134	133	131	141	136	135	126	132	130	125
	131	134	141	136	135	132	136	124	145	136	132	135	134	130	124
	131	134	142	133	135	135	132	132	148	136	131	121	130	127	125
	138	135	139	135	139	133	136	133	139	136	134	127	130	127	124
	137	133	142	135	134	136	132	130	146	135	133	118	131	130	124
<b>Mean</b>	135	134	141	134	135	134	134	131	144	137	133	128	132	130	124
<b>Std. Devn.</b>	2.26	1.05	1.34	1.07	2.01	1.34	2.41	2.908	2.92	2.42	1.42	10.69	1.69	2.55	1.07
<b>% RSD</b>	1.68	0.79	0.95	0.80	1.49	1.00	1.80	2.215	2.03	1.77	1.07	8.37	1.28	1.97	0.86
<b>Ag (g/t) by Fire Assay and gravimetric finish</b>															
CDN-SS-2203	169	128			125	126	127	127		121	131	133	108.0	124	119
	115	125			139	124	129	125		122	130	129	105.0	123	122
	113	127			130	124	126	127		120	132	126	104.0	129	122
	115	141			123	122	126	125		122	132	137	108.0	129	110
	191	132			123	121	133	126		125	131	128	109.0	126	120
	104	135			124	127	124	128		129	128	131	99.9	126	122
	114	132			126	124	123	127		119	132	130	111.0	129	123
	110	133			125	124	119	129		116	133	126	106.0	123	119
	121	135			126	123	128	125		117	131	130	100.0	128	119
	117	134			125	121	124	128		117	132	130	96.9	126	117
<b>Mean</b>	127	132			127	124	126	127		121	131	130	104.8	126.3	119
<b>Std. Devn.</b>	28.80	4.64			4.79	1.96	3.78	1.418		3.99	1.40	3.27	4.57	2.41	3.77
<b>% RSD</b>	22.70	3.51			3.78	1.58	3.01	1.119		3.31	1.07	2.51	4.36	1.90	3.16

**Notes:**

Au results from Lab 13 were removed for failing the t test.

Ag results assayed by 4 Acid digestion and ICP finish from Labs 4 and 13, were removed for failing the t test.

Ag results assayed by Fire Assay and gravimetric finish from Lab 13, were removed for failing the t test.