

# CDN Resource Laboratories Ltd.

Unit 2 - 20148, 102nd Avenue, Langley, B.C., Canada, V1M 4B4, Ph: 604-882-8422 Fax: 604-882-8466 (www.cdnlabs.com)

## PLATINUM GROUP ORE REFERENCE STANDARD: CDN-PGMS-15

Recommended values and the "Between Lab" Two Standard Deviations

Gold concentration:  $0.41 \pm 0.07$  g/t (*Au is provisional value only, RSD = 8.96%*)  
Platinum concentration:  $0.098 \pm 0.014$  g/t  
Palladium concentration:  $0.428 \pm 0.030$  g/t

**\*\* Note \*\***

**Standards with an RSD of near or less than 5% are certified, RSD's of between 5% and 15% are Provisional, and RSD's over 15% are Indicated. Provisional and Indicated values cannot be used to monitor accuracy with a high degree of certainty.**

**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:** October 25, 2008

### **METHOD OF PREPARATION:**

The ore was supplied by Stillwater Mining Corporation from the Stillwater Complex in Montana.

The mineralogy of the Stillwater Pt/Pd ore consists of up to 1 % sulphides comprising chalcopyrite, pentlandite, pyrrhotite, ± pyrite hosted by a chromite-rich ultramafic layer. The main platinum-bearing minerals are Braggite (Pt,Pd,Ni)S, Cooperite (Pt, Pd ,Ni)S as well as Isoferroplatinum (PtFe<sub>3</sub>) and Moncheite (Pt,Pd)(Te,Bi)<sub>2</sub>. The majority of the palladium is hosted as solid solution within the pentlandite ((Fe,Ni)<sub>9</sub>S<sub>8</sub>); less than 15 % as Vysotskite (Pd,Ni,Pt)S, Braggite, Cooperite and Moncheite.

This standard was prepared by combining a quantity of the Stillwater ore (screened to -325) with a quantity of gold-bearing ore from the Eleonore (Les Mines Opinaca) deposit (screened to -200) and diluting with a blank granitic material that had been screened to -200 mesh. The material was mixed for 6 days in a double-cone mixer. Splits were sent to 12 laboratories for round robin assaying.

**Approximate chemical composition is as follows:**

	Percent			Percent
SiO <sub>2</sub>	64.2		MgO	2.7
Al <sub>2</sub> O <sub>3</sub>	14.0		K <sub>2</sub> O	1.1
Fe <sub>2</sub> O <sub>3</sub>	6.4		TiO <sub>2</sub>	0.6
CaO	4.8		LOI	2.0
Na <sub>2</sub> O	2.9		S	0.2

### **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 means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±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.

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

**Assay Procedure: 30g fire assay, 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	Lab 10	Lab 11	Lab 12
SAMPLE	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
PGMS-15-1	0.561	0.44	0.35	0.432	0.38	0.354	0.43	0.377	0.429	0.45	0.45	0.372
PGMS-15-2	0.428	0.40	0.33	0.403	0.43	0.337	0.44	0.356	0.398	0.45	0.35	0.361
PGMS-15-3	0.487	0.45	0.42	0.401	0.39	0.388	0.40	0.474	0.359	0.44	0.49	0.368
PGMS-15-4	0.342	0.42	0.34	0.424	0.57	0.398	0.41	0.447	0.392	0.42	0.51	0.387
PGMS-15-5	0.410	0.43	0.33	0.367	0.33	0.422	0.37	0.433	0.398	0.38	0.49	0.365
PGMS-15-6	0.427	0.42	0.33	0.374	0.38	0.376	0.38	0.393	0.429	0.39	0.38	0.380
PGMS-15-7	0.391	0.41	0.36	0.377	0.41	0.440	0.44	0.411	0.398	0.45	0.39	0.356
PGMS-15-8	0.371	0.39	0.44	0.392	0.40	0.443	0.39	0.407	0.395	0.48	0.44	0.368
PGMS-15-9	0.429	0.41	0.36	0.373	0.37	0.380	0.37	0.428	0.439	0.48	0.36	0.369
PGMS-15-10	0.351	0.44	0.37	0.435	0.48	0.388	0.43	0.364	0.432	0.46	0.45	0.370
Mean	0.420	0.421	0.363	0.398	0.414	0.393	0.406	0.409	0.407	0.439	0.429	0.370
Std. Dev'n	0.0656	0.0191	0.0383	0.0255	0.0675	0.0345	0.0280	0.0375	0.0248	0.0324	0.0566	0.0088
%RSD	15.63	4.54	10.55	6.42	16.31	8.80	6.89	9.18	6.09	7.39	13.17	2.39
	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t	Pt g/t
PGMS-15-1	0.098	0.11	0.08	0.109	0.10	0.099	0.11	0.111	0.097	0.09	0.09	0.080
PGMS-15-2	0.102	0.11	0.08	0.099	0.08	0.091	0.10	0.109	0.100	0.08	0.09	0.085
PGMS-15-3	0.103	0.09	0.07	0.094	0.09	0.103	0.10	0.109	0.098	0.10	0.09	0.079
PGMS-15-4	0.095	0.09	0.07	0.105	0.10	0.104	0.10	0.100	0.090	0.09	0.09	0.078
PGMS-15-5	0.102	0.10	0.07	0.087	0.10	0.094	0.10	0.103	0.099	0.09	0.09	0.083
PGMS-15-6	0.100	0.10	0.08	0.098	0.09	0.100	0.11	0.101	0.109	0.08	0.09	0.076
PGMS-15-7	0.096	0.10	0.08	0.089	0.08	0.090	0.10	0.103	0.092	0.10	0.09	0.077
PGMS-15-8	0.105	0.10	0.08	0.095	0.08	0.090	0.11	0.097	0.102	0.10	0.09	0.077
PGMS-15-9	0.104	0.11	0.07	0.095	0.09	0.099	0.11	0.096	0.103	0.08	0.09	0.079
PGMS-15-10	0.092	0.10	0.07	0.098	0.09	0.096	0.11	0.104	0.102	0.09	0.09	0.082
Mean	0.100	0.101	0.075	0.097	0.090	0.097	0.105	0.103	0.099	0.091	0.089	0.080
Std. Dev'n	0.0043	0.0074	0.0053	0.0066	0.0082	0.0052	0.0053	0.0052	0.0056	0.0077	0.0029	0.0029
%RSD	4.31	7.31	7.03	6.84	9.07	5.39	5.02	5.01	5.64	8.47	3.24	3.66
	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t	Pd g/t
PGMS-15-1	0.418	0.43	0.32	0.411	0.44	0.428	0.42	0.427	0.441	0.45	0.44	0.356
PGMS-15-2	0.429	0.44	0.38	0.411	0.45	0.404	0.42	0.425	0.435	0.44	0.43	0.373
PGMS-15-3	0.429	0.43	0.32	0.400	0.46	0.427	0.43	0.440	0.435	0.44	0.44	0.363
PGMS-15-4	0.417	0.43	0.36	0.403	0.45	0.412	0.43	0.432	0.448	0.44	0.44	0.366
PGMS-15-5	0.426	0.42	0.34	0.383	0.43	0.412	0.43	0.330	0.428	0.44	0.44	0.361
PGMS-15-6	0.426	0.43	0.32	0.397	0.43	0.403	0.41	0.433	0.457	0.44	0.42	0.356
PGMS-15-7	0.413	0.44	0.34	0.397	0.42	0.409	0.42	0.426	0.426	0.45	0.43	0.363
PGMS-15-8	0.420	0.44	0.36	0.403	0.44	0.404	0.44	0.415	0.442	0.43	0.42	0.348
PGMS-15-9	0.428	0.41	0.33	0.410	0.44	0.406	0.39	0.405	0.441	0.45	0.45	0.358
PGMS-15-10	0.424	0.44	0.33	0.418	0.46	0.412	0.41	0.425	0.435	0.45	0.44	0.368
Mean	0.423	0.431	0.340	0.403	0.442	0.412	0.420	0.416	0.439	0.443	0.434	0.361
Std. Dev'n	0.0056	0.0099	0.0205	0.0099	0.0132	0.0090	0.0141	0.0316	0.0092	0.0062	0.0095	0.0071
%RSD	1.33	2.31	6.04	2.45	2.98	2.19	3.37	7.60	2.09	1.40	2.20	1.97

**Note: Au data: all data from Lab 3 removed for failing the “t” test.**

**Pd, Pt data: all data from Lab 3 & Lab 12 removed for failing the “t” test.**

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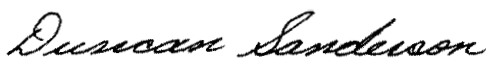
**Participating Laboratories:**


(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, Ancaster, Ontario  
ASA Argentina  
Genalysis Laboratory Services Pty Ltd., Perth  
International Plasma Labs. Ltd., Richmond, B.C.  
Labtium Inc., Finland  
OMAC Laboratories Ltd., Ireland  
Skyline Laboratories Ltd., Arizona, USA  
Ultra Trace Pty Ltd., Australia  
TSL Laboratories, Saskatoon

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Certified by   
Duncan Sanderson, Certified Assayer of B.C.

Geochemist   
Barry Smees, Ph.D., P. Geo.