African Mineral Standards
MATRIX REFERENCE MATERIALS

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Gold and Uranium Ore
Witwatersrand Reference Material
Ore Grade

AMIS0103

Certificate of Analysis

Recommended Concentrations and Limits
(at two Standard Deviations)

Certified Concentrations

Au Pb Collection	4.73	±	0.38	g/t
U M/ICP	299	±	21.3	ppm
U XRF	304	±	13.7	ppm
Specific Gravity	2.70	±	0.08	

Major Element Certified Concentrations

Al2O3	1.45	±	0.10	%
Fe2O3	2.06	±	0.08	%
K2O	0.27	±	0.02	%
MnO	0.11	±	0.02	%
SiO2	94.8	±	0.84	%

Major Element Provisional Concentrations

CaO	0.06	±	0.02	%
P2O5	0.021	±	0.006	%
TiO2	0.066	±	0.008	%

Major Element Indicated Values

Cr2O3	0.05	%
LOI	0.66	%
MgO	0.15	%
Na2O	0.04	%

*** Or, by applying a chemical conversion factor of U x 1.1793 = U_3O_8, U_3O_8 by multi acid digestion: 353 ± 25.1 ppm, U_3O_8 by XRF: 359 ± 16.2 ppm**

1. Intended use: AMIS0103 is suitable for monitoring the accuracy of a single analysis of gold or uranium ores hosted by siliceous rocks. The material can be used for routine quality control by inserting within a batch of samples.

The recommended mean and "Between Lab" standard deviations for this standard reflect the average results from the laboratories that participated in the round robin. Slight variations in analytical procedures between laboratories will reflect as slight biases to the recommended concentrations and this is acceptable. Good laboratories however will report results within the two standard deviation levels with a failure of <10 %.

2. Origin of material: This standard is a blend of Ventersdorp Contact Reef, Carbon Leader Reef and Vaal Reef material provided by Anglo Gold Ashanti in South Africa. It was made from a mixture of pulp reject sample material, collected during routine underground sampling, sourced from mine assay laboratories and blended down to a required grade with silica.

3. Mineral and chemical composition: The major gangue mineral is quartz with minor pyrite, uraninite and thucolite. Gold occurs primarily as discrete grains.

The major element chemistry was calculated, from predominantly XRF data submitted by ten of the laboratories, from the eight samples sent each lab.

4. Appearance: The material is a very fine powder coloured Light Grey (Corstor 5Y 7/1).

5. Handling instructions: The material in Laboratory Packs must be shaken before use. Normal safety precautions for handling fine particulate matter are suggested, such as the use of safety glasses, breathing protection, gloves and a laboratory coat.

6. Radioactivity: Shipments of this material do not require special marking, labeling or placarding. AMIS0103 does contain U (3.8 Bq/g) and Th (0.16 Bq/g) but due to the low activity concentrations it is classified as EXEMPT MATERIAL in terms of “Safety Standards Series No. TS-R-1: Regulations for the Safe Transport of Radioactive Material, International Atomic Energy Agency, 2005, para 403, Table 1”.

7. Method of preparation: The material was crushed, dry-milled and air-classified to 100% <54um. Wet sieve particle size analysis of random samples confirmed the material was 100% <54um. It was then blended in a bi-conical mixer, systematically divided and then sealed into 1kg Laboratory Packs. Samples were selected for homogeneity testing and third party analysis. Statistical analysis for the consensus test results were carried out by an independent statistician. Explorer Packs are subdivided from the Laboratory packs as required.

8. Methods of analysis requested:

1. Au – Pb collection ICP-OES or ICP-MS.
2. Multi-acid digest U ICP- OES or ICP-MS.
3. U XRF.
4. Majors (Al_2O_3, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, MnO, Na_2O, S, SiO_2, TiO_2. LOI.) XRF fusion.
5. SG (gas pycnometer)

9. Method of certification: Twenty two laboratories were each given eight randomly selected packages of sample. All of the laboratories submitted results.

The mean and standard deviation for all data was calculated. Outliers were defined as samples beyond the mean $\pm$ 2 Standard Deviations from all data. These outliers were removed from the data and a new mean and standard deviation was determined.

Standards with an RSD of near or less than 5 % are then certified, RSD’s of between near 5 % and 15 % are given Provisional Concentrations and limits, those with RSD’s over 15 % are given Indicated Concentrations.

This method is different from that used to calculate the Confidence Interval shown on many Government-produced standards 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 Certified Limits published on other standards which quote a Confidence Interval.

10. Participating laboratories: (Not in same order as in the table of assays)

1. ACME Analytical Laboratories Ltd CA
2. Activation Laboratories Pty Ltd (ActLabs) CA
3. ALS Chemex Laboratory Group Johannesburg SA
4. ALS Chemex Laboratory Group Perth WA
5. ALS Chemex Laboratory Group Vancouver CA
6. Anglo Gold Ashanti - Navachab Gold Mine Laboratory Namibia
7. Anglo Gold Ashanti - Vaal River Laboratory SA
8. Anglo Gold Ashanti - West Wits Laboratory SA
9. Anglo Research (Crown Campus)
10. Assayers Canada
11. Intertek Utama Services (Indonesia)
12. Labtium Inc Finland
13. MAED Metallurgical Laboratories (Knights) SA
14. OMAC Laboratories Limited (Ireland)
15. Performance Laboratories SA
16. Performance Labs (Welkom)
17. Set Point Laboratories (Isando) SA
18. SGS Australia Pty Ltd (Newburn) WA
19. SGS Lakefield Research Africa Pty Ltd (Barberton) SA
20. SGS Lakefield Research Africa Pty Ltd (Booysens) SA
21. SGS Mineral Services Lakefield (Canada)
22. Ultra Trace (Pty) Ltd WA

11. Assay Data: Data as received from the laboratories is set out below. A proficiency report has been sent to the managers of the participating laboratories.

Lab Code	Au g/t g/t Pb Coll	U ppm M/ICP	U ppm XRF	SG	Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	LOI %	MgO % XRF	MnO % XRF	Na20 % XRF	P2O5 % XRF	S % XRF	SiO2 % XRF	TiO2 % XRF
A	4.77	306															
A	4.66	309															
A	4.74	302															
A	4.56	303															
A	4.48	306															
A	4.70	307															
A	4.61	303															
A	4.53	311															
B	4.81	306	330	2.75	1.47	0.06	0.05	2.09	0.28		0.14	0.12	0.04			94.98	0.07
B	4.72	303	310	2.78	1.46	0.06	0.05	2.11	0.28		0.13	0.11	0.04			94.84	0.07
B	4.74	315	320	2.77	1.46	0.07	0.05	2.10	0.28		0.13	0.11	0.03			94.97	0.07
B	4.70	286	320	2.76	1.46	0.06	0.05	2.09	0.28		0.14	0.11	0.05			94.97	0.07
B	4.79	327	340	2.76	1.48	0.06	0.05	2.09	0.28		0.14	0.12	0.05			95.08	0.07
B	4.75	322	310	2.75	1.47	0.07	0.05	2.09	0.28		0.13	0.11	0.04			94.96	0.07
B	4.82	314	330	2.75	1.45	0.06	0.05	2.09	0.28		0.13	0.12	0.04			95.00	0.07
B	4.79	304	340	2.74	1.46	0.06	0.05	2.10	0.28		0.13	0.11	0.05			94.99	0.07
C	4.30	284		2.63	1.50	0.06	0.06	2.04	0.29	0.69	0.20	0.11	0.02	0.03	0.28		0.06
C	4.46	280		2.59	1.48	0.05	0.06	2.03	0.28	0.69	0.19	0.11	0.01	0.03	0.27		0.06
C	3.63	285		2.62	1.48	0.05	0.06	2.05	0.28	0.70	0.19	0.11	0.02	0.03	0.27		0.06
C	4.33	283		2.62	1.49	0.06	0.06	2.05	0.28	0.68	0.18	0.11	0.02	0.02	0.28		0.06
C	4.41	288		2.67	1.48	0.05	0.06	2.05	0.28	0.70	0.19	0.11	0.01	0.03	0.28		0.07
C	4.24	293		2.65	1.46	0.05	0.06	2.03	0.28	0.67	0.18	0.11	0.02	0.03	0.28		0.07
C	4.52	290		2.64	1.49	0.05	0.06	2.04	0.29	0.68	0.18	0.11	0.02	0.03	0.28		0.07
C	4.30	323		2.67	1.48	0.05	0.06	2.03	0.28	0.68	0.19	0.11	0.02	0.03	0.31		0.07
D	4.98	290	301	2.64	1.42	0.07	0.05	2.00	0.27	0.44	0.03	0.10	0.05			94.80	0.07
D	4.96	283	300	2.65	1.44	0.07	0.04	2.01	0.27	0.55	0.03	0.10	0.07			94.60	0.06
D	4.66	292	301	2.65	1.46	0.07	0.04	1.99	0.26	0.26	0.04	0.10	0.07			94.90	0.06
D	4.99	290	305	2.64	1.42	0.07	0.04	2.00	0.27	0.47	0.03	0.10	0.06			94.70	0.06
D	4.80	289	302	2.60	1.44	0.06	0.04	1.99	0.27	0.67	0.03	0.10	0.07			94.50	0.06
D	4.81	283	306	2.61	1.40	0.07	0.08	2.00	0.26	0.29	0.03	0.10	0.07			94.80	0.07
D	5.01	283	302	2.60	1.50	0.07	0.05	2.04	0.27		0.05	0.10	0.06			95.10	0.07
D	4.73	292	301	2.63	1.42	0.06	0.05	1.97	0.26	0.58	0.03	0.10	0.08			94.60	0.07

Assay Data (cont):

Lab Code	Au g/t g/t Pb Coll	U ppm M/ICP	U ppm XRF	SG	Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	LOI %	MgO % XRF	MnO % XRF	Na20 % XRF	P2O5 % XRF	S % XRF	SiO2 % XRF	TiO2 % XRF
E	4.94		297	2.69													
E	4.95		298	2.69													
E	4.77		296	2.69													
E	4.90		297	2.75													
E	5.00		296	2.69													
E	5.05		295	2.76													
E	4.95		297	2.72													
E	5.05		296	2.72													
F	5.04																
F	5.06																
F	5.08																
F	4.92																
F	4.98																
F	5.04																
F	5.08																
F	5.08																
G	4.70																
G	4.61																
G	4.36																
G	4.55																
G	4.75																
G	4.50																
G	4.76																
G	4.78																
H	4.74																
H	4.77																
H	4.76																
H	4.75																
H	4.74																
H	4.72																
H	4.75																
H	4.74																
I	3.93	295															
I	3.82	292															
I	3.93	290															
I	3.65	295															
I	3.87	289															
I	3.80	296															
I	3.75	294															
I	3.67	293															
J	4.55				1.38	0.07	0.02	2.04	0.28	0.50	0.11	0.11	0.06	0.02		95.50	0.06
J	4.67				1.36	0.07		1.99	0.28	0.50	0.10	0.11	0.05	0.02		95.20	0.06
J	4.63				1.36	0.07	0.02	2.04	0.28	0.50	0.10	0.11	0.06	0.02		95.30	0.07
J	4.59				1.38	0.07	0.01	2.03	0.28	0.50	0.11	0.11	0.06	0.02		95.60	0.07
J	4.55				1.36	0.07	0.01	2.00	0.28	0.50	0.10	0.11	0.06	0.02		94.60	0.06
J	4.58				1.36	0.07		2.02	0.28	0.50	0.10	0.11	0.05	0.02		95.00	0.06
J	4.57				1.37	0.07	0.01	2.05	0.28	0.50	0.11	0.11	0.07	0.02		95.30	0.06
J	4.55				1.37	0.07		2.03	0.28	0.50	0.11	0.11	0.05	0.02		95.20	0.06
K	4.58		309		1.53	0.06		2.05	0.27		0.12	0.10			0.27	94.80	0.07
K	4.91		307		1.53	0.06		2.05	0.27		0.12	0.10		0.02	0.27	95.30	0.07
K	4.86		313		1.53	0.06		2.07	0.27		0.14	0.10		0.02	0.27	95.30	0.07
K	4.84		306		1.52	0.06		2.04	0.27		0.12	0.10			0.26	94.90	0.07
K	2.95		298		1.50	0.06		2.02	0.26		0.12	0.10		0.01	0.26	94.30	0.06
K	4.92		310		1.51	0.06		2.06	0.27		0.12	0.10			0.27	95.30	0.07
K	4.97		299		1.49	0.06		2.03	0.26		0.12	0.10			0.26	94.30	0.07
K	4.85		305		1.51	0.06		2.06	0.27		0.12	0.10		0.01	0.27	95.10	0.07
L	5.25		303														
L	5.04		300														
L	4.99		298														
L	4.81		307														
L	5.04		296														
L	5.05		301														
L	4.98		308														
L	5.13		305														
M	5.02	306	310	2.71	1.14	0.02	0.05	2.12	0.27	0.72	0.06	0.11	0.03	0.02		94.56	0.07
M	4.88	285	307	2.66	1.13	0.04	0.05	2.13	0.26	0.76	0.13	0.11	0.03	0.02		95.29	0.07
M	4.81	292	304	2.69	1.26	0.03	0.05	2.12	0.29	0.74	0.07	0.11	0.03	0.02		95.91	0.07
M	5.00	294	312	2.75	1.07	0.03	0.05	2.10	0.26	0.78	0.04	0.11	0.02	0.01		95.13	0.07
M	5.12	316	306	2.77	1.08	0.03	0.05	2.11	0.27	0.76	0.06	0.11	0.02	0.02		95.68	0.07
M	4.72	313	306	2.74	1.15	0.03	0.05	2.12	0.27	0.72	0.07	0.11	0.02	0.02		95.45	0.07
M	4.93	300	309	2.71	1.25	0.04	0.05	2.12	0.29	0.77	0.06	0.19	0.04	0.02		94.86	0.07
M	5.02	296	306	2.70	1.23	0.03	0.05	2.11	0.27	0.76	0.07	0.11	0.01	0.02		95.30	0.07
N	4.59	324	300	2.70	1.30	0.07	0.03	2.03	0.28	0.72	0.13	0.11	0.09		0.22	94.96	0.07
N	4.50	324	299	2.69	1.30	0.07	0.03	2.01	0.29	0.72	0.12	0.11	0.10		0.21	94.97	0.06
N	4.56	330	296	2.70	1.30	0.07	0.03	2.04	0.28	0.71	0.14	0.11	0.12		0.21	94.92	0.07
N	4.55	341	291	2.70	1.30	0.11	0.03	2.03	0.32	0.68	0.21	0.11	0.08		0.20	94.85	0.07
N	4.63	322	289	2.70	1.30	0.06	0.03	2.04	0.28	0.72	0.14	0.11	0.08		0.21	94.96	0.06
N	4.64	344	293	2.70	1.30	0.08	0.04	2.02	0.29	0.71	0.13	0.11	0.08		0.20	94.97	0.06
N	4.62	331	289	2.70	1.30	0.06	0.03	2.03	0.28	0.70	0.12	0.11	0.08		0.21	95.01	0.06
N	4.58	320	290	2.70	1.30	0.07	0.03	2.03	0.28	0.69	0.12	0.11	0.08		0.21	95.01	0.06

Assay Data (cont):

Lab Code	Au g/t g/t Pb Coll	U ppm M/ICP	U ppm XRF	SG	Al2O3 % XRF	CaO % XRF	Cr2O3 % XRF	Fe2O3 % XRF	K2O % XRF	LOI %	MgO % XRF	MnO % XRF	Na20 % XRF	P2O5 % XRF	S % XRF	SiO2 % XRF	TiO2 % XRF
O	4.64																
O	4.72																
O	4.60																
O	4.76																
O	4.64																
O	4.72																
O	4.64																
O	4.64																
P	4.56		315														
P	4.64		304														
P	4.64		311														
P	4.68		322														
P	4.68		329														
P	4.76		328														
P	4.76		304														
P	4.64		309														
Q	4.63			2.71													
Q	4.66			2.67													
Q	4.72			2.72													
Q	4.77			2.72													
Q	4.85			2.71													
Q	4.85			2.72													
Q	4.54			2.70													
Q	4.79			2.72													
R	4.43																
R	4.48																
R	4.60																
R	4.61																
R	4.72																
R	4.45																
R	4.45																
R	4.61																
S	4.57	302	315		1.46	0.07	0.05	2.09	0.27	0.57	0.15	0.11	0.06			94.10	0.06
S	4.57	309	314		1.45	0.07	0.05	2.08	0.28	0.54	0.14	0.11	0.05			94.10	0.06
S	4.30	294	310		1.46	0.08	0.05	2.08	0.27	0.52	0.14	0.11	0.05			94.20	0.06
S	4.49	312	310		1.45	0.07	0.05	2.09	0.27	0.52	0.14	0.11	0.05			94.10	0.07
S	4.52	298	315		1.45	0.07	0.05	2.08	0.28	0.56	0.14	0.11	0.05			94.10	0.07
S	4.38	305	315		1.44	0.08	0.05	2.08	0.27	0.52	0.15	0.11	0.05			94.10	0.07
S	4.35	306	313		1.44	0.08	0.05	2.09	0.27	0.52	0.15	0.11	0.05			94.10	0.07
S	4.40	300	314		1.46	0.08	0.05	2.08	0.27	0.51	0.15	0.11	0.05			94.10	0.07
T	4.64																
T	4.74																
T	4.74																
T	4.80																
T	4.77																
T	4.68																
T	4.72																
T	4.80																
U	4.73	293	330	2.73	1.39	0.07	0.06	2.05	0.25	0.85	0.18	0.11	0.05			94.40	0.07
U	4.94	298	330	2.71	1.41	0.05	0.06	2.06	0.27	0.83	0.17	0.12	0.04	0.01		94.90	0.06
U	4.79	295	330	2.72	1.45	0.06	0.05	2.10	0.30	0.84	0.14	0.11	0.05	0.02		94.90	0.07
U	4.83	296	340	2.70	1.47	0.07	0.04	2.08	0.28	0.82	0.15	0.11	0.05	0.02		94.90	0.07
U	4.95	296	330	2.72	1.36	0.06	0.05	2.08	0.28	0.82	0.16	0.11	0.05	0.01		94.80	0.06
U	4.80	306	340	2.69	1.38	0.05	0.05	2.07	0.27	0.79	0.17	0.12	0.05	0.02		94.40	0.06
U	4.83	287	330	2.68	1.38	0.06	0.05	2.09	0.27	0.77	0.12	0.13	0.05	0.02		94.80	0.06
U	4.99	298	310	2.73	1.41	0.06	0.05	2.08	0.27	0.76	0.17	0.13	0.05	0.02		94.90	0.06
V	4.73	320	310	2.69	1.50	0.06	0.03	2.07	0.27	0.49	0.18	0.11		0.02		94.80	0.07
V	4.68	310	312	2.69	1.45	0.05	0.04	2.07	0.27	0.69	0.17	0.11		0.01		94.10	0.07
V	4.77	310	310	2.70	1.45	0.06	0.03	2.08	0.27	0.80	0.18	0.11		0.02		94.40	0.07
V	4.78	310	306	2.68	1.48	0.06	0.03	2.10	0.27	0.78	0.19	0.11		0.01		94.40	0.07
V	4.71	320	303	2.68	1.46	0.05	0.03	2.09	0.27	0.80	0.17	0.11		0.02		93.90	0.06
V	4.74	310	306	2.70	1.51	0.05	0.04	1.95	0.26	0.62	0.18	0.12		0.02		94.10	0.07
V	4.69	310	296	2.69	1.51	0.06	0.03	2.09	0.27	1.23	0.17	0.11	0.05	0.02		94.50	0.07
V	4.74	320	305	2.69	1.50	0.06	0.04	2.06	0.28	0.73	0.20	0.11	0.09	0.02		93.80	0.07

12. Measurement of Uncertainty:

Uncertainty in measurement takes into consideration the between lab and the within lab variances and is calculated from the square roots of the variances of these components using the formula below**. The samples used in this certification process have been selected in such a way as to represent the entire batch of material and were taken from the final packaged units; therefore all possible sources of uncertainty (sample uncertainty and measurement uncertainty) are included in the final Total Uncertainty determination.

These uncertainty measurements may be used by laboratories as a component for calculating the total uncertainty for method validation.

	Uncertainty measurement**		Uncertainty measurement**
Au	0.027	LOI	0.062
SG	0.016	MgO	0.016
U M/ICP	4.194	MnO	0.002
U XRF	2.283	Na2O	0.009
Al2O3	0.026	P2O5	0.002
CaO	0.003	S LECO	0.036
Cr2O3	0.005	SiO2	0.168
Fe2O3	0.014	TiO2	0.001
K2O	0.002		

***Uncertainty=sqrt((between lab.var/no of labs) + (mean square within lab.var /no of assays))*

13. Uncertified values: The Certified, Provisional and Indicated values listed on p1 of this certificate fulfill the AMIS statistical criteria regarding agreement for certification and have been independently validated by Dr Barry Smee. The uncertified informational values presented in the appendix have been subjected to statistical analysis, but have not been independently validated.

14. Traceability: The values quoted herein are based on the consensus values derived from statistical analysis of the data from an inter laboratory measurement program. Traceability to SI units is via the standards used by the individual laboratories. While use of this material may support the traceability of the results, it cannot be considered as a direct demonstration of traceability.

15. Certification: AMIS0103 is a new material.

16. Period of validity: The certified values are valid until notification to the contrary. The stability of this material will be subject to continuous testing for the duration of the inventory. All customers will be notified if product stability becomes an issue and notification to that effect will be placed on the www.amis.co.za website.

17. Minimum sample size: The majority of laboratories reporting used a 30 aliquot size for the gold analyses and 0.2g for the ICP. These are the recommended minimum sample sizes for the use of this material.

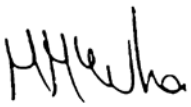
18. Radioactivity: Shipments of this material do not require special marking, labeling or placarding. AMIS0103 does contain U (3.8 Bq/g) and Th (0.1 Bq/g) but due to the low activity concentrations it is classified as EXEMPT MATERIAL in terms of “Safety Standards Series No. TS-R-1: Regulations for the Safe Transport of Radioactive Material, International Atomic Energy Agency, 2005, para 403, Table 1”.

19. Availability: This product is available in Laboratory Packs containing 1kg of material or in Explorer Packs containing client specified weights of material from 50g up to 250g. Laboratory Packs are sealed bottles delivered in sealed foil pouches. Explorer Packs contain material in standard geochem envelopes placed into foil pouches that are nitrogen flushed and vacuum sealed.

20. Legal notice: This certificate and the reference material described in it have been prepared with due care and attention. However AMIS, Set Point Technology (Pty) Ltd, Mike McWha, Dr Barry Smee and Smee and Associates Ltd; accept no liability for any decisions or actions taken following the use of the reference material.

Originally certified 14 January 2009
Clauses 12-17 added 30 March 2009

Certifying officers:



African Mineral Standards:_____

Mike McWha
BSc (Hons), FGSSA, MSAIMM, Pr.Sci.Nat

Geochemist:_____

Barry W. Smee
BSc, PhD, P.Geo, (B.C.)

APPENDIX – Uncertified iterated M/ICP trace element data from 3 laboratories

	Unit	mean	2SD	RSD%	n
Ag	ppm	0.5	0.1	8.3	16
Al	%	0.7	0.1	8.1	23
As	ppm	93	10	5.5	23
Ba	ppm	51	3	3.2	20
Be	ppm	0.3	0.1	9.6	16
Bi	ppm	0.7	0.1	8.3	23
Ca	%	0.04	0.001	0.9	20
Cd	ppm	0.2	0.02	5.1	14
Ce	ppm	34	4	5.7	15
Co	ppm	20	3	6.4	24
Cr	ppm	274	47	8.6	22
Cs	ppm	1.1	0.2	10.1	15
Cu	ppm	43	5	6.0	16
Fe	ppm	1.4	0.1	1.9	23
Ga	ppm	2.3	0.2	3.3	15
Ge	ppm	0.1	0.02	9.6	8
Hf	ppm	1.1	0.1	4.5	15
In	ppm	0.01	0.002	8.0	14
K	ppm	0.2	0.01	3.3	23
La	ppm	18	4	10.0	16
Li	ppm	2.9	0.3	5.2	15
Mg	%	0.1	0.001	0.6	19
Mn	ppm	812	34	2.1	23
Mo	ppm	3.5	0.4	6.3	22
Na	%	0.03	0.02	34.2	18
Nb	ppm	2.2	0.6	13.4	15
Ni	ppm	50	4	4.1	23
P	ppm	65	17	12.9	15
Pb	ppm	173	10	3.0	23
Rb	ppm	9.9	0.8	3.9	23
Re	ppm	0.002	0.001	20.3	5
S	ppm	0.25	0.07	13.1	24
Sb	ppm	4.0	1.3	16.9	24
Sc	ppm	1.3	0.1	3.4	8
Se	ppm	1.8	1.2	33.2	11
Sn	ppm	1.6	0.3	8.2	16
Sr	ppm	12	2	6.9	23
Ta	ppm	0.7	0.1	10.4	16
Te	ppm	0.1	0.04	22.5	16
Th	ppm	33	3	4.7	15
Ti	%	0.03	0.01	12.3	24
Tl	ppm	0.1	0.02	8.8	16
V	ppm	8.7	1.8	10.6	24
W	ppm	0.7	0.1	6.2	16
Y	ppm	15	2	6.4	15
Zn	ppm	83	17	10.1	24
Zr	ppm	40	5	5.6	15