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Analyse Service GmbH

GeoPT 36A, England - SdAR-M2, Metalliferous Sediment

Veranstalter: International Association of Geoanalysts and Geostandards Newsletter - GeoPT36a
Ringversuchsmaterial: SdAR-M2, (Metal-rich Sediment)
RV geschlossen: 2015 – 3
Literatur: Report - GeoPT36a Proficiency Testing Round (CRB Laborcode = N56)

Hauptelemente [MA%]

	CRB	RV	1sRV	Z-Score
Na_2O	2,58	2,579	0,045	0,01
MgO	0,49	0,491	0,011	-0,05
Al_2O_3	12,45	12,47	0,171	-0,06
SiO_2	73,36	73,45	0,77	-0,06
P_2O5	0,079	0,079	0,002	0,00
K_2O	4,98	5,00	0,078	-0,13
CaO	0,85	0,841	0,017	0,25
TiO_2	0,301	0,300	0,007	0,07
Fe_2O_3 tot	2,58	2,63	0,045	-0,55
MnO	0,137	0,134	0,004	0,40
L.O.I.	1,60	1,62	0,03	-0,33

Spurenelemente [µg/g]

	CRB	RV	1sRV	Z-Score
Ag *	10	14,5	4,2	---
As	85	75,8	3,2	1,45
Ba	1020	990	28	0,53
C-tot. *	3351	3080	437	---
C-org. *	2697	2383	498	---
Br *	2	1,6	1,0	---
Ce	97	98,8	4,0	-0,22
Co	14	12,4	0,7	1,18
Cr	57	49,6	2,2	1,68
Cu	242	236	8,3	0,36
Ga	18	17,6	0,9	0,23
Hf	7,0	7,29	0,4	-0,34
La	44	46,6	2,1	-0,62
Nb	27	26,2	1,3	0,31
Nd	36	39,4	1,8	-0,94
Ni	48	48,8	2,2	-0,17
Pb	820	808	23,6	0,26
Pr	10	11,0	0,6	-0,80
Rb	156	149,2	5,6	0,61
S *	770	927	308	---
Sb *	70	106	42	---
Se *	2	2,7	1,4	---
Sm	6	7,2	0,4	-1,38

Sr	150	143,9	5,5	0,56
Th	17	14,2	0,8	1,82
U	1,5	2,5	0,2	-2,93
V	595	600,9	5,5	-0,06
Y	25	25,2	1,2	-1,85
Zn	774	760,0	22,4	0,31
Zr	252	259,0	9,0	-0,39

Legende

CRB: Ergebnisse CRB – **RV:** Ergebnisse Ringversuch -- **1s-RV:** Standardabweichung Ringversuch
Z-Score: Differenz des Messwertes vom Mittelwert des Ringversuchs -- ***** Wert nicht zertifiziert

Geo*PT*36A — AN INTERNATIONAL PROFICIENCY TEST FOR ANALYTICAL GEOCHEMISTRY LABORATORIES — REPORT ON ROUND 36A (Metal-rich sediment, SdAR-M2) / January 2015

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*Keywords: proficiency testing, quality assurance, Geo*PT*, Geo*PT*36A, round 36A, SDAR-M2, gabbro*

Abstract

Results are presented for Geo*PT*36A, the subject of round thirty-six of the International Association of Geoanalysts' Proficiency Testing programme for analytical geochemistry laboratories. The test sample distributed in this round was a metal-rich sediment, SdAR-M2, supplied by Dr Stephen Wilson of the U.S. Geological Survey. In this report, the data contributed from 84 laboratories are listed, together with an assessment of consensus values, consequent *z*-scores and charts to show the distribution of contributed results and the overall performance of participating laboratories.

Introduction

This thirty-sixth round of the international proficiency testing programme, Geo*PT*, was conducted in a similar manner to earlier rounds. The programme is designed to be part of the routine quality assurance procedures employed by analytical geochemistry laboratories. The programme is organised by the International Association of Geoanalysts and is conducted in accordance with a published protocol available at (http://www.geoanalyst.org/documents/ GeoPT-protocol.pdf). The overall aim of the programme is to provide participating laboratories with *z*-score information for reported elemental determinations from which the laboratory can decide whether the quality of their data is satisfactory in relation both to their chosen fitness-for-purpose criteria and to the results submitted by other laboratories contributing to the round and can choose to take corrective action if this appears justified.

Steering Committee for Round 36A: P.C. Webb (results coordinator), M. Thompson (statistical advisor), P.J. Potts (analytical advisor), S.Wilson (provision of SDAR-M2).

Timetable for Round 36A:

Distribution of sample: September 2014.
Deadline for submission of analytical results: 12th December 2014.
Release of report: February 2015

Test Material details

Geo*PT*36A: The metal-rich sediment test material, SdAR-M2, was produced at the U.S. Geological Survey under the direction of Stephen Wilson. It was produced by blending and designed to resemble sediment sampled when monitoring moderate levels of environmental contamination associated with discharges from a mining operation. The test material was evaluated for homogeneity by the originator and as a result, the sample was considered suitable for use in this proficiency test.

Submission of results

3189 results were submitted for Geo*PT*36A (SdAR-M2) by 84 laboratories as listed in Table 1. Submission of data was by the recently introduced online system

developed by KPMD (IT Solutions) Ltd, Sheffield, England. In Table 1 results designated as data quality 1 are shown in bold: results of data quality 2 are shown underlined. Results from all laboratories submitting data were used to assess respective assigned values. However, in our **Instructions to Analysts** participants are instructed that values of '0', i.e. zero, should not be reported, but this was done by a number of laboratories. Zero is not regarded as a valid result, and 12 such values were excluded from consideration.

Assigned values

Following procedures described in earlier rounds, a robust statistical procedure was used to derive assigned concentration values [X_a], these being judged to be the best available estimates of the true composition of this sample. Values were assigned on the basis that: (i) sufficient laboratories had contributed data for an element, and (ii) the statistical assessment gave confidence that the results distribution showed a central portion approximating to a normal distribution. Part of this assessment involved examining a bar chart of contributed data for each element to judge the distribution of results.

Table 2 lists assigned and provisional values for 11 major components and 47 trace elements in Geo*PT*36A (SDAR-M2). Bar charts for the 58 elements/components of Geo*PT*36A that were judged to have satisfactory distributions for consensus values to be given assigned or provisional values are shown in Figure 1. These are: SiO_2, TiO_2, Al_2O_3, Fe_2O_3T, MnO, MgO*, CaO, Na_2O, K_2O, P_2O_5*, LOI*, As*, Ba, Be, Bi, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Ga, Gd, Ge*, Hf, Hg, Ho, In*, La, Li, Lu, Mo, Nb, Nd, Ni, Pb, Pr, Rb, Sb*, Sc, Sm, Sn*, Sr, Ta, Tb, Th, Tl*, Tm, U, V, W*, Y, Yb, Zn and Zr. Of these, only provisional values were given to the 10 marked '*'. Instances of provisional status were recorded because either i) a relatively small number of measurements contributed to the consensus, or ii) the results were significantly dispersed in relation to the target value or the distribution was in part non-symmetrical.

In 20 cases the robust mean was used to define the consensus value, but in 38 cases the median value was preferred.

Bar charts for the 10 elements/components: Fe(II)O, CO_2, Ag, B, C(tot), Cl, F, S, Se and Te are plotted in Figure 2 for information only, as the data were insufficient or too variable for the reliable determination of a consensus.

***Z*-score analysis**

As in previous rounds, laboratories were invited to choose one of two performance standards against which their analytical results would be judged:

Data quality 1 for laboratories working to a 'pure geochemistry' standard of performance, where analytical results are designed for geochemical research and where care is taken to provide data of high precision and accuracy, sometimes at the expense of a reduced sample throughput rate. For Geo*PT*36A, 1608 results of data quality 1 were submitted.

Data quality 2 for laboratories working to an 'applied geochemistry' standard of performance, where, although precision and accuracy are still important, the main objective is to provide results on large numbers of samples collected, for example, as part of geochemical mapping projects or geochemical exploration programmes. For Geo*PT*36A, 1581 results of data quality 2 were submitted.

The target standard deviation (H_a) for each element assessed was calculated from a modified form of the Horwitz function as follows:

$H_a = k.X_a^{0.8495}$

Where X_a is the concentration of the element expressed as a *fraction*; the factor k = 0.01 for pure geochemistry labs and k = 0.02 for applied geochemistry labs.

Z-scores were calculated for each elemental result submitted by each laboratory from:

$z = [X - X_a] / H_a$

where: X is the contributed result, X_a is the assigned value and H_a is the target standard deviation.

Z-score results for contributors to Geo*PT*36A are listed in Table 3. Participating laboratories are invited to assess their performance using the following criterion:– *Z*-score results in the range $-2<z<2$ are considered to be 'satisfactory' (in the sense that no action is called for by the participant). If the *z*-score for any element falls outside this range, especially if it is outside the range $-3<z<3$, it would be advisable for the contributing laboratory to examine its procedures, and if necessary, take action to ensure that determinations are not subject to unsuspected analytical bias.

Overall performance

A summary of the overall performance of individual laboratories in this round is plotted in multiple *z*-score charts for Geo*PT*36A in Figure 3. In these charts, the *z*-score performance for each element is distinguished by symbols that make it simple to identify whether the results were satisfactory or gave *z*-scores that exceeded the action limits. This chart is designed to help individual laboratories to judge their overall performance in this proficiency testing round. Participants should always review their *z*-scores in accord with their own fitness-for-purpose criteria.

Participation in future rounds

The benefit from proficiency testing arises from regular participation and laboratories are invited to contribute to the Geo*PT*37 round, the test sample for which will be distributed during March 2014.

Reminder to participants

Participants are instructed (in our **Instructions to Analysts**) that '0', i.e. zero, should not be reported as a result. For Geo*PT*36A, 12 zeros were reported and were disregarded. It is recommended that participants do not report zeros in future.

Acknowledgements

The authors thank Liz Lomas for much-valued assistance in distributing this sample. Thanks also to Mick Daniels and Ben Solway of KPMD (IT Solutions) Ltd for developing an efficient system for producing this report.

Appendix 1

Publication status of proficiency testing reports. Previous reports are available for download from the IAG website (http://www.geoanalyst.org/).

Geo*PT*1
Thompson M., Potts P.J., Kane J.S. and Webb P.C. (1996) Geo*PT*1. International proficiency test for analytical geochemistry laboratories - Report on round 1. Geostandards Newsletter: The Journal of Geostandards and Geoanalysis, 20, 295-325.

Geo*PT*2
Thompson M., Potts P.J., Kane J.S., Webb P.C. and Watson, J.S. (1998) Geo*PT*2. International proficiency test for analytical geochemistry laboratories - Report on round 2. Geostandards Newsletter: The Journal of Geostandards and Geoanalysis, 22 127-156.

Geo*PT*3
Thompson M., Potts P.J., Kane J.S. and Chappell B.W. (1999a) Geo*PT*3. International proficiency test for analytical geochemistry laboratories - Report on round 3. Geostandards Newsletter: The Journal of Geostandards and Geoanalysis, 23, 87-121.

Geo*PT*4
Thompson M., Potts P.J., Kane J.S., Webb P.C. and Watson J.S. (1999b) Geo*PT*4. International proficiency test for analytical geochemistry laboratories - Report on round 4. Published in the electronic version of Geostandards Newsletter: The Journal of Geostandards and Geoanalysis (Summer 2000).

Geo*PT*5
Thompson M., Potts P.J., Kane J.S., and Wilson S. (1999c) Geo*PT*5. International proficiency test for analytical geochemistry laboratories - Report on round 5. Published in the electronic version of Geostandards Newsletter: The Journal of Geostandards and Geoanalysis (Summer 2000).

Geo*PT*6
Potts P.J., Thompson M., Kane J.S., Webb P.C. and Carignan J. (2000) GEO*PT*6 - an international proficiency test for analytical geochemistry laboratories - report on round 6 (OU-3: Nanhoron microgranite) and 6A (CAL-S: CRPG limestone). International Association of Geoanalysts: Unpublished report.

Geo*PT*7
Potts P.J., Thompson M., Kane J.S., and Petrov L.L. (2000) GEO*PT*7 - an international proficiency test for analytical geochemistry laboratories - report on round 7 (GBPG-1 Garnet-biotite plagiogneiss). International Association of Geoanalysts: Unpublished report.

Geo*PT*8
Potts P.J., Thompson M., Kane J.S., Webb, P.C. and Watson J.S. (2000) GEO*PT*8 - an international proficiency test for analytical geochemistry laboratories - report on round 8 / February 2001 (OU-4 Penmaenmawr microdiorite). International Association of Geoanalysts: Unpublished report.

Geo*PT*9
Potts P.J., Thompson M., Webb, P.C. and Watson J.S. (2001) GEO*PT*9 - an international proficiency test for analytical geochemistry laboratories - report on round 9 / July 2001 (OU-6 Penrhyn slate). International Association of Geoanalysts: Unpublished report.

Geo*PT*10
Potts P.J., Thompson M., Webb, P.C., Watson J.S. and Wang Yimin (2001) GEO*PT*10 - an international proficiency test for analytical geochemistry laboratories - report on round 10 / December 2001 (CH-1 Marine sediment). International Association of Geoanalysts: Unpublished report.

Geo*PT*11
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and Watson J.S. (2002)
GEO*PT*11 - an international proficiency test for analytical geochemistry laboratories - report on round 11 / July 2002 (OU-5 Leaton dolerite). International Association of Geoanalysts: Unpublished report.

Geo*PT*12
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and Batjargal B. (2003)
GEO*PT*12 - an international proficiency test for analytical geochemistry laboratories - report on round 12 / January 2003 (GAS Serpentinite). International Association of Geoanalysts: Unpublished report.

Geo*PT*13
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and Kaspar H.U. (2003)
GEO*PT*13 - an international proficiency test for analytical geochemistry laboratories - report on round 13 / July 2003 (Köln Loess). International Association of Geoanalysts: Unpublished report.

Geo*PT*14
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and B. Batjargal (2004)
Geo*PT*14 - an international proficiency test for analytical geochemistry laboratories - report on round 14 / January 2004 (OShBO - alkaline granite). International Association of Geoanalysts: Unpublished report.

Geo*PT*15
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and WANG Yimin (2004)
Geo*PT*15 - an international proficiency test for analytical geochemistry laboratories - report on round 15 / June 2004 (Ocean floor sediment MSAN). International Association of Geoanalysts: Unpublished report.

Geo*PT*16
Potts P.J., Thompson M., Webb, P.C. and S.Wilson (2005)
Geo*PT*16 - an international proficiency test for analytical geochemistry laboratories - report on round 16 / February 2005 (Nevada basalt, BNV-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*17
Potts P.J., Thompson M., Webb, P.C. and J. Nicholas Walsh (2005)
Geo*PT*17 - an international proficiency test for analytical geochemistry laboratories - report on round 17 / July 2005 (Calcareous sandstone, OU-8). International Association of Geoanalysts: Unpublished report.

Geo*PT*18
Webb, P.C., Thompson M., Potts P.J. and L. Paul Bedard (2006)
Geo*PT*18 - an international proficiency test for analytical geochemistry laboratories - report on round 18 / Jan 2006 (Quartz Diorite, KPT-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*19
Webb, P.C., Thompson M., Potts P.J. and B. Batjargal (2006)
Geo*PT*19 - an international proficiency test for analytical geochemistry laboratories - report on round 19 / July 2006 (Gabbro, MGR-N). International Association of Geoanalysts: Unpublished report.

Geo*PT*20
Webb, P.C., Thompson M., Potts P.J. and M. Burnham (2007)
Geo*PT*20 - an international proficiency test for analytical geochemistry laboratories - report on round 20 / Jan 2007 (Ultramafic rock, OPY-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*21
Webb, P.C., Thompson M., Potts P.J. and B. Batjargal (2007)
Geo*PT*21 - an international proficiency test for analytical geochemistry laboratories - report on round 21 / July 2007 (Granite, MGT-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*22
Webb, P.C., Thompson, M., Potts, P.J. and Batjargal, B. (2008)
Geo*PT*22 - an international proficiency test for analytical geochemistry laboratories - report on round 22 / January 2008 (Basalt, MBL-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*23
Webb, P.C., Thompson, M., Potts, P.J., Watson, J.S. and Kriete, C. (2008)
Geo*PT*23 - an international proficiency test for analytical geochemistry laboratories - report on round 23 / September 2008 (Separation Lake pegmatite, OU-9) and 23A (Manganese nodule, FeMn-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*24
Webb, P.C., Thompson, M., Potts, P.J. and Watson, J.S. (2009)
Geo*PT*24 - an international proficiency test for analytical geochemistry laboratories - report on round 24 / January 2009 (Longmyndian greywacke, OU-10). International Association of Geoanalysts: Unpublished report.

Geo*PT*25
Webb, P.C., Thompson, M., Potts, P.J. and Enzweiler, J. (2009)
Geo*PT*25 - an international proficiency test for analytical geochemistry laboratories - report on round 25 / July 2009 (Basalt, HTP-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*26
Webb, P.C., Thompson, M., Potts, P.J. and Loubser, M. (2010)
Geo*PT*26 - an international proficiency test for analytical geochemistry laboratories - report on round 26 / January 2010 (Ordinary Portland cement, OPC-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*27
Webb, P.C., Thompson, M., Potts, P.J. and Batjargal, B. (2010)
Geo*PT*27 - an international proficiency test for analytical geochemistry laboratories - report on round 27 / July 2010 (Andesite, MGL-AND). International Association of Geoanalysts: Unpublished report.

Geo*PT*28
Webb, P.C., Thompson, M., Potts, P.J. and Wilson, S. (2011)
Geo*PT*28 - an international proficiency test for analytical geochemistry laboratories - report on round 28 / January 2011 (Shale, SBC-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*29
Webb, P.C., Thompson, M., Potts, P.J. and Wilson, S. (2011)
Geo*PT*29 - an international proficiency test for analytical geochemistry laboratories - report on round 29 / July 2011 (Nephelinite, NKT-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*30
Webb, P.C., Thompson, M., Potts, P.J., Long, D. and Batjargal, B. (2012)
Geo*PT*30 - an international proficiency test for analytical geochemistry laboratories - report on round 30 / January 2012 (Syenite, CG-2) and 30A (Limestone, ML-2). International Association of Geoanalysts: Unpublished report.

Geo*PT*31
Webb, P.C., Thompson, M., Potts, P.J and Wilson, S. (2012)
Geo*PT*31 - an international proficiency test for analytical geochemistry laboratories - report on round 31 / July 2012 (Modified river sediment, SdAR-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*32
Webb, P.C., Thompson, M., Potts, P.J and Webber, E. (2013)
Geo*PT*32 - an international proficiency test for analytical geochemistry laboratories - report on round 32 / January 2013 (Woodstock Basalt, WG-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*33
Webb, P.C., Thompson, M., Potts, P.J., Prusisz, B., and Young, K. (2013)
Geo*PT*33 - an international proficiency test for analytical geochemistry laboratories - report on round 33 / July-August 2013 (Ball Clay, DBC-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*34
Webb, P.C., Thompson, M., Potts, P.J and Wilson, S. (2014)
Geo*PT*34 - an international proficiency test for analytical geochemistry laboratories - report on round 34 / January 2014 (Granite, GRI-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*35
Webb, P.C., Thompson, M., Potts, P.J and Wilson, S. (2014)
Geo*PT*35 - an international proficiency test for analytical geochemistry laboratories - report on round 35 / August 2014 (Tonalite, TLM-1). International Association of Geoanalysts: Unpublished report.

Geo*PT*35A
Webb, P.C., Thompson, M., Potts, P.J and Wilson, S. (2014)
Geo*PT*35A - an international proficiency test for analytical geochemistry laboratories - report on round 35A / August 2014 (Metalliferous sediment, SdAR-H1). International Association of Geoanalysts: Unpublished report.

Table 1 - GeoPT36A Contributed data for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code		N3	N4	N7	N8	N9	N10	N12	N13	N14	N15	N16	N17	N18
SiO2	g 100g-1	72.75	73.97	73.27	73.33	73.38		73.88			73.78	73.48	73.66	73.17
TiO2	g 100g-1	0.3	0.297	0.294	0.3	0.304		0.276	0.45	0.28	0.29	0.296	0.306	0.288
Al2O3	g 100g-1	12.23	12.58	12.395	12.57	12.34		12.81	13.57		12.4	12.45	12.48	12.9
Fe2O3T	g 100g-1	2.52	2.602	2.588	2.64	2.71		2.595	2.93		2.6	2.62	2.56	2.771
Fe(II)O	g 100g-1				0.889									
MnO	g 100g-1	0.14	0.134	0.133	0.13	0.139		0.132	0.14	0.128	0.131	0.139	0.128	0.142
MgO	g 100g-1	0.46	0.505	0.47	0.53	0.49		0.480	0.52		0.47	0.5	0.458	0.486
CaO	g 100g-1	0.84	0.825	0.833	0.83	0.85		0.844	0.84		0.81	0.841	0.868	0.811
Na2O	g 100g-1	2.48	2.5	2.66	2.63	2.68		2.485	1.69		2.58	2.53	2.69	2.638
K2O	g 100g-1	5.02	5.014	5.054	5.01	5.07		5.01	4.96		4.95	4.87	4.92	5.266
P2O5	g 100g-1	0.07	0.072	0.073	0.08	0.089		0.072			0.074	0.076	0.072	0.079
H2O+	g 100g-1													
CO2	g 100g-1								1.15					
LOI	g 100g-1	1.89	1.521	1.58		1.63		1.405			1.53	1.65	1.71	
Ag	mg kg-1	14.9	17.2		18.742			13.54				14.5	21	16.08
As	mg kg-1	85	57		83.864	94		135	64.9			100	84	79.6
Au	mg kg-1													0.219
B	mg kg-1											13.6	18	
Ba	mg kg-1	1031	912	1040	974	990		1017	1054	995.6	967.360	1040	981	981.7
Be	mg kg-1	6.49	8.3		6.137			4.337				2.4	5.8	6.4
Bi	mg kg-1	2.6	0.955		1.017			0.804	1.06				0.95	
Br	mg kg-1	1.5												
C(org)	mg kg-1													
C(tot)	mg kg-1										2890			
Cd	mg kg-1	5.22	4.98		5.272			4.148	4			4.3		5.133
Ce	mg kg-1	100	93.54		104.549			99.88	107.5	101.150		100.4	97	98.47
Cl	mg kg-1				93									
Co	mg kg-1	11.5	10		13.639	28		12.48	14.5	11.58		11.3	12.3	12.2
Cr	mg kg-1	59.6	52.79		62.413	42		49.12		36.02		54	46	51.47
Cs	mg kg-1		2		1.834			2.016	1.58	1.734		1.3	1.66	1.747
Cu	mg kg-1	238	293		231	202	242	175.3	284	212.4		230	244	243.7
Dy	mg kg-1	5.97	5.14		6.118			6.05	6.76	5.84			6.2	5.56
Er	mg kg-1	3.79	3.029		3.814			3.711	4.22	3.33			3.73	3.5
Eu	mg kg-1	1.37	1.495		1.453			1.294	1.57	1.288			1.48	1.377
F	mg kg-1				717								700	
Ga	mg kg-1	15.9	20.81		19.695	19		18.38		18.04		17.5	17	18.3
Gd	mg kg-1	6.23	5.356		6.404			6.268	6.7	6.39			6.9	7.49
Ge	mg kg-1				1.555			2.065					1.3	
Hf	mg kg-1	10.8	6.78		7.984			7.709	9.4	7.53			8.6	7.253
Hg	mg kg-1											1.319	1.51	1.643
Ho	mg kg-1	1.22	1.033		1.244			1.191		1.157			1.21	1.363
I	mg kg-1											1		
In	mg kg-1							1.509	2.07			1.5		
La	mg kg-1	47.1	48.42		48.837			46.96	50.5	47.47		45.1	42	45.67
Li	mg kg-1	10.15	16.8					16.41				17.7	19	19.5
Lu	mg kg-1	0.55	0.522		0.543			0.482	0.65	0.486			0.53	0.522
Mo	mg kg-1	14.2	13.1		13.622	14		19.03	19			12	18	12.77
N	mg kg-1													
Nb	mg kg-1	25.5	25.7		28.686	25.5		24.81	29.3	28.4		27	29	23.67
Nd	mg kg-1	39.7	36.69		40.905			38.87	46	39.76		41.5	40	39.97
Ni	mg kg-1	46.8	34.45		50.523	56	52.9	48.57	180	48.14		48.6	57	40.7
Pb	mg kg-1	816	708		821	825	761	914.2	870	789.7		810	999	813
Pr	mg kg-1	10.9	9.8		11.325			10.52	11.72	11.13			10.1	
Rb	mg kg-1	142	160		137	153		150.6	152.4	149.170		144	152	141.7
Re	mg kg-1							0.005						
S	mg kg-1			900	13735	543			1264.500		1180			1100
Sb	mg kg-1	113	123		115.027			70.35	132.5				110	115
Sc	mg kg-1	5.4	5.66		4.322	3		3.49	6.78	3.66			3.7	3.873
Se	mg kg-1	6.83						3.161						3.86
Sm	mg kg-1	6.98	6.971		7.457			7.037	8.6	7.23			7.2	7.29
Sn	mg kg-1				2.378			3.616	5.01			1.8	3.5	
Sr	mg kg-1	137.6	131	150	144	149	385	136.9	160	142.440		140.5	149	142
Ta	mg kg-1		2.29					1.538	1.71	1.748			2.16	1.877
Tb	mg kg-1	1	0.833		0.929			0.909	1.04	1.005			0.99	0.99
Te	mg kg-1							2.442				2.6		
Th	mg kg-1	17.6	13.65		14.173	21		14.7	16.18	14.65		16	16.6	14.07
Tl	mg kg-1	3.04	2.6					2.292					2.72	3.017
Tm	mg kg-1	0.54	0.513					0.54	0.68	0.527			0.53	0.493
U	mg kg-1	2.79	2.381		2.581	3		2.338	3.13	2.43			1.8	2.573
V	mg kg-1	27.5	25.66		27.548	25	45.3	26.7	51.6	23.66		28	18	24.77
W	mg kg-1		3.04		3.315			3.391	8.6				3.3	3.697
Y	mg kg-1	31.9	33.33		35.142	32.1		32	38.3	31.91		34	29	31.77
Yb	mg kg-1	3.69	0.48		3.689			3.233	4.64	3.33			3.76	3.603
Zn	mg kg-1	797	752	800	766	703	796	640.5	784	640.9	779.3	767	760	789.7
Zr	mg kg-1	246	257		252	265		289.6	321	298.540	259.110	261	242	266.7

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

Table 1 - GeoPT36A Contributed data for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code		N19	N21	N22	N23	N24	N25	N26	N27	N29	N30	N31	N32	N34
SiO2	g 100g^{-1}	73.5	**74.27**	74.594	72	73.262	73.8	71.012	74.6	73.6	**67.4**	73.26	**71.74**	73.28
TiO2	g 100g^{-1}	0.302	**0.3**	0.308	0.305	0.296	0.295	0.288	0.31	0.3	**0.277**	0.293	**0.3**	0.31
Al2O3	g 100g^{-1}	12.6	**12.78**	12.428	12.56	12.332	12.4	12.395	12.6	12.5	**11**	12.74	**12.91**	12.48
Fe2O3T	g 100g^{-1}	2.6	**2.6**	2.672	2.54	2.629	2.61	2.608	2.64	2.6	**2.51**	2.55	**2.91**	2.68
Fe(II)O	g 100g^{-1}													
MnO	g 100g^{-1}	0.135	**0.135**	0.142	0.135	0.118		0.139	0.14	0.13	**0.132**	0.129	**0.13**	0.14
MgO	g 100g^{-1}	0.466	**0.35**	0.489	0.463	0.505		0.427	0.5	0.43	**0.62**	0.44	**0.6**	0.44
CaO	g 100g^{-1}	0.825	**0.82**	0.838	0.94	0.845	0.796	0.854	0.84	0.73	**0.84**	0.79	**1.11**	0.84
Na2O	g 100g^{-1}	2.53	**2.55**	2.513	2.68	2.612	2.54	2.561	2.61	2.3	**1.3**	2.56	**2.45**	2.66
K2O	g 100g^{-1}	5.06	**4.83**	4.892	5.34	5.036	4.93	5.148	5.02	5.01	**4.9**	4.86	**4.82**	5.23
P2O5	g 100g^{-1}	0.079	**0.081**		0.07	0.079		0.082	0.07	0.07	**0.066**	0.07	**0.07**	0.08
H2O+	g 100g^{-1}			1.38										
CO2	g 100g^{-1}				1.099									
LOI	g 100g^{-1}		**1.34**	1.8		1.44	1.52	1.671	2.14	1.49		1.78	**1.84**	1.68
Ag	mg kg^{-1}							14.74	10		**39.1**	20.4		
As	mg kg^{-1}		**58**			100	54.1	80.39	78.8		**76.7**		**80**	74
Au	mg kg^{-1}													
B	mg kg^{-1}							10.26						
Ba	mg kg^{-1}		**920**	970.6	1033	1002		116.5	892	940	**1119**	952	**958**	979
Be	mg kg^{-1}			6.5				5.32						
Bi	mg kg^{-1}											1.05		
Br	mg kg^{-1}												**3**	
C(org)	mg kg^{-1}			2396										
C(tot)	mg kg^{-1}			4270					2900					
Cd	mg kg^{-1}							6.81			**14.6**	5.81		
Ce	mg kg^{-1}		**80**	92.89		105		91.7	97.7		**103.8**	101.2	**75**	
Cl	mg kg^{-1}												**65**	
Co	mg kg^{-1}		**12**	12.49				12.85	12.5			11	**5**	12
Cr	mg kg^{-1}		**48**	51.7		54	52	11.01	63		**41.9**		**53**	86
Cs	mg kg^{-1}		**6.9**	1.48					1.93		**15.8**	1.78		
Cu	mg kg^{-1}		**220**	235.5	233	238	200	236.9	237		**228.8**	231	**225**	216
Dy	mg kg^{-1}			5.72				6.11	6.18			6.72		
Er	mg kg^{-1}			3.56				3.99	3.85			4.26		
Eu	mg kg^{-1}			1.36				1.67	1.62			1.83		
F	mg kg^{-1}												**1289**	
Ga	mg kg^{-1}		**20**	17.63		17		17.4	17		**15.3**	18.67	**18**	16
Gd	mg kg^{-1}							6.3	7.24			8.23	**4**	
Ge	mg kg^{-1}		**1.3**										**2**	
Hf	mg kg^{-1}		**9.9**	6.27					7.2		**13.9**		**7**	
Hg	mg kg^{-1}							1.65						
Ho	mg kg^{-1}			1.16				1.25	1.4			1.34		
I	mg kg^{-1}													
In	mg kg^{-1}													
La	mg kg^{-1}		**37**	44.01	47	53		41.64	49.7			46.78	**50**	
Li	mg kg^{-1}							14.18						
Lu	mg kg^{-1}			0.52				0.56	0.58			0.54		
Mo	mg kg^{-1}		**14**	13.24				13.45	15		**9.8**			
N	mg kg^{-1}			1298										
Nb	mg kg^{-1}		**27**	24.1		26		1.91	29.9				**36**	25
Nd	mg kg^{-1}		**39**	36.56				36.29	42.4			41.52	**35**	
Ni	mg kg^{-1}		**46**	49.1	48	50	51.9	44.89	52		**45.4**		**54**	49
Pb	mg kg^{-1}		**775**	791.790		818	843	884.7	791		**752.4**	799	**763**	789
Pr	mg kg^{-1}							9.78	11.9			11.02		
Rb	mg kg^{-1}		**140**	144.020		152		157	144	150	**137.7**	155.450	**155**	143
Re	mg kg^{-1}													
S	mg kg^{-1}			1867	1000				800		**1122**		**714**	
Sb	mg kg^{-1}						88.7	98.6			**142.4**			90
Sc	mg kg^{-1}		**4.3**	3.9		4		3.48					**5**	
Se	mg kg^{-1}		**2**								**0.45**			
Sm	mg kg^{-1}			6.65				6.67	7.42			7.37		
Sn	mg kg^{-1}			2.41				1.52	2		**6.2**			
Sr	mg kg^{-1}		**138**	142.4		147	141	21.32	135	140	**130.9**	139	**151**	142
Ta	mg kg^{-1}		**2.6**	1.49					1.8					
Tb	mg kg^{-1}			0.96				1.01	1.18			1.09		
Te	mg kg^{-1}										**28.6**			
Th	mg kg^{-1}		**13**	12.74		15		15.17	14.6		**30.8**	15.55		10
Tl	mg kg^{-1}			2.47					2.6		**4.5**			
Tm	mg kg^{-1}			0.52				0.59	0.6			0.57		
U	mg kg^{-1}			2.4		2		2.82	2.68					
V	mg kg^{-1}		**25**	26.7	24	24		17.74	29		**24.7**	30	**33**	23
W	mg kg^{-1}			2.97					3					
Y	mg kg^{-1}		**31**	36.6	35	30		34.84	32.8		**30.5**	33.33	**36**	34
Yb	mg kg^{-1}		**3.2**	3.51				3.89	3.8			3.85		
Zn	mg kg^{-1}		**731**	835	785	716	778	716.2	737		**752.8**	779	**728**	758
Zr	mg kg^{-1}		**245**	229.580	212	263			235	250	**242.6**	272	**238**	257

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

Table 1 - GeoPT36A Contributed data for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code		N35	N36	N38	N43	N44	N45	N46	N47	N48	N50	N51	N53	N55
SiO2	g 100g-1	74.38		73.6	73.08		73.3	73.6	73.73	73.33	73.276	73.5	73.44	
TiO2	g 100g-1	0.297		0.32	0.296	0.313	0.293	0.258	0.3	0.295	0.308	0.3	0.29	
Al2O3	g 100g-1	12.87	11.49	12.83	12.394	12.89	12.513	12	12.48	12.507	12.798	12.65	12.44	
Fe2O3T	g 100g-1	2.62	2.404	2.83	2.71	2.835	2.651	2.68	2.66	2.607	2.646	2.61	2.63	
Fe(II)O	g 100g-1				0.892				0.9					
MnO	g 100g-1	0.139	0.141	0.14	0.129	0.137	0.137	0.126	0.14	0.134	0.141	0.13	0.13	
MgO	g 100g-1	0.482	0.405	0.55	0.581	0.501	0.544	0.543	0.5	0.520	0.555	0.46	0.51	
CaO	g 100g-1	0.882	0.792	0.96	0.937	0.792	0.807	0.819	0.86	0.842	0.829	0.84	0.82	
Na2O	g 100g-1	2.62	2.309	2.56	2.681	3.096	2.609	3.16	2.49	2.520	2.699	2.59	2.61	
K2O	g 100g-1	5.09	4.499	5.32	4.886	5.215	4.99	4.28	4.98	4.947	4.993	5.01	4.98	
P2O5	g 100g-1	0.077		0.08	0.083	0.087	0.075	0.080	0.08	0.075	0.083	0.08	0.08	
H2O+	g 100g-1				1.348									
CO2	g 100g-1		0.918		0.095									
LOI	g 100g-1	0.428		1.41	1.695		1.636	1.85		1.557	1.56	1.87	1.67	1.6
Ag	mg kg-1					19.1				17.51				
As	mg kg-1					86.7				80.62		12		
Au	mg kg-1													
B	mg kg-1					27.73								
Ba	mg kg-1		1051.554	1205.200		1047		1000	968	966.010	959	956	1005	1137
Be	mg kg-1		6.615	6.6	6.01	7.216							7.15	
Bi	mg kg-1		1			1.14								
Br	mg kg-1													
C(org)	mg kg-1				3010									
C(tot)	mg kg-1		2506		3270				0.31					
Cd	mg kg-1		5.031		5.46	5.425								
Ce	mg kg-1		102.032	105.2	100.640	107.8				98.274			98.1	106
Cl	mg kg-1							269						
Co	mg kg-1		11.655	12.8	10.32	13.01			14	14.530	10	21	13	
Cr	mg kg-1		37.012	58.9	51.52	49			63	49.867	70	66	47.6	
Cs	mg kg-1			2.1		1.834							1.84	1.87
Cu	mg kg-1		235.581	198.5	162.880	247		283	283	243.500	248	187	230	
Dy	mg kg-1		6.084	5.9	6.02	6.257							6.04	5.36
Er	mg kg-1		3.708	3.6	3.57	3.827							3.69	3.1
Eu	mg kg-1		1.51	1.4	1.59	1.455							1.44	1.43
F	mg kg-1				747									
Ga	mg kg-1		17.86	16.8	19.69	17.28			28	17.223		7	18	
Gd	mg kg-1		6.337	6.3	6.87	6.222							6.36	5.97
Ge	mg kg-1				2.255								1.5	
Hf	mg kg-1			7.6		7.42							7.35	4.52
Hg	mg kg-1		0.005		1.416									
Ho	mg kg-1		1.214	1.3	1.3	1.196							1.22	1.11
I	mg kg-1													
In	mg kg-1					1.735								
La	mg kg-1		49.512	51.2	48.86	48.94				43.262			47	48.4
Li	mg kg-1		18.689			19.27							18.9	
Lu	mg kg-1		0.576	0.55	0.606	0.595							0.55	0.48
Mo	mg kg-1		12.658	15.5	13.5	15.28				15.013		16		13.9
N	mg kg-1													
Nb	mg kg-1			27.1		28.49			27	28.095	24	22	27.5	30.1
Nd	mg kg-1		41.446	41.2	39.34	40.22				37.588			39.2	40.2
Ni	mg kg-1		46.38	41.4	50.42	49.84		191	45	55.082	54	46	49.9	
Pb	mg kg-1		919.840	722.2	963.450	878		980	834	859.580	821	715	759	1214
Pr	mg kg-1		11.477	11.2	10.79	11.21							10.9	11.1
Rb	mg kg-1		143.362	150.1	149.890	154.5		156	148	152.568	147	148	150	156
Re	mg kg-1													
S	mg kg-1		426		870			1140	1000					
Sb	mg kg-1					113.9				107.131				
Sc	mg kg-1			4.3						3.555		9	4.47	4.08
Se	mg kg-1					2.992				2.452				
Sm	mg kg-1		7.172	7.3	7.1	7.54							7.14	7.23
Sn	mg kg-1			2.5		2.278				3.8				
Sr	mg kg-1		136.806	160.1	149.590	148.1		208	151	147.102	146	134	147	134
Ta	mg kg-1			1.85		1.728							1.63	2.08
Tb	mg kg-1		1.082		1.05	0.952							0.98	0.92
Te	mg kg-1		2.015			1.749								
Th	mg kg-1		14.217	14.96		15.46			10	14.302		14	13.9	13.3
Tl	mg kg-1		3.104	2.59		2.357				3.05				
Tm	mg kg-1		0.571	0.5	0.576	0.579							0.57	0.5
U	mg kg-1		2.124	2.6	2.96	2.609				3.8		6	2.55	2.48
V	mg kg-1		25.09	29.5	4.76	25.6			31	25.920	28	31	25.2	
W	mg kg-1			3.45		3.642				3.886				3.2
Y	mg kg-1		33.626	36.3	32.2	34.99		64.3	29	33.385	35	42	35.8	31
Yb	mg kg-1		3.819	3.6	3.88	3.879							3.7	3.06
Zn	mg kg-1			795.2	675.320	788.1		841	755	746.716	814	749	737	
Zr	mg kg-1			283.5	220.160	238.9		319	275	259.878	242	243	278	150

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

Table 1 - GeoPT36A Contributed data for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code		N56	N57	N58	N59	N61	N62	N64	N65	N66	N67	N68	N70	N72
SiO2	g 100g-1	73.36	73.52	74.46	73.58	73.3	56.29	72.94	74.38			72.17	73	73.9
TiO2	g 100g-1	0.301	0.290	0.299	0.31	0.29	0.27	0.3	0.32	0.298		0.25	0.301	0.3
Al2O3	g 100g-1	12.45	12.438	12.77	12.5	12.45	9.83	12.44	12.68			12.35	12.4	12.6
Fe2O3T	g 100g-1	2.58	2.517	2.65	2.63	2.6	2.46	2.65	2.68			2.97	2.6	2.59
Fe(II)O	g 100g-1				0.76									
MnO	g 100g-1	0.137	0.129	0.13	0.134	0.14	0.14	0.13	0.15	0.134		0.15	0.133	0.13
MgO	g 100g-1	0.49	0.505	0.499	0.47	0.48	0.31	0.51	0.38			0.48	0.451	0.47
CaO	g 100g-1	0.85	0.841	0.865	0.85	0.82	0.83	0.82	0.86			0.88	0.823	0.85
Na2O	g 100g-1	2.58	2.598	2.548	2.55	2.59	1.76	2.68	2.64			2.26	2.59	2.54
K2O	g 100g-1	4.98	4.983	5.118	5.04	4.98	4.86	4.94	5.29			4.82	4.95	4.95
P2O5	g 100g-1	0.079	0.087	0.072	0.08	0.08	0.04	0.07	0.07			0.09	0.078	0.08
H2O+	g 100g-1													
CO2	g 100g-1	0.24												
LOI	g 100g-1	1.6	1.61	1.765	1.73	1.52		1.58	1.51		1.648	1.87	1.58	
Ag	mg kg-1	10						10			12.3	22.85		
As	mg kg-1	85	106.7		82		73	60			74.4	72.85	86	
Au	mg kg-1													
B	mg kg-1													
Ba	mg kg-1	1020	962.5	1078	955	1000		936		995	927.3	677	1000	
Be	mg kg-1		6.7							6.68		6.72		
Bi	mg kg-1		1.046							1.1	1			
Br	mg kg-1	2												
C(org)	mg kg-1	2697											3510	
C(tot)	mg kg-1	3351		2831									2520	
Cd	mg kg-1		4.218								4.2	8.3		
Ce	mg kg-1	97	79.34		74	90.9		97		102	89.6	101.5	73	
Cl	mg kg-1													
Co	mg kg-1	14	10.4		10		2	13		12.3	13.4	8.98	11.1	
Cr	mg kg-1	57	51.34	30	52	50	5	47		53.1	46.9	28.6	45.5	
Cs	mg kg-1		1.7			1.75				1.76	1.5			
Cu	mg kg-1	242	200.8	236	211		212	198		240	216.5	242	232	
Dy	mg kg-1		4.885			5.91				5.7		6.88		
Er	mg kg-1		3.141			3.42				3.31		3.87		
Eu	mg kg-1		1.248			1.32				1.31		1.35		
F	mg kg-1			1328										
Ga	mg kg-1	18	17.42		14	16.8		17		18.2	15.9		19.9	
Gd	mg kg-1		5.131			6.04				5.53		6.59		
Ge	mg kg-1										1.1			
Hf	mg kg-1	7	7.731			7		8		7.8	5.6		6.4	
Hg	mg kg-1		1.226											
Ho	mg kg-1		0.989			1.27				1.15		1.425		
I	mg kg-1										0.9			
In	mg kg-1										2.8			
La	mg kg-1	44	37.07		52	43.5		52		48.6	43.5	54.6	37	
Li	mg kg-1		18.43				32			17.7		22.5		
Lu	mg kg-1		0.495			0.53				0.56		0.57		
Mo	mg kg-1	8	13.14					11		12.7	12.7	16.5	13.1	
N	mg kg-1													
Nb	mg kg-1	27	29.27		23	24.1		25		28.3	24.3		25.3	
Nd	mg kg-1	36	32.51		32	38.2		32		40.4	39.7	41.4	40	
Ni	mg kg-1	48	41.3	50	50		37	43		50.9	45.2	46	51.7	
Pb	mg kg-1	820	713	913	829		789	759		832	790.6	580	834	
Pr	mg kg-1	10	8.547			9.91				11.1		10.72		
Rb	mg kg-1	156	150.7		145	141.5		148		151	145.8	147	150	
Re	mg kg-1													
S	mg kg-1	770		811									936	
Sb	mg kg-1	70					47	93			94.9	101	99	
Sc	mg kg-1	8	2.575					9		3.74	6.7	4.42		
Se	mg kg-1	2									2.5	2.14		
Sm	mg kg-1	6	6.077			7.27		5		7.46	6.7	7.24		
Sn	mg kg-1	5	1.388							2.24	1.1			
Sr	mg kg-1	150	135.9		146	138.5	96	144		149	141.4	156	151	
Ta	mg kg-1	5	1.37			1.6				1.75	1.2		8.6	
Tb	mg kg-1		0.796			0.97				0.92		1.14		
Te	mg kg-1										1.2			
Th	mg kg-1	17	11.75		16	12.3		12		14.7	13.6		13.1	
Tl	mg kg-1	1.3								3.05	3			
Tm	mg kg-1		0.458			0.53				0.56		0.58		
U	mg kg-1	1.5	2.325			2.52		3		2.66	1.1		7.4	
V	mg kg-1	25	21.67	26	23	25	18.6	25		24.9	24	19.95	28.3	
W	mg kg-1	9	3.305			4		11			43	4.88		
Y	mg kg-1	27	29.95			30.5		34		36	32.4	30.1	35.7	
Yb	mg kg-1		3.366			3.4				3.77	3.7	3.69		
Zn	mg kg-1	774	740.1	977	769		684	720		794	742.1	789	745	
Zr	mg kg-1	252	283.3		271	271		260		284	250.4	205	277	

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

Table 1 - GeoPT36A Contributed data for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code		N73	N74	N75	N78	N79	N80	N81	N84	N86	N88	N89	N90	N91
SiO2	g 100g-1		73.027	73.46	73.23	73.21	69.15			71.849	72.86	76.49	73.5	73.32
TiO2	g 100g-1	0.036	0.261	0.3	0.38	0.31	0.29		0.299	0.285	0.302	0.3	0.3	0.306
Al2O3	g 100g-1	1.113	12.272	12.08	12.29	12.62	12.07		12.338	12.576	12.3	12.3	12.42	12.47
Fe2O3T	g 100g-1	1.63	2.711	2.63	2.55	2.69	2.59		2.545	2.725	2.688	2.65	2.636	2.53
Fe(II)O	g 100g-1					0.54							1.137	
MnO	g 100g-1	0.118	0.131	0.132	0.12	0.14	0.14		0.136	0.148	0.139	0.12	0.113	0.13
MgO	g 100g-1	0.318	0.526	0.56	0.59	0.52	0.57		0.348	0.428	0.484	0.48	0.431	0.43
CaO	g 100g-1	0.338	0.855	0.76	0.8	0.82	0.9		0.798	0.787	0.831	0.85	0.853	0.81
Na2O	g 100g-1	0.063	2.533	2.61	2.55	2.42	2.44		2.588	2.774	2.51	2.56	2.598	2.68
K2O	g 100g-1	0.24	4.985	4.89	5.15	5	5.2		4.891	5.168	5	4.77	5.032	4.96
P2O5	g 100g-1	0.058	0.069	0.094	0.071	0.08	0.09			0.087	0.070	0.081	0.077	0.081
H2O+	g 100g-1											1.45	1	
CO2	g 100g-1												0.137	
LOI	g 100g-1		1.675	1.66	1.54	1.66				1.59			1.656	
Ag	mg kg-1	2.56						17.65	15.83				17.4	
As	mg kg-1	42.38				46.3		49.5	80.6		90.65	70	72.01	72
Au	mg kg-1								0.616					
B	mg kg-1	8.12												
Ba	mg kg-1	59.99	932	1007		939	967.4	995.7	990		1026	906	1010	
Be	mg kg-1	2.61		6.1		6.59					7.281		6.63	
Bi	mg kg-1	0.55		1.1		1.15		1.187				1.05	1.2	
Br	mg kg-1													
C(org)	mg kg-1													
C(tot)	mg kg-1				2980	3200							2870	
Cd	mg kg-1	2.77		5.11		3.28						4.74	5.147	
Ce	mg kg-1	81		106		103	98.65	97.83	102		115	85.5	100.440	
Cl	mg kg-1			145									162.3	
Co	mg kg-1	3.85	9	12		11.7	16	13.11	12.23		13.21	11.8	12.12	
Cr	mg kg-1	5	12	44		51.7	51	21.88	53		40.43	48	53.8	47
Cs	mg kg-1			1.9		1.85	1.751	1.817	1.38		2.024	1.63	2.11	
Cu	mg kg-1	122.690	167	241		252	265	240.8			244.3		236	240
Dy	mg kg-1	1.58		4.9		5.84	5.363	5.304	6.57		5.829	5.67	5.837	
Er	mg kg-1	0.85		2.78		3.59	3.255	3.27			3.438	3.52	3.571	
Eu	mg kg-1	0.28		1.57		1.52	1.511	1.675	1.314		1.574	1.38	1.389	
F	mg kg-1		710	662									712.3	
Ga	mg kg-1		16	17.7		16.6	21				16.48		17.7	17
Gd	mg kg-1	2.7		6.3		7.12	5.901	5.248			6.247	6.3	5.936	
Ge	mg kg-1	0.02				1.42						1.4	1.6	
Hf	mg kg-1					6.85	4.445	6.541	7.54		5.523	5.8	7.9	
Hg	mg kg-1			1.57					1.3				1.39	
Ho	mg kg-1	0.3		0.95		1.24	1.1	1.101			1.14	1.13	1.179	
I	mg kg-1													
In	mg kg-1					2.26			2.03				2.39	
La	mg kg-1	38		49.6		46.8	45.47	43.66	45.87		52.65		45.55	66
Li	mg kg-1	7.19	17	16.2		15.2					20.78	17.7	15.6	
Lu	mg kg-1	0.1		0.41		0.54	0.469	0.457	0.527		0.507	0.51	0.595	
Mo	mg kg-1	7.19		13.5		8.05		14.54			14.52		12.58	
N	mg kg-1													
Nb	mg kg-1	1.65		26.4		28.3	24.81	25.23			28.35	24.8	25.2	27
Nd	mg kg-1	16.11		41.6		39.1	38.45	42.25	32		44.18	36	38.55	
Ni	mg kg-1	23.86	51	47.4		52.8	51	49.4			49.48	45.6	43.7	47
Pb	mg kg-1	455.050	729	826		820	846.1	800.1			954.9	719	770	792
Pr	mg kg-1	4.69		11.5		11.1	10.41	11.2			12.2	10.1	11.061	
Rb	mg kg-1	15		138		152	149.9	147.8	148		138.3	136	154.470	147
Re	mg kg-1													
S	mg kg-1			1178		916							880	
Sb	mg kg-1			110		67.1		111.2	106			87	114.670	
Sc	mg kg-1	0.9		3.93			4.936	3.963	3.937		4.381			
Se	mg kg-1	1.83				0.2							3	
Sm	mg kg-1	2.87		7.35		7.03	6.871	7.537	6.85		7.794	6.5	6.89	
Sn	mg kg-1	0.14		2		2.28		2.55			2.347	2.1	2.5	
Sr	mg kg-1	17	155	132		157	142.5	147.6			141.6	135	148	145
Ta	mg kg-1			1.7		1.73		2.072	1.6		2.464		1.77	
Tb	mg kg-1	0.32		0.9		1.07	0.914	0.915	0.814		0.956	0.92	0.983	
Te	mg kg-1			2									1.722	
Th	mg kg-1	6.08		15.9		14.4	15.57	15.25	14.04		16.21	12.5	14.02	13
Tl	mg kg-1	1.11		3.04		3.11		3.022			3.48	2.7	2.65	
Tm	mg kg-1	0.11		0.41		0.54	0.494	0.468			0.510	0.51	0.562	
U	mg kg-1	0.69		2.4		2.46	2.458	2.555	1.93		2.773	2.53	2.56	4
V	mg kg-1	9				22.9	29	24.99	25.1		26.48	23.3	26	27
W	mg kg-1	0.1				2.66		3.455	3.7		4.212	2.6	3.5	
Y	mg kg-1	13	29			33.3	29.14	26.25			28.66		31.83	35
Yb	mg kg-1	0.7		2.9		3.66	3.326	3.158	3.39		3.365	3.34	3.63	
Zn	mg kg-1	379.510	700	771		863	817	695.8	780		820.6		763	689
Zr	mg kg-1	2.59	277	279		233	140.7	204.5	220		260.9		4.99	236

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

Table 1 - GeoPT36A Contributed data for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code		N93	N94	N95	N96	N97	N98	N100	N101	N102	N103	N105	N107	N108
SiO2	g 100g-1		73.54	74.46	74.76	73.57	86.69	74.36	73.66	73.48		62.78	73.64	
TiO2	g 100g-1	0.3	0.29	0.3	0.31	0.29	0.28	0.3	0.29	0.31	0.3	0.299	0.33	0.266
Al2O3	g 100g-1		12.38	12.67	12.94	12.54	2.92	12.57	12.21	12.47		10.68	12.15	
Fe2O3T	g 100g-1	2.67	2.62	2.56	2.67	2.63	12.04	2.69	2.59	2.92		2.273	2.63	2.562
Fe(II)O	g 100g-1							1.06						
MnO	g 100g-1	0.13	0.13	0.121	0.13	0.142	0.22	0.139	0.14	0.13	0.135	0.117	0.119	0.127
MgO	g 100g-1		0.5	0.5	0.52	0.52	0.95	0.5	0.47	0.54			0.52	
CaO	g 100g-1		0.83	0.86	0.85	0.823	1.56	0.87	0.85	0.92		1.39	0.95	
Na2O	g 100g-1		2.58	2.7	2.57	2.6	1.84	2.65	2.65	2.66			2.69	
K2O	g 100g-1		5.02	4.84	5.15	5	4.24	5.08	4.97	5.02		5.24	5.1	
P2O5	g 100g-1	0.08	0.084	0.085	0.08	0.075	0.14	0.05	0.06	0.09			0.06	
H2O+	g 100g-1							0.96						
CO2	g 100g-1					1.11						1.1		
LOI	g 100g-1		1.34	1.78	1.3	1.65		1.64	1.7	1.58			1.49	
Ag	mg kg-1	12.8	14.8	18.24		14	18.6		16.2				7	
As	mg kg-1	72.2	84	89.37		81.4	27.81	89.97	65.1	65		62.1	70.7	67.6
Au	mg kg-1													
B	mg kg-1							20						
Ba	mg kg-1	1011	1019	987	984	1031		975.7	920	1012	1003	750	941.6	890.4
Be	mg kg-1	6.05		6.55		6.74		6.834			6.67			
Bi	mg kg-1		1.02			1.04		1.045	1.5		1.1		2.4	1.14
Br	mg kg-1								0.6				0.8	
C(org)	mg kg-1			2099				1578						
C(tot)	mg kg-1		0.3	3254				2587					2680	
Cd	mg kg-1	5.33	5.1	5.1		5.04		5.028	4.1			5.3	4.6	
Ce	mg kg-1	98.9	100	104		98.86	86.62	98.48	86.4	108	102	73.9	61.3	94.501
Cl	mg kg-1			149				89	12.1					
Co	mg kg-1	12.7	12.8	11.23	19	13.29	17.1	12.9	11.1	11	12.4		17.2	6.1
Cr	mg kg-1	49.6	42.2	50.35	49	57	36.23	59.7	41.8		52		47.7	35
Cs	mg kg-1	1.86	1.8			1.86	9.97	1.638			1.76			1.791
Cu	mg kg-1	243	242.1	239	169	249.8	273.4	227.1	193.3	229	243	207	203.6	216
Dy	mg kg-1	5.93	5.9	6.24		6.06		5.828			5.63			5.576
Er	mg kg-1	3.6	4.1	3.85		3.8		3.371			3.26			3.308
Eu	mg kg-1	1.47	1.5	1.47		1.44		1.394			1.29			1.376
F	mg kg-1							693	1554					
Ga	mg kg-1	18	17.6		41	17.83	16.59	18.86	16.7	17	18.3		16.1	16
Gd	mg kg-1	6.59	5.9	6.54		5.98		5.65			5.44			5.602
Ge	mg kg-1		1.2					1.591	2.3					
Hf	mg kg-1	7.33	6.9	7.29		6.72		7.24	6.6		7.73		6.6	7.408
Hg	mg kg-1		1.4			1.5		1.3					2.06	
Ho	mg kg-1	1.21	1.2	1.24		1.24		1.229			1.13			1.163
I	mg kg-1													
In	mg kg-1		2.22			2.13		1.99						
La	mg kg-1	45	46.4	47.2	40	46.32	4.26	46.02	42.3		48.6	40	41.9	44.684
Li	mg kg-1	16.6	19	17.92		18		18.5			17.7			
Lu	mg kg-1	0.56	0.5	0.56		0.55		0.53			0.56			0.503
Mo	mg kg-1	15.8	13	12.66		15.12		13.02	11.7		13		12.3	13.8
N	mg kg-1													
Nb	mg kg-1	27.9	27	24.66	30	27.29	11.72	21.52	25.5	26	28.3	19	23.7	24.2
Nd	mg kg-1	39.5	40.9	39.91		40.02	5.08	38.44	33.6		40.2	28.3	24.1	36.892
Ni	mg kg-1	44.2	47	48.25	71	49.4	63.75	51.68	43.9	46	51.1	48.9	44.1	46.1
Pb	mg kg-1	762	787	806	1202	809.9	119.390	845.8	755.9	801	838	716	735.7	763.3
Pr	mg kg-1	10.6	10.9	10.82		10.95		10.75			11	12.8		9.978
Rb	mg kg-1	150	152.8	133	155	156.840	139.690	160	142.4	154	151	133	141.4	146.8
Re	mg kg-1													
S	mg kg-1		1008	953	2400	930		972	661	1140		783	910	
Sb	mg kg-1		103.4	113		115.9		108.7	95.1	112			100.2	90.5
Sc	mg kg-1	4.28	4	3.52		4.6	12.41	4.14	6.5		3.72		3.2	
Se	mg kg-1		4			3.3		3.4	2.4				3	
Sm	mg kg-1	7.01	7.6	7.28		7.19		7.067	5.7		7.51		13.3	6.627
Sn	mg kg-1		2			2.43		2.76			2.25		4.6	
Sr	mg kg-1	145	154.9	142	206	150.9	115.010	142.7	140.2	146	150	128	139.2	139.8
Ta	mg kg-1	1.55	1.66	1.11		1.8	0.6	1.817	4.9		1.86			1.322
Tb	mg kg-1	1	1	0.99		0.97		0.925			0.9			0.907
Te	mg kg-1		2.2			2.12							2.8	
Th	mg kg-1	13.9	14.4	14.44		14.05		12.46	11.4		14.6	13.5	11.6	14.5
Tl	mg kg-1	2.76	2.9			2.73			2.3		3.05		1.5	2.814
Tm	mg kg-1	0.57	0.6	0.56		0.56		0.505			0.55			0.528
U	mg kg-1	2.63	2.6	2.32		2.69		2.348	1.7		2.65		2.4	2.282
V	mg kg-1	25.3	23	23.96	29	24.3	58.73	23.39	25.3	27	24.9		20.1	23
W	mg kg-1		2.5			3.62		3.616	1.3				2.4	
Y	mg kg-1	32.1	32.3	33.05	58	34.52	0.01	32.57	33.3	35	35.8	27.9	32.5	32.4
Yb	mg kg-1	3.7	3.8	3.84		3.69		3.478	0.4		3.76		3	3.326
Zn	mg kg-1	809	790.5	802	384	726	456.760	797.1	700.2	740	799	679	722.1	668.2
Zr	mg kg-1	268	259	261	307	241	141.960	269.4	252.3	259	282	225	253.3	239.3

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

Table 1 - GeoPT36A Contributed data for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code		N109	N110	N111	N112	N113	N114	-	-	-	-	-	-	-
SiO2	g 100g-1		73.36	73.04	72.9	75.45								
TiO2	g 100g-1		0.301	0.3	0.3	0.321	0.31							
Al2O3	g 100g-1		12.408	12.39	12.6	12.57								
Fe2O3T	g 100g-1		2.671	2.65	2.55	2.82								
Fe(II)O	g 100g-1													
MnO	g 100g-1		0.136	0.13	0.13	0.146	0.14							
MgO	g 100g-1		0.493	0.51	0.45	0.542								
CaO	g 100g-1		0.835	0.91	1.19	0.831								
Na2O	g 100g-1		2.602	2.69	2.67	2.648								
K2O	g 100g-1		5.001	5.03	5.45	5.154								
P2O5	g 100g-1		0.079		0.09	0.077								
H2O+	g 100g-1				0.85									
CO2	g 100g-1				0.33									
LOI	g 100g-1		1.563	1.52	1.4	1.75								
Ag	mg kg-1													
As	mg kg-1			81	91									
Au	mg kg-1													
B	mg kg-1			23										
Ba	mg kg-1	1018	993.6	1038	1033	1134.500	1071							
Be	mg kg-1			7.6	6.77	7.29	6.45							
Bi	mg kg-1													
Br	mg kg-1													
C(org)	mg kg-1													
C(tot)	mg kg-1													
Cd	mg kg-1			6.2										
Ce	mg kg-1	97	102.5	88	98	107.3	101							
Cl	mg kg-1													
Co	mg kg-1	12.8			12.5	13.53	13.3							
Cr	mg kg-1	58.7	54.5	49	47	36.565								
Cs	mg kg-1	1.7	1.78		1.79	2.117	1.9							
Cu	mg kg-1		238	247	231	238.8	246							
Dy	mg kg-1	5.69	6.61		5.85	5.64	6							
Er	mg kg-1	3.37	3.9		3.75	3.27	3.65							
Eu	mg kg-1	1.34	1.55		1.31	1.47	1.71							
F	mg kg-1													
Ga	mg kg-1		16.5		18	17.5	18.5							
Gd	mg kg-1	6.3	6.34		5.98	6.09	6.49							
Ge	mg kg-1													
Hf	mg kg-1	6.9	7.6		7.3	3.71	8.49							
Hg	mg kg-1				1.45									
Ho	mg kg-1	1.21	1.38		1.24	1.148	1.24							
I	mg kg-1													
In	mg kg-1													
La	mg kg-1	44.8	48.16	44	46	53.8	51.6							
Li	mg kg-1			18	18.1	21.07	18.9							
Lu	mg kg-1	0.53	0.56		0.54	0.458	0.56							
Mo	mg kg-1						12.6							
N	mg kg-1													
Nb	mg kg-1	27.5	25.97	27.3	27	32.14								
Nd	mg kg-1	37	40.28		39	41.63	41.9							
Ni	mg kg-1	50	46.78	48	49	53.33	48.5							
Pb	mg kg-1		825.1	846	780	591.170	814							
Pr	mg kg-1	10.3	11.22		11.05	11.44	12.1							
Rb	mg kg-1	143	146.8	150	140	150.5	152							
Re	mg kg-1													
S	mg kg-1													
Sb	mg kg-1			109										
Sc	mg kg-1		3.93	4	3.8	4.36	4.37							
Se	mg kg-1													
Sm	mg kg-1	6.99	7.74		7.1	7.55	7.6							
Sn	mg kg-1													
Sr	mg kg-1	152	148.1	145	152	135.1	148							
Ta	mg kg-1	2.97	1.77		1.67	2.05								
Tb	mg kg-1	0.93	1.06		0.96	0.945	1.11							
Te	mg kg-1													
Th	mg kg-1	13.6	14.76		14.2	14.19	14.4							
Tl	mg kg-1				2.75									
Tm	mg kg-1	0.52	0.59		0.55		0.57							
U	mg kg-1	2.66	2.64		2.43	2.64	2.51							
V	mg kg-1		27.6		28	29.228	26.7							
W	mg kg-1													
Y	mg kg-1	30.3	34.77	32	33	31.82	33.1							
Yb	mg kg-1	3.36	3.66		3.95	3.22	3.79							
Zn	mg kg-1		800	782	720	811.1	756							
Zr	mg kg-1	260	277	260	271	130.1	281							

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

Table 2 - GeoPT36A Assigned values and statistical summary for Metal-rich sediment, SdAR-M2.

	Assigned Value	Uncertainty of assigned value	Horwitz Target Value	Uncertainty/ Target	Number of reported results	Robust Mean of results	Robust SD of results	Median of results	Status of consensus value	Type of consensus value
	X_a	*sdm*	H_a	*sdm*/H_a	*n*					
	g 100g^{-1}	g 100g^{-1}	g 100g^{-1}			g 100g^{-1}	g 100g^{-1}	g 100g^{-1}		
SiO2	73.45	0.08325	0.7695	0.1082	68	73.45	0.6865	73.45	Assigned	Robust Mean
TiO2	0.3	0.001058	0.007192	0.1471	78	0.2983	0.00934	0.3	Assigned	Median
Al2O3	12.47	0.02758	0.1706	0.1617	73	12.47	0.2356	12.45	Assigned	Robust Mean
Fe2O3T	2.63	0.00719	0.04548	0.1581	75	2.629	0.06227	2.63	Assigned	Median
MnO	0.1341	0.0007681	0.00363	0.2116	78	0.1341	0.006784	0.134	Assigned	Robust Mean
MgO	0.4911	0.005806	0.01093	0.5312	71	0.4911	0.04892	0.493	Provisional	Robust Mean
CaO	0.8412	0.00418	0.01727	0.242	73	0.8412	0.03571	0.84	Assigned	Robust Mean
Na2O	2.579	0.01148	0.04472	0.2566	72	2.579	0.09737	2.589	Assigned	Robust Mean
K2O	5	0.01349	0.07849	0.1719	73	5	0.1153	5	Assigned	Robust Mean
P2O5	0.079	0.0009056	0.002315	0.3912	67	0.07746	0.007413	0.079	Provisional	Median
LOI	1.62	0.01783	0.03013	0.5918	56	1.617	0.1334	1.62	Provisional	Median
	mg kg^{-1}	mg kg^{-1}	mg kg^{-1}			mg kg^{-1}	mg kg^{-1}	mg kg^{-1}		
As	75.82	2.16	3.162	0.6833	49	75.82	15.12	78.8	Provisional	Robust Mean
Ba	990	5.982	28.04	0.2133	71	986.9	50.41	990	Assigned	Median
Be	6.6	0.06231	0.3974	0.1568	31	6.528	0.3469	6.6	Assigned	Median
Bi	1.05	0.01483	0.08337	0.1778	25	1.076	0.07413	1.05	Assigned	Median
Cd	5.1	0.09745	0.3192	0.3053	30	5.005	0.5337	5.1	Assigned	Median
Ce	98.75	0.8134	3.957	0.2055	60	97.47	6.3	98.75	Assigned	Median
Co	12.4	0.1708	0.679	0.2516	61	12.28	1.334	12.4	Assigned	Median
Cr	49.6	0.8091	2.205	0.367	65	48.63	6.523	49.6	Assigned	Median
Cs	1.821	0.03028	0.1331	0.2275	41	1.821	0.1939	1.8	Assigned	Robust Mean
Cu	236	1.589	8.294	0.1915	69	230.3	13.2	236	Assigned	Median
Dy	5.877	0.06052	0.3601	0.1681	43	5.877	0.3968	5.9	Assigned	Robust Mean
Er	3.58	0.0549	0.2364	0.2323	42	3.563	0.3558	3.58	Assigned	Median
Eu	1.44	0.01809	0.109	0.1659	43	1.442	0.1186	1.44	Assigned	Median
Ga	17.58	0.177	0.9135	0.1938	56	17.58	1.325	17.55	Assigned	Robust Mean
Gd	6.284	0.07	0.3812	0.1837	42	6.187	0.4537	6.284	Assigned	Median
Ge	1.5	0.07656	0.1129	0.6783	15	1.558	0.2965	1.5	Provisional	Median
Hf	7.29	0.1127	0.4324	0.2607	45	7.223	0.7561	7.29	Assigned	Median
Hg	1.436	0.04472	0.1088	0.4111	15	1.436	0.1732	1.416	Assigned	Robust Mean
Ho	1.21	0.01227	0.09404	0.1305	41	1.202	0.07858	1.21	Assigned	Median
In	2.07	0.08493	0.1484	0.5724	11	2.039	0.2817	2.07	Provisional	Median
La	46.59	0.4957	2.09	0.2372	60	46.44	3.84	46.59	Assigned	Median
Li	17.9	0.3486	0.9276	0.3758	31	17.9	1.941	18	Assigned	Robust Mean
Lu	0.54	0.004522	0.04739	0.09542	43	0.5328	0.02965	0.54	Assigned	Median
Mo	13.34	0.181	0.7227	0.2505	44	13.56	1.201	13.34	Assigned	Median
Nb	26.2	0.3441	1.282	0.2684	60	26.26	2.665	26.2	Assigned	Median
Nd	39.42	0.3776	1.814	0.2082	56	38.73	2.826	39.42	Assigned	Median
Ni	48.75	0.4873	2.172	0.2243	70	48.63	4.077	48.75	Assigned	Median
Pb	808	6.734	23.6	0.2854	70	804.6	56.34	808	Assigned	Median
Pr	10.97	0.08293	0.6121	0.1355	42	10.87	0.5374	10.97	Assigned	Median
Rb	149.2	0.8621	5.617	0.1535	69	147.9	7.161	149.2	Assigned	Median
Sb	106.6	2.103	4.221	0.4981	34	103.4	12.26	106.6	Provisional	Median
Sc	4.08	0.08398	0.2641	0.318	45	4.283	0.5634	4.08	Assigned	Median
Sm	7.181	0.05938	0.4269	0.1391	48	7.136	0.4114	7.181	Assigned	Median
Sn	2.362	0.1016	0.166	0.6117	28	2.528	0.5374	2.362	Provisional	Median
Sr	143.9	1.011	5.45	0.1855	73	143.9	8.636	144	Assigned	Robust Mean
Ta	1.76	0.04449	0.1293	0.3441	38	1.82	0.2743	1.76	Assigned	Median
Tb	0.9692	0.01186	0.07788	0.1523	42	0.9692	0.07686	0.965	Assigned	Robust Mean
Th	14.23	0.2013	0.7631	0.2638	59	14.23	1.546	14.22	Assigned	Robust Mean
Tl	2.755	0.07715	0.1892	0.4078	30	2.767	0.4225	2.755	Provisional	Median
Tm	0.5405	0.006681	0.04743	0.1409	40	0.5405	0.04226	0.54	Assigned	Robust Mean
U	2.534	0.04585	0.1762	0.2602	52	2.534	0.3306	2.553	Assigned	Robust Mean
V	25.15	0.3376	1.238	0.2727	66	25.63	2.743	25.15	Assigned	Median
W	3.494	0.1579	0.2315	0.6821	30	3.494	0.8648	3.453	Provisional	Robust Mean
Y	32.74	0.3488	1.549	0.2251	66	32.74	2.833	32.69	Assigned	Robust Mean
Yb	3.63	0.04974	0.2391	0.208	47	3.535	0.341	3.63	Assigned	Median
Zn	760	6.194	22.4	0.2765	71	755.9	52.19	760	Assigned	Median
Zr	259	3.213	8.976	0.3579	69	254	26.69	259	Assigned	Median

Table 3 - GeoPT36A Z-scores for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code	N3	N4	N7	N8	N9	N10	N12	N13	N14	N15	N16	N17	N18
SiO2	-0.91	0.68	-0.12	-0.16	-0.09	*	0.28	*	*	0.43	0.02	0.27	-0.36
TiO2	0.00	-0.38	-0.42	0.00	0.56	*	-1.64	10.43	-2.78	-1.39	-0.28	0.76	-1.67
Al2O3	-1.41	0.65	-0.22	0.59	-0.76	*	1.00	3.22	*	-0.41	-0.06	0.06	2.52
Fe2O3T	-2.42	-0.62	-0.46	0.22	1.76	*	-0.38	3.30	*	-0.66	-0.11	-1.54	3.10
MnO	1.62	-0.12	-0.16	-1.14	1.34	*	-0.33	0.81	-1.69	-0.86	0.67	-0.91	2.17
MgO	*-2.84*	*1.27*	*-0.96*	*3.56*	*-0.10*	*	*-0.53*	*1.32*	*	*-1.93*	*0.41*	*-1.51*	*-0.46*
CaO	-0.07	-0.94	-0.24	-0.65	0.51	*	0.07	-0.04	*	-1.81	-0.01	0.78	-1.75
Na2O	-2.21	-1.77	0.91	1.14	2.26	*	-1.05	-9.94	*	0.02	-0.55	2.48	1.32
K2O	0.25	0.18	0.34	0.13	0.89	*	0.06	-0.25	*	-0.64	-0.83	-1.02	3.39
P2O5	*-3.89*	*-3.07*	*-1.30*	*0.43*	*4.32*	*	*-1.45*	*	*	*-2.16*	*-0.65*	*-3.02*	*0.00*
LOI	*8.96*	*-3.29*	*-0.66*	*	*0.33*	*	*-3.57*	*	*	*-2.99*	*0.50*	*1.49*	*
As	*2.90*	*-5.95*	*	*2.54*	*5.75*	*	*9.36*	*-1.73*	*	*	*3.82*	*1.29*	*1.19*
Ba	1.46	-2.78	0.89	-0.57	0.00	*	0.48	1.14	0.20	-0.81	0.89	-0.16	-0.30
Be	-0.28	4.28	*	-1.17	*	*	-2.85	*	*	*	-5.28	-1.01	-0.50
Bi	9.30	-1.14	*	-0.40	*	*	-1.48	0.06	*	*	*	-0.60	*
Cd	0.38	-0.38	*	0.54	*	*	-1.49	-1.72	*	*	-1.25	*	0.10
Ce	0.31	-1.32	*	1.46	*	*	0.14	1.10	0.61	*	0.21	-0.22	-0.07
Co	-0.66	-3.53	*	1.82	22.98	*	0.06	1.55	-1.21	*	-0.81	-0.07	-0.29
Cr	4.54	1.45	*	5.81	-3.45	*	-0.11	*	-6.16	*	1.00	-0.82	0.85
Cs	*	1.34	*	0.10	*	*	0.73	-0.91	-0.65	*	-1.96	-0.61	-0.56
Cu	0.24	6.87	*	-0.60	-4.10	0.72	-3.66	2.89	-2.85	*	-0.36	0.48	0.93
Dy	0.26	-2.05	*	0.67	*	*	0.24	1.23	-0.10	*	*	0.45	-0.88
Er	0.89	-2.33	*	0.99	*	*	0.28	1.35	-1.06	*	*	0.32	-0.34
Eu	-0.64	0.50	*	0.12	*	*	-0.67	0.60	-1.39	*	*	0.18	-0.58
Ga	-0.92	3.53	*	2.31	1.55	*	0.44	*	0.50	*	-0.04	-0.32	0.79
Gd	-0.14	-2.43	*	0.31	*	*	-0.02	0.55	0.28	*	*	0.81	3.16
Ge	*	*	*	*0.49*	*	*	*2.50*	*	*	*	*	*-0.89*	*
Hf	4.06	-1.18	*	1.60	*	*	0.48	2.44	0.56	*	*	1.51	-0.09
Hg	*	*	*	*	*	*	*	*	*	*	-0.54	0.34	1.90
Ho	0.11	-1.88	*	0.36	*	*	-0.10	*	-0.56	*	*	0.00	1.63
In	*	*	*	*	*	*	*-1.89*	*0.00*	*	*	*-1.92*	*	*
La	0.24	0.88	*	1.07	*	*	0.09	0.94	0.42	*	-0.36	-1.10	-0.44
Li	-8.36	-1.19	*	*	*	*	-0.81	*	*	*	-0.11	1.18	1.72
Lu	0.21	-0.38	*	0.06	*	*	-0.61	1.16	-1.14	*	*	-0.11	-0.38
Mo	1.18	-0.34	*	0.38	0.91	*	3.93	3.91	*	*	-0.93	3.22	-0.80
Nb	-0.27	-0.39	*	1.94	-0.55	*	-0.54	1.21	1.72	*	0.31	1.09	-1.97
Nd	0.15	-1.51	*	0.82	*	*	-0.15	1.81	0.19	*	0.57	0.16	0.30
Ni	-0.90	-6.58	*	0.82	3.34	1.91	-0.04	30.21	-0.28	*	-0.03	1.90	-3.71
Pb	0.17	-4.24	*	0.55	0.72	-1.99	2.25	1.31	-0.77	*	0.04	4.05	0.21
Pr	-0.12	-1.92	*	0.57	*	*	-0.37	0.61	0.25	*	*	-0.71	*
Rb	-0.64	1.93	*	-2.17	0.68	*	0.13	0.29	0.00	*	-0.46	0.25	-1.33
Sb	*1.52*	*3.89*	*	*2.00*	*	*	*-4.29*	*3.07*	*	*	*	*0.41*	*2.00*
Sc	2.50	5.98	*	0.92	-2.04	*	-1.12	5.11	-1.59	*	*	-0.72	-0.78
Sm	-0.47	-0.49	*	0.65	*	*	-0.17	1.66	0.11	*	*	0.02	0.26
Sn	*	*	*	*0.09*	*	*	*3.77*	*7.97*	*	*	*-1.69*	*3.43*	*
Sr	-0.58	-2.38	0.56	0.01	0.93	44.23	-0.65	1.47	-0.28	*	-0.32	0.46	-0.36
Ta	*	4.10	*	*	*	*	-0.86	-0.19	-0.09	*	*	1.55	0.90
Tb	0.40	-1.75	*	-0.52	*	*	-0.39	0.45	0.46	*	*	0.13	0.27
Th	4.42	-0.76	*	-0.07	8.88	*	0.31	1.28	0.55	*	1.16	1.55	-0.21
Tl	*1.51*	*-0.82*	*	*	*	*	*-1.22*	*	*	*	*	*-0.09*	*1.38*
Tm	-0.01	-0.58	*	*	*	*	-0.01	1.47	-0.28	*	*	-0.11	-1.00
U	1.45	-0.87	*	0.27	1.32	*	-0.56	1.69	-0.59	*	*	-2.08	0.22
V	1.90	0.41	*	1.94	-0.12	16.27	0.63	10.68	-1.20	*	1.15	-2.89	-0.31
W	*	*-1.96*	*	*-0.77*	*	*	*-0.22*	*11.03*	*	*	*	*-0.42*	*0.88*
Y	-0.27	0.38	*	1.55	-0.42	*	-0.24	1.79	-0.54	*	0.41	-1.21	-0.63
Yb	0.25	-13.17	*	0.25	*	*	-0.83	2.11	-1.25	*	*	0.27	-0.11
Zn	0.83	-0.36	0.89	0.27	-2.54	1.61	-2.67	0.54	-5.32	0.86	0.16	0.00	1.33
Zr	-0.72	-0.22	*	-0.78	0.67	*	1.70	3.45	4.40	0.01	0.11	-0.95	0.86

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

Table 3 - GeoPT36A Z-scores for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code	N19	N21	N22	N23	N24	N25	N26	N27	N29	N30	N31	N32	N34
SiO2	0.03	**1.07**	0.74	-0.94	-0.12	0.23	-1.58	0.75	0.10	**-7.86**	-0.12	**-2.22**	-0.11
TiO2	0.14	**0.00**	0.56	0.35	-0.28	-0.35	-0.83	0.70	0.00	**-3.20**	-0.49	**0.00**	0.70
Al2O3	0.38	**1.82**	-0.12	0.26	-0.40	-0.20	-0.22	0.38	0.09	**-8.62**	0.79	**2.58**	0.03
Fe2O3T	-0.33	**-0.66**	0.46	-0.99	-0.01	-0.22	-0.24	0.11	-0.33	**-2.64**	-0.88	**6.16**	0.55
MnO	0.12	**0.24**	1.08	0.12	-2.22	*	0.67	0.81	-0.57	**-0.64**	-0.71	**-1.14**	0.81
MgO	*-1.15*	***-12.91***	*-0.09*	*-1.28*	*0.64*	*	*-2.93*	*0.41*	*-2.79*	***11.80***	*-2.34*	***9.97***	*-2.34*
CaO	-0.47	**-1.23**	-0.09	2.86	0.11	-1.31	0.37	-0.04	-3.22	**-0.07**	-1.48	**15.56**	-0.04
Na2O	-0.55	**-0.65**	-0.74	1.13	0.37	-0.44	-0.20	0.35	-3.12	**-28.60**	-0.21	**-2.88**	0.91
K2O	0.38	**-2.17**	-0.69	2.17	0.23	-0.45	0.94	0.13	0.06	**-1.27**	-0.89	**-2.29**	1.47
P2O5	*0.00*	***0.86***	*	*-1.94*	*0.00*	*	*0.65*	*-1.94*	*-1.94*	***-5.44***	*-1.94*	***-3.89***	*0.22*
LOI	*	***-9.29***	*2.99*	*	*-2.99*	*-1.66*	*0.85*	*8.63*	*-2.16*	*	*2.66*	***7.30***	*1.00*
As	*	***-5.64***	*	*	*3.82*	*-3.44*	*0.72*	*0.47*	*	***0.28***	*	***1.32***	*-0.29*
Ba	*	**-2.50**	-0.35	0.77	0.21	*	-15.58	-1.75	-0.89	**4.60**	-0.68	**-1.14**	-0.20
Be	*	*	-0.13	*	*	*	-1.61	*	*	*	*	*	*
Bi	*	*	*	*	*	*	*	*	*	*	0.00	*	*
Cd	*	*	*	*	*	*	2.68	*	*	**29.76**	1.11	*	*
Ce	*	**-4.74**	-0.74	*	0.79	*	-0.89	-0.13	*	**1.27**	0.31	**-6.00**	*
Co	*	**-0.59**	0.07	*	*	*	0.33	0.07	*	*	-1.03	**-10.90**	-0.29
Cr	*	**-0.73**	0.48	*	1.00	0.54	-8.75	3.04	*	**-3.49**	*	**1.54**	8.26
Cs	*	**38.16**	-1.28	*	*	*	*	0.41	*	**105.03**	-0.15	*	*
Cu	*	**-1.93**	-0.03	-0.18	0.12	-2.17	0.05	0.06	*	**-0.87**	-0.30	**-1.33**	-1.21
Dy	*	*	-0.22	*	*	*	0.32	0.42	*	*	1.17	*	*
Er	*	*	-0.04	*	*	*	0.87	0.57	*	*	1.44	*	*
Eu	*	*	-0.37	*	*	*	1.05	0.83	*	*	1.79	*	*
Ga	*	**2.65**	0.03	*	-0.32	*	-0.10	-0.32	*	**-2.50**	0.60	**0.46**	-0.87
Gd	*	*	*	*	*	*	0.02	1.25	*	*	2.55	**-5.99**	*
Ge	*	***-1.77***	*	*	*	*	*	*	*	*	*	***4.43***	*
Hf	*	**6.04**	-1.18	*	*	*	*	-0.10	*	**15.29**	*	**-0.67**	*
Hg	*	*	*	*	*	*	0.98	*	*	*	*	*	*
Ho	*	*	-0.27	*	*	*	0.21	1.01	*	*	0.69	*	*
In	*	*	*	*	*	*	*	*	*	*	*	*	*
La	*	**-4.59**	-0.62	0.10	1.53	*	-1.18	0.74	*	*	0.05	**1.63**	*
Li	*	*	*	*	*	*	-2.01	*	*	*	*	*	*
Lu	*	*	-0.21	*	*	*	0.21	0.42	*	*	0.00	*	*
Mo	*	**0.91**	-0.07	*	*	*	0.07	1.15	*	**-4.91**	*	*	*
Nb	*	**0.62**	-0.82	*	-0.08	*	-9.47	1.44	*	*	*	**7.65**	-0.47
Nd	*	**-0.23**	-0.79	*	*	*	-0.86	0.82	*	*	0.58	**-2.44**	*
Ni	*	**-1.27**	0.08	-0.17	0.29	0.73	-0.89	0.75	*	**-1.54**	*	**2.42**	0.06
Pb	*	**-1.40**	-0.34	*	0.21	0.74	1.63	-0.36	*	**-2.35**	-0.19	**-1.91**	-0.40
Pr	*	*	*	*	*	*	-0.98	0.76	*	*	0.04	*	*
Rb	*	**-1.63**	-0.46	*	0.25	*	0.70	-0.46	0.07	**-2.04**	0.56	**1.04**	-0.55
Sb	*	*	*	*	*	*-2.12*	*-0.94*	*	*	***8.49***	*	*	*-1.96*
Sc	*	**0.83**	-0.34	*	-0.15	*	-1.14	*	*	*	*	**3.48**	*
Sm	*	*	-0.62	*	*	*	-0.60	0.28	*	*	0.22	*	*
Sn	*	*	*0.14*	*	*	*	*-2.54*	*-1.09*	*	***23.11***	*	*	*
Sr	*	**-1.09**	-0.14	*	0.28	-0.27	-11.25	-0.82	-0.36	**-2.39**	-0.45	**1.29**	-0.18
Ta	*	**6.50**	-1.04	*	*	*	*	0.15	*	*	*	*	*
Tb	*	*	-0.06	*	*	*	0.26	1.35	*	*	0.78	*	*
Th	*	**-1.61**	-0.97	*	0.51	*	0.62	0.24	*	**21.72**	0.87	*	-2.77
Tl	*	*	*-0.75*	*	*	*	*	*-0.41*	*	***9.22***	*	*	*
Tm	*	*	-0.22	*	*	*	0.52	0.63	*	*	0.31	*	*
U	*	*	-0.38	*	-1.52	*	0.81	0.41	*	*	*	*	*
V	*	**-0.12**	0.63	-0.46	-0.46	*	-2.99	1.55	*	**-0.36**	1.96	**6.34**	-0.87
W	*	*	*-1.13*	*	*	*	*	*-1.07*	*	*	*	*	*
Y	*	**-1.13**	1.24	0.73	-0.89	*	0.68	0.02	*	**-1.45**	0.19	**2.10**	0.41
Yb	*	**-1.80**	-0.25	*	*	*	0.54	0.36	*	*	0.46	*	*
Zn	*	**-1.29**	1.67	0.56	-0.98	0.40	-0.98	-0.51	*	**-0.32**	0.42	**-1.43**	-0.04
Zr	*	**-1.56**	-1.64	-2.62	0.22	*	*	-1.34	-0.50	**-1.83**	0.72	**-2.34**	-0.11

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

Table 3 - GeoPT36A Z-scores for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code	N35	N36	N38	N43	N44	N45	N46	N47	N48	N50	N51	N53	N55
SiO2	0.60	*	**0.19**	**-0.48**	*	-0.10	0.10	**0.36**	**-0.16**	-0.11	**0.07**	-0.01	*
TiO2	-0.21	*	**2.78**	**-0.56**	0.90	-0.46	-2.92	**0.00**	**-0.69**	0.56	**0.00**	-0.70	*
Al2O3	1.17	-2.87	**2.11**	**-0.44**	1.23	0.13	-1.38	**0.06**	**0.22**	0.96	**1.06**	-0.09	*
Fe2O3T	-0.11	-2.48	**4.40**	**1.76**	2.25	0.23	0.55	**0.66**	**-0.51**	0.18	**-0.44**	0.00	*
MnO	0.67	0.95	**1.62**	**-1.47**	0.40	0.44	-1.12	**1.62**	**-0.01**	0.95	**-1.14**	-0.57	*
MgO	*-0.41*	*-3.94*	***5.39***	***8.23***	*0.45*	*2.44*	*2.38*	***0.82***	***2.66***	*2.92*	***-2.84***	*0.87*	*
CaO	1.18	-1.43	**6.88**	**5.55**	-1.43	-0.99	-0.64	**1.09**	**0.03**	-0.35	**-0.07**	-0.61	*
Na2O	0.46	-3.02	**-0.42**	**2.28**	5.78	0.34	6.50	**-1.99**	**-1.32**	1.34	**0.25**	0.35	*
K2O	0.57	-3.19	**4.08**	**-1.45**	1.37	-0.06	-4.59	**-0.25**	**-0.67**	-0.04	**0.13**	-0.13	*
P2O5	*-0.43*	*	***0.43***	***1.60***	*1.73*	*-0.93*	*0.15*	***0.43***	***-1.54***	*0.86*	***0.43***	*0.22*	*
LOI	*-19.78*	*	***-6.97***	***2.49***	*	*0.27*	*3.82*	*	***-2.11***	*-1.00*	***8.30***	*0.83*	***-0.66***
As	*	*	*	*	*1.72*	*	*	*	***1.52***	*	***-20.19***	*	*
Ba	*	1.10	**7.67**	*	1.02	*	0.18	**-0.78**	**-0.86**	-0.55	**-1.21**	0.27	**5.24**
Be	*	0.02	**0.00**	-0.74	0.78	*	*	*	*	*	*	0.69	*
Bi	*	-0.30	*	*	0.54	*	*	*	*	*	*	*	*
Cd	*	-0.11	*	0.56	0.51	*	*	*	*	*	*	*	*
Ce	*	**0.83**	**1.63**	**0.48**	1.14	*	*	*	**-0.12**	*	*	-0.08	**1.83**
Co	*	-0.55	**0.59**	-1.53	0.45	*	*	**2.36**	**3.14**	-1.77	**12.67**	0.44	*
Cr	*	-2.86	**4.22**	0.44	-0.14	*	*	**6.08**	**0.12**	4.63	**7.44**	-0.45	*
Cs	*	*	**2.10**	*	0.05	*	*	*	*	*	*	0.07	**0.37**
Cu	*	-0.03	**-4.52**	-4.41	0.66	*	2.83	**5.67**	**0.90**	0.72	**-5.91**	-0.36	*
Dy	*	**0.58**	**0.07**	**0.40**	0.53	*	*	*	*	*	*	0.23	**-1.43**
Er	*	**0.54**	**0.08**	**-0.04**	0.52	*	*	*	*	*	*	0.23	**-2.03**
Eu	*	**0.64**	**-0.37**	**1.38**	0.07	*	*	*	*	*	*	0.00	**-0.09**
Ga	*	0.15	**-0.86**	1.15	-0.17	*	*	**11.40**	**-0.39**	*	**-11.58**	0.23	*
Gd	*	**0.14**	**0.04**	**1.54**	-0.08	*	*	*	*	*	*	0.10	**-0.82**
Ge	*	*	*	*3.34*	*	*	*	*	*	*	*	*0.00*	*
Hf	*	*	**0.72**	*	0.15	*	*	*	*	*	*	0.07	**-6.41**
Hg	*	**-13.16**	*	**-0.19**	*	*	*	*	*	*	*	*	*
Ho	*	**0.04**	**0.96**	**0.96**	-0.07	*	*	*	*	*	*	0.05	**-1.06**
In	*	*	*	*	*-1.13*	*	*	*	*	*	*	*	*
La	*	**1.40**	**2.21**	**1.09**	0.56	*	*	*	**-1.59**	*	*	0.10	**0.87**
Li	*	0.42	*	*	0.74	*	*	*	*	*	*	0.54	*
Lu	*	**0.76**	**0.21**	**1.39**	0.58	*	*	*	*	*	*	0.11	**-1.27**
Mo	*	-0.48	**2.98**	0.11	1.34	*	*	*	**2.31**	*	**3.67**	*	**0.77**
Nb	*	*	**0.70**	*	0.89	*	*	**0.62**	**1.48**	-0.86	**-3.28**	0.51	**3.04**
Nd	*	**1.12**	**0.98**	**-0.04**	0.22	*	*	*	**-1.01**	*	*	-0.06	**0.43**
Ni	*	-0.55	**-3.38**	0.38	0.25	*	32.74	**-1.73**	**2.91**	1.21	**-1.27**	0.26	*
Pb	*	2.37	**-3.63**	3.30	1.48	*	3.65	**1.10**	**2.19**	0.28	**-3.94**	-1.04	8.60
Pr	*	**0.82**	**0.37**	**-0.30**	0.19	*	*	*	*	*	*	-0.06	**0.20**
Rb	*	-0.52	**0.17**	0.06	0.47	*	0.61	**-0.21**	**0.60**	-0.19	**-0.21**	0.07	**1.22**
Sb	*	*	*	*	*0.87*	*	*	*	***0.13***	*	*	*	*
Sc	*	*	**0.83**	*	*	*	*	*	**-1.99**	*	**18.63**	0.74	**0.00**
Sm	*	**-0.02**	**0.28**	**-0.19**	0.42	*	*	*	*	*	*	-0.05	**0.11**
Sn	*	*	***0.83***	*	*-0.25*	*	*	*	***8.66***	*	*	*	*
Sr	*	-0.66	**2.96**	0.52	0.38	*	5.88	**1.29**	**0.58**	0.19	**-1.83**	0.28	**-1.83**
Ta	*	*	**0.70**	*	-0.12	*	*	*	*	*	*	-0.50	**2.48**
Tb	*	**1.45**	*	**1.04**	-0.11	*	*	*	*	*	*	0.07	**-0.63**
Th	*	**-0.01**	**0.96**	*	0.81	*	*	**-5.54**	**0.10**	*	**-0.30**	-0.21	**-1.21**
Tl	*	*0.92*	***-0.87***	*	*-1.05*	*	*	*	***1.56***	*	*	*	*
Tm	*	**0.64**	**-0.85**	**0.75**	0.41	*	*	*	*	*	*	0.31	**-0.85**
U	*	-1.16	**0.37**	1.21	0.21	*	*	*	**7.18**	*	**19.67**	0.05	**-0.31**
V	*	-0.02	**3.51**	-8.23	0.18	*	*	**4.72**	**0.62**	1.15	**4.72**	0.02	*
W	*	*	***-0.19***	*	*0.32*	*	*	*	***1.70***	*	*	*	***-1.27***
Y	*	**0.57**	**2.30**	**-0.35**	0.73	*	10.18	**-2.42**	**0.41**	0.73	**5.98**	0.99	**-1.13**
Yb	*	**0.79**	**-0.13**	**1.05**	0.52	*	*	*	*	*	*	0.15	**-2.38**
Zn	*	*	**1.57**	-1.89	0.63	*	1.81	**-0.22**	**-0.59**	1.21	**-0.49**	-0.51	*
Zr	*	*	**2.73**	-2.16	-1.12	*	3.34	**1.78**	**0.10**	-0.95	**-1.78**	1.06	**-12.14**

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

Table 3 - GeoPT36A Z-scores for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code	N56	N57	N58	N59	N61	N62	N64	N65	N66	N67	N68	N70	N72
SiO2	-0.06	0.09	0.66	0.17	-0.10	-22.30	-0.66	0.60	*	*	-1.66	-0.29	0.29
TiO2	0.07	-1.35	-0.07	1.39	-0.70	-4.17	0.00	2.78	-0.28	*	-6.95	0.07	0.00
Al2O3	-0.06	-0.19	0.88	0.18	-0.06	-15.47	-0.18	1.23	*	*	-0.70	-0.20	0.38
Fe2O3T	-0.55	-2.48	0.22	0.00	-0.33	-3.74	0.44	1.10	*	*	7.48	-0.33	-0.44
MnO	0.40	-1.47	-0.57	-0.04	0.81	1.62	-1.14	4.37	-0.04	*	4.37	-0.16	-0.57
MgO	*-0.05*	*1.27*	*0.36*	*-1.93*	*-0.51*	*-16.56*	*1.73*	*-10.16*	*	*	*-1.01*	*-1.83*	*-0.96*
CaO	0.25	-0.01	0.69	0.51	-0.61	-0.65	-1.23	1.09	*	*	2.25	-0.53	0.25
Na2O	0.01	0.43	-0.35	-0.65	0.12	-18.31	2.26	1.37	*	*	-7.13	0.12	-0.44
K2O	-0.13	-0.22	0.75	0.51	-0.13	-1.78	-0.76	3.69	*	*	-2.29	-0.32	-0.32
P2O5	*0.00*	*3.33*	*-1.51*	*0.43*	*0.22*	*-8.42*	*-3.89*	*-3.89*	*	*	*4.75*	*-0.22*	*0.22*
LOI	*-0.33*	*-0.33*	*2.41*	*3.65*	*-1.66*	*	*-1.33*	*-3.65*	*	*0.46*	*8.30*	*-0.66*	*
As	*1.45*	*9.77*	*	*1.95*	*	*-0.89*	*-5.01*	*	*	*-0.23*	*-0.94*	*1.61*	*
Ba	0.53	-0.98	1.57	-1.25	0.18	*	-1.93	*	0.18	-1.12	-11.16	0.18	*
Be	*	0.25	*	*	*	*	*	*	0.20	*	0.30	*	*
Bi	*	-0.05	*	*	*	*	*	*	0.60	-0.30	*	*	*
Cd	*	-2.76	*	*	*	*	*	*	*	-1.41	10.02	*	*
Ce	-0.22	-4.91	*	-6.26	-0.99	*	-0.44	*	0.82	-1.16	0.69	-3.25	*
Co	1.18	-2.95	*	-3.53	*	-15.32	0.88	*	-0.15	0.74	-5.04	-0.96	*
Cr	1.68	0.79	-4.45	1.09	0.09	-20.23	-1.18	*	1.59	-0.61	-9.53	-0.93	*
Cs	*	-0.91	*	*	-0.27	*	*	*	-0.46	-1.21	*	*	*
Cu	0.36	-4.24	0.00	-3.01	*	-2.89	-4.58	*	0.48	-1.18	0.72	-0.24	*
Dy	*	-2.75	*	*	0.05	*	*	*	-0.49	*	2.79	*	*
Er	*	-1.86	*	*	-0.34	*	*	*	-1.14	*	1.22	*	*
Eu	*	-1.76	*	*	-0.55	*	*	*	-1.19	*	-0.83	*	*
Ga	0.23	-0.18	*	-3.92	-0.43	*	-0.64	*	0.68	-0.92	*	1.27	*
Gd	*	-3.03	*	*	-0.32	*	*	*	-1.98	*	0.80	*	*
Ge	*	*	*	*	*	*	*	*	*	*-1.77*	*	*	*
Hf	-0.34	1.02	*	*	-0.34	*	1.64	*	1.18	-1.95	*	-1.03	*
Hg	*	-1.93	*	*	*	*	*	*	*	*	*	*	*
Ho	*	-2.35	*	*	0.32	*	*	*	-0.64	*	2.29	*	*
In	*	*	*	*	*	*	*	*	*	*2.46*	*	*	*
La	-0.62	-4.55	*	2.59	-0.74	*	2.59	*	0.96	-0.74	3.83	-2.29	*
Li	*	0.57	*	*	*	15.20	*	*	-0.22	*	4.95	*	*
Lu	*	-0.95	*	*	-0.11	*	*	*	0.42	*	0.63	*	*
Mo	-3.70	-0.28	*	*	*	*	-3.24	*	-0.89	-0.45	4.37	-0.17	*
Nb	0.31	2.39	*	-2.50	-0.82	*	-0.94	*	1.64	-0.74	*	-0.35	*
Nd	-0.94	-3.81	*	-4.09	-0.34	*	-4.09	*	0.54	0.08	1.09	0.16	*
Ni	-0.17	-3.43	0.29	0.58	*	-5.41	-2.65	*	0.99	-0.82	-1.27	0.68	*
Pb	0.26	-4.02	2.23	0.89	*	-0.80	-2.07	*	1.02	-0.37	-9.66	0.55	*
Pr	-0.80	-3.97	*	*	-0.87	*	*	*	0.20	*	-0.42	*	*
Rb	0.61	0.27	*	-0.74	-0.68	*	-0.21	*	0.33	-0.30	-0.39	0.07	*
Sb	*-4.33*	*	*	*	*	*-14.11*	*-3.21*	*	*	*-1.38*	*-1.32*	*-0.90*	*
Sc	7.42	-5.70	*	*	*	*	18.63	*	-1.29	4.96	1.29	*	*
Sm	-1.38	-2.59	*	*	0.10	*	-5.11	*	0.65	-0.56	0.14	*	*
Sn	*7.94*	*-5.87*	*	*	*	*	*	*	*-0.74*	*-3.80*	*	*	*
Sr	0.56	-1.48	*	0.38	-0.50	-8.80	0.01	*	0.93	-0.23	2.21	0.65	*
Ta	12.53	-3.02	*	*	-0.62	*	*	*	-0.08	-2.17	*	26.45	*
Tb	*	-2.22	*	*	0.01	*	*	*	-0.63	*	2.19	*	*
Th	1.82	-3.25	*	2.32	-1.26	*	-2.92	*	0.62	-0.41	*	-0.74	*
Tl	*-3.85*	*	*	*	*	*	*	*	*1.56*	*0.65*	*	*	*
Tm	*	-1.74	*	*	-0.11	*	*	*	0.41	*	0.83	*	*
U	-2.93	-1.19	*	*	-0.04	*	2.64	*	0.71	-4.07	*	13.81	*
V	-0.06	-2.81	0.34	-1.74	-0.06	-5.29	-0.12	*	-0.20	-0.46	-4.20	1.27	*
W	*11.89*	*-0.81*	*	*	*1.09*	*	*32.43*	*	*	*85.34*	*5.99*	*	*
Y	-1.85	-1.80	*	*	-0.72	*	0.81	*	2.10	-0.11	-1.71	0.95	*
Yb	*	-1.10	*	*	-0.48	*	*	*	0.59	0.15	0.25	*	*
Zn	0.31	-0.89	4.84	0.40	*	-3.39	-1.79	*	1.52	-0.40	1.29	-0.33	*
Zr	-0.39	2.71	*	1.34	0.67	*	0.11	*	2.79	-0.48	-6.02	1.00	*

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

Table 3 - GeoPT36A Z-scores for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code	N73	N74	N75	N78	N79	N80	N81	N84	N86	N88	N89	N90	N91
SiO2	*	-0.27	0.01	**-0.29**	**-0.31**	**-5.59**	*	*	-1.04	**-0.77**	**3.95**	0.03	-0.08
TiO2	-18.35	-2.71	0.00	**11.12**	**1.39**	**-1.39**	*	**-0.19**	-1.04	**0.25**	**0.00**	0.00	0.42
Al2O3	-33.29	-0.58	-1.14	**-1.05**	**0.88**	**-2.34**	*	**-0.77**	0.31	**-1.00**	**-1.00**	-0.15	0.00
Fe2O3T	-10.99	0.89	0.00	**-1.76**	**1.32**	**-0.88**	*	**-1.87**	1.04	**1.28**	**0.44**	0.07	-1.10
MnO	-2.22	-0.43	-0.29	**-3.89**	**1.62**	**1.62**	*	**0.40**	1.91	**1.20**	**-3.89**	-2.91	-0.57
MgO	*-7.92*	*1.60*	*3.15*	***9.05***	***2.65***	***7.22***	*	*-6.54*	*-2.88*	***-0.65***	***-1.01***	*-2.75*	*-2.79*
CaO	-14.57	0.40	-2.35	**-2.39**	**-1.23**	**3.40**	*	**-2.53**	-1.57	**-0.60**	**0.51**	0.34	-0.90
Na2O	-28.13	-0.51	0.35	**-0.65**	**-3.55**	**-3.11**	*	**0.20**	2.18	**-1.54**	**-0.42**	0.21	1.13
K2O	-30.32	-0.10	-0.70	**1.91**	**0.00**	**2.55**	*	**-1.39**	1.07	**0.00**	**-2.93**	0.20	-0.25
P2O5	*-4.54*	*-2.16*	*3.24*	***-3.46***	***0.43***	***4.75***	*	*	*1.73*	***-3.80***	***0.86***	*-0.43*	*0.43*
LOI	*	*0.91*	*0.66*	***-2.66***	***1.33***	*	*	*	*-0.50*	*	*	*0.60*	*
As	*-5.29*	*	*	*	***-9.34***	*	***-8.33***	***1.51***	*	***4.69***	***-1.84***	*-0.60*	*-0.60*
Ba	-16.58	-1.03	0.30	*	**-1.82**	**-0.81**	**0.20**	**0.00**	*	**1.28**	**-3.00**	0.36	*
Be	-5.02	*	-0.63	*	**-0.03**	*	*	*	*	**1.71**	*	0.04	*
Bi	-3.00	*	0.30	*	**1.20**	*	**1.64**	*	*	*	**0.00**	0.90	*
Cd	-3.65	*	0.02	*	**-5.70**	*	*	*	*	*	**-1.13**	0.07	*
Ce	-2.24	*	0.92	*	**1.07**	**-0.03**	**-0.23**	**0.82**	*	**4.11**	**-3.35**	0.21	*
Co	-6.30	-2.50	-0.29	*	**-1.03**	**5.30**	**1.05**	**-0.25**	*	**1.19**	**-0.88**	-0.21	*
Cr	-10.12	-8.53	-1.27	*	**0.95**	**0.64**	**-12.57**	**1.54**	*	**-4.16**	**-0.73**	0.95	-0.59
Cs	*	*	0.30	*	**0.22**	**-0.53**	**-0.03**	**-3.31**	*	**1.52**	**-1.44**	1.09	*
Cu	-6.83	-4.16	0.30	*	**1.93**	**3.50**	**0.58**	*	*	**1.00**	*	0.00	0.24
Dy	-5.97	*	-1.36	*	**-0.10**	**-1.43**	**-1.59**	**1.93**	*	**-0.13**	**-0.57**	-0.05	*
Er	-5.78	*	-1.69	*	**0.04**	**-1.38**	**-1.31**	*	*	**-0.60**	**-0.26**	-0.02	*
Eu	-5.32	*	0.60	*	**0.73**	**0.65**	**2.16**	**-1.16**	*	**1.23**	**-0.55**	-0.23	*
Ga	*	-0.87	0.06	*	**-1.08**	**3.74**	*	*	*	**-1.21**	*	0.06	-0.32
Gd	-4.70	*	0.02	*	**2.19**	**-1.00**	**-2.72**	*	*	**-0.10**	**0.04**	-0.46	*
Ge	*-6.56*	*	*	*	***-0.71***	*	*	*	*	*	***-0.89***	*0.44*	*
Hf	*	*	*	*	**-1.02**	**-6.58**	**-1.73**	**0.58**	*	**-4.09**	**-3.45**	0.71	*
Hg	*	*	0.61	*	*	*	*	**-1.25**	*	*	*	-0.21	*
Ho	-4.84	*	-1.38	*	**0.32**	**-1.17**	**-1.16**	*	*	**-0.74**	**-0.85**	-0.16	*
In	*	*	*	*	***1.28***	*	*	***-0.27***	*	*	*	*1.08*	*
La	-2.05	*	0.72	*	**0.10**	**-0.54**	**-1.40**	**-0.34**	*	**2.90**	*	-0.25	4.64
Li	-5.77	-0.49	-0.92	*	**-2.91**	*	*	*	*	**3.10**	**-0.22**	-1.24	*
Lu	-4.64	*	-1.37	*	**0.00**	**-1.49**	**-1.75**	**-0.27**	*	**-0.69**	**-0.63**	0.58	*
Mo	-4.26	*	0.11	*	**-7.33**	*	**1.65**	*	*	**1.63**	*	-0.53	*
Nb	-9.58	*	0.08	*	**1.64**	**-1.08**	**-0.76**	*	*	**1.68**	**-1.09**	-0.39	0.31
Nd	-6.43	*	0.60	*	**-0.18**	**-0.53**	**1.56**	**-4.09**	*	**2.62**	**-1.89**	-0.24	*
Ni	-5.73	0.52	-0.31	*	**1.86**	**1.04**	**0.30**	*	*	**0.34**	**-1.45**	-1.16	-0.40
Pb	-7.48	-1.67	0.38	*	**0.51**	**1.62**	**-0.33**	*	*	**6.23**	**-3.77**	-0.80	-0.34
Pr	-5.13	*	0.43	*	**0.20**	**-0.92**	**0.37**	*	*	**2.00**	**-1.43**	0.07	*
Rb	-11.94	*	-0.99	*	**0.50**	**0.13**	**-0.24**	**-0.21**	*	**-1.94**	**-2.34**	0.47	-0.19
Sb	*	*	*0.41*	*	***-9.35***	*	***1.10***	***-0.13***	*	*	***-4.63***	*0.96*	*
Sc	-6.02	*	-0.28	*	*	**3.24**	**-0.44**	**-0.54**	*	**1.14**	*	*	*
Sm	-5.05	*	0.20	*	**-0.35**	**-0.73**	**0.83**	**-0.78**	*	**1.44**	**-1.60**	-0.34	*
Sn	*-6.69*	*	*-1.09*	*	***-0.50***	*	***1.13***	*	*	***-0.09***	***-1.58***	*0.41*	*
Sr	-11.65	1.01	-1.10	*	**2.39**	**-0.27**	**0.67**	*	*	**-0.43**	**-1.64**	0.37	0.10
Ta	*	*	-0.23	*	**-0.23**	*	**2.41**	**-1.24**	*	**5.45**	*	0.04	*
Tb	-4.17	*	-0.44	*	**1.29**	**-0.71**	**-0.70**	**-1.99**	*	**-0.17**	**-0.63**	0.09	*
Th	-5.34	*	1.10	*	**0.23**	**1.76**	**1.34**	**-0.25**	*	**2.60**	**-2.26**	-0.14	-0.80
Tl	*-4.35*	*	*0.75*	*	***1.88***	*	***1.41***	*	*	***3.83***	***-0.29***	*-0.28*	*
Tm	-4.54	*	-1.38	*	**-0.01**	**-0.99**	**-1.53**	*	*	**-0.63**	**-0.64**	0.23	*
U	-5.23	*	-0.38	*	**-0.42**	**-0.43**	**0.12**	**-3.43**	*	**1.36**	**-0.02**	0.07	4.16
V	-6.52	*	*	*	**-1.82**	**3.11**	**-0.13**	**-0.04**	*	**1.07**	**-1.49**	0.34	0.75
W	*-7.33*	*	*	*	***-3.60***	*	***-0.17***	***0.89***	*	***3.10***	***-3.86***	*0.01*	*
Y	-6.37	-1.21	*	*	**0.36**	**-2.33**	**-4.19**	*	*	**-2.64**	*	-0.29	0.73
Yb	-6.13	*	-1.53	*	**0.13**	**-1.27**	**-1.97**	**-1.00**	*	**-1.11**	**-1.21**	0.00	*
Zn	-8.49	-1.34	0.25	*	**4.60**	**2.54**	**-2.87**	**0.89**	*	**2.71**	*	0.07	-1.58
Zr	-14.28	1.00	1.11	*	**-2.90**	**-13.18**	**-6.07**	**-4.34**	*	**0.21**	*	-14.15	-1.28

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

Table 3 - GeoPT36A Z-scores for Metal-rich sediment, SdAR-M2. 12/12/2014

Lab Code	N93	N94	N95	N96	N97	N98	N100	N101	N102	N103	N105	N107	N108
SiO2	*	0.06	0.66	0.85	0.08	8.60	1.18	0.27	0.04	*	-6.93	0.12	*
TiO2	0.00	-0.70	0.00	0.70	-0.70	-1.39	0.00	-1.39	1.39	0.00	-0.07	2.09	-4.73
Al2O3	*	-0.26	0.59	1.38	0.21	-27.99	0.59	-1.52	0.00	*	-5.25	-0.94	*
Fe2O3T	0.88	-0.11	-0.77	0.44	0.00	103.46	1.32	-0.88	6.38	*	-3.93	0.00	-1.50
MnO	-1.14	-0.57	-1.81	-0.57	1.08	11.83	1.40	1.62	-1.14	0.24	-2.36	-2.08	-1.96
MgO	*	*0.41*	*0.41*	*1.32*	*1.32*	*20.99*	***0.82***	***-1.93***	***4.48***	*	*	*1.32*	*
CaO	*	-0.33	0.54	0.25	-0.53	20.81	1.67	0.51	4.56	*	15.89	3.15	*
Na2O	*	0.01	1.35	-0.10	0.24	-8.26	1.59	1.59	1.81	*	*	1.24	*
K2O	*	0.13	-1.02	0.96	0.00	-4.84	1.02	-0.38	0.25	*	1.53	0.64	*
P2O5	***0.43***	*1.08*	*1.30*	*0.22*	*-0.86*	*13.17*	***-12.53***	***-8.21***	***4.75***	*	*	*-4.10*	*
LOI	*	*-4.65*	*2.66*	*-5.31*	*0.50*	*	***0.66***	*1.33*	***-1.33***	*	*	*-2.16*	*
As	***-1.15***	*1.29*	*2.14*	*	*0.88*	*-7.59*	***4.47***	***-3.39***	***-3.42***	*	*-2.17*	*-0.81*	***-2.60***
Ba	0.75	0.52	-0.05	-0.11	0.73	*	-0.51	-2.50	0.78	0.46	-4.28	-0.86	-3.55
Be	-1.38	*	-0.06	*	0.18	*	0.59	*	*	0.18	*	*	*
Bi	*	-0.18	*	*	-0.06	*	-0.06	5.40	*	0.60	*	8.10	1.08
Cd	0.72	0.00	0.00	*	-0.09	*	-0.23	-3.13	*	*	0.31	-0.78	*
Ce	0.04	0.16	0.66	*	0.01	-1.53	-0.07	-3.12	2.34	0.82	-3.14	-4.73	-1.08
Co	0.44	0.29	-0.86	4.86	0.66	3.46	0.74	-1.91	-2.06	0.00	*	3.53	-9.28
Cr	0.00	-1.68	0.17	-0.14	1.68	-3.03	4.58	-3.54	*	1.09	*	-0.43	-6.62
Cs	0.29	-0.08	*	*	0.15	30.61	-1.38	*	*	-0.46	*	*	-0.23
Cu	0.84	0.37	0.18	-4.04	0.83	2.25	-1.07	-5.15	-0.84	0.84	-1.75	-1.95	-2.41
Dy	0.15	0.03	0.50	*	0.25	*	-0.13	*	*	-0.68	*	*	-0.83
Er	0.08	1.10	0.57	*	0.46	*	-0.89	*	*	-1.36	*	*	-1.15
Eu	0.28	0.28	0.14	*	0.00	*	-0.42	*	*	-1.38	*	*	-0.59
Ga	0.46	0.01	*	12.82	0.14	-0.54	1.40	-0.97	-0.64	0.79	*	-0.81	-1.73
Gd	0.80	-0.50	0.34	*	-0.40	*	-1.66	*	*	-2.21	*	*	-1.79
Ge	*	*-1.33*	*	*	*	*	***0.81***	***7.09***	*	*	*	*	*
Hf	0.09	-0.45	0.00	*	-0.66	*	-0.12	-1.60	*	1.02	*	-0.80	0.27
Hg	*	-0.17	*	*	0.29	*	-1.25	*	*	*	*	2.87	*
Ho	0.00	-0.05	0.16	*	0.16	*	0.20	*	*	-0.85	*	*	-0.50
In	*	*0.51*	*	*	*0.20*	*	***-0.54***	*	*	*	*	*	*
La	-0.76	-0.05	0.15	-1.58	-0.06	-10.13	-0.27	-2.05	*	0.96	-1.58	-1.12	-0.91
Li	-1.41	0.59	0.01	*	0.05	*	0.64	*	*	-0.22	*	*	*
Lu	0.42	-0.42	0.21	*	0.11	*	-0.21	*	*	0.42	*	*	-0.78
Mo	3.40	-0.24	-0.47	*	1.23	*	-0.45	-2.28	*	-0.48	*	-0.72	0.63
Nb	1.33	0.31	-0.60	1.48	0.43	-5.65	-3.65	-0.55	-0.16	1.64	-2.81	-0.98	-1.56
Nd	0.04	0.41	0.14	*	0.17	-9.47	-0.54	-3.21	*	0.43	-3.07	-4.22	-1.39
Ni	-2.09	-0.40	-0.12	5.12	0.15	3.45	1.35	-2.23	-1.27	1.08	0.03	-1.07	-1.22
Pb	-1.95	-0.44	-0.04	8.35	0.04	-14.59	1.60	-2.21	-0.29	1.27	-1.95	-1.53	-1.89
Pr	-0.61	-0.06	-0.13	*	-0.02	*	-0.37	*	*	0.04	1.49	*	-1.63
Rb	0.15	0.32	-1.44	0.52	0.68	-0.84	1.93	-1.21	0.86	0.33	-1.44	-0.69	-0.42
Sb	*	*-0.37*	*0.76*	*	*1.11*	*	***0.51***	***-2.72***	***1.29***	*	*	*-0.75*	***-3.81***
Sc	0.76	-0.15	-1.06	*	0.98	15.77	0.23	9.16	*	-1.36	*	-1.67	*
Sm	-0.40	0.49	0.12	*	0.01	*	-0.27	-3.47	*	0.77	*	7.17	-1.30
Sn	*	*-1.09*	*	*	*0.20*	*	***2.39***	*	*	***-0.68***	*	*6.74*	*
Sr	0.19	1.00	-0.18	5.69	0.64	-2.65	-0.23	-0.69	0.38	1.11	-1.46	-0.44	-0.76
Ta	-1.62	-0.39	-2.51	*	0.15	-4.49	0.44	24.29	*	0.77	*	*	-3.39
Tb	0.40	0.20	0.13	*	0.01	*	-0.57	*	*	-0.89	*	*	-0.80
Th	-0.43	0.11	0.14	*	-0.12	*	-2.32	-3.70	*	0.49	-0.48	-1.72	0.36
Tl	***0.03***	*0.38*	*	*	*-0.07*	*	*	***-2.41***	*	***1.56***	*	*-3.32*	***0.31***
Tm	0.62	0.63	0.21	*	0.21	*	-0.75	*	*	0.20	*	*	-0.26
U	0.54	0.19	-0.61	*	0.44	*	-1.06	-4.73	*	0.66	*	-0.38	-1.43
V	0.12	-0.87	-0.48	1.55	-0.34	13.56	-1.42	0.12	1.49	-0.20	*	-2.04	-1.74
W	*	*-2.15*	*	*	*0.27*	*	***0.53***	***-9.48***	*	*	*	*-2.36*	*
Y	-0.42	-0.14	0.10	8.15	0.57	-10.56	-0.11	0.36	1.46	1.97	-1.56	-0.08	-0.22
Yb	0.29	0.36	0.44	*	0.13	*	-0.64	-13.51	*	0.54	*	-1.32	-1.27
Zn	2.19	0.68	0.94	-8.39	-0.76	-6.77	1.66	-2.67	-0.89	1.74	-1.81	-0.85	-4.10
Zr	1.00	0.00	0.11	2.67	-1.00	-6.52	1.16	-0.75	0.00	2.56	-1.89	-0.32	-2.19

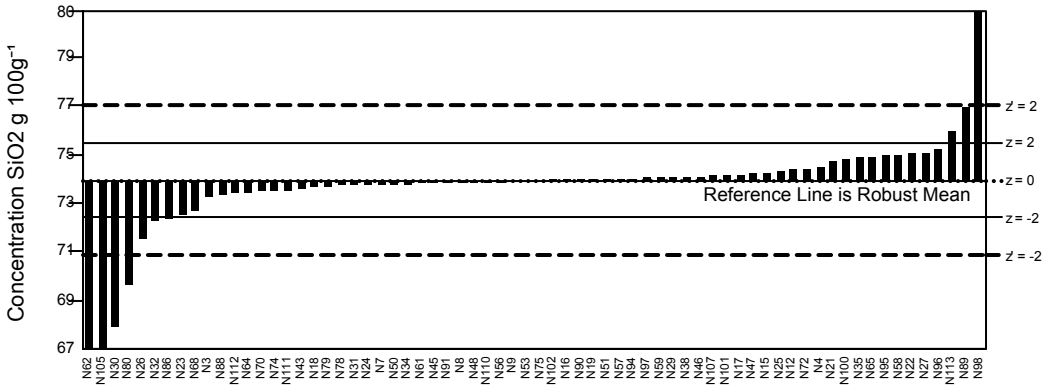
Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

Table 3 - GeoPT36A Z-scores for Metal-rich sediment, SdAR-M2. 12/12/2014

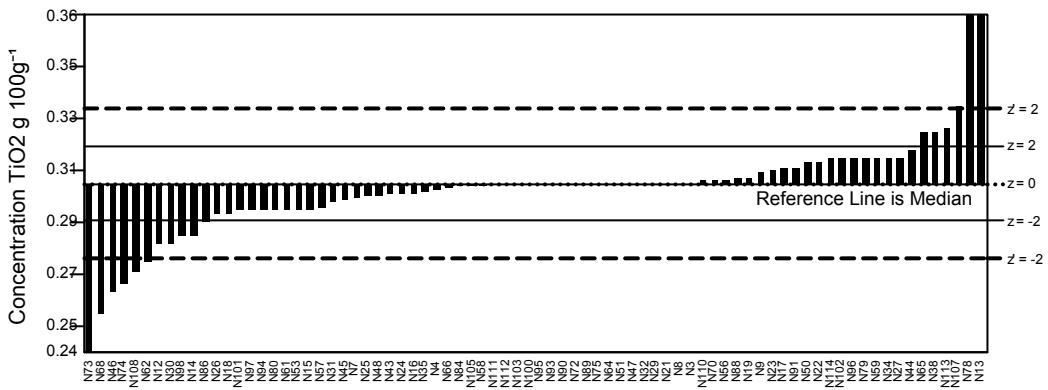
Lab Code	N109	N110	N111	N112	N113	N114
SiO2	*	**-0.12**	-0.27	-0.36	**2.60**	*
TiO2	*	**0.14**	0.00	0.00	**2.92**	**1.39**
Al2O3	*	**-0.36**	-0.23	0.38	**0.59**	*
Fe2O3T	*	**0.90**	0.22	-0.88	**4.18**	*
MnO	*	**0.52**	-0.57	-0.57	**3.27**	**1.62**
MgO	*	***0.18***	*0.87*	*-1.88*	***4.66***	*
CaO	*	**-0.36**	1.99	10.10	**-0.59**	*
Na2O	*	**0.52**	1.24	1.02	**1.54**	*
K2O	*	**0.01**	0.19	2.87	**1.96**	*
P2O5	*	***0.00***	*	*2.38*	***-0.86***	*
LOI	*	***-1.89***	*-1.66*	*-3.65*	***4.31***	*
As	*	*	*0.82*	*2.40*	*	*
Ba	**1.00**	**0.13**	0.86	0.77	**5.15**	**2.89**
Be	*	*	1.26	0.21	**1.74**	**-0.38**
Bi	*	*	*	*	*	*
Cd	*	*	1.72	*	*	*
Ce	**-0.44**	**0.95**	-1.36	**-0.19**	**2.16**	**0.57**
Co	**0.59**	*	*	0.07	**1.66**	**1.33**
Cr	**4.13**	**2.22**	-0.14	-0.59	**-5.91**	*
Cs	**-0.91**	**-0.31**	*	-0.12	**2.22**	**0.59**
Cu	*	**0.24**	0.66	-0.30	**0.34**	**1.21**
Dy	**-0.52**	**2.04**	*	**-0.07**	**-0.66**	**0.34**
Er	**-0.89**	**1.35**	*	**0.72**	**-1.31**	**0.29**
Eu	**-0.92**	**1.01**	*	**-1.19**	**0.28**	**2.48**
Ga	*	**-1.18**	*	**0.46**	**-0.09**	**1.00**
Gd	**0.04**	**0.15**	*	**-0.80**	**-0.51**	**0.54**
Ge	*	*	*	*	*	*
Hf	**-0.90**	**0.72**	*	0.01	**-8.28**	**2.78**
Hg	*	*	*	0.06	*	*
Ho	**0.00**	**1.81**	*	**0.32**	**-0.66**	**0.32**
In	*	*	*	*	*	*
La	**-0.86**	**0.75**	-0.62	**-0.28**	**3.45**	**2.40**
Li	*	*	0.05	0.11	**3.41**	**1.07**
Lu	**-0.21**	**0.42**	*	**0.00**	**-1.73**	**0.42**
Mo	*	*	*	*	*	**-1.03**
Nb	**1.01**	**-0.18**	0.43	0.31	**4.63**	*
Nd	**-1.33**	**0.47**	*	**-0.23**	**1.22**	**1.37**
Ni	**0.58**	**-0.91**	-0.17	0.06	**2.11**	**-0.12**
Pb	*	**0.73**	0.81	-0.59	**-9.19**	**0.26**
Pr	**-1.10**	**0.40**	*	**0.12**	**0.76**	**1.84**
Rb	**-1.10**	**-0.42**	0.07	-0.82	**0.24**	**0.50**
Sb	*	*	*0.29*	*	*	*
Sc	*	**-0.57**	-0.15	-0.53	**1.06**	**1.10**
Sm	**-0.45**	**1.31**	*	**-0.19**	**0.86**	**0.98**
Sn	*	*	*	*	*	*
Sr	**1.48**	**0.76**	0.10	0.74	**-1.62**	**0.74**
Ta	**9.36**	**0.08**	*	-0.35	**2.24**	*
Tb	**-0.50**	**1.17**	*	**-0.12**	**-0.31**	**1.81**
Th	**-0.82**	**0.70**	*	-0.02	**-0.05**	**0.23**
Tl	*	*	*	*-0.01*	*	*
Tm	**-0.43**	**1.04**	*	**0.20**	*	**0.62**
U	**0.71**	**0.60**	*	-0.30	**0.60**	**-0.14**
V	*	**1.98**	*	1.15	**3.29**	**1.25**
W	*	*	*	*	*	*
Y	**-1.58**	**1.31**	-0.24	0.08	**-0.60**	**0.23**
Yb	**-1.13**	**0.13**	*	**1.34**	**-1.71**	**0.67**
Zn	*	**1.79**	0.49	-0.89	**2.28**	**-0.18**
Zr	**0.11**	**2.01**	0.06	0.67	**-14.36**	**2.45**

Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

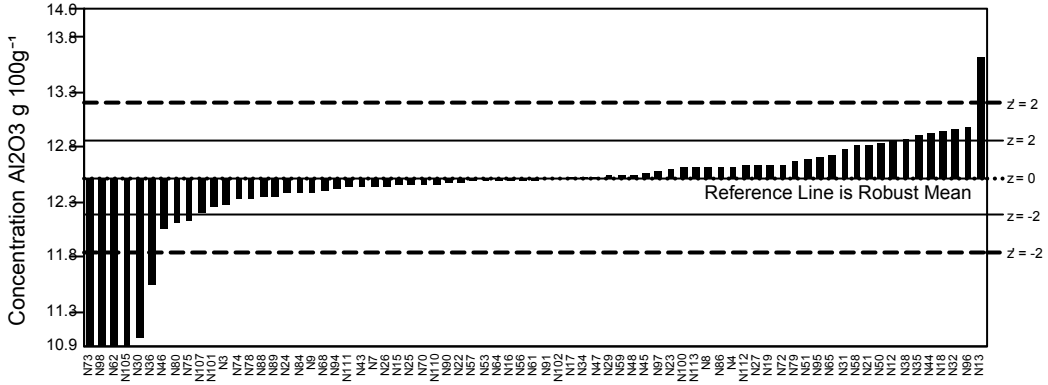
GeoPT36A - Barchart for SiO2



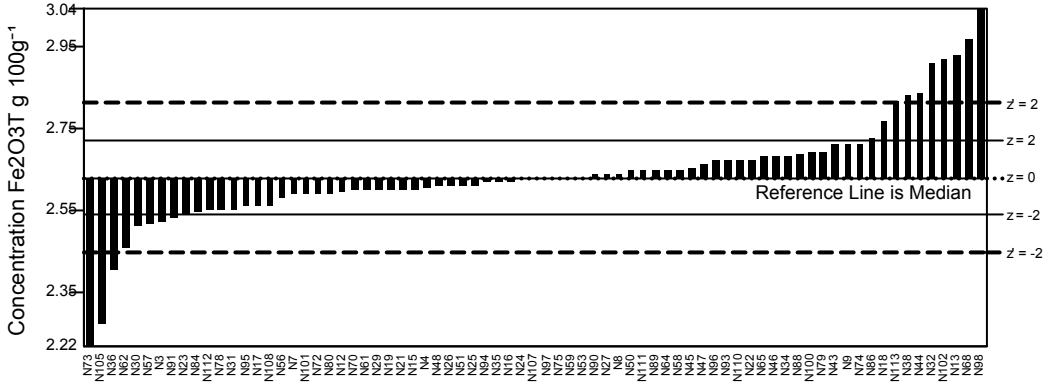
GeoPT36A - Barchart for TiO2



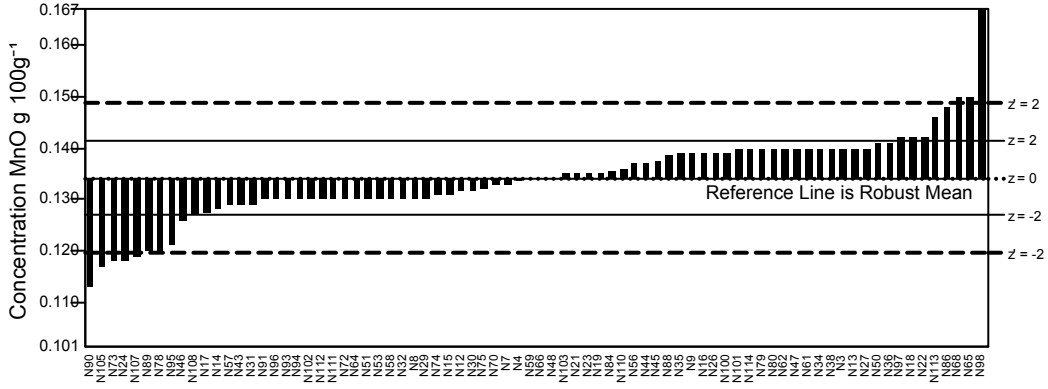
GeoPT36A - Barchart for Al2O3



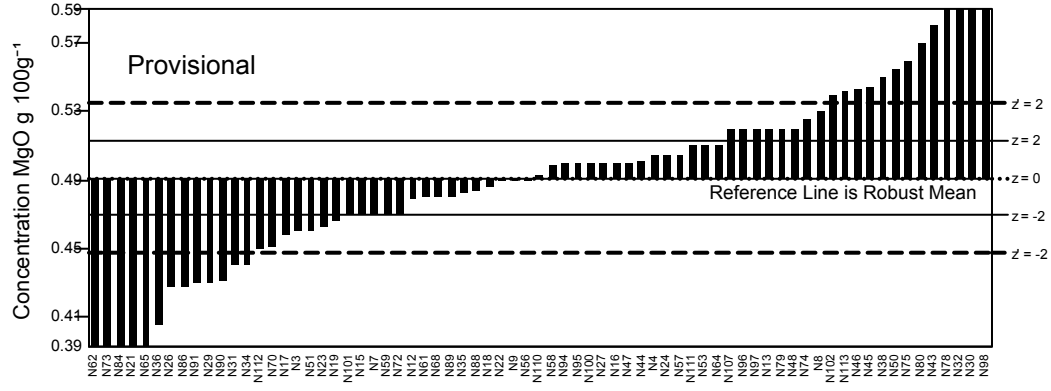
GeoPT36A - Barchart for Fe2O3T



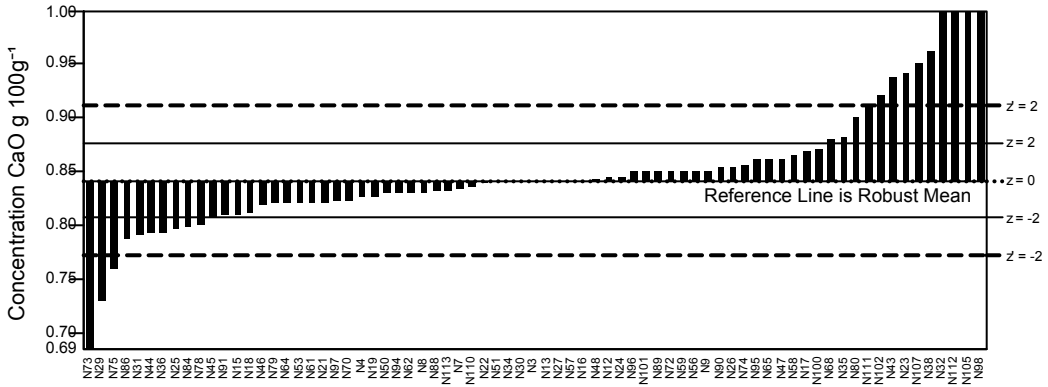
GeoPT36A - Barchart for MnO



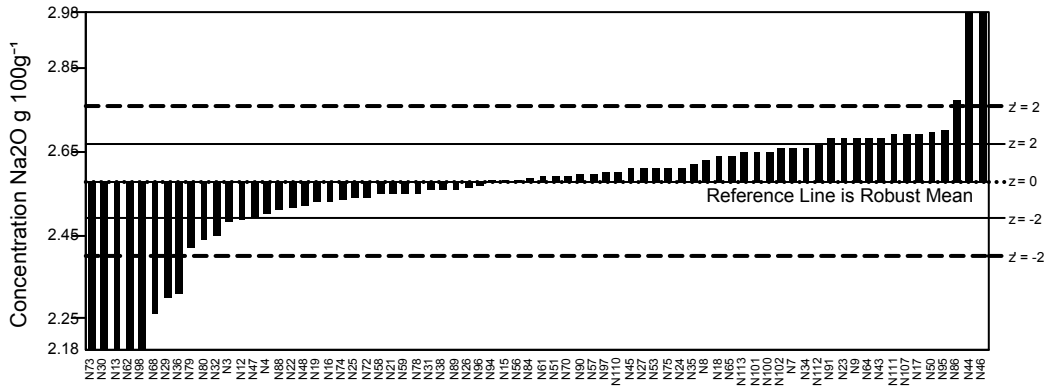
GeoPT36A - Barchart for MgO



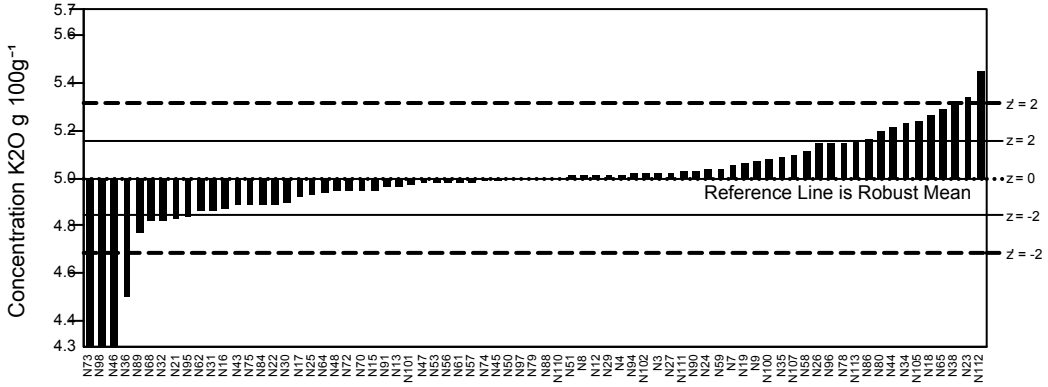
GeoPT36A - Barchart for CaO



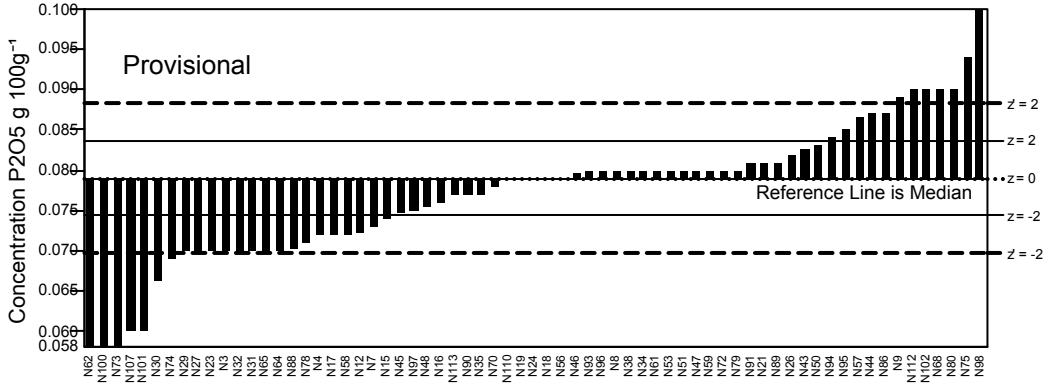
GeoPT36A - Barchart for Na2O



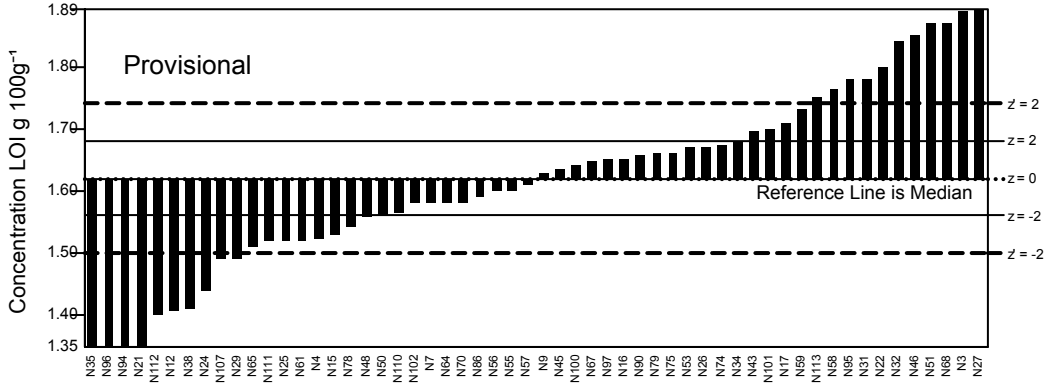
GeoPT36A - Barchart for K2O



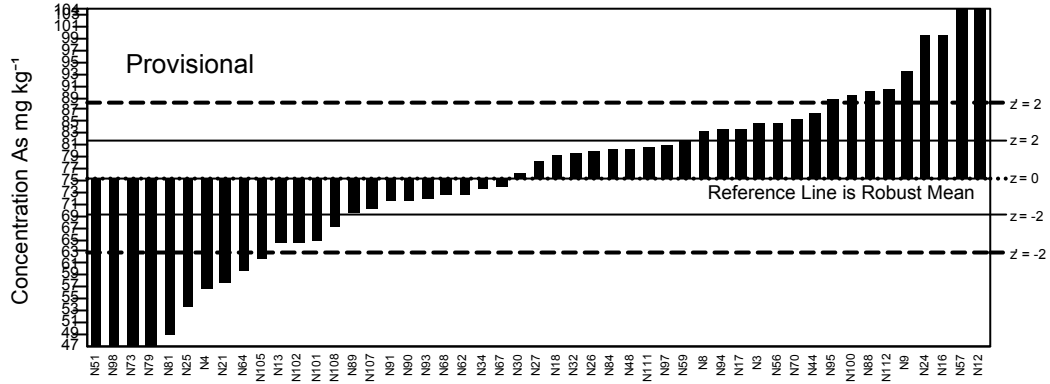
GeoPT36A - Barchart for P2O5



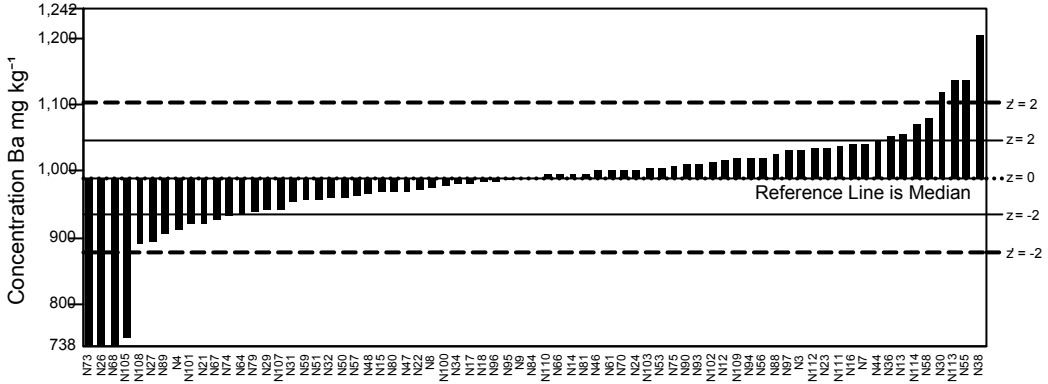
GeoPT36A - Barchart for LOI



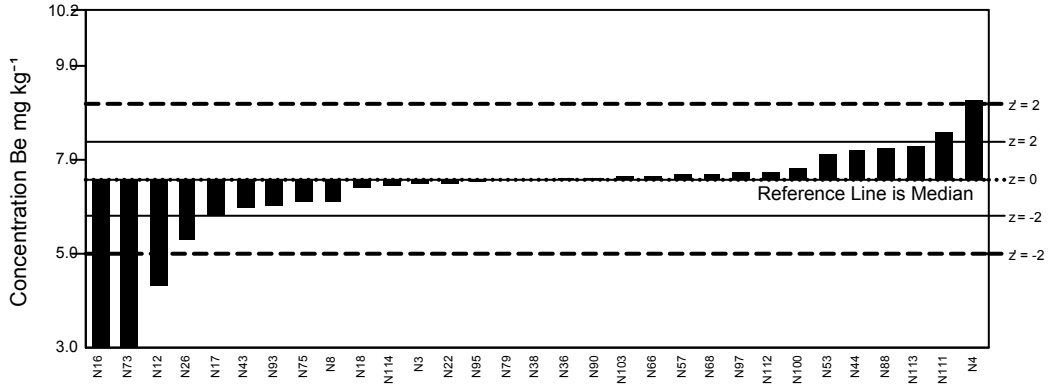
GeoPT36A - Barchart for As



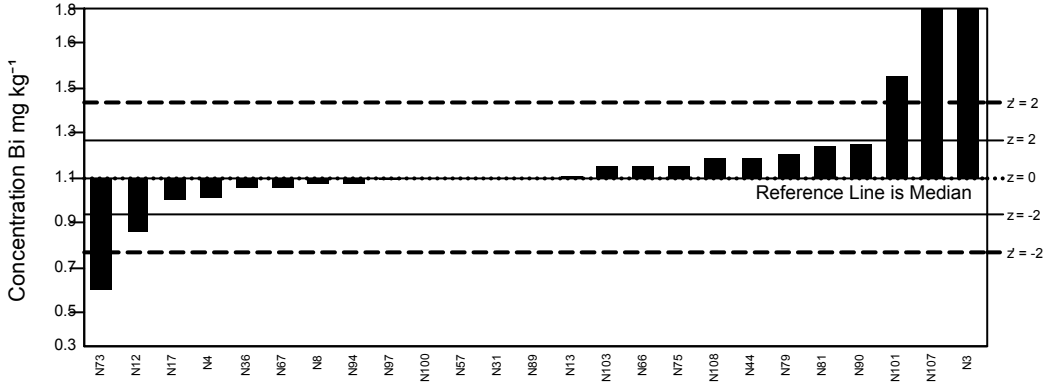
GeoPT36A - Barchart for Ba



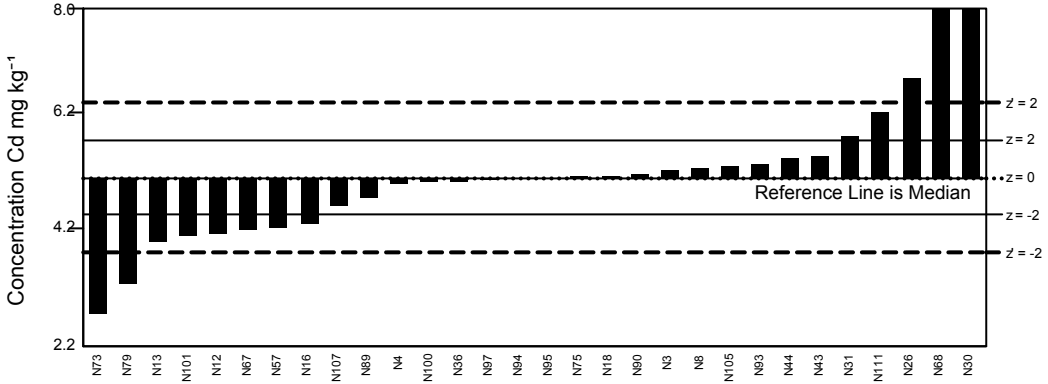
GeoPT36A - Barchart for Be



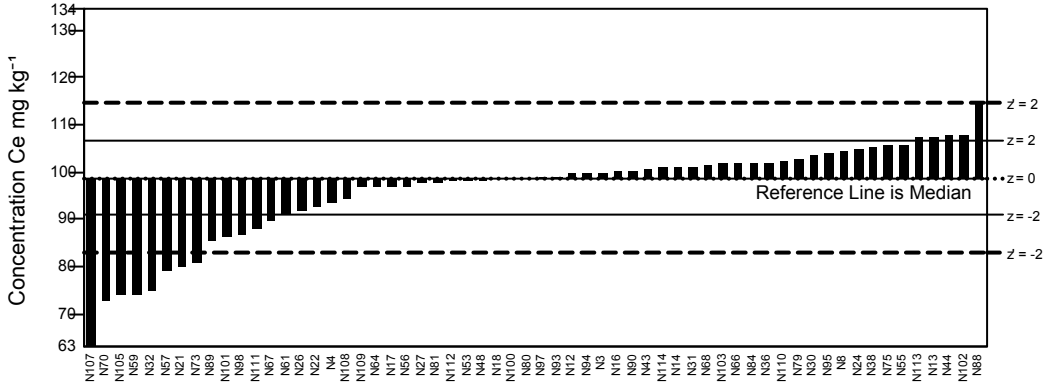
GeoPT36A - Barchart for Bi



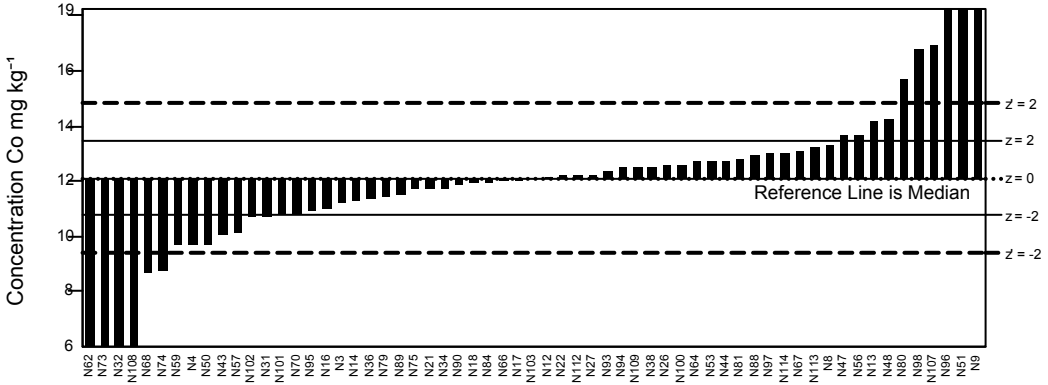
GeoPT36A - Barchart for Cd



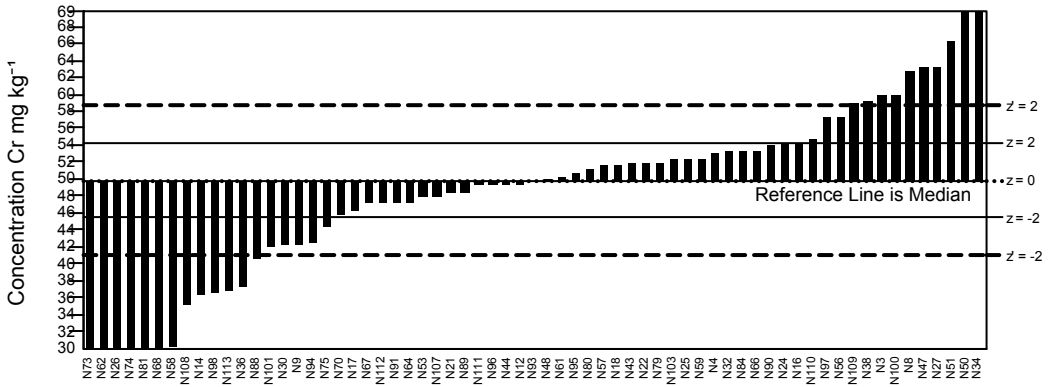
GeoPT36A - Barchart for Ce



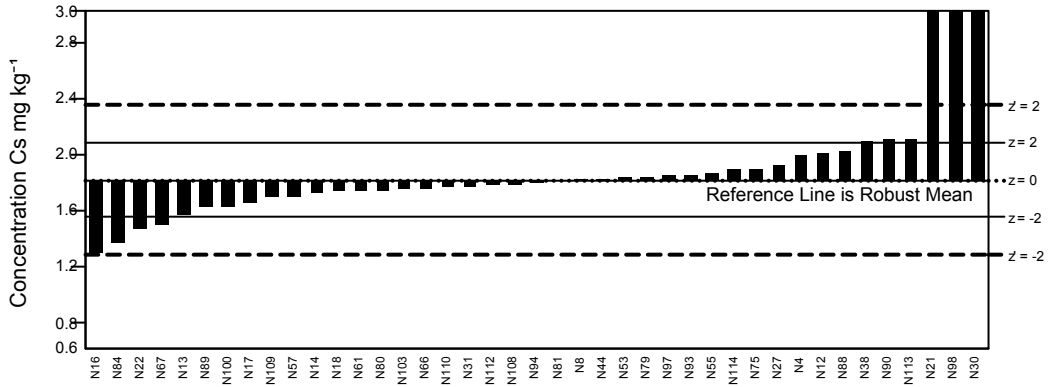
GeoPT36A - Barchart for Co



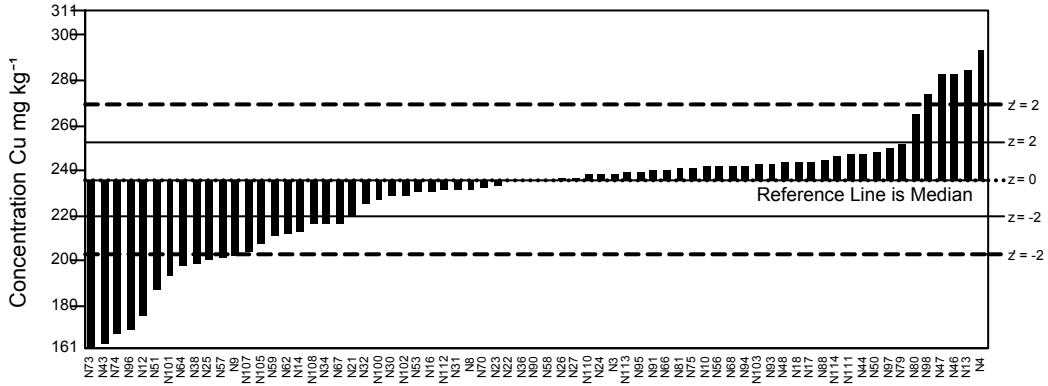
GeoPT36A - Barchart for Cr



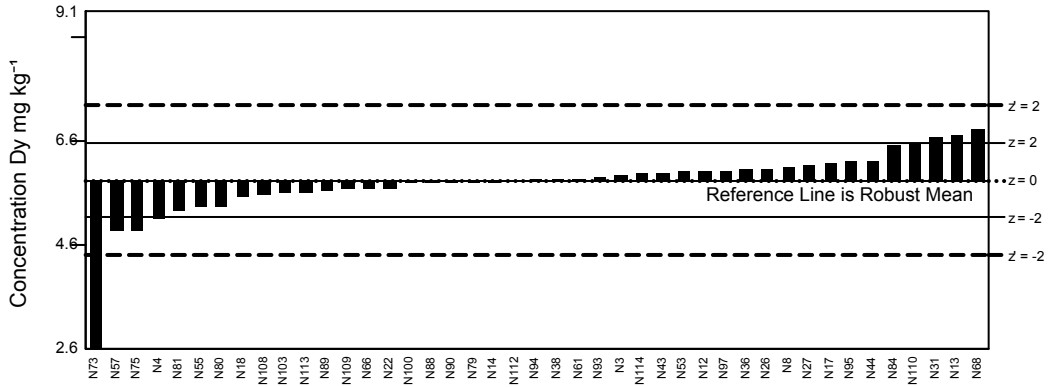
GeoPT36A - Barchart for Cs



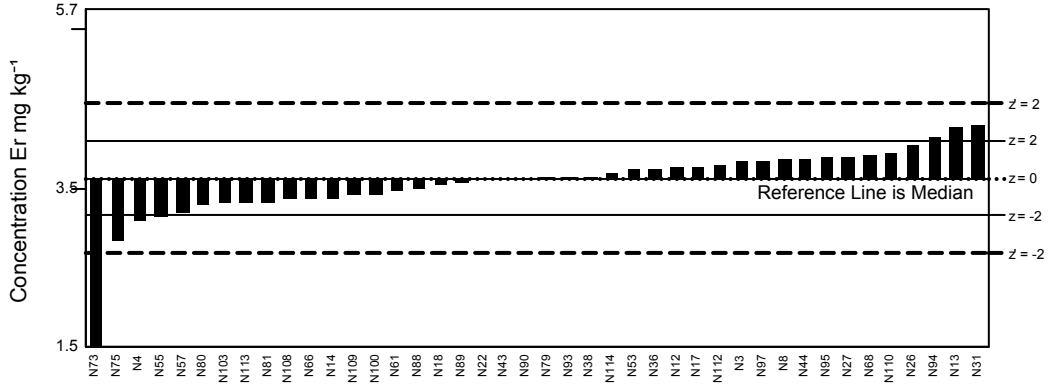
GeoPT36A - Barchart for Cu



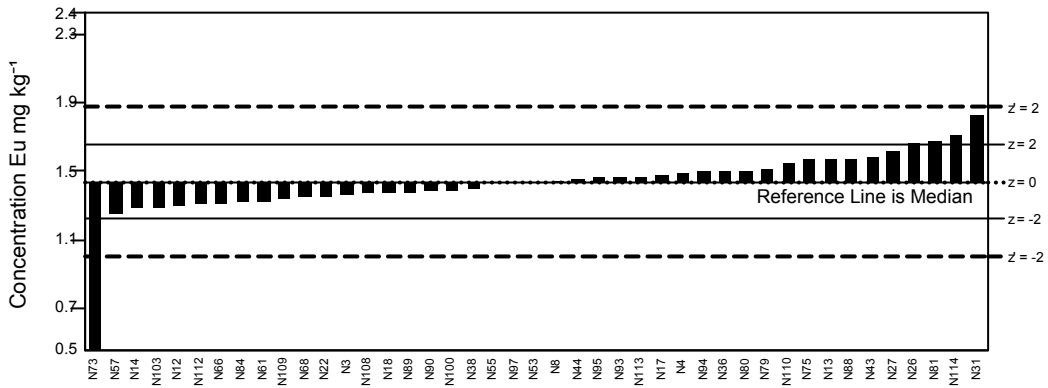
GeoPT36A - Barchart for Dy

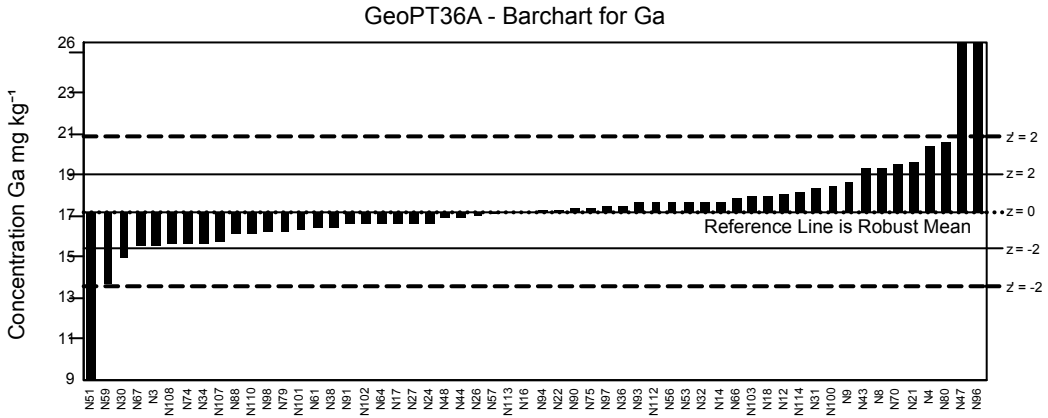


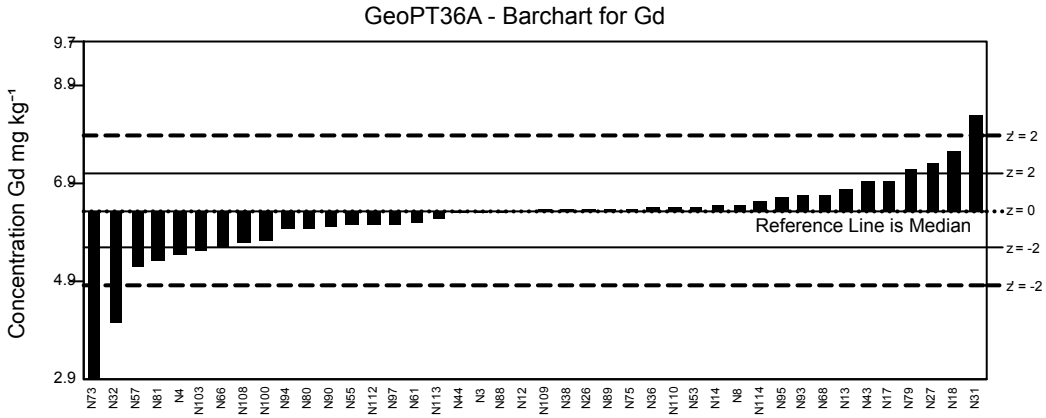
GeoPT36A - Barchart for Er

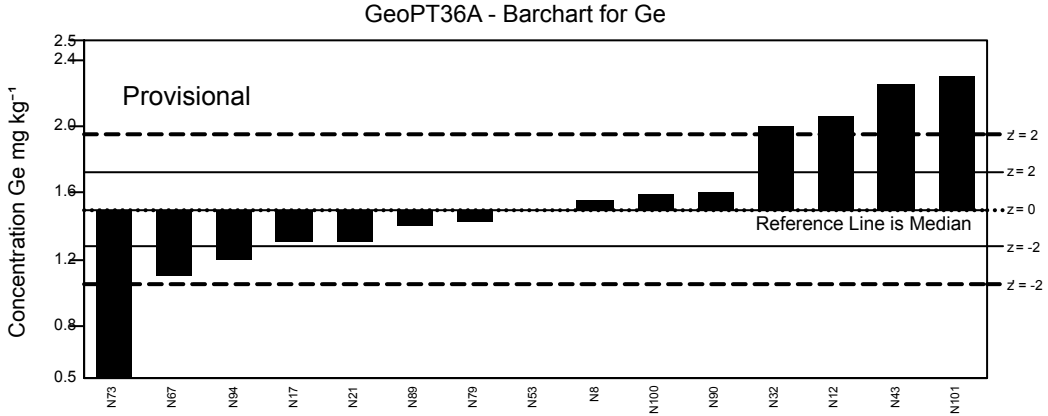


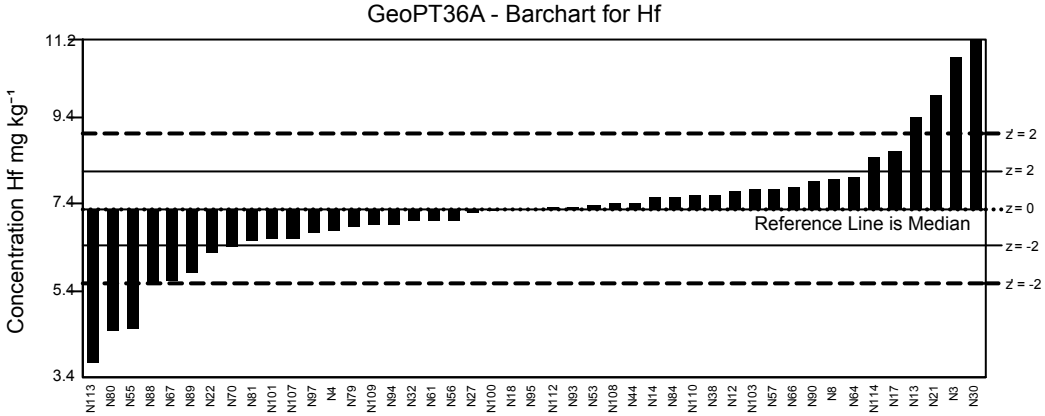
GeoPT36A - Barchart for Eu

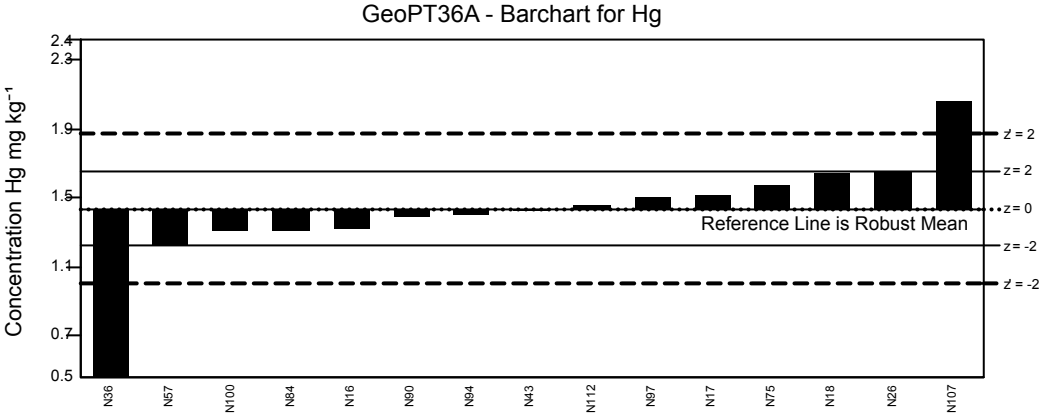


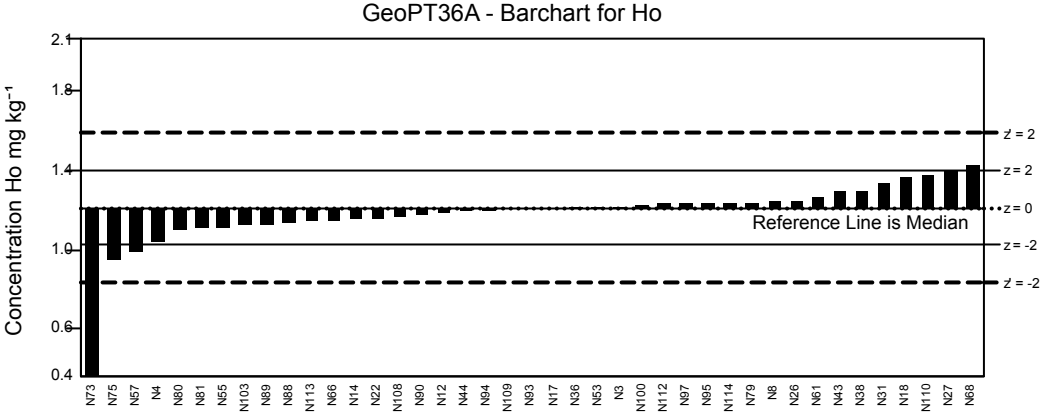

GeoPT36A - Barchart for Ga
Concentration Ga mg kg⁻¹
Reference Line is Robust Mean
z' = 2
z = 2
z = 0
z = -2
z' = -2


GeoPT36A - Barchart for Gd
Concentration Gd mg kg⁻¹
Reference Line is Median
z' = 2
z = 2
z = 0
z = -2
z' = -2

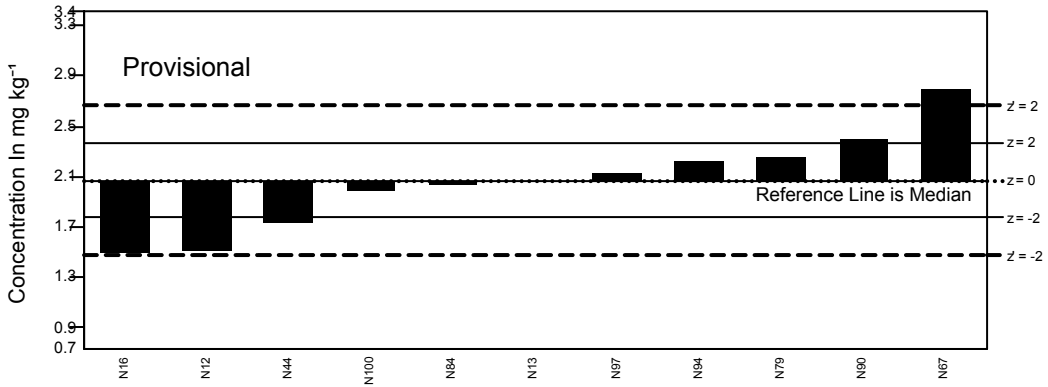

GeoPT36A - Barchart for Ge
Concentration Ge mg kg⁻¹
Provisional
Reference Line is Median
z' = 2
z = 2
z = 0
z = -2
z' = -2


GeoPT36A - Barchart for Hf
Concentration Hf mg kg⁻¹
Reference Line is Median
z' = 2
z = 2
z = 0
z = -2
z' = -2

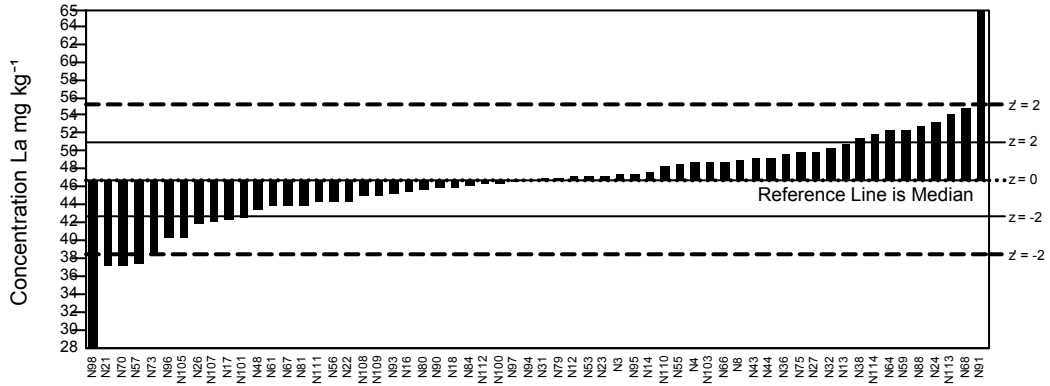

GeoPT36A - Barchart for Hg
Concentration Hg mg kg⁻¹
Reference Line is Robust Mean
z' = 2
z = 2
z = 0
z = -2
z' = -2


GeoPT36A - Barchart for Ho
Concentration Ho mg kg⁻¹
Reference Line is Median
z' = 2
z = 2
z = 0
z = -2
z' = -2

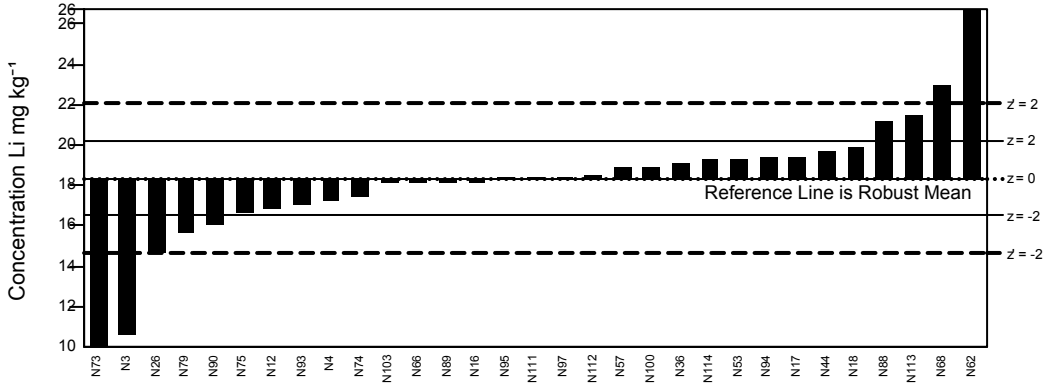
GeoPT36A - Barchart for In



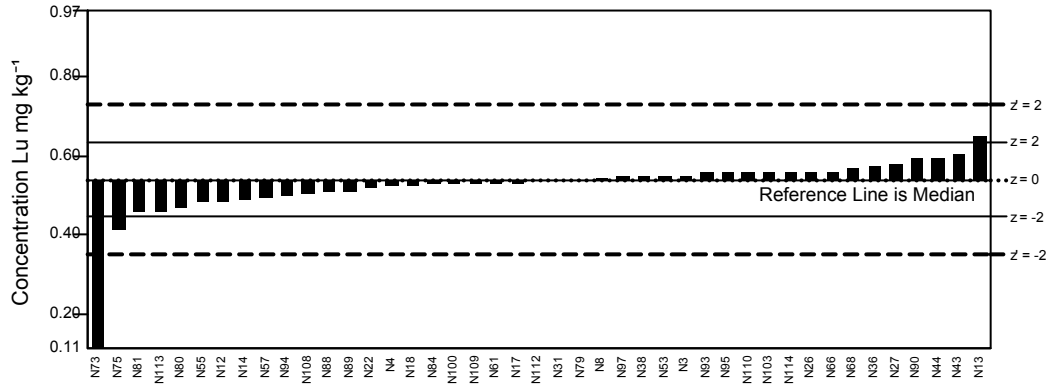
GeoPT36A - Barchart for La



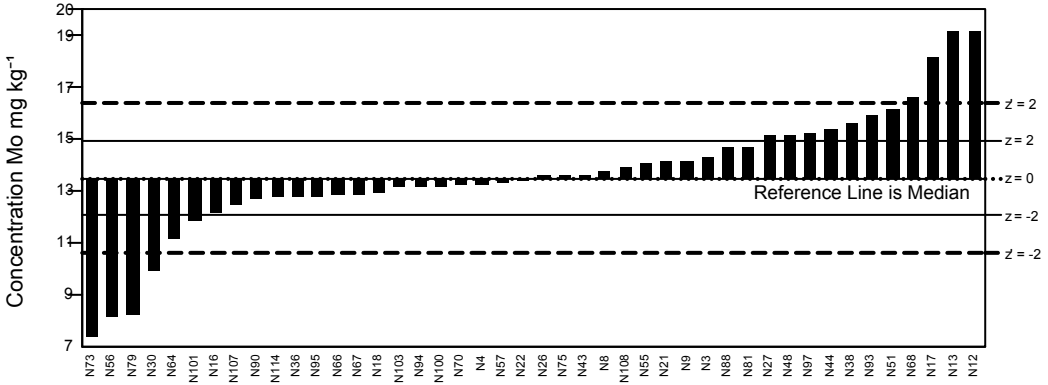
GeoPT36A - Barchart for Li



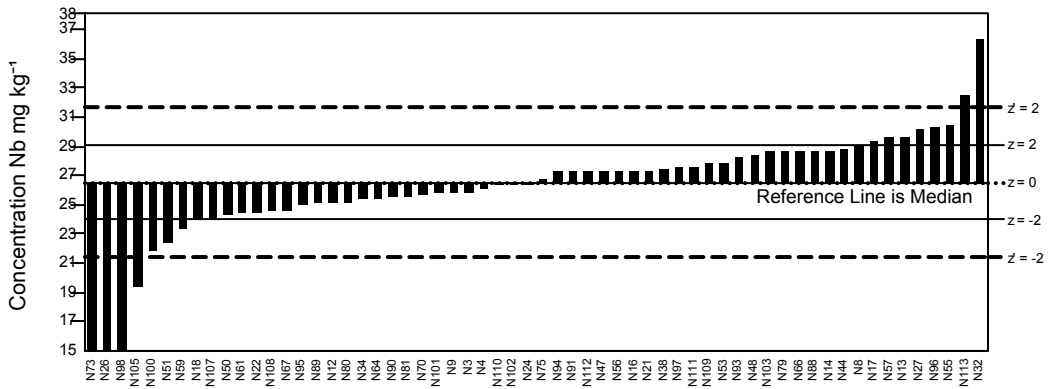
GeoPT36A - Barchart for Lu



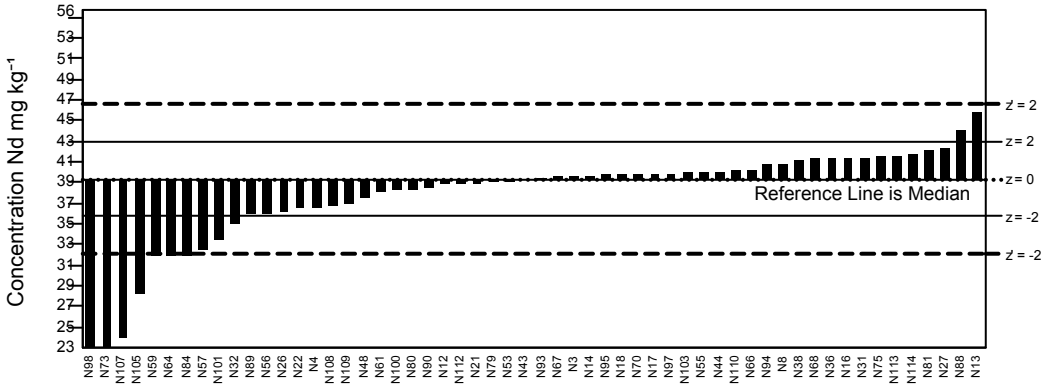
GeoPT36A - Barchart for Mo



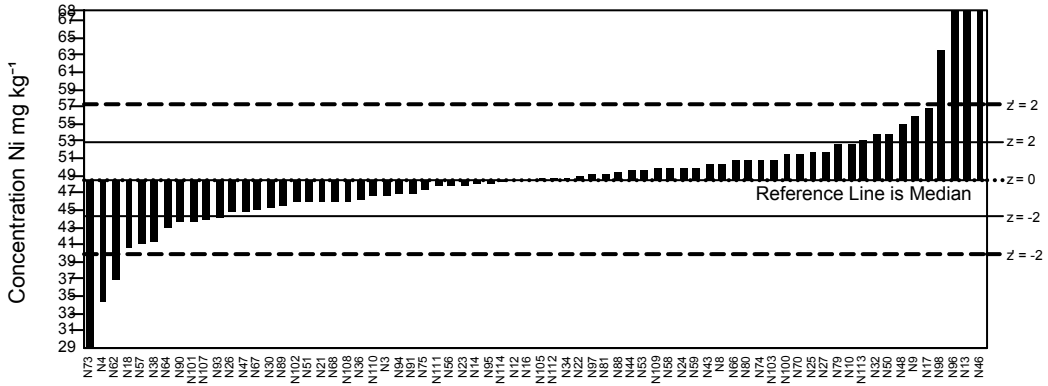
GeoPT36A - Barchart for Nb



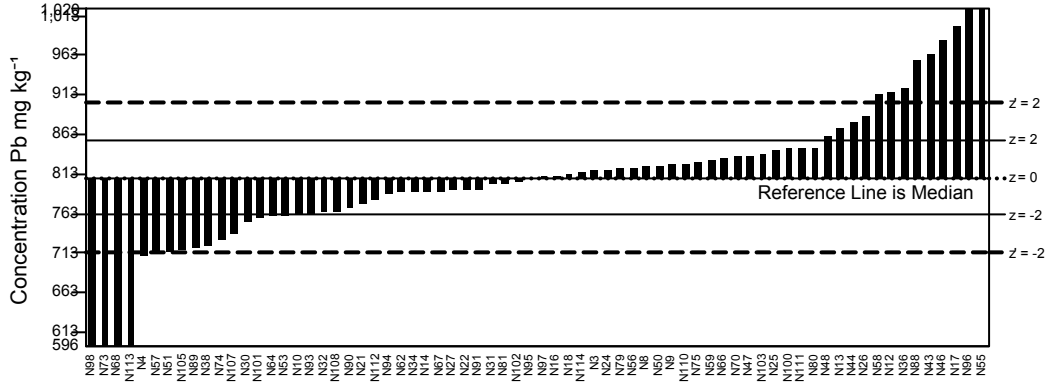
GeoPT36A - Barchart for Nd



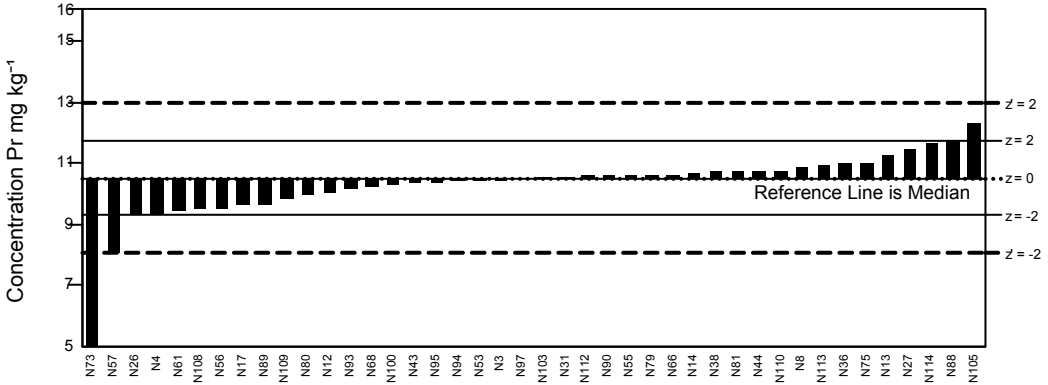
GeoPT36A - Barchart for Ni



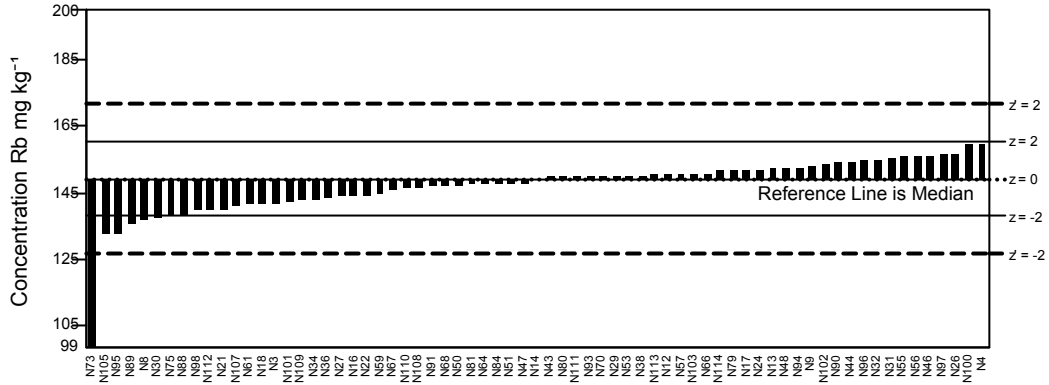
GeoPT36A - Barchart for Pb



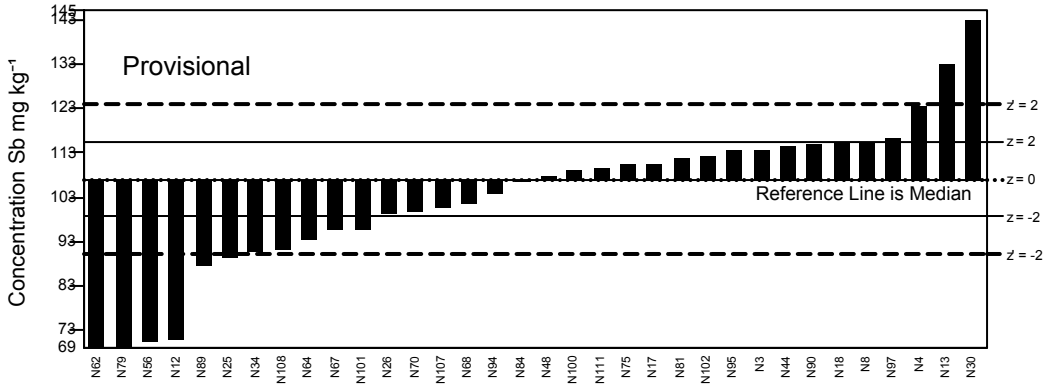
GeoPT36A - Barchart for Pr



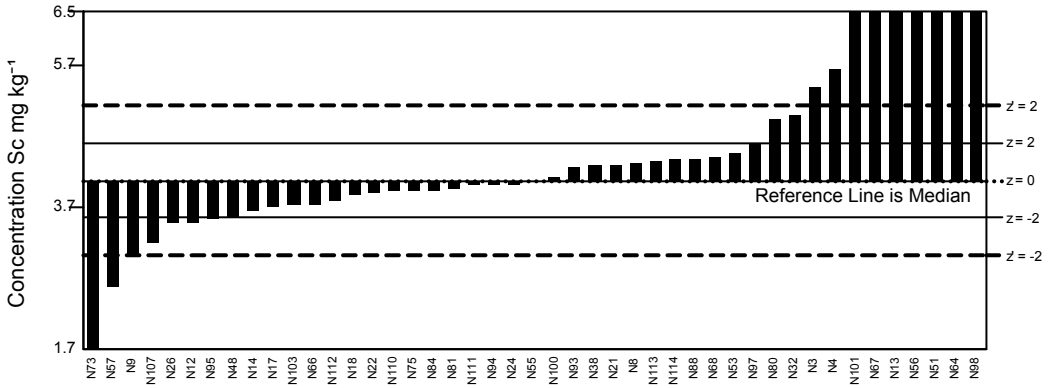
GeoPT36A - Barchart for Rb



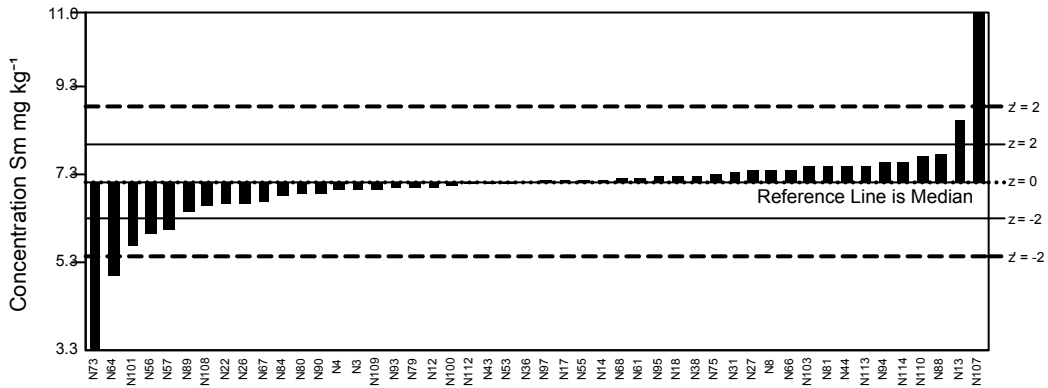
GeoPT36A - Barchart for Sb



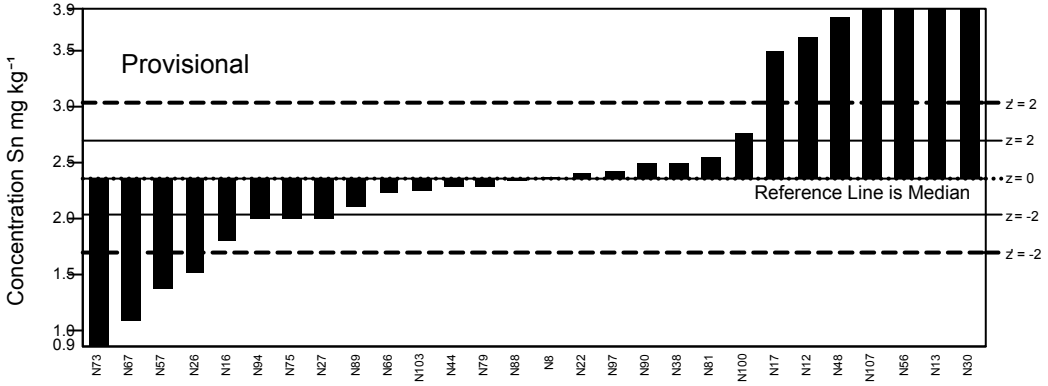
GeoPT36A - Barchart for Sc



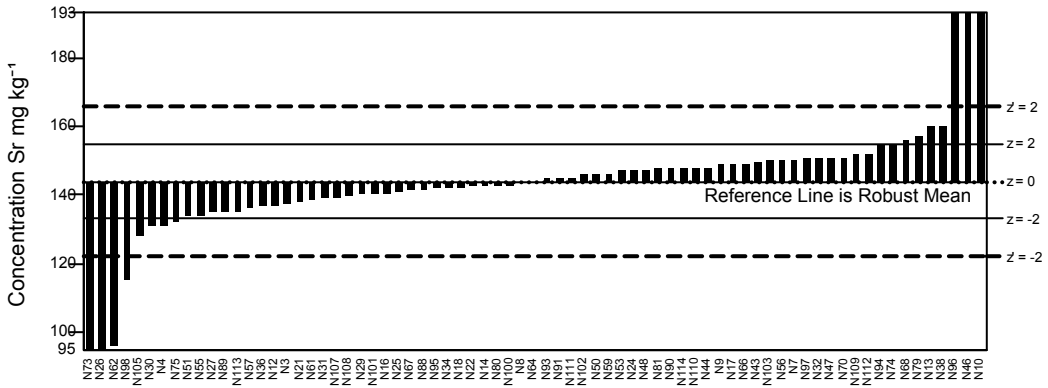
GeoPT36A - Barchart for Sm



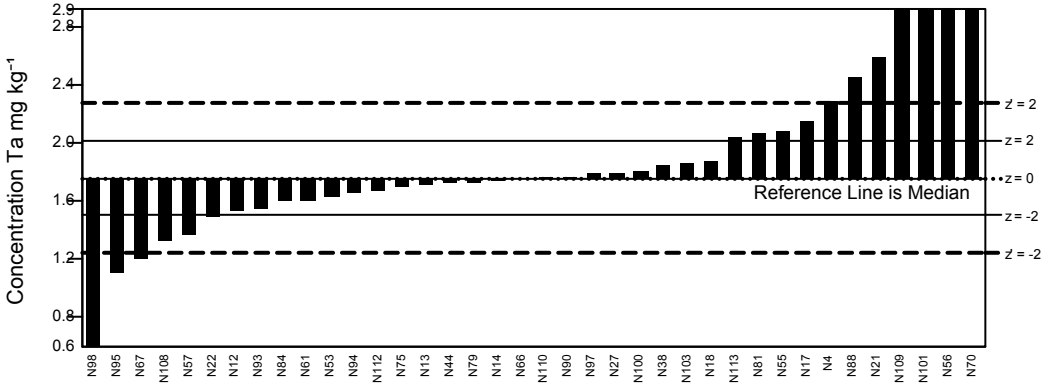
GeoPT36A - Barchart for Sn



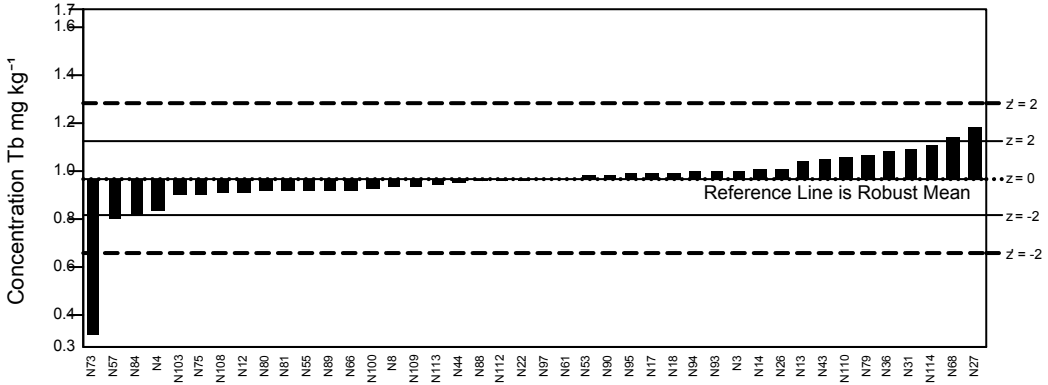
GeoPT36A - Barchart for Sr



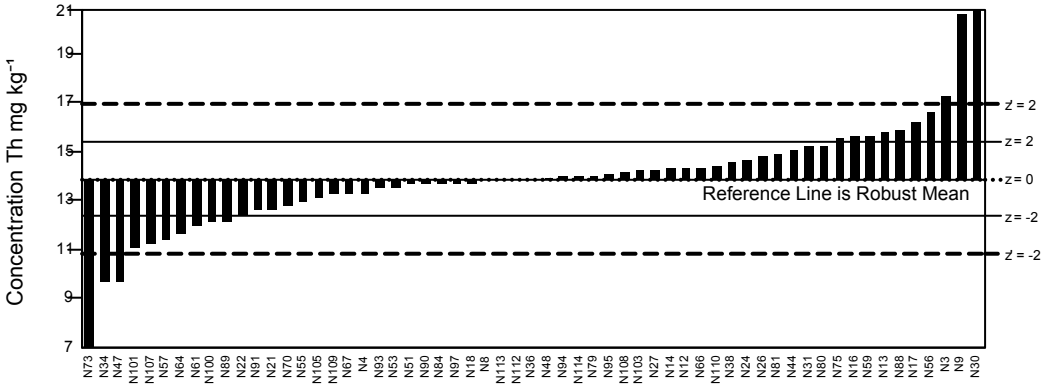
GeoPT36A - Barchart for Ta



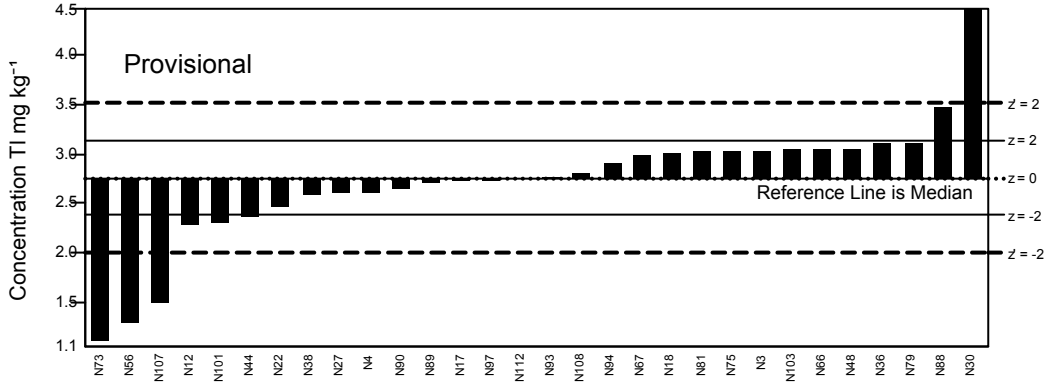
GeoPT36A - Barchart for Tb



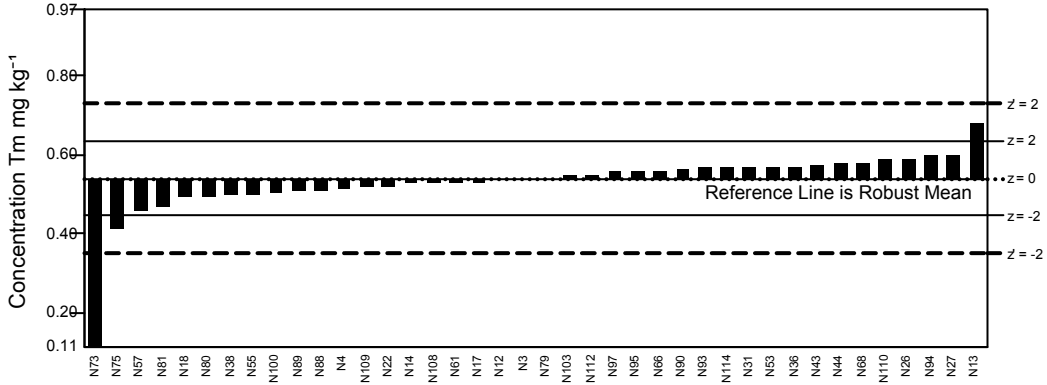
GeoPT36A - Barchart for Th



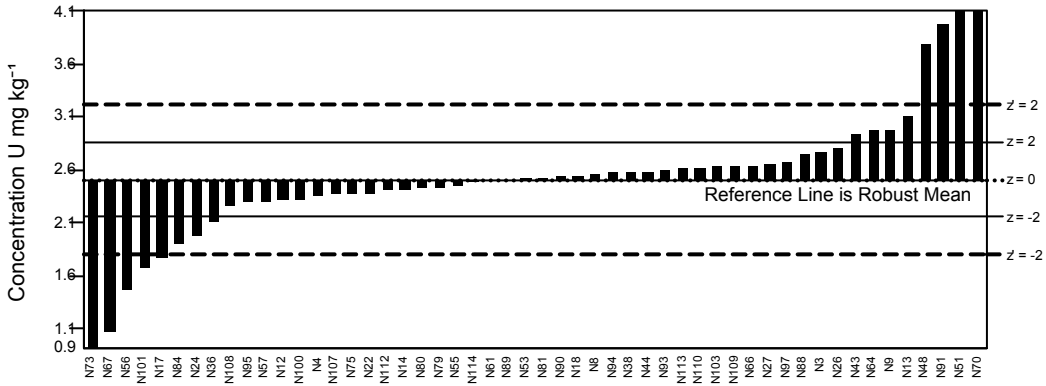
GeoPT36A - Barchart for Tl



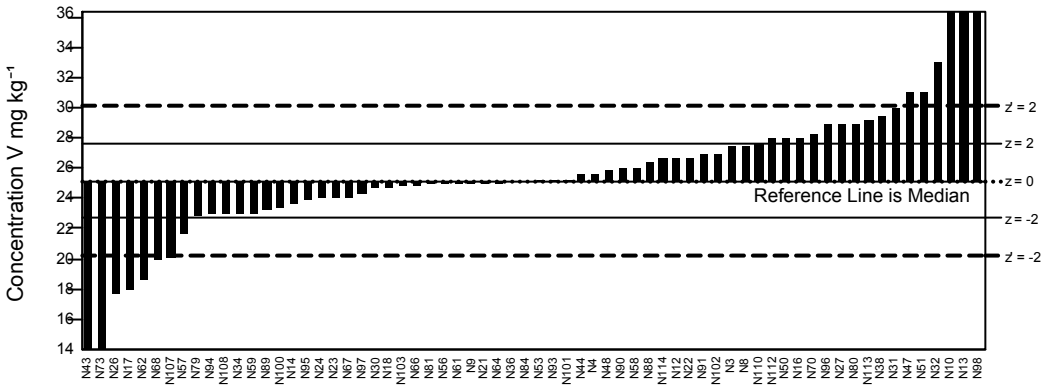
GeoPT36A - Barchart for Tm



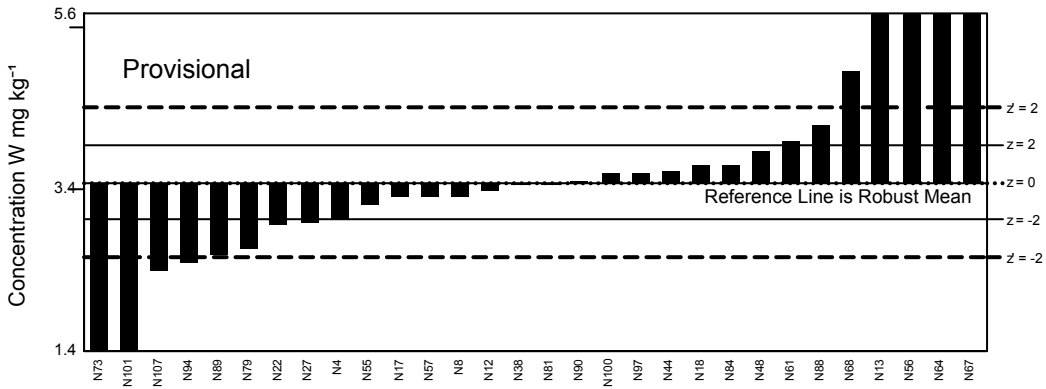
GeoPT36A - Barchart for U

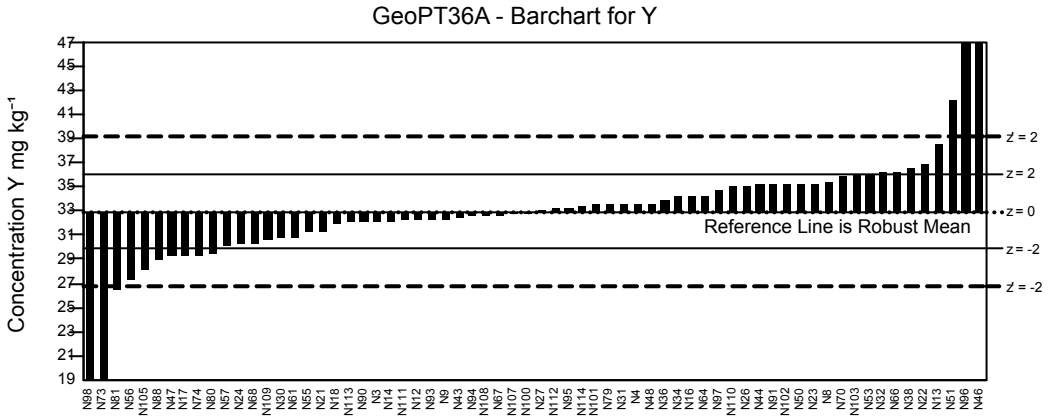


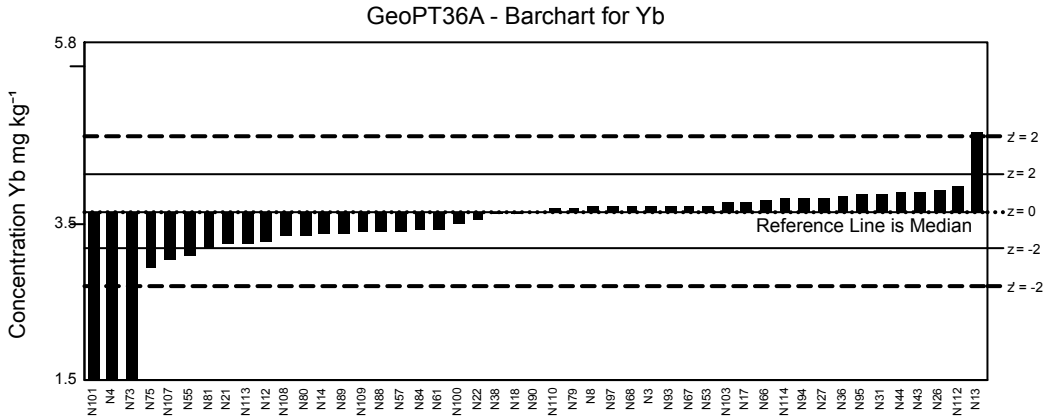
GeoPT36A - Barchart for V

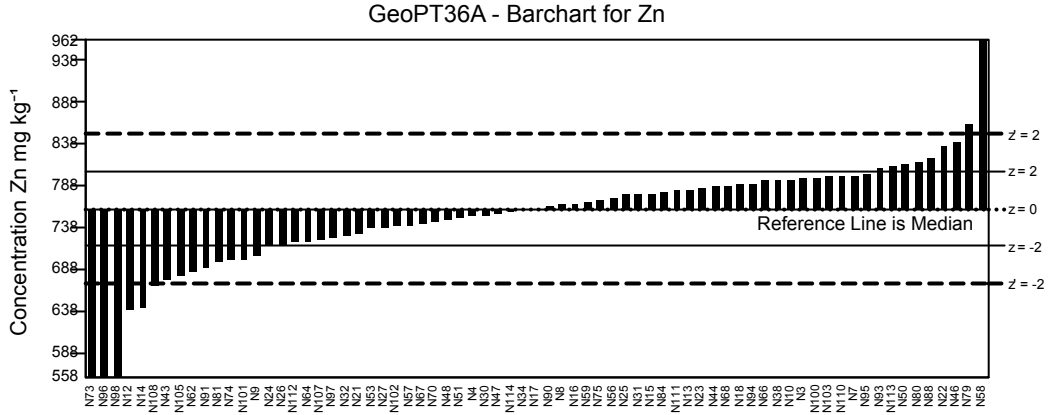


GeoPT36A - Barchart for W









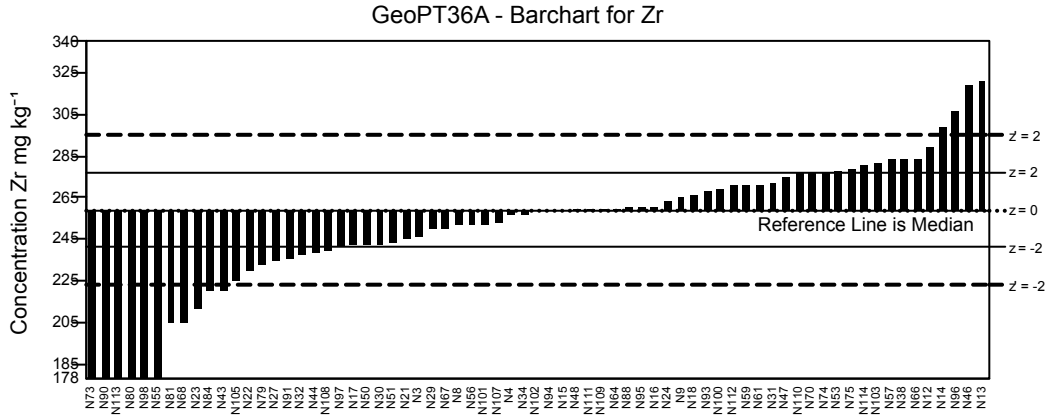
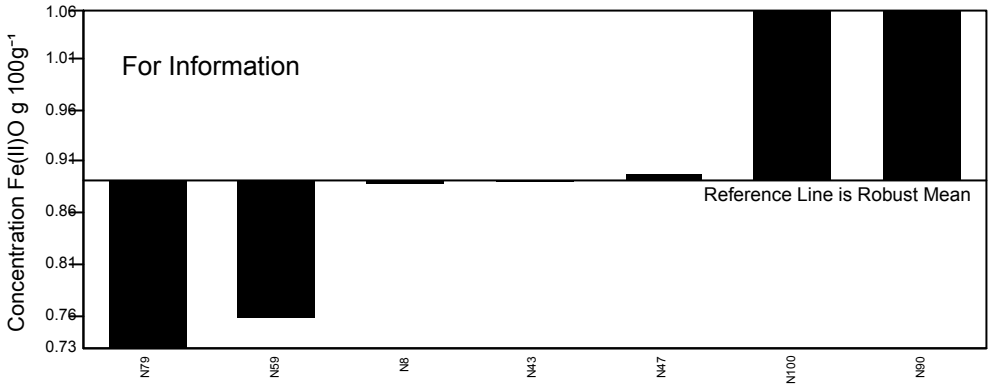
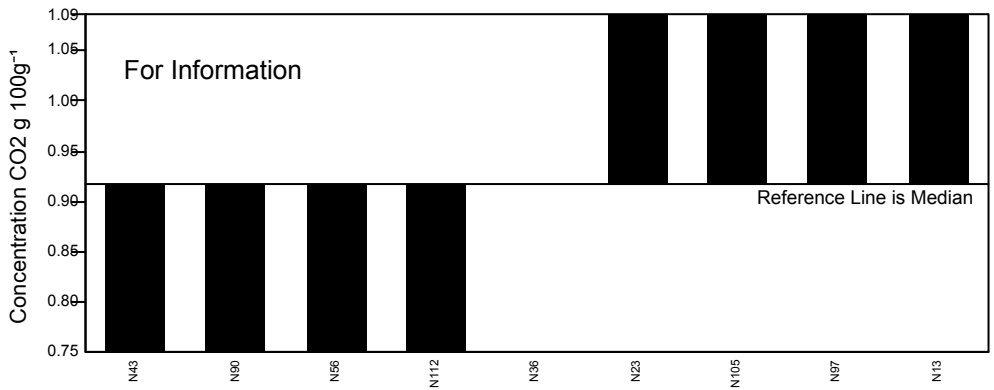


Figure 1: GeoPT36A - Metal-rich sediment, SdAR-M2. Data distribution charts for elements for which values were assigned or provisional values given for guidance. Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).

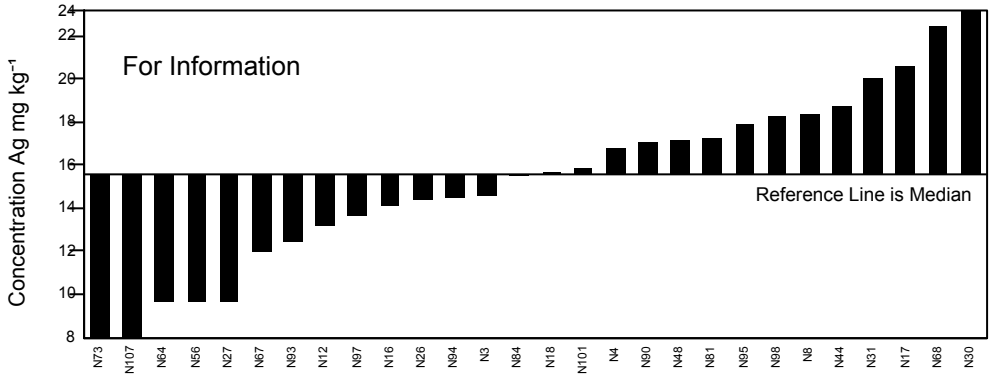
GeoPT36A - Barchart for Fe(II)O



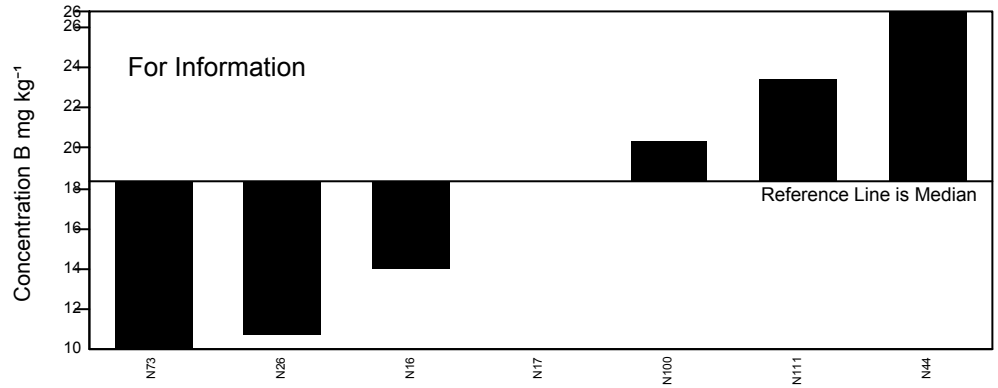
GeoPT36A - Barchart for CO2



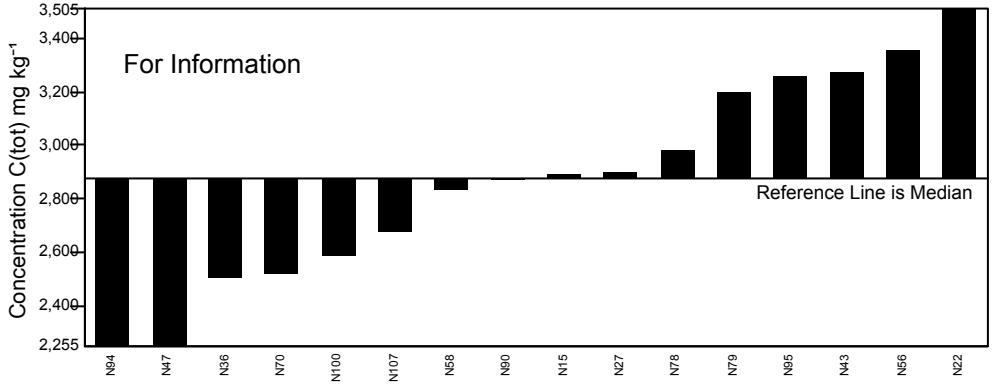
GeoPT36A - Barchart for Ag



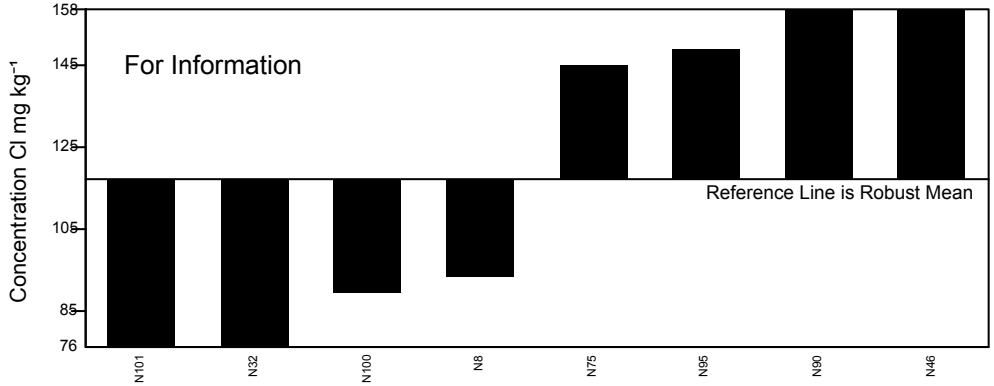
GeoPT36A - Barchart for B

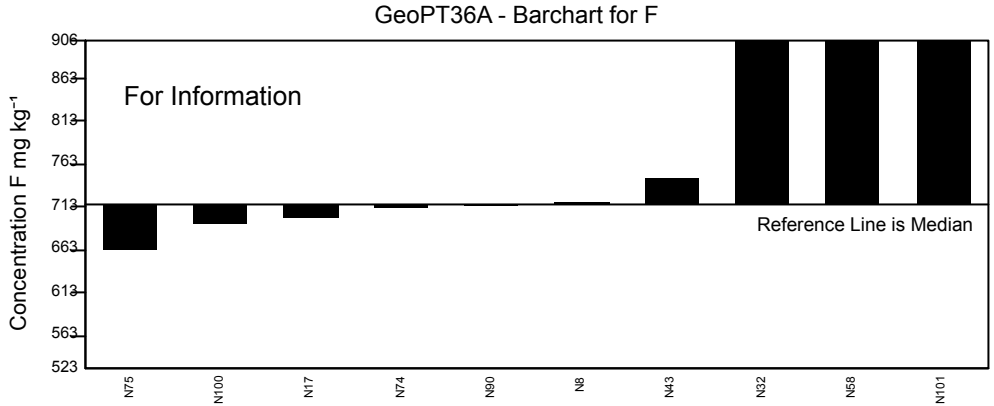


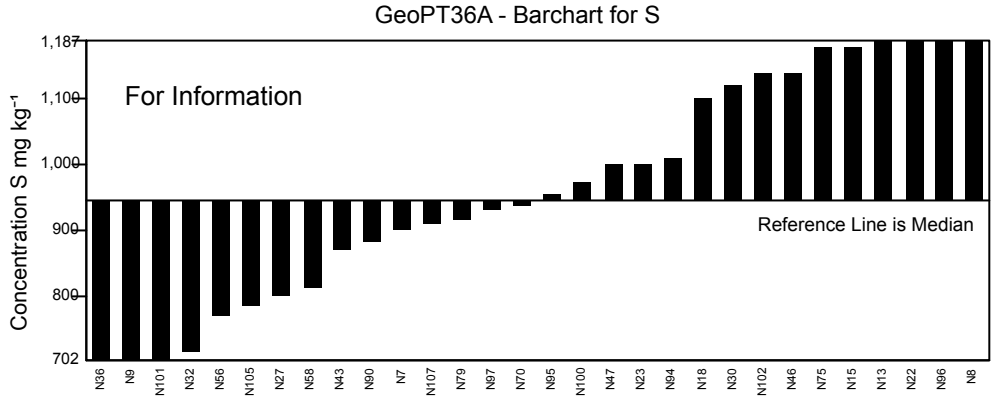
GeoPT36A - Barchart for C(tot)

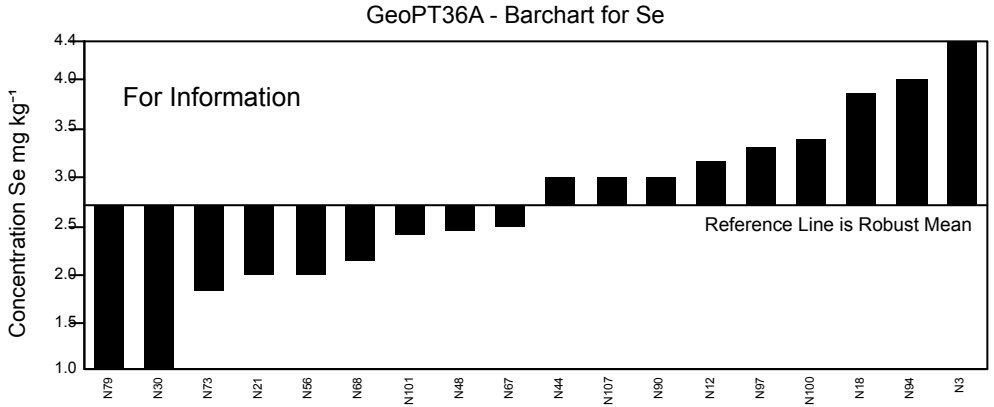


GeoPT36A - Barchart for Cl









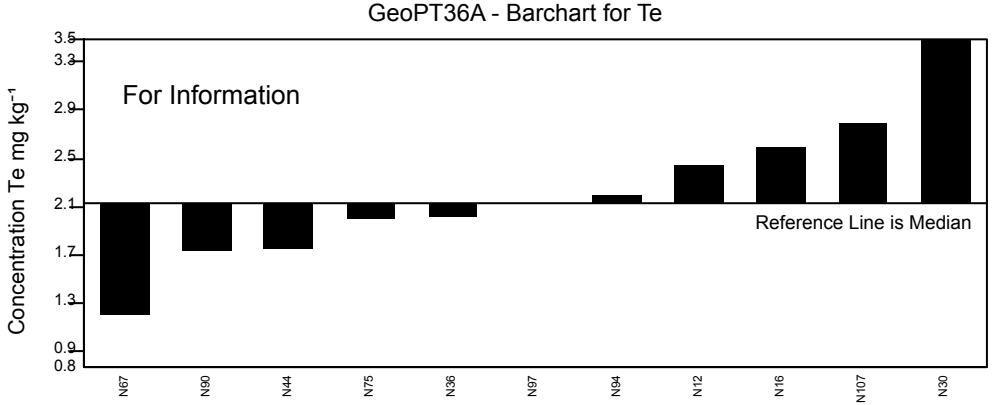


Figure 2: GeoPT36A - Metal-rich sediment, SdAR-M2. Data distribution charts provided for information only for elements for which values could not be assigned.

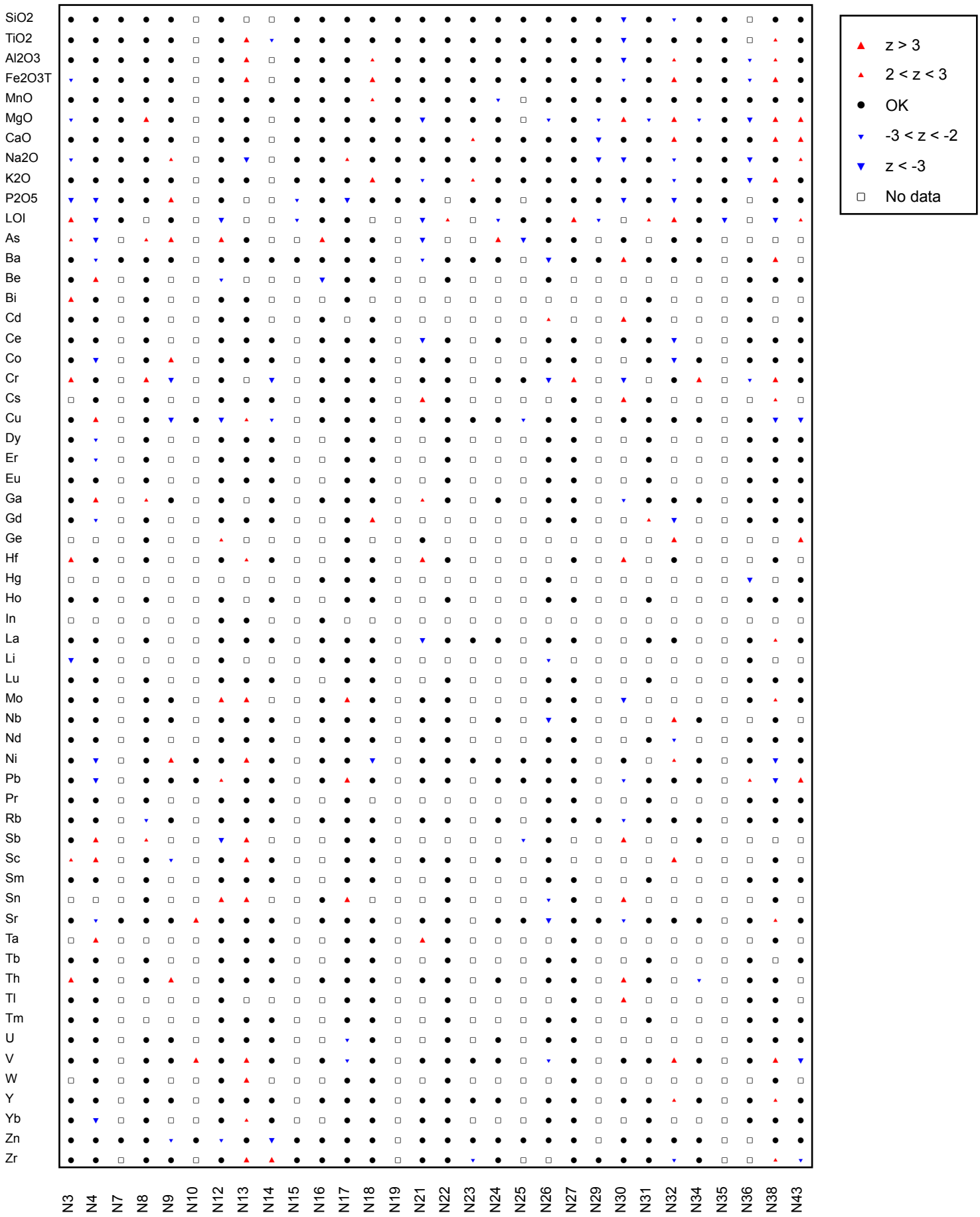


Figure 3: GeoPT36A - Metal-rich sediment, SdAR-M2. Multiple z-score charts for laboratories participating in the GeoPT36 A round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria (see key).

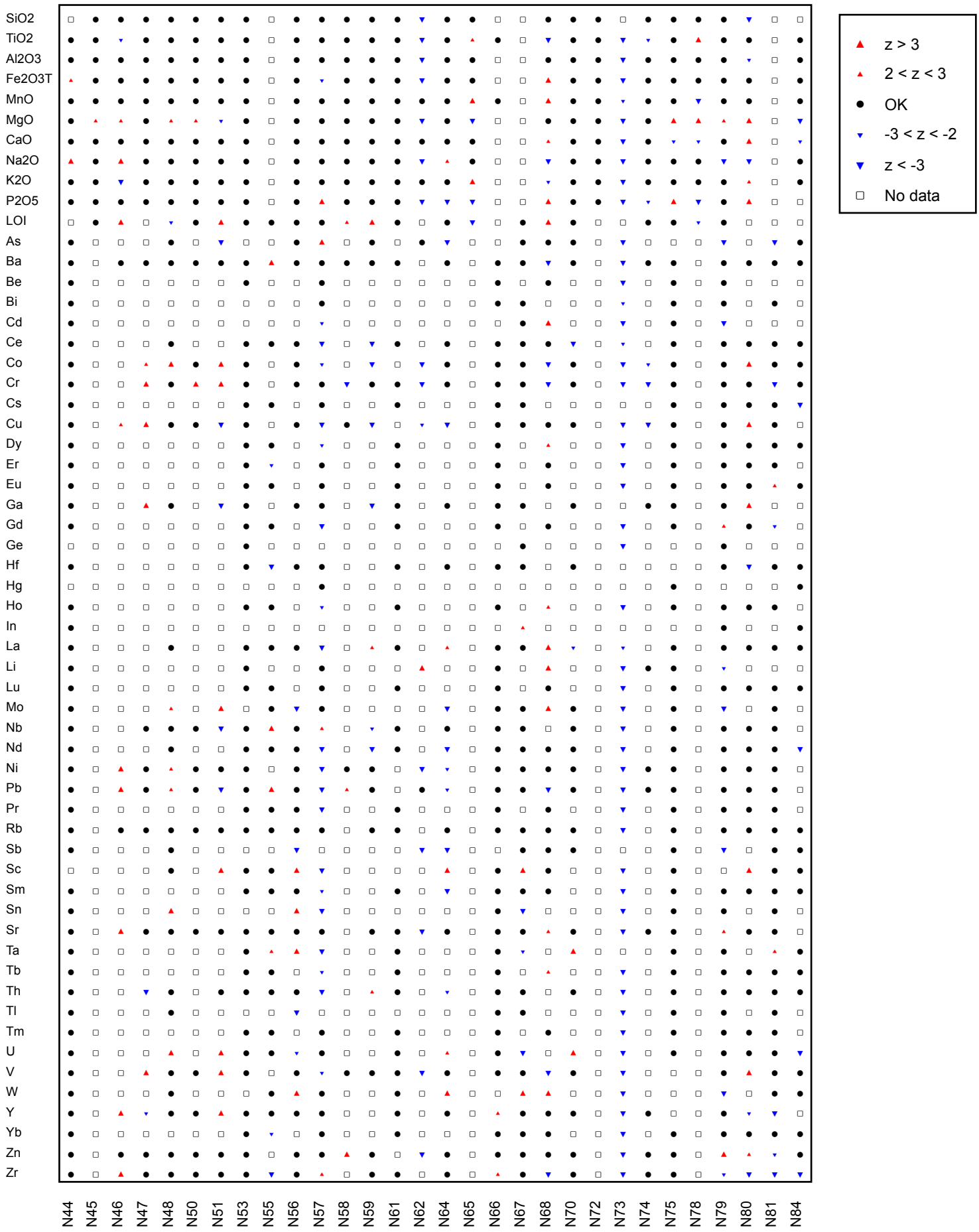


Figure 3: GeoPT36A - Metal-rich sediment, SdAR-M2. Multiple z-score charts for laboratories participating in the GeoPT36 A round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria (see key).

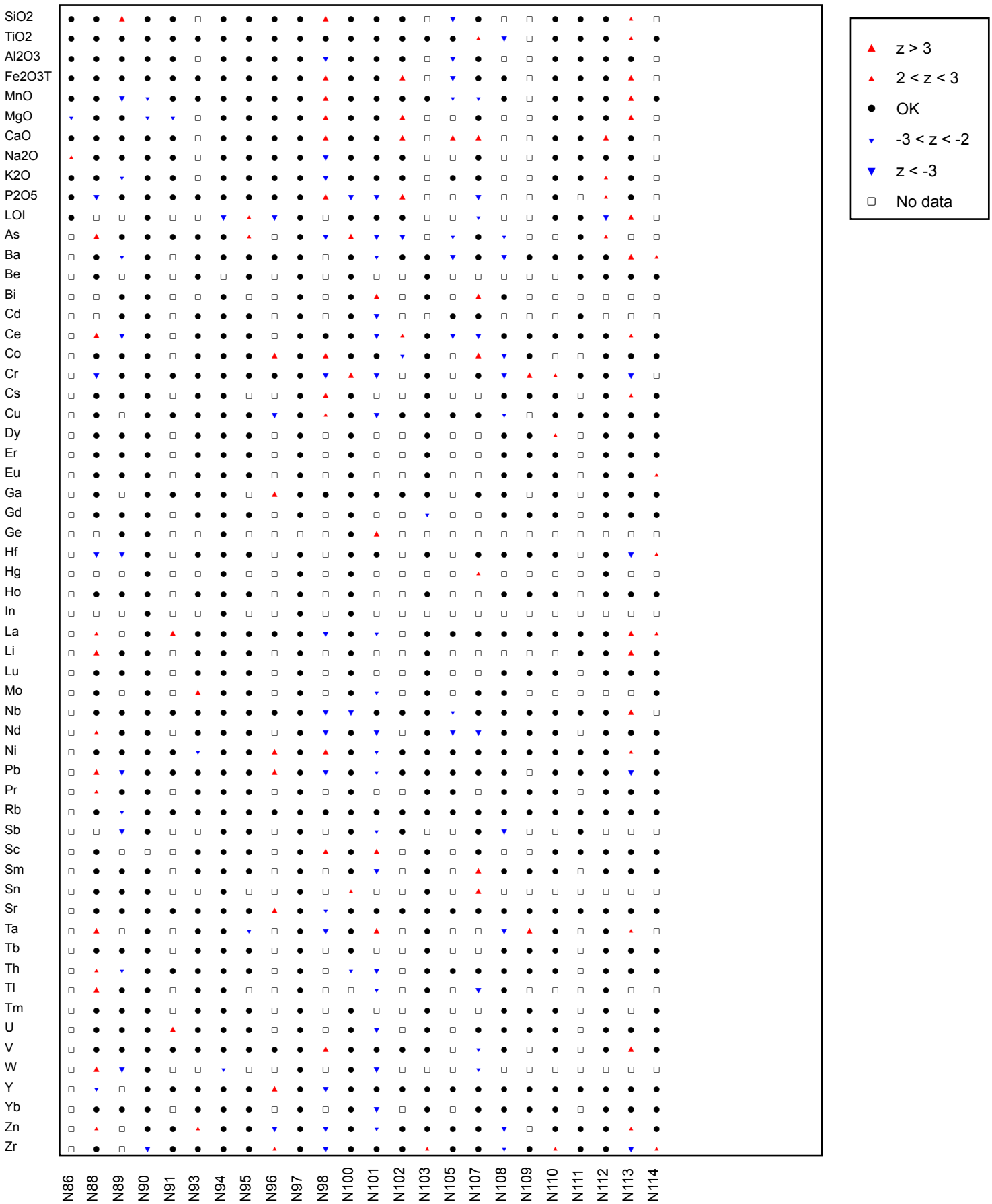


Figure 3: GeoPT36A - Metal-rich sediment, SdAR-M2. Multiple z-score charts for laboratories participating in the GeoPT36 A round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria (see key).