

# CDN Resource Laboratories Ltd.

10945-B River Road, Delta, B.C., Canada, V4C 2R8, 604-540-2233, Fax: 604-540-2237 (www.cdnlabs.com)

## ORE REFERENCE STANDARD: CDN-HLLC

Recommended values and the "Between Lab" Two Standard Deviations

*Gold* 0.83 ± 0.12 g/t

*Silver* 65.1 ± 6.7 g/t

*Copper* 1.49 ± 0.06 %

*Lead* 0.29 ± 0.03 %

*Zinc* 3.01 ± 0.17 %

**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:** August 8, 2006

### **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 5 days in a V- mixer. Splits were taken and sent to twelve laboratories for round robin assaying. The material has been packaged in nominal 100g lots in tin-top kraft bags which have been individually vacuum-sealed in polyethylene bags.

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

The ore is described as massive to semi-massive sulphides from the High Lake West Zone orebody, an archean aged VMS deposit in the Slave structural province of Canada. It consists of pyrite, pyrrhotite, chalcopyrite, sphalerite and minor galena. Gangue minerals include quartz, chlorite, feldspar, cordierite, biotite, magnetite, anthophyllite and grunerite.

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

Standard CDN-HLLC is a high sulphide material with approximately 33% sulphur.

### **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.

### **Results from round-robin assaying are presented on subsequent pages:**

### **Assay Procedures:**

**Au:** Fire assay pre-concentration, AA or ICP finish (10g sub-sample).

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

**STANDARD REFERENCE MATERIAL CDN-HLLC**

	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 gpt	Au gpt	Au gpt	Au gpt	Au gpt	Au gpt	Au gpt	Au gpt	Au gpt	Au gpt	Au gpt	Au gpt
HLLC-1	0.79	0.73	1.00	0.86	0.74	0.92	0.80	0.92	0.81	0.76	0.931	0.80
HLLC-2	0.77	0.82	0.83	0.82	0.95	0.81	0.81	0.88	0.80	0.75	0.823	0.81
HLLC-3	0.77	0.79	0.82	0.88	0.85	0.81	0.73	0.86	0.83	0.85	0.882	0.87
HLLC-4	0.81	0.86	0.91	0.86	0.96	0.85	0.81	0.96	0.88	0.81	0.83	0.74
HLLC-5	0.88	0.78	0.87	0.89	0.92	0.86	0.85	0.67	0.83	0.87	0.975	0.74
HLLC-6	0.82	0.91	0.79	0.91	0.88	0.89	0.84	0.73	0.90	0.80	0.839	0.73
HLLC-7	0.79	0.80	0.79	0.92	0.89	0.85	0.90	0.87	0.89	0.84	0.928	0.81
HLLC-8	0.75	0.91	0.76	0.95	0.96	0.82	0.84	0.80	0.86	0.87	0.783	0.77
HLLC-9	0.86	0.91	0.78	0.79	1.08	0.83	0.72	0.88	0.85	0.82	0.837	0.88
HLLC-10	0.78	0.78	0.78	0.90	0.94	0.85	0.73	0.76	0.80	0.76	0.735	0.81
Mean	0.80	0.83	0.83	0.88	0.92	0.85	0.80	0.83	0.84	0.81	0.86	0.80
Std. Devn.	0.041	0.065	0.075	0.049	0.088	0.035	0.060	0.091	0.035	0.048	0.073	0.052
% RSD	5.15	7.81	8.95	5.58	9.60	4.13	7.43	10.87	4.15	5.85	8.53	6.55
	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt	Ag gpt
HLLC-1	63.4	60	68	69	72.5	59.8	68	70.4	60.6	64	66.1	67.6
HLLC-2	65.2	61	64	64	68.8	60.8	66	55.7	59.6	65	64.6	60.6
HLLC-3	65.6	71	68	64	72.9	59.9	69	62.6	61.4	67	67.0	64.6
HLLC-4	63.8	63	70	66	72.3	59.3	69	80.0	59.5	64	64.8	65.4
HLLC-5	66.5	65	65	66	71.2	62.7	67	74.7	60.9	66	62.6	67.8
HLLC-6	65.6	64	71	63	73.8	61.0	69	74.5	59.1	65	63.8	70.9
HLLC-7	66.0	66	66	66	66.7	60.7	68	64.5	60.5	66	61.3	64.7
HLLC-8	64.2	61	66	64	71.1	59.5	67	62.7	61.1	62	60.3	66.0
HLLC-9	63.7	65	64	65	68.5	60.2	68	69.7	61.3	66	66.1	66.8
HLLC-10	63.9	68	67	65	74.1	62.7	67	70.6	61.6	64	61.0	66.5
Mean	65	64	67	65	71	61	68	69	61	65	64	66
Std. Devn.	1.11	3.41	2.38	1.69	2.46	1.21	1.03	7.18	0.88	1.38	2.36	2.67
% RSD	1.71	5.29	3.55	2.59	3.45	2.00	1.52	10.48	1.45	2.12	3.70	4.04

**STANDARD REFERENCE MATERIAL CDN-HLLC**

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12
	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu	% Cu
HLLC-1	1.43	1.51	1.50	1.48	1.52	1.42	1.51	1.49	1.46	1.51	1.50	1.51
HLLC-2	1.43	1.55	1.50	1.46	1.51	1.48	1.47	1.48	1.44	1.53	1.52	1.41
HLLC-3	1.42	1.53	1.48	1.48	1.52	1.44	1.48	1.48	1.46	1.53	1.55	1.50
HLLC-4	1.43	1.52	1.50	1.50	1.50	1.43	1.49	1.48	1.46	1.53	1.52	1.49
HLLC-5	1.44	1.55	1.52	1.50	1.49	1.52	1.49	1.49	1.46	1.51	1.50	1.51
HLLC-6	1.43	1.53	1.51	1.47	1.49	1.50	1.49	1.49	1.46	1.51	1.52	1.50
HLLC-7	1.42	1.53	1.49	1.50	1.50	1.49	1.50	1.47	1.45	1.51	1.50	1.51
HLLC-8	1.43	1.52	1.47	1.48	1.49	1.44	1.49	1.48	1.45	1.51	1.48	1.51
HLLC-9	1.43	1.51	1.51	1.48	1.50	1.50	1.52	1.45	1.44	1.52	1.50	1.52
HLLC-10	1.42	1.52	1.52	1.50	1.50	1.43	1.49	1.47	1.44	1.51	1.56	1.51
Mean	1.43	1.53	1.50	1.49	1.50	1.47	1.49	1.48	1.45	1.52	1.52	1.50
Std. Devn.	0.0063	0.0142	0.0170	0.0143	0.0114	0.0366	0.0132	0.0136	0.0092	0.0093	0.0246	0.0298
% RSD	0.44	0.93	1.14	0.97	0.76	2.50	0.88	0.92	0.63	0.61	1.62	1.99
	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb	% Pb
HLLC-1	0.28	0.30	0.30	0.31	0.295	0.283	0.247	0.279	0.30	0.28	0.26	0.29
HLLC-2	0.27	0.30	0.30	0.29	0.291	0.293	0.266	0.282	0.30	0.29	0.26	0.29
HLLC-3	0.28	0.29	0.30	0.31	0.291	0.285	0.255	0.281	0.30	0.29	0.26	0.30
HLLC-4	0.29	0.30	0.30	0.29	0.291	0.285	0.263	0.283	0.30	0.28	0.26	0.30
HLLC-5	0.28	0.29	0.30	0.29	0.292	0.304	0.255	0.284	0.30	0.28	0.26	0.30
HLLC-6	0.28	0.30	0.30	0.29	0.289	0.302	0.255	0.284	0.30	0.28	0.26	0.30
HLLC-7	0.27	0.30	0.30	0.30	0.292	0.297	0.262	0.280	0.30	0.29	0.26	0.30
HLLC-8	0.28	0.29	0.30	0.29	0.290	0.288	0.262	0.283	0.30	0.29	0.26	0.30
HLLC-9	0.29	0.29	0.30	0.30	0.292	0.299	0.256	0.284	0.30	0.29	0.26	0.30
HLLC-10	0.28	0.29	0.31	0.29	0.293	0.284	0.248	0.281	0.30	0.28	0.26	0.29
Mean	0.28	0.30	0.30	0.30	0.29	0.29	0.26	0.28	0.30	0.28	0.26	0.30
Std. Devn.	0.0067	0.0053	0.0032	0.0084	0.0016	0.0080	0.0063	0.0018	0.0000	0.0016	0.0000	0.0050
% RSD	2.38	1.79	1.05	2.85	0.56	2.74	2.46	0.64	0.00	0.58	0.00	1.69
	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn	% Zn
HLLC-1	2.88	3.34	3.09	3.07	2.95	2.88	3.15	3.05	2.95	3.02	2.49	2.99
HLLC-2	2.99	3.23	3.15	3.02	2.94	2.99	3.01	3.03	2.97	3.06	2.58	2.87
HLLC-3	2.97	3.47	3.15	3.05	2.94	2.91	3.12	3.05	2.96	3.04	2.58	3.04
HLLC-4	2.95	3.40	3.16	3.02	2.91	2.91	3.10	3.04	2.93	3.03	2.51	3.01
HLLC-5	2.89	3.42	3.21	3.08	2.91	3.07	3.11	3.08	2.96	2.99	2.51	3.04
HLLC-6	2.91	3.38	3.14	3.00	2.90	3.04	3.09	3.09	2.98	3.00	2.62	3.01
HLLC-7	2.87	3.42	3.14	3.08	2.92	3.00	3.16	3.02	2.97	3.03	2.55	3.09
HLLC-8	2.92	3.37	3.07	3.00	2.90	2.92	3.09	3.06	2.91	3.02	2.60	3.05
HLLC-9	2.93	3.41	3.11	3.07	2.91	3.01	3.00	3.08	2.95	3.00	2.54	3.06
HLLC-10	2.90	3.36	3.20	3.07	2.92	2.89	3.04	3.04		3.01	2.54	3.00
Mean	2.92	3.38	3.14	3.05	2.92	2.96	3.09	3.05	2.95	3.02	2.55	3.02
Std. Devn.	0.0393	0.0643	0.0439	0.0327	0.0176	0.0678	0.0543	0.0237	0.0218	0.0208	0.0424	0.0608
% RSD	1.34	1.90	1.40	1.07	0.60	2.29	1.76	0.78	0.74	0.69	1.66	2.02

**NOTE:** Zn data from Lab. 11 was removed from the data set for failing the “t” test.

**STANDARD REFERENCE MATERIAL CDN-HLLC**

**Participating Laboratories:**

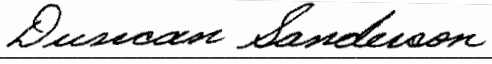
(not in same order as listed in table of results)

Acme Analytical Laboratories Ltd., Vancouver  
Assayers Canada Ltd., Vancouver  
ALS Chemex Laboratories, North Vancouver  
Actlabs, Ontario, Canada  
Alex Stewart Assayers (Argentina) Ltd.  
GTK Laboratory, Finland  
International Plasma Laboratories Ltd., Vancouver  
OMAC Laboratory Ltd., Ireland  
SGS-XRAL, Toronto  
Skyline Laboratory, Arizona, USA  
Teck Cominco - Global Discovery Laboratory, Vancouver  
TSL Laboratories Ltd., Saskatoon


Legal Notice:

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.