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ASSAY REPORT

ORO GRANDE MINE

WICKENBURG, ARIZONA

By: Michael P. Thomas BA, MS, ACS, AIME
M.H.S Laboratories, Denver, Colorado
January 29, 1988

Noto Bene.....

.... Arizona contributes 72% of United States platinum recovered from copper concentrates and, because the bulk of their copper is derived from porphyry copper deposits, the platinum must be present in these felsic rocks. Data are not available for roasted concentrates, but some data are given by Parker (1978) for reverbatory furnace and converter feed and products. Concentrates, precipitates and other roaster feed from Arizona in 1971-73* contained an average of about 0.001 ppm Pd (Parker, 1978). PGE recovery values are not reported and there is relatively nothing known about their mineralogy or their geochemistry in these deposits.

*Representing 55.4% of total U.S.A production

Excerpted from pp.245-246, C.I.M. Special Volume 23, The Canadian Institute of Mining and Metallurgy, Montreal-Quebec, 1981.

Prologue

The analysis of platinum group metals is the principal business of M.H.S. Laboratory. The laboratory operates as a subsidiary of Mullen High School and is located at 3601 So. Lowell Blvd., Denver, Colorado 80236. The laboratory is managed and operated by Mr. Michael P. Thomas BA, MS, ACS, AIME. The laboratory directs and supports research in the analysis and metallurgy of platinum group metals and also supports science education at the secondary level and beyond.

Mr. Thomas has a distributive master's degree in geology and mathematics. His thesis work was in pyrometallurgical chemistry, "The Determination of Percentage Levels of Palladium in Alumina-Rich Matrices by Fire Assaying". Mr. Thomas has done consulting work for the following companies in the last ten years:

Marathon Oil Denver Research Center
ARCO Refining Co.
ARCO (Anaconda-Stillwater Project)
Mining Corporation, Inc. (Noranda Group)
American Rare Minerals, Inc.
Aurotech Assaying Co.
Elgen West, Inc.
C.S.M. Experimental Mine
Rocky Mountain Core Co.

In addition to Mr. Thomas, the following persons have contributed advice and data to this report:

Jeffrey P. Kurtz, PhD
Geology-Geochemistry
University of Colorado at Denver

Phoebe L. Hauff, MS
Mineralogical Research Lab, Supervisor
C.S.E.S.
University of Colorado at Boulder

Phil Russell, MS
Rocky Mtn. SEM
Engineering Department
University of Denver

Physiography

The Oro Grande Mine is located in T8N, R5W, Section 24 of south-central Yapavai County, Arizona, about 4.5 miles northeast of Wickenburg, Arizona, in the Black Rock Mining District.

The average annual rainfall is about ten inches. The mean elevation is about 2500 feet. The terrain is sparsely vegetated, rocky, and arid. Varieties of cactus, manzanita, and sage are charateristic of the flora.

The Oro Grande Mine is situated on about 150 acres of private property, nine patented claims, and is surrounded bv about 1000 acres of lode claims under the same ownership.

Geology

The main ore body of the Oro Grande is the remnant of a laramide age, composite batholith, which has been sheared, hydrothermally altered, and mineralized.

Three major mineralized shear zones exist on the private property. These are charaterized by hematitic alterations via hydrothermal fluids which have been active at several times since the onset of the laramide. These major shear zones can be measured to about 3000 feet length on the surface and 200 feet width. Significant nobel metal mineralizations occur within these shear zones. The shear zones are approximately parallel and strike about northeast. Major dip-slip faults cross cut the shear zones on the north and south ends of the property. These strike roughly northwest and are post laramide.

It should be noted that the widths of the shear zones appear to increase with depth, as noted by measurements at the 100 ft. level in the mine.

The lithologies visible at the surface are complex and are characterized by hematitic breccias, mafic schists, diorites, aplites, pegmatities, hornblendites. Sulfides and copper oxides are characteristic of many of the outcrops in the vicinity of the mine.

The Oro Grande Mine consists of three main levels, 100 ft., 200 ft., and 340 ft.. A set of stopes exist at the 50 ft. level. The 100 ft. level of the mine contains significant sulfides in matrices of diorite and schist together with hematitic breccias in the area of the main vertical shaft.

Whole rock analysis reveals the following average compositions:

Stockpile Ore (hematitic breccias with quartz)

SiO_2	60.4%
Al_2O_3	11.2%
CaO	1.77%
MgO	1.18%
Na_2O	0.32%
K_2O	2.75%
Fe_2O_3	15.9%
MnO	0.05%
TiO_2	0.52%
P_2O_5	0.24%

Sulfide Ore (felsic - mafic matrices with sulfides)

SiO_2	49.1%
Al_2O_3	13.2%
CaO	6.63%
MgO	3.49%
Na_2O	2.23%
K_2O	2.84%
Fe_2O_3	10.2%

MnO----------0.25%

TiO_2----------0.65%

P_2O_5----------0.29%

Halo Ore (schists and diorites with amphibolites)

SiO_2----------51.4%

Al_2O_3----------17.9%

CaO----------7.81%

MgO----------3.74%

Na_2O----------4.19%

K_2O----------1.56%

Fe_2O_3----------7.65%

MnO----------0.12%

TiO_2----------0.71%

P_2O_5----------0.40%

Assays

Five hundred preliminary assays were run on the materials of the Oro Grande in order to determine the most suitable analytical techniques. Standard analytical techniques were followed for the most part on these materials; this includes aqua regia digestions followed by flame atomic absorption and/or graphite furnace atomic absorption, nickel sulfide assays followed by hydrochloric acid-hydrogen peroxide digestions and atomic absorption, and classical fire assays followed by aqua regia digestions and graphite furnace atomic absorption analysis. Matrices were appropriately matched and background correction was used for the development of the atomic absorption data.

An important treatise on the analytical methods and extractive methods will follow this report. The methods-extractive report is proprietary and will be forwarded to the president of Global Platinum and Gold, Inc..

The final assays consisted of 862 analyses distributed among seven elements: Au, Pt, Pd, Rh, Os, Ir, and Ag. Of these 862 items 25 were rejected owing to experimental errors.

On the following pages are ten sets of data. Each set of data reflects analyses of the ncble metals associated with a certain rock type. These data are preceded by a summary page of raw averages for all rock types. All data are given in troy ounces per short ton (opt).

Notes on Assay Samples and Sampling

The brunton formula was used to estimate safe sample weights:

$$W = \frac{D^3 \, fsn \, (k-c)}{0.2764 \, (cp)}$$

Where: D = diameter of grains, f = volume-density factor (0.526), s = specific gravity, n = deviation number (90), k = grade of richest ore, c = average grade, and p = percent of error.

Sample numbers 36 to 67 are surface samples of Fe-Complexes taken every 200 ft along the trail on a NE-SW traverse from the winz to the major fault line at the south end of the property. Sample numbers 85 to 159 are core samples derived from a sampling project by Global Platinum and Gold, Inc. between 1985 and 1986.

Sample numbers 74 to 84 and 165 to 186 are random samples taken from surface outcrops and from the 100 ft level in the mine at recorded locations. These samples were taken by Dr. Jeff Kurtz and Mr. Thomas during their visit to the Oro Grande in September of 1987.

The map and geologic treatise by Mary K. Post furnished an excellent guideline to the complex lithologies and structural relations at the Oro Grande. Appropriate samples were located via the 'Post' map.

First Assay Summary, Raw Averages

Set I, Hematitic Breccias

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.084	0.0916	0.0605	0.0089	20.640	86.999	1.016
n =	53	52	43	43	6	9	5

Set II, Fe-Complexes (Metallics)

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.5578	2.644	0.2773	0.2601	266.98	46.221	1.126
n =	49	60	49	48	15	20	38

Set III, Schists and Diorites

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.0506	0.1280	0.0757	0.0053	48.250	167.93	1.337
n =	53	51	49	48	1	4	6

Set IV, Sulfide Ores

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.3320	0.7565	0.0418	0.0147	20.582	7.1794	1.105
n =	11	10	6	6	3	5	4

Set V, Cu-oxides and Breccias

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.024	0.944	0.0025	0.00045	/	0.337	0.5812
n =	5	5	2	2	/	1	2

Set VI, Mafics and Amphibolites

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.0796	0.0822	-0-	0.0190	11.580	0.220	/
n =	5	5	1	1	1	1	/

Set VII, Creek Concentrates

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.0997	0.1158	0.0462	0.0144	6.400	0.583	/
n =	6	6	5	5	1	1	/

Set VIII, Well Cores

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.0253	0.1310	0.056	-0-	/	/	/
n =	6	6	6	1	/	/	/

Set IX, Quartz Veins

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.059	0.127	-0-	0.025	14.460	0.360	/
n =	4	4	1	1	1	1	/

Set X, Miscellaneous

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.0815	0.0405	/	/	/	/	/
n =	2	2	/	/	/	/	/

Summation, Raw Averages of All Sets

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.205	0.864	0.128	0.0860	152.53	57.54	1.1098
n =	194	201	162	155	28	42	55

It should be noted that these data reflect raw averages of all of the assays of the rock types. These data do not reflect averages per ton available from the mine site.

Set I

Hematitic Breccias

Henry J. Sandri
Assistant Vice President
Strategic Planning and Business Development
(212) 612-5883

October 20, 1989

Richard E. Jensen, President
Global Platinum & Gold Inc.
8421 Top of the World Drive
Salt Lake City, Utah 84121

Dear Dick:

As you can see, we have had mixed results on the samples. As of next week Isman should receive the Hazan samples for a "second look".

Sincerely,

HJS:np
Attachment

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87

Project Engineer: M. P. Thomas

Sponsor: Global

Date Submitted: 9/87

Sample Type: Hematitic & Limonitic Breccias w/Quartz

Notes: SP = Stockpile, MO = Main Ore - 100' level

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
1		SP	.031	.022	.012	-o-	\	4.32	\			
2		SP	.021	.011	-o-	-o-	\	\	\			
3		SP	.039	.026	.031	-o-	\	\	\			
4		SP	.231	.0275	-o-	-o-	\	\	\			
6		SP	.089	.010	-o-	.006	\	\	\			
7		SP	.269	.1595	-o-	.034	\	741.0	\			
15		MO	.223	.051	-o-	.010	\	.159	\			
22		MO	.190	.173	.267	.070	\	\	1.17			
23		MO	.100	.088	.241	.061	\	\	2.33			
30		SP	.018	.063	.007	.025	3.34	.266	\			
31		MO	.016	.152	.007	.022	3.11	.943	\			
32		MO	.012	.058	.004	.017	2.90	.467	\			
77		SP	.414	.200	\	\	\	\	\			
80		MO	.158	.083	\	\	\	\	\			

Remarks: Values in opt

Supervisor: M. P. Thomas

Date Reported: 11/29/88

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M.P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes: H = Core drill hole

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
85		H1	.053	.336	.110	.006	\	\	\			
86		H2-13	.070	-o-	.140	-o-	\	\	\			
87		H3	.060	-o-	.160	-o-	\	\	\			
88		H3-1	.036	-o-	.150	-o-	\	\	\			
90		H3-3	.040	-o-	.040	-o-	\	\	\			
91		H3-4	.031	-o-	.030	-o-	\	\	\			
97		H3-12	.026	-o-	.140	-o-	\	\	\			
98		H3-11	.044	-o-	.140	-o-	\	\	\			
105		H4	.045	-o-	.090	-o-	\	\	\			
109		H8	-o-	.209	.110	-o-	\	\	\			
110		H10	.035	.088	.220	-o-	\	\	\			
112		H12	.034	.067	.080	-o-	\	\	\			
116		H36	.075	.131	.180	-o-	\	\	\			
117		H37	.014	.086	.070	-o-	\	\	\			

Remarks: Values in opt

Supervisor: M.P. Thomas

Date Reported: 1/20/88

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M.P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes: H = core drill hole

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
125		H1	.058	.125	.060	.001	\	\	\			
126		H-2-13	.035	.095	.030	-o-	\	\	\			
127		H3	.100	.120	.070	-o-	\	\	\			
128		H3-1	.035	-o-	-o-	-o-	\	\	\			
130		H3-3	.040	.125	.050	.006	\	\	\			
131		H3-4	.038	.265	.030	-o-	\	\	\			
137		H3-12	.049	.133	.030	-o-	\	\	\			
138		H3-11	.137	.139	.060	.008	\	\	\			
145		H4	.013	.256	.007	.020	\	\	\			
149		H8	.060	.201	.030	-o-	\	\	\			
150		H10	.053	.150	.003	.020	\	\	\			
156		H36	.055	-o-	-o-	.002	\	\	\			
157		H37	.027	-o-	-o-	-o-	\	\	\			
165		SP	.162	.113	\	\	39.97	31.82	\			

Remarks: Values in opt

Supervisor: M.P. Thomas

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes:

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
169		NE Twin Vert. Shafts	.100	.066	-o-	.039	44.62	3.58	\			
170		NE Twin Vert. Shafts	.161	.064	-o-	.035	29.92	.440	\			
173		"	.126	.140	\	\	\	\	\			
174		"	.147	.203	\	\	\	\	\			
177		"	.165	.236	\	\	\	\	\			
178		"	.229	.161	\	\	\	\	\			
181		"	.059	.035	\	\	\	\	\			
182		"	.050	.064	\	\	\	\	\			
190		MO	.012	.001	.001	.0005	\	\	.500			
191		MO	.026	.001	.001	.0009	\	\	.810			
197		MO	.094	\	\	\	\	\	.270			

Set II

Fe-Complexes (Metallics)

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type: Metallic Concentrates (Fe-complexes)

Notes: MC = Fe-Complexes, HTE = high temperature extraction, N = nugget

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
10		MC	0.992	0.747	-o-	0.260	\	51.53	\			
11		MC	0.373	0.218	-o-	-o-	\	7.630	\			
12		MC	-o-	89.95	-o-	0.010	\	3.700	\			
13		MC	0.200	0.040	0.030	-o-	\	0.014	\			
16		MC HTE	2.090	1.300	-o-	0.292	66.00	64.00	\			
17		MC HTE	1.762	1.500	-o-	0.085	86.00	83.00	\			
18		MC HTE	4.380	0.700	-o-	0.914	56.00	162.00	\			
19		MC HTE	3.070	0.941	-o-	0.103	58.00	89.00	\			
20		MC HTE	2.215	1.125	-o-	0.297	64.00	-o-	\			
21		MC HTE	1.825	1.044	-o-	0.281	70.00	-o-	\			
26		MC	0.179	0.035	0.109	-o-	\	5.43	0.320			
35		MC N	0.890	10.200	-o-	0.442	18.30	10.44	\			
36		MC	0.089	0.182	-o-	0.043	31.67	3.610	3.540			
37		MC	0.033	0.109	0.041	0.073	\	\	3.280			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 11/20/88

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes:

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
38		MC	0.011	-o-	0.030	0.049	\	\	1.270			
39		MC	0.095	-o-	0.015	0.051	\	\	5.490			
40		MC	0.113	0.097	0.019	0.039	\	\	5.490			
41		MC	0.073	-o-	-o-	0.044	59.36	26.07	0.300			
42		MC	0.014	-o-	0.055	0.041	\	\	0.146			
43		MC	0.111	0.134	-o-	0.023	\	\	0.144			
44		MC	0.198	-o-	-o-	0.114	\	\	6.160			
45		MC	0.105	0.201	-o-	0.060	\	\	-o-			
46		MC	0.081	-o-	0.028	0.057	31.24	3.570	-o-			
47		MC	0.093	0.107	0.029	0.065	\	\	-o-			
48		MC	0.075	0.149	-o-	0.043	\	\	5.780			
49		MC	0.224	0.020	-o-	0.068	\	\	-o-			
50		MC	0.161	0.286	-o-	0.001	\	\	-o-			
51		MC	0.127	0.195	-o-	0.119	21.24	0.910	-o-			

Remarks: Values in opt.

Supervisor: M. P. Thomas

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes:

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
52		MC	-o-	0.233	0.030	\	\	\	7.540			
53		MC	-o-	0.052	0.013	0.144	\	\	-o-			
54		MC	0.023	0.144	-o-	0.077	\	\	-o-			
55		MC	-o-	0.198	-o-	0.071	\	\	0.660			
56		MC	0.030	0.276	0.160	0.116	55.97	7.360	0.289			
57		MC	0.023	-o-	-o-	0.130	\	\	1.220			
58		MC	-o-	0.133	0.013	0.110	\	\	-o-			
59		MC	0.039	0.111	0.013	0.105	\	\	-o-			
60		MC	0.010	0.049	0.040	0.104	\	\	-o-			
61		MC	0.170	0.014	-o-	0.172	50.83	14.90	-o-			
62		MC	0.288	0.395	0.241	0.089	\	\	-o-			
63		MC	0.247	0.036	0.181	0.103	\	\	1.170			
64		MC	0.281	0.247	0.396	0.065	\	\	-o-			
65		MC	0.083	0.053	0.103	0.044	\	\	-o-			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 1/29/88

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes: Mag = magnetics, HTE = high temperature extractions

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
66		MC	0.067	-o-	0.080	0.044	63.43	19.35	-o-			
67		MC from Aplite	0.093	0.150	0.013	0.028	\	\	-o-			
68		MC Mag	2.300	3.675	1.000	0.245	\	\	-o-			
69		MC Mag	-o-	12.115	3.900	1.860	\	\	-o-			
70		MC Mag	-o-	9.110	1.600	1.395			-o-			
71		MC Mag	4.100	8.250	1.800	2.780	3272.60	371.89	-o-			
72		MC Mag	-o-	10.875	2.900	1.230			-o-			
199		MC HTE	\	0.130	\	\	\	\	\			
200		MC HTE	\	-o-	\	\	\	\	\			
201		MC HTE	\	0.176	\	\	\	\	\			
202		MC HTE	\	0.130	\	\	\	\	\			
203		MC HTE	\	0.050	\	\	\	\	\			
204		MC HTE	\	0.280	\	\	\	\	\			
205		MC HTE	\	-o-	\	\	\	\	\			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M.P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes:

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
206		MC	\	0.007	\	\	\	\	\			
207		MC	\	0.053	\	\	\	\	\			
208		MC	\	0.049	\	\	\	\	\			
209		MC	\	2.350	\	\	\	\	\			

Remarks: Values in opt.

Supervisor: M.P. Thomas

Date Reported: 1/29/88

Set III

Schists and Diorites

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87

Project Engineer: M. P. Thomas

Sponsor: Global

Date Submitted: 9/87

Sample Type: Schists and Diorites, Granites and Aplites

Notes: Halo => schists & diorites, G = granitic, D = diorite, H = core drill hole

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
8		Halo	0.119	0.1315	-o-	0.0175	\	638.00	\			
25		Halo	0.169	0.201	0.134	0.025	\	\	3.210			
28		Halo	-o-	0.023	0.023	0.002	\	2.150	\			
29		G	0.008	-o-	-o-	0.004	\	0.447	\			
84		D	0.032	0.101	\	\	\	\	\			
89		H 3-2	0.103	-o-	0.160	-o-	\	\	\			
92		H 3-5	0.089	-o-	0.130	-o-	\	\	\			
93		H 3-6	0.126	-o-	0.070	0.040	\	\	\			
94		H 3-8	0.034	0.481	0.160	-o-	\	\	\			
95		H 3-9	0.017	-o-	0.140	-o-	\	\	\			
96		H 3-10	0.044	-o-	0.220	-o-	\	\	\			
99		H 3-13	0.056	0.359	0.040	-o-	\	\	\			
100		H 3-14	0.035	-o-	0.080	-o-	\	\	\			
101			0.040	-o-	0.120	-o-	\	\	\			

Remarks: Values in opt

Supervisor: M. P. Thomas

Date Reported: 1/29/88

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87

Project Engineer: M. P. Thomas

Sponsor: Global

Date Submitted: 9/87

Sample Type:

Notes: H = core drill hole

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
102		H 3-16	0.058	0.410	0.130	-o-	\	\	\			
103		H 3-17	0.037	0.018	0.100	-o-	\	\	\			
104		H 3-18	0.036	0.327	0.090	0.005	\	\	\			
106		H 5	0.031	0.038	0.090	0.020	\	\	\			
107		H 6	0.095	-o-	0.200	-o-	\	\	\			
108		H 7	0.125	0.059	0.120	-o-	\	\	\			
111		H 11	0.054	-o-	0.200	-o-	\	\	\			
113		H 31	0.021	-o-	0.150	-o-	\	\	\			
114		H 32	0.053	0.459	0.150	-o-	\	\	\			
115		H 33	0.071	-o-	0.090	-o-	\	\	\			
118		H 38	0.018	-o-	0.100	-o-	\	\	\			
119		H 39	-o-	0.290	0.220	-o-	\	\	\			
129		H 3-2	0.069	0.140	0.030	0.010	\	\	\			
132		H 3-5	0.027	0.123	-o-	-o-	\	\	\			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 1/29/88

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes: H = core drill hole

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
133		H 3-6	0.091	0.227	0.110	0.002	\	\	\			
134		H 3-8	0.085	0.212	0.010	0.030	\	\	\			
135		H 3-9	0.085	0.128	0.001	-o-	\	\	\			
136		H 3-10	0.034	0.150	0.070	-o-	\	\	\			
139		H 3-13	0.006	0.138	0.040	-o-	\	\	\			
140		H 3-14	0.024	0.077	-o-	0.030	\	\	\			
141		H 3-15	0.050	0.203	0.080	-o-	\	\	\			
142		H 3-16	0.013	0.230	0.009	-o-	\	\	\			
143		H 3-17	0.033	0.181	0.001	0.004	\	\	\			
144		H 3-18	0.027	0.368	0.040	-o-	\	\	\			
146		H 5	0.069	0.197	0.020	-o-	\	\	\			
147		H 6	0.107	0.222	-o-	-o-	\	\	\			
149		H 7	0.036	0.113	0.060	-o-	\	\	\			
151		H 11	0.022	0.233	0.040	-o-	\	\	\			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 1/20/88

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type:

Notes: H = core drill hole

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
153		H-31	0.019	0.104	0.070	-o-	\	\	\			
154		H32	0.028	0.078	0.002	0.020	\	\	\			
155		H 33	0.067	0.160	0.080	0.040	\	\	\			
158		H 38	0.018	0.024	0.080	-o-	\	\	\			
159		H 39	0.093	0.172	0.050	-o-	\	\	\			
168		Halo	0.057	0.141	\	\	48.25	31.11	\			
187		Halo	0.049	0.009	-o-	0.001	\	\	1.660			
188		Halo	0.027	0.001	-o-	0.001	\	\	1.510			
189		Halo	0.019	0.001	0.001	0.001	\	\	0.620			
195		Halo	0.024	\	\	\	\	\	0.560			
198		Halo	0.032	\	\	\	\	\	0.460			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 1/29/88

Set IV

Sulfide Ores

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type: Sulfide Ores

Notes: S = sulfide ore (with pyrites), SP = stockpile

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
9		S	0.069	0.067	-o-	0.009	\	13.91	\			
14		S	3.000	0.0295	0.030	-o-	\	0.002	\			
24		S	0.078	0.100	0.213	0.048	\	\	0.890			
34		S	0.016	0.076	0.008	0.023	6.460	0.325	\			
76		S, SP	-o-	0.110	\	\	\	\	\			
79		S, 100' level	0.159	0.169	\	\	\	\	\			
81		S, 100' level	0.1935	0.087	\	\	21.175	0.450	\			
167		S	0.064	0.116	\	\	34.11	21.21	\			
193		S	0.024	0.001	-o-	0.007	\	\	1.460			
194		S	0.024	0.001	-o-	0.0012	\	\	1.460			
196		S	0.024	\	\	\	\	\	0.610			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 1/29/88

Set V

Cu-Oxide Breccias

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M.P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type: Cu - Hematitic Breccias

Notes: CuB = CuO breccia w/hematite, SP = stockpile

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
27		CuB, Winz	0.002	0.011	0.005	-o-	\	0.337	0.003			
7A		CuB, Winz	0.066	0.277	\	\	\	\	\			
75		CuB, SP	-o-	0.038	\	\	\	\	\			
185		CuB, Winz	0.030	0.142	\	\	\	\	\			
192		CuB	0.024	0.004	-o-	0.0009	\	\	1.160			

Remarks: Values in opt. Supervisor: M.P. Thomas

Set VI

Mafics and Amphibolites

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type: Mafics and Amphibolites

Notes: MD = mafic dike, Amp = amphibolite

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
171		MD	0.080	0.028	-o-	0.019	11.58	0.220	\			
175		MD	0.096	0.107	\	\	\	\	\			
179		MD	0.072	0.065	\	\	\	\	\			
183		MD	0.090	0.151	\	\	\	\	\			
186		Amp	0.060	0.060	\	\	\	\	\			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 1/29/88

Set VII

Creek Concentrates

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type: Creek Concentrates

Notes: CC = panned concentrates from creek

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
33		cc	0.016	0.080	0.009	0.022	6.400	0.583	\			
123		cc	0.107	-o-	0.090	-o-	\	\	\			
124		cc	0.078	-o-	0.100	-o-	\	\	\			
163		cc	0.105	0.265	0.030	0.010	\	\	\			
164		cc	0.114	0.140	0.002	0.040	\	\	\			
166		cc	0.178	0.210	\	\	\	\	\			

Remarks: Values in opt. Supervisor: M. P. Thomas

Set VIII

Well Cores

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type: Water Well Core

Notes:

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
120		640'	0.033	0.226	0.070	-o-	\	\	\			
121		715'	0.032	0.160	0.210	-o-	\	\	\			
122		700'	0.023	0.051	-o-	-o-	\	\	\			
160		640'	-o-	0.024	0.006	-o-	\	\	\			
161		715'	0.050	0.149	-o-	-o-	\	\	\			
162		700'	0.014	0.177	0.05	-o-	\	\	\			

Remarks: Values in opt.

Supervisor: M. P. Thomas

Date Reported: 1/29/88

Set IX

Quartz Veins

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87

Project Engineer: M.P. Thomas

Sponsor: Global

Date Submitted: 9/87

Sample Type: Quartz Veins

Notes:

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
172		NW corner of Property	0.030	0.098	-0-	0.025	14.46	0.360	\			
175		"	0.096	0.107	\	\	\	\	\			
180		"	0.028	0.139	\	\	\	\	\			
184		"	0.083	0.165	\	\	\	\	\			

Remarks: Values in opt.

Supervisor: M.P. Thomas

Date Reported: 1/29/88

Set X

Miscellaneous

MHS Fire Assay & Geochemical Laboratories

ANALYTICAL REPORT

— Pd - Pt Specialists —

Project Number: 133-87 Project Engineer: M. P. Thomas

Sponsor: Global Date Submitted: 9/87

Sample Type: Miscellaneous

Notes:

Lab No.	Samp. No.	Description	Au	Pt	Pd	Rh	Os	Ir	Ag			
73		Well Water	0.007	0.003	\	-o-	\	\	-o-			
78		Vig Au plus Limonite	0.156	0.078	\	\	\	\	\			

Remarks: Values in ppt.

Supervisor: M. P. Thomas

Interpretation of Data, Averages After Statistical Analysis

Set I

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.084	0.092	0.061	0.009	3.12	1.45	1.02
n =	53	52	43	43	3	7	5

Set II

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.558	2.640	0.277	0.260	53.98	26.03	1.130
n =	49	60	49	48	7	15	38

Set III

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.051	0.128	0.076	0.005	0.910	11.24	1.340
n =	53	51	49	48	1	3	6

Set IV

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.332	0.076	0.042	0.015	5.610	3.670	1.110
n =	11	10	6	6	3	4	4

Set V

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.024	0.094	0.003	0.0005	/	0.337	0.581
n =	5	5	2	2	/	1	2

Set VI

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.080	0.082	-0-	0.019	2.320	0.220	/
n =	5	5	1	1	1	1	/

Set VII

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.100	0.166	0.046	0.014	1.070	0.583	/
n =	6	6	5	5	1	1	/

Set VIII

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.025	0.131	0.056	-0-	/	/	/
n =	6	6	6	1	/	/	/

Set IX

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.059	0.127	-0-	0.025	3.620	0.360	/
n =	4	4	1	1	1	1	/

Set X

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.082	0.041	/	/	/	/	/
n =	2	2	/	/	/	/	/

Summation, Averages of All Sets After Data Reduction

	Au	Pt	Pd	Rh	Os	Ir	Ag
x =	0.205	0.863	0.128	0.086	24.230	13.65	1.120
n =	194	201	162	155	17	33	55

Two methods were used to accomplish the data reduction in line with most current statistical practice. A two-tailed "t" test at the 95% confidence level was used in order to reject outliers from the data. A simple probability calculation was used on elements (Os and Ir, for example) for which less data was available. The probability test used relative sample quantity as a guideline with which to estimate the reliability of high concentrations. Each reduction was based on the maximum number of samples in the set. A set containing a maximum of 53 samples for one element, then, allowed the 53 samples to indicate a probable relative accuracy of 100%. An element with less samples (Os,Ir) was assigned an accuracy based upon its relative number of samples, a simple ratio.

Average Values

The following are the corrected values of the assays for all of the ores:

Element	Average
Au	0.205 opt
Pt	0.863 opt
Pd	0.128 opt
Rh	0.086 opt
Os	24.230 opt
Ir	13.650 opt
Ag	1.120 opt

For the sake of comparison, the following table lists the corrected values of the assays for all ores excluding the Fe-Complexes:

Element	Average
Au	0.09 opt
Pt	0.11 opt
Pd	0.06 opt
Rh	0.01 opt
Os	3.41 opt
Ir	3.33 opt
Ag	1.10 opt

Application of Assay Values to the Ores

The Fe-Complexes have the highest concentration values among the ores of the Oro Grande. These complexes are not distinguishable as volumes of rock material, isolated from the remainder of the ores.

The complexes occur as veinlets and nuggets throughout most of the ores. They constitute up to 2% of some of the ores and are most prevalent in the schists, mafic schists, diorites, granites, and aplites. The veins measure up to 4 mm in thickness and constitute an average volume of up to 0.1% of the rocks inspected at the surface of the mine site. Soils across the 150 acres and the surrounding area contain up to 7% of this material. Both gravity separation and magnetic separation are effective in isolating this material.

The Fe-Complexes are essentially reduced irons with traces of Ti, V, and Mn. This was determined on the basis of SEM scans of the materials. PGMs are not detectable using SEM since the detection limit for SEM is about 0.1%. It should be noted that the highest average concentration of Pt, for example, is 2.64 opt, which equates to about 0.009%. There has been some question about the origin of these reduced irons. Some contain traces of carbon but no nickel; meteorites are possible but not probable on the basis of what is now known.

The presence of the Fe-Complexes must be considered in the projections of the economic potential of the Oro Grande.

Reserve Estimates and Economic Projections

The Os and Ir values appear to be very high according to the assay data (see pp. 8-9). The note "cf" affixed to the assay values in the following summary indicates that the assay values were adjusted by an approximation based upon the probable relative accuracy of the assay values: the ratio of the number of samples of an element in a set to the maximum number of samples in a set yields a fraction, often about 0.1, by which the values are multiplied to obtain net values for the economic and reserve projections which are in line with an experimental coefficient of extractibility. The coefficient has been determined by research at M.H.S. Laboratories.

Tonnage Estimates and Value Estimates

The following summaries indicate the estimated tonnages of most ore types of the Oro Grande. The data regarding the estimates of recovery from various extraction processes will follow in a final report to the president of Global Platinum and Gold, Inc..

Set I Soils and Overburden

Location: 150 acres of the Oro Grande Mine Site

Dimensions: 6,534,000 ft^2(A) x 3.0 ft (D) = 19,602,000 ft^3

Average density: 2.0 g/cm^3

Estimated tonnage: 1,224,036 st

Percent of mineral of value: 5%

Mineral type: Fe-Complexes (Metallics)

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.558	61,202	34,151	15.37
Pt	2.640	61,202	161,573	74.32
Pd	0.277	61,202	16,953	2.03
Rh	0.260	61,202	15,912	17.50
Os	53.980 cf	61,202	330,368	264.30
Ir	26.030 cf	61,202	159,309	47.79
Ag	1.130	61,202	69,158	0.38
			Tot.	421.69

Location: 1000 acres, lode claim area, Oro Grande

Dimensions: 43,560,000 ft^2 (A) x 3.0 ft (D) = 1.3068 x 10^8 ft^3

Average density: 2.0g/cm^3

Estimated tonnage: 8,160,240 st

Percent of mineral of value: 5%

Mineral type: Fe-Complexes (Metallics)

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.558	408,012	227,671	102.50
Pt	2.640	408,012	1,077,152	495.50
Pd	0.277	408,012	113,019	13.60
Rh	0.260	408,012	106,083	116.69
Os	53.980 cf	408,012	2,202,449	1761.96
Ir	26.030 cf	408,012	1,062,055	318.62
Ag	1.130	408,012	461,054	2.54
			Tot.	2811.41

Set II Hematitic Breccias and Cu-O Breccias

Location: Northeast corner of 150 acres, Oro Grande

Dimensions: 7.04 x 10^8 ft^3

Average density: 3.5g/cm^3

Estimated tonnage: 19,227,674 st

Mineral type: Hematitic Breccias

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.084	19,227,674	1,615,125	726.80
Pt	0.092	19,227,673	1,768,946	813.70
Pd	0.061	19,227,673	1,172,888	140.75
Rh	0.009	19,227,673	173,049	190.35
Os	3.120 cf	19,227,673	5,999,034	4799.20
Ir	1.450 cf	19,227,673	2,788,013	836.40
AG	1.020	19,227,673	19,612,227	107.90
			Tot.	7615.10

Location: Winz area, Oro Grande

Dimensions: 88 x $10^6 ft^3$

Average density: 3.5g/cm^3

Estimated tonnage: 3,845,535 st

Mineral type: Cu-O Breccias

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.024	3,845,535	92,293	41.50
Pt	0.094	3,845,535	361,480	166.30
Pd	0.003	3,845,535	11,536	1.38
Rh	0.0005	3,845,535	1,923	2.12
Os	/	/	/	/
Ir	0.337	3,845,535	1,295,945	388.80
Ag	0.581	3,845,535	2,234,256	12,28
			Tot.	612.38

Set III Hematitic Breccias

Location:Main shear zone, mine site, Oro Grande

Dimensions: 1.75 x 10^8 ft^3

Average density: 3.5g/cm^3

Estimated tonnage: 19,118,425 st

Mineral type: Hematitic Breccia

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.084	19,118,425	1,605,948	722.70
Pt	0.092	19,118,425	1,758,895	809.10
Pd	0.061	19,118,425	1,166,224	139.90
Rh	0.009	19,118,425	172,066	189.30
Os	3.120 cf	19,118,425	5,964,949	4772.00
Ir	1.450 cf	19,118,425	2,772,172	831.70
Ag	1.020	19,118,425	19,500,794	107.00
			Tot.	7571.70

Set IV Quartz Veins

Location: Northwest corner of 150 acres, 1000 ft west of Winz

Dimensions: 12.0 x 10^6 ft^3

Average density: 2.6g/cm^3

Estimated tonnage: 973,332 st

Mineral type: Quartz with Platinoids and Gold

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.059	973,332	57,427	25.80
Pt	0.127	973,332	123,613	56.90
Pd	-0-	/	/	/
Rh	0.025	973,332	24,333	26.80
Os	3.620 cf	973,332	352,346	281.90
Ir	0.360	973,332	350,399	105.10
Ag	/	/	/	/
			Tot.	496.50

Set V Schists and Diorites

Location: Main shear zone, mine site, Oro Grande
Dimensions: 72 x 10^6 ft^3
Average density: 2.6g/cm^3
Estimated tonnage: 5,839,999 st
Mineral type: Mafics with Platinoids and Gold

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.051	5,839,999	297,840	134.00
Pt	0.128	5,839,999	747,520	343.90
Pd	0.076	5,839,999	443,840	53.30
Rh	0.005	5,839,999	29,200	32.10
Os	0.910	5,839,999	5,314,399	4251.52
Ir	11.240 cf	5,839,999	6,564,159	1969.25
Af	1.340	5,839,999	7,825,599	43.00
			Tot.	6827.07

Set VI Sulfide Ores

Location: Main shear zone, mine site, Oro Grande
Dimensions: 87.5 x 10^6 ft^3
Average density: 2.6g/cm^3
Estimated tonnage: 3,548,611 st
Mineral type: Pyrites in acid matrices

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.332	3,548,611	1,178,138	530.20
Pt	0.076	3,548,611	269,694	124.00
Pd	0.042	3,548,611	149,042	17.90
Rh	0.015	3,548,611	53,229	58.60
Os	5.610 cf	3,548,611	1,990,771	1592.60
Ir	3.670 cf	3,548,611	1,302,340	390.70
Ag	1.110	3,548,611	3,938,958	21.70
			Tot.	2735.70

Set VII Miscellaneous Ores with Fe-Complexes (Metallics)

Location: West of main shear zone, below 350 ft (D), Oro Grande

Dimensions: 2,287 x 10^6 ft^3

Average density: 2.4g/cm^3

Estimated tonnage: 171.3 x 10^6 st

Percent of mineral of value: 0.1%

Mineral types: Fe-Complexes associated with mafics and intrusives

Element	Assay (opt)	Est. Tons	Troy Oz.	($) x 10^6
Au	0.558	171,300	95,585	43.01
Pt	2.640	171,300	452,232	208.03
Pd	0.277	171,300	47,450	5.69
Rh	0.260	171,300	44,538	48.99
Os	53.980 cf	171,300	924,677	739.74
Ir	26.030 cf	171,300	445,894	133.77
Ag	1.130	171,300	193,569	1.07
			Tot.	1180.30

Summary of Tonnage Estimates and Value Estimates

Set No.	Type	Est. Tonnage	($)Est. Value ($10^6$)
I	Soils and Overburden	1,224,036	421.69
I	Soils and Overburden	8,160,240	2811.41
II	Hematitic Breccias	19,227,674	7615.10
II	Cu-O Hema. Breccias	3,845,535	612.38
III	Hematitic Breccias	19,118,425	7571.70
IV	Quartz Veins	973,332	496.50
V	Schists and Diorite	5,839,999	6827.07
VI	Sulfide Ores	3,548,611	2735.70
VII	Dispersed Metallics	171,300	1180.30
Totals----------		62,109,152 st	----30,271.85

Overall dollar per short ton value is $ 487.40/st by estimate.

There are approximately 100 x 10^6 st of materials above the 700 ft level on the 150 acre mine site which are not represented by the assays which were done for this report. The exception to this would be the Fe-Complexes (Metallics) which are, on average , dispersed through all of the lithologies. The maximum sample depth for this report is 715 ft (a water well core at the mine site), sample #121, which contains 0.032 opt Au, 0.160 opt Pt, and 0.210 opt Pd. The matrix of this sample appeared to be granite or aplite. One sample is not representative. However, it is an indication that additional values are present below the 350 ft level of the mine. Additional sampling needs to be done to determine the vertical and lateral extent of these values.

An estimate of the Fe-Complexes in the soils and overburden of the 1000 acres outside of the Oro Grande mine site was included in the ore reserve estimates above. There is no assay data on the rocks below the soils in this area. The geologic map and on-site inspection indicate structural and lithologic similarities between this area and the area of the mine site. If these similarities are any indication, then it is likely that economic values exist in the 1000 acres surrounding the 150 acre mine site.

Additional Assay Laboratory Reports

Global Platinum and Gold, Inc. has additional assays reports on file, which reflect similar platinum group metal values and gold values. As follows:

1. Gregory Iseman, Mining Consultant, Mesa, Arizona.
2. J. B. Laboratory, Phoenix, Arizona
3. A.S.T. Laboratory, Scottsdale, Arizona
4. Johannisburg Consolidated Investment Co., Ltd., So. Africa
5. X-Ray Assay Laboratories, Don Mills, Ontario, Canada

Additional Credits

1. Mary K. Post, Thesis on the Oro Grande Mine, 1983
2. J. Carlton Bray, Report on Oro Grande Consolidated Mines, 1931

Signature: Michael P. Thomas BA, MS, ACS, AIME Michael P. Thomas

M.H.S. Laboratories, Denver

January 29, 1988

ACS LABS

ACS LABS OF ARIZONA, INC.

TO: Mr. Rick J. Sandri
Assistant Vice President
INCO Limited
One New York Place
New York, NY 10004

DATE: December 4, 1989

RE: Analysis of samples from Global Platinum and Gold Inc.

SYNOPSIS

In early November, Mr. Richard Jensen, President of Global Platinum and Gold Inc. contracted ACS Laboratories to perform a preliminary evaluation of several samples from Globals' Wickenburg Arizona properties. By mid November ten samples were received from Hazen Research Inc. and four samples from a Mr. Russell Twiford of Global for precious metal analysis.

It was explained to ACS that there were discrepancies between the results from Hazen Research and Gordon Research Laboratory. It was decided upon to run several different 'assay' techniques so to give a fair evaluation of the samples submitted. The four samples submitted by Mr. Russell Twiford to ACS Labs were for reference purpose only.

SAMPLES

The samples received from Hazen Research Inc. were numbered one thru ten.

The samples received from Mr. Russell Twiford of Global were labeled: #11 WC-Split (Weaver Creek); #12 OG-Split (Oro Grande); #13 OG-Mags Split (Oro Grande/Red Magnetics) and #14 Diorite.

It should be noted that Mr. Twiford was present when the samples were first received and upon preliminary investigation (via microscopic observations) Mr. Twiford did not feel that all the samples were from Globals' property (particularly #1,2 and 7; possibly #5). Since ACS Laboratories was contracted only to analyze the samples submitted, we do not have or wish to express an opinion. The statement is included only because Mr. Twiford wished that his beliefs be noted in this report.

1355 North McQueen Rd. • Gilbert, Arizona 85234 • (602) 892-7020 • FAX (602) 497-3729

PROCEDURES

To expedite and to cross check the findings, the samples were split and analyzed at both ACS Laboratories locations.

ACS Labs of Houston Texas ran four different 'assay' procedures with the final product analyzed by a Direct Coupled Plasma Spectrophotometer. The four procedures were:

1) High Temperature Barium Peroxide fusion with subsequent fire assay using Tin as a collector.

2) Pressure Vessel Digestion (PVD) using Aqua Regia, Hydroflouric Acid and Boric Acid as the lixiviant.

3) Nickel Sulfide Fusion

4) Straight Fire Assay using Tin as the primary collector.

ACS Labs of Arizona ran four different 'assay' procedures with the final product analyzed by a Instrumentation Laboratory S-12 Atomic Absorption Spectrophotometer. The procedures tried were as follows:

1) High Temperature Barium Peroxide fusion dissolved in Aqua Regia.

2) Aqua Regia Hydroflouric Acid dissolution using a CEM MDS81D Model Microwave as a sample preparation technique (high pressure/high temperature dissolution).

3) Aqua Regia dissolution (standard 'breaker' preparation).

4) Straight 'fire assay' technique using Lead or Silver as the collectors.

It should be noted that only two samples were subjected using the Nickel Sulfide procedure, Tin collection (fire assay) procedure and straight Lead/Silver collection (fire assay) procedure. Economic considerations were the reasons for these limited procedural investigations.

In addition to the above mentioned procedures ACS Labs of Arizona tried two procedures given to us by Mr. Russell Twiford. The first procedure labeled 'The Twiford Process' uses a 2% Scav-Ox pretreatment to ore that was previously magnetized. The ore is then subjected to a hot Aqua Regia digestion. The second procedure labeled 'The Arnold Process' is a two stage leaching procedure utilizing Cuprous Chloride, Sulfamic Acid, Sulfuric Acid, and a tri-chlor compound (reagents were given to ACS by Mr. Twiford and were checked for precious metal content). Both solutions were mixed and then subjected to electrowinning (Lead anode and cathode/25 A.S.F./3.2 volts). The cathode slimes were dissolved in Aqua Regia and analyzed for their precious metal content.

RESULTS

All results are listed in Troy Ounces Per Short Ton.

Standards Additions Technique was initiated as was matrix matching (when necessary). The instruments were calibrated using known certified standards.

ACS LABS
ANALYTICAL CONSULTING SERVICES
16203 Park Row, Suite 100 • Houston, Texas 77084
(713) 579-8822 Fax (713) 579-9663

December 1, 1989

Greg Iseman
ACS LABS OF ARIZONA, INC.
1355 North McQueen Road
Gilbert, Arizona 85234

SUBJECT: Analysis of fourteen Barium Peroxide Fusion samples.

RE: **Lab No. 911243** *RE: Inco Project*

ANALYTICAL DATA: *Results reported in troy ounces per ton and parts per million.*

SAMPLE I.D.	GOLD PPM	GOLD TROY/OZ	PLATINUM PPM	PLATINUM TROY/OZ
#1	3.58	0.105	0.057	0.002
#2	3.78	0.110	0.078	0.003
#3	3.07	0.090	0.48	0.014
#4	3.57	0.104	<0.01	<0.001
#5	3.48	0.102	<0.01	<0.001
#6	3.60	0.105	<0.01	<0.001
#7	3.48	0.102	0.020	<0.001
#8	7.70	0.225	0.567	0.017
#9	7.50	0.219	0.168	0.005
#10	7.90	0.230	0.249	0.007
#11	7.70	0.225	<0.01	<0.001
#12	7.40	0.216	0.372	0.011
#13	7.60	0.222	0.762	0.022
#14	7.90	0.231	0.186	0.005

ASSAY METHOD:

1. **Barium Peroxide Fusion**
2. **Tin Collection Assay**
3. **DCP Instrument Finish**

QUALITY ASSURANCE: *Samples are analyzed in accordance with EPA, Standard Methods, or ASTM procedures with at least 10% analyzed in duplicate. Serial dilutions and/or process spikes are routinely employed to assure accuracy and precision of the reported data.*

ANALYTICAL CONSULTING SERVICES, INC.

Ernest P. Williams
Lab Director

EPW/sab

ACS LABS
ANALYTICAL CONSULTING SERVICES
16203 Park Row, Suite 100 • Houston, Texas 77084
(713) 579-8822 Fax (713) 579-9663

December 1, 1989

Greg Iseman
ACS LABS OF ARIZONA, INC.
1355 North McQueen Road
Gilbert, Arizona 85234

SUBJECT: Analysis of ten Powder samples.

RE: **Lab No. 911273**

ANALYTICAL DATA: Results reported in troy ounces per ton.

SAMPLE I.D.	GOLD	PLATINUM
#1	0.090	0.030
#2	0.111	0.342
#3	0.088	0.239
#4	0.093	0.091
#5	0.076	0.456
#6	0.385	0.332
#7	0.123	0.061
#8	0.193	0.307
#9	0.100	0.161
#10	0.198	0.187

ASSAY METHOD: **PVD-Digestion - DCP Analysis, calibrated against known standards. Backround corrected and acid matrix matched.**

NOTE: **Some of the Platinum values could be high due to interelement interferences.**

QUALITY ASSURANCE: Samples are analyzed in accordance with EPA, Standard Methods, or ASTM procedures with at least 10% analyzed in duplicate. Serial dilutions and/or process spikes are routinely employed to assure accuracy and precision of the reported data.

ANALYTICAL CONSULTING SERVICES, INC.

Ernest P. Williams
Lab Director

EPW/sab

ACS LABS
ANALYTICAL CONSULTING SERVICES
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(713) 579-8822 Fax (713) 579-9663

December 1, 1989

Greg Iseman
ACS LABS OF ARIZONA, INC.
1355 North McQueen Road
Gilbert, Arizona 85234

SUBJECT: Analysis of three Powder samples.

RE: **Lab No. 911276** RE: Inco Project

ANALYTICAL DATA: Results reported in troy ounces per ton.

SAMPLE I.D.	GOLD	PLATINUM
WC-SPLIT	**0.149**	**0.146**
06-MAGS-SPLIT	**0.305**	**0.259**
OG-SPLIT	**0.154**	**0.201**

ASSAY METHOD: **PVD - digestion - DCP analysis calibrated against known standards. Background corrected and acid matrix matched.**

NOTE: **Some of the Platinum values could be high due to interelement interferences.**

QUALITY ASSURANCE: Samples are analyzed in accordance with EPA, Standard Methods, or ASTM procedures with at least 10% analyzed in duplicate. Serial dilutions and/or process spikes are routinely employed to assure accuracy and precision of the reported data.

ANALYTICAL CONSULTING SERVICES, INC.

Ernest P. Williams
Lab Director

EPW/sab

ACS LABS
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December 4, 1989

Greg Iseman
ACS LABS OF ARIZONA, INC.
1355 North McQueen Road
Gilbert, Arizona 85234

SUBJECT: Analysis of two Residue samples.

RE: **Lab No. 911288** *REF: INCO PROJECT*

ANALYTICAL DATA: *Results reported in troy ounces per ton.*

TIN COLLECTION:

SAMPLE I.D.	GOLD	PLATINUM
#4-OG-SPLIT	0.024	0.004
#10-WC-SPLIT	0.042	0.010

NICKEL SULPHIDE COLLECTION:

SAMPLE I.D.	GOLD	PLATINUM
#4-OG-SPLIT	0.022	0.004
#10-WC-SPLIT	0.038	0.009

TIN COLLECTION:

Ore - 15g
Flux:
Soda Ash - 33g
Borax - 7g
Flour - 4g
Silica - 4g
Tin Metal - 15g
***Tellurium Metal - 0.150g**

NICKEL SULPHIDE COLLECTION

Ore - 15g
Flux:
Soda Ash 20g
Borax - 35g
Sulfur - 6g
Silica - 5g
Nickel Carbonate - 16g
Copper Sulphate - 1g

***=added to help collect PGM's**

QUALITY ASSURANCE: *Samples are analyzed in accordance with EPA, Standard Methods, or ASTM procedures with at least 10% analyzed in duplicate. Serial dilutions and/or process spikes are routinely employed to assure accuracy and precision of the reported data.*

ANALYTICAL CONSULTING SERVICES, INC.

Ernest P. Williams
Lab Director

EPW/sab

EXTRACTION WORKSHEET

CLIENT: Global/ INCO

SAMPLE # A-9-12-110
DATE 12/89

PROCESS		CONDITIONS	
ASSAY		STRENGTH OF REAGENT	
CYANIDE		% SOLIDS	
THIOUREA		TIME OF TEST	
OTHER	Barium Peroxide Fusion	AGITATION	
		TEMPERATURE	
		MILLIVOLT	
ORE/MATERIAL USED	See Below	pH	
ORE SIZE USED	As Received		

RESULTS

ID OF SAMPLE	Au	Ag	PT	Pd	Ir	Os	Ru	Rh
# 1	.093	.026	.025	.009				.002
# 2	.099	.019	.035	.013				.008
# 3	.085	.056	.060	.046				.026
# 4	.124	.113	.100	.083				<.001
# 5	.103	.046	.015	.026				.012
# 6	.096	.069	.025	.008				.006
# 7	.108	.102	.025	.015				.004
# 8	.196	.177	.130	.122				.085
# 9	.133	.014	.025	.033				.052
#10	.169	.082	.015	.005				.022
#11	.156	.036	.050	.022				.022
#12	.145	.038	.060	.038				.018
#13	.246	.021	.215	.096				<.001
#14	.136	.040	.050	.025				.168

The foregoing results were ran using standard Analytical procedures and based soley on the samples submitted. ACS Labs of Arizona strives to do the best to its knowledge and ability but makes no warrantees, written or implied.

EXTRACTION WORKSHEET

CLIENT: Global/ INCO

SAMPLE # A-9-12-111
DATE 12/89

PROCESS

ASSAY _____
CYANIDE _____
THIOUREA _____
OTHER Microwave Procedure

ORE/MATERIAL USED See Below

ORE SIZE USED As Received

CONDITIONS

STRENGTH OF REAGENT _____
% SOLIDS _____
TIME OF TEST _____
AGITATION _____
TEMPERATURE _____
MILLIVOLT _____
pH _____

RESULTS

ID OF SAMPLE	Au	Ag	PT	Pd	Ir	Os	Ru	Rh
# 1	.089	.033	.050	.032				.013
# 2	.066	.028	.075	.069				.022
# 3	.076	.041	.100	.113				.038
# 4	.113	.058	.135	.148				.029
# 5	.124	.037	.025	.044				.025
# 6	.099	.029	.050	.039				.018
# 7	.082	.071	.050	.062				.012
# 8	.445	.078	.155	.210				.166
# 9	.177	.022	.075	.094				.092
#10	.189	.049	.050	.068				.076
#11	.178	.052	.075	.085				.069
#12	.172	.072	.100	.102				.039
#13	.298	.328	.605	.335				.468

The foregoing results were ran using standard Analytical procedures and based soley on the samples submitted. ACS Labs of Arizona strives to do the best to its knowledge and ability but makes no warrantees, written or implied.

EXTRACTION WORKSHEET

CLIENT: Global/ INCO

SAMPLE # A-9-12-112
DATE 12/89

PROCESS

ASSAY _____
CYANIDE _____
THIOUREA _____
OTHER Aqua Regia

ORE/MATERIAL USED See Below

ORE SIZE USED As Received

CONDITIONS

STRENGTH OF REAGENT _____
% SOLIDS _____
TIME OF TEST _____
AGITATION _____
TEMPERATURE _____
MILLIVOLT _____
pH _____

RESULTS

ID OF SAMPLE	Au	Ag	PT	Pd	Ir	Os	Ru	Rh
# 1	<.001	.008	<.001	.008				<.001
# 2	<.001	.011	<.001	.006				<.001
# 3	.012	.026	.005	.010				.005
# 4	.034	.048	.014	.016				.024
# 5	.008	.015	.008	.010				.008
# 6	.022	.040	.018	.020				.012
# 7	.005	.062	.005	.017				.002
# 8	.056	.204	.026	.033				.028
# 9	.016	.032	.010	.016				.005
#10	.028	.060	.023	.042				.014
#11	.031	.021	.030	.016				.012
#12	.010	.010	.018	.024				.005
#13	.043	.103	.050	.066				.020

The foregoing results were ran using standard Analytical procedures and based soley on the samples submitted. ACS Labs of Arizona strives to do the best to its knowledge and ability but makes no warrantees, written or implied.

EXTRACTION WORKSHEET

CLIENT: Global/ INCO

SAMPLE # A-9-12-113
DATE 12/89

PROCESS		CONDITIONS	
ASSAY		STRENGTH OF REAGENT	
CYANIDE		% SOLIDS	
THIOUREA		TIME OF TEST	
OTHER	Fire Assay	AGITATION	
		TEMPERATURE	
		MILLIVOLT	
ORE/MATERIAL USED	See Below	pH	
ORE SIZE USED	As Received		

RESULTS

ID OF SAMPLE	Au	Ag	PT	Pd	Ir	Os	Ru	Rh
Lead Collector								
# 4	.006	.014	<.001	.003				<.001
#10	.010	.022	.003	.008				.005
Silver Collector								
# 4	.014	--	.010	.012				.003
#10	.027	--	.014	.018				.010

The foregoing results were ran using standard Analytical procedures and based soley on the samples submitted. ACS Labs of Arizona strives to do the best to its knowledge and ability but makes no warrantees, written or implied.

EXTRACTION WORKSHEET

CLIENT: Global/ INCO

SAMPLE # A-9-12-114
DATE 12/89

PROCESS

ASSAY _____
CYANIDE _____
THIOUREA _____
OTHER Twiford Process

ORE/MATERIAL USED See Below

ORE SIZE USED 100 Minus

CONDITIONS

STRENGTH OF REAGENT _____
% SOLIDS _____
TIME OF TEST _____
AGITATION _____
TEMPERATURE _____
MILLIVOLT _____
pH _____

RESULTS

ID OF SAMPLE	Au	Ag	PT	Pd	Ir	Os	Ru	Rh
# 9	.17	.22	.05	.06				I
#10	.14	.38	.24	.16				.10
Weaver Creek	.16	.17	.13	.07				.06

The foregoing results were ran using standard Analytical procedures and based soley on the samples submitted. ACS Labs of Arizona strives to do the best to its knowledge and ability but makes no warrantees, written or implied.

EXTRACTION WORKSHEET

CLIENT: Global/ INCO

SAMPLE # A-9-12-115
DATE 12/89

PROCESS		CONDITIONS	
ASSAY		STRENGTH OF REAGENT	
CYANIDE		% SOLIDS	
THIOUREA		TIME OF TEST	
OTHER	Arnold Process	AGITATION	
		TEMPERATURE	
		MILLIVOLT	
ORE/MATERIAL USED	#13	pH	
ORE SIZE USED	100 Minus		

RESULTS

ID OF SAMPLE	Au	Ag	PT	Pd	Ir	Os	Ru	Rh
# 13	.056	.088	.028	.019				.013

The foregoing results were ran using standard Analytical procedures and based soley on the samples submitted. ACS Labs of Arizona strives to do the best to its knowledge and ability but makes no warrantees, written or implied.

SUMMARY

From the preceding results and depending on which analytical technique was used, it is obvious that there were some variations. ACS Labs recognizes that not all 'assay' methods work on all ores. Some ores may need some sort of pretreatment prior to the assay procedure.

Even withstanding the above mentioned variations, we are very encouraged with our findings. The Barium Peroxide fusion with subsequent fire assay using Tin as a collector was extremely successful for Gold. The Platinum group metals were strongly evident in the PVD (Pressure Vessel Digestion) Technique and the Microwave Techniques.

We feel further work is warranted. Gold and Platinum is definitely present in the samples submitted. Additional work on optimizing the assay procedures is needed before a complete understanding of the ores' true assay can be known.

Respectfully Submitted,

Gregor J. Iseman
President-ACS Labs of Arizona

GJI/yp

SUMMARY

From the preceding results and depending on which analytical technique was used, it is obvious that there were some variations. ACS Labs recognizes that not all 'assay' methods work on all ores. Some ores may need some sort of pretreatment prior to the assay procedure.

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Respectfully Submitted,

Gregor J. Iseman
President-ACS Labs of Arizona

GJI/yp