

GeoPT35A — AN INTERNATIONAL PROFICIENCY TEST FOR ANALYTICAL GEOCHEMISTRY LABORATORIES — REPORT ON SUPPLEMENTARY ROUND 35A (Metalliferous sediment, SdAR-H1) / August 2014

**Peter C. Webb¹*, Michael Thompson², Philip J. Potts¹
and Stephen A. Wilson³**

¹Department of Environment, Earth and Ecosystems, The Open University, Walton Hall, Milton Keynes,
MK7 6AA, UK.

²School of Biological and Chemical Sciences, Birkbeck University of London, Malet Street, London WC1E 7HX, UK.

³U.S. Geological Survey, Box 25046, MS 964D, Denver Federal Centre, Denver, CO 80225, USA.

*Corresponding author: e-mail p.c.webb@open.ac.uk

Keywords: proficiency testing, quality assurance, GeoPT, GeoPT35A, round 35, SdAR-H1, metalliferous sediment

Abstract

Results are presented for GeoPT35A, a supplementary test material distributed with the routine test material in round thirty-five of the International Association of Geoanalysts' Proficiency Testing programme for analytical geochemistry laboratories. This test sample was a metalliferous sediment, SdAR-H1, supplied by Dr Stephen Wilson of the U.S. Geological Survey. In this report, the data contributed from 89 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-fifth round of the international proficiency testing programme, GeoPT, 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. This supplementary test sample was designed to provide more challenging analytical demands than the routine test material.

Steering Committee for Round 35A: P.C. Webb (system manager), M. Thompson (statistical advisor), P.J. Potts (analytical advisor), S. Wilson (provision of SdAR-H1).

Timetable for Round 35:

Distribution of sample: March 2014.

Deadline for submission of analytical results:
13th June 2014.

Distribution of report: August 2014

Test Material details

GeoPT35A: The metalliferous sediment test material, SdAR-H1, was produced at the U.S. Geological Survey under the direction of Stephen Wilson. It is a blended material designed to resemble sediment sampled when

monitoring environmental contamination associated with discharges from mining operations. 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.

On account of the unusually high levels of many constituents, participants were informed of the approximate compositional ranges of those constituents. The information provided was: Ag 50-150 ppm, As 200-500 ppm, Au 2-10 ppm, Be 10-40 ppm, Cd 10-40 ppm, Cu 500-1500 ppm, F 1000-2000 ppm, In 5-20 ppm, Hg 4-12 ppm, Mo 40-100 ppm, Pb 2000-6000 ppm, Sb 300-700 ppm, Te 5-15 ppm, Tl 5-20 ppm, Zn 2000-6000 ppm. A recommendation was also made for participants to adhere to good laboratory practice when analysing this sample on account of higher than normal levels of potentially toxic elements and the capacity for potential damage to laboratory equipment.

Submission of results

The results submitted for GeoPT35A (SdAR-H1) by 89 laboratories are listed in Table 1. Submission of data was by a new 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 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. 11 such values were excluded from consideration.

It was observed that two laboratories, L6 and L18 had transposed their results for samples GeoPT35 and GeoPT35A. As a test of proficiency, results have to be processed as submitted, consequently *z*-scores for these laboratories probably do not reflect their analytical capabilities. We apologise if in any way the move to the new system was a contributory factor.

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 10 major components and 41 trace elements in GeoPT35A (SdAR-H1). Bar charts for the 51 elements/components of GeoPT35A that were judged to have satisfactory distributions for consensus values to be assigned or given provisional values are shown in Figure 1. These are: SiO₂, TiO₂, Al₂O₃, Fe₂O₃T, MnO, MgO, CaO, Na₂O*, K₂O, P₂O₅, Ag*, Ba, Be*, Bi*, Cd*, Ce, Co, Cs, Cu, Dy, Er, Eu, Ga, Gd, Hf*, Ho, In*, La, Li, Lu, Mo, Nb, Nd, Ni, Pb, Pr, Rb, Sc*, Sm, Sr, Ta, Tb, Th, Tl, Tm, U, V, 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 degree of consensus was less than ideal because results were significantly dispersed in relation to the target value or the distribution was in part non symmetrical. In 13 cases the robust mean was used to define the consensus value, but in 35 cases the median value was preferred.

In 3 cases a mode provided the most satisfactory consensus value. The procedure used to determine the mode was based on the analysis of mixed populations detailed in Thompson (2006) and first used for GeoPT23. Values obtained in this way were, in all cases, designated as provisional values.

Bar charts for the 18 elements/components: Fe(II)O, H₂O⁺, LOI, As, Au, C(org), C(tot), Cl, Cr, F, Ge, Hg, S, Sb, Se, Sn, Te and W are plotted in Figure 2 for information only, as the data were insufficient or too variable for the reliable determination of a consensus.

In general the quality of results reported for this sample was not as good as that routinely supplied in GeoPT.

This was not surprising, however, as the unusual composition of this sample meant that it would be a challenge for many analytical systems.

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 GeoPT35A, 1634 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 GeoPT35A, 1780 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:

$$H_a = k \cdot X_a^{0.8495}$$

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 GeoPT35A 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 GeoPT35A 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 GeoPT36 round, the test sample for which will be distributed during September 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 GeoPT35A, 11 zeros were reported and were disregarded. Participants are requested not to 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.

Reference

Thompson, M. (2006). Using mixture models for bump-hunting in the results of proficiency tests. *Accred. Qual. Assur.*, 10, 501-505

Appendix 1

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

GeoPT1

Thompson M., Potts P.J., Kane J.S. and Webb P.C. (1996) GeoPT1. International proficiency test for analytical geochemistry laboratories - Report on round 1. *Geostandards Newsletter: The Journal of Geostandards and Geoanalysis*, 20, 295-325.

GeoPT2

Thompson M., Potts P.J., Kane J.S., Webb P.C. and Watson, J.S. (1998) GeoPT2. International proficiency test for analytical geochemistry laboratories - Report on round 2. *Geostandards Newsletter: The Journal of Geostandards and Geoanalysis*, 22 127-156.

GeoPT3

Thompson M., Potts P.J., Kane J.S. and Chappell B.W. (1999a) GeoPT3. International proficiency test for analytical geochemistry laboratories - Report on round 3. *Geostandards Newsletter: The Journal of Geostandards and Geoanalysis*, 23, 87-121.

GeoPT4

Thompson M., Potts P.J., Kane J.S., Webb P.C. and Watson J.S. (1999b) GeoPT4. 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).

GeoPT5

Thompson M., Potts P.J., Kane J.S., and Wilson S. (1999c) GeoPT5. 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).

GeoPT6

Potts P.J., Thompson M., Kane J.S., Webb P.C. and Carignan J. (2000) GeoPT6 - 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.

GeoPT7

Potts P.J., Thompson M., Kane J.S., and Petrov L.L. (2000) GeoPT7 - an international proficiency test for analytical geochemistry laboratories - report on round 7 (GBPG-1 Garnet-biotite plagiogneiss). International Association of Geoanalysts: Unpublished report.

GeoPT8

Potts P.J., Thompson M., Kane J.S., Webb P.C. and Watson J.S. (2000) GeoPT8 - an international proficiency test for analytical geochemistry laboratories - report on round 8 / February 2001 (OU-4 Penmaenmawr microdiorite). International Association of Geoanalysts: Unpublished report.

GeoPT9

Potts P.J., Thompson M., Webb P.C. and Watson J.S. (2001) GeoPT9 - an international proficiency test for analytical geochemistry laboratories - report on round 9 / July 2001 (OU-6 Penrhyn slate). International Association of Geoanalysts: Unpublished report.

GeoPT10

Potts P.J., Thompson M., Webb P.C., Watson J.S. and Wang Yimin (2001) GeoPT10 - an international proficiency test for analytical geochemistry laboratories - report on round 10 / December 2001 (CH-1 Marine sediment). International Association of Geoanalysts: Unpublished report.

GeoPT11

Potts P.J., Thompson M., Chenery S.R., Webb P.C. and Watson J.S. (2002) GeoPT11 - an international proficiency test for analytical geochemistry laboratories - report on round 11 / July 2002 (OU-5 Leaton dolerite). International Association of Geoanalysts: Unpublished report.

GeoPT12

Potts P.J., Thompson M., Chenery S.R., Webb P.C. and Batjargal B. (2003) GeoPT12 - an international proficiency test for analytical geochemistry laboratories - report on round 12 / January 2003 (GAS Serpentine). International Association of Geoanalysts: Unpublished report.

GeoPT13

Potts P.J., Thompson M., Chenery S.R., Webb P.C. and Kaspar H.U. (2003) GeoPT13 - an international proficiency test for analytical geochemistry laboratories - report on round 13 / July 2003 (Köln Loess). International Association of Geoanalysts: Unpublished report.

GeoPT14

Potts P.J., Thompson M., Chenery S.R., Webb P.C. and B. Batjargal (2004) GeoPT14 - an international proficiency test for analytical geochemistry laboratories - report on round 14 / January 2004 (OSHBO - alkaline granite). International Association of Geoanalysts: Unpublished report.

GeoPT15

Potts P.J., Thompson M., Chenery S.R., Webb P.C. and WANG Yimin (2004) GeoPT15 - an international proficiency test for analytical geochemistry laboratories - report on round 15 / June 2004 (Ocean floor sediment MSAN). International Association of Geoanalysts: Unpublished report.

GeoPT16

Potts P.J., Thompson M., Webb P.C. and S.Wilson (2005) GeoPT16 - an international proficiency test for analytical geochemistry laboratories - report on round 16 / February 2005 (Nevada basalt, BNV-1). International Association of Geoanalysts: Unpublished report.

GeoPT17

Potts P.J., Thompson M., Webb, P.C. and J. Nicholas Walsh (2005)
GeoPT17 - an international proficiency test for analytical geochemistry laboratories - report on round 17 / July 2005 (Calcareous sandstone, OU-8). International Association of Geoanalysts: Unpublished report.

GeoPT18

Webb, P.C., Thompson M., Potts P.J. and L. Paul Bedard (2006)
GeoPT18 - an international proficiency test for analytical geochemistry laboratories - report on round 18 / Jan 2006 (Quartz Diorite, KPT-1). International Association of Geoanalysts: Unpublished report.

GeoPT19

Webb, P.C., Thompson M., Potts P.J. and B. Batjargal (2006)
GeoPT19 - an international proficiency test for analytical geochemistry laboratories - report on round 19 / July 2006 (Gabbro, MGR-N). International Association of Geoanalysts: Unpublished report.

GeoPT20

Webb, P.C., Thompson M., Potts P.J. and M. Burnham (2007)
GeoPT20 - an international proficiency test for analytical geochemistry laboratories - report on round 20 / Jan 2007 (Ultramafic rock, OPY-1). International Association of Geoanalysts: Unpublished report.

GeoPT21

Webb, P.C., Thompson M., Potts P.J. and B. Batjargal (2007)
GeoPT21 - an international proficiency test for analytical geochemistry laboratories - report on round 21 / July 2007 (Granite, MGT-1). International Association of Geoanalysts: Unpublished report.

GeoPT22

Webb, P.C., Thompson, M., Potts, P.J. and Batjargal, B. (2008)
GeoPT22 - an international proficiency test for analytical geochemistry laboratories - report on round 22 / January 2008 (Basalt, MBL-1). International Association of Geoanalysts: Unpublished report.

GeoPT23

Webb, P.C., Thompson, M., Potts, P.J., Watson, J.S. and Kriete, C. (2008)
GeoPT23 - 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.

GeoPT24

Webb, P.C., Thompson, M., Potts, P.J. and Watson, J.S. (2009)
GeoPT24 - an international proficiency test for analytical geochemistry laboratories - report on round 24 / January 2009 (Longmyndian greywacke, OU-10). International Association of Geoanalysts: Unpublished report.

GeoPT25

Webb, P.C., Thompson, M., Potts, P.J. and Enzweiler, J. (2009)
GeoPT25 - an international proficiency test for analytical geochemistry laboratories - report on round 25 / July 2009 (Basalt, HTP-1). International Association of Geoanalysts: Unpublished report.

GeoPT26

Webb, P.C., Thompson, M., Potts, P.J. and Loubser, M. (2010)
GeoPT26 - 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.

GeoPT27

Webb, P.C., Thompson, M., Potts, P.J. and Batjargal, B. (2010)
GeoPT27 - an international proficiency test for analytical geochemistry laboratories - report on round 27 / July 2010 (Andesite, MGL-AND). International Association of Geoanalysts: Unpublished report.

GeoPT28

Webb, P.C., Thompson, M., Potts, P.J. and Wilson, S. (2011)
GeoPT28 - an international proficiency test for analytical geochemistry laboratories - report on round 28 / January 2011 (Shale, SBC-1). International Association of Geoanalysts: Unpublished report.

GeoPT29

Webb, P.C., Thompson, M., Potts, P.J. and Wilson, S. (2011)
GeoPT29 - an international proficiency test for analytical geochemistry laboratories - report on round 29 / July 2011 (Nephelinite, NKT-1). International Association of Geoanalysts: Unpublished report.

GeoPT30

Webb, P.C., Thompson, M., Potts, P.J., Long, D. and Batjargal, B. (2012)
GeoPT30 - 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.

GeoPT31

Webb, P.C., Thompson, M., Potts, P.J. and Wilson, S. (2012)
GeoPT31 - 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.

GeoPT32

Webb, P.C., Thompson, M., Potts, P.J. and Webber, E. (2013)
GeoPT32 - an international proficiency test for analytical geochemistry laboratories - report on round 32 / January 2013 (Woodstock Basalt, WG-1). International Association of Geoanalysts: Unpublished report.

GeoPT33

Webb, P.C., Thompson, M., Potts, P.J., Prusisz, B., and Young, K. (2013)
GeoPT33 - 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.

GeoPT34

Webb, P.C., Thompson, M., Potts, P.J. and Wilson, S. (2014)
GeoPT34 - an international proficiency test for analytical geochemistry laboratories - report on round 34 / January 2014 (Granite, GRI-1). International Association of Geoanalysts: Unpublished report.

Table 1 - GeoPT35A Contributed data for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code		L1	L2	L3	L4	L6	L7	L9	L10	L11	L13	L14	L16	L17
SiO2	g 100g ⁻¹	<u>64.33</u>	<u>65.24</u>	<u>65.17</u>	<u>66.74</u>		<u>65</u>	<u>65.5</u>	<u>65.9</u>	<u>67.92</u>		<u>65.22</u>	<u>65</u>	
TiO2	g 100g ⁻¹	<u>0.564</u>	<u>0.28</u>	<u>0.56</u>	<u>0.613</u>	<u>0.853</u>	<u>0.586</u>	<u>0.568</u>	<u>0.553</u>	<u>0.55</u>		<u>0.52</u>	<u>0.548</u>	<u>0.549</u>
Al2O3	g 100g ⁻¹	<u>12.46</u>	<u>10.46</u>	<u>11.69</u>	<u>12.17</u>	<u>17</u>	<u>12.34</u>	<u>11.83</u>	<u>11.5</u>	<u>11.97</u>		<u>11.61</u>	<u>13.29</u>	
Fe2O3T	g 100g ⁻¹	<u>6.63</u>	<u>6.41</u>	<u>6.6</u>	<u>6.304</u>	<u>7.41</u>	<u>6.566</u>	<u>6.46</u>	<u>6.36</u>	<u>6.83</u>		<u>6.59</u>	<u>5.72</u>	
Fe(II)O	g 100g ⁻¹			<u>2.89</u>	<u>1.36</u>						<u>4.63</u>		<u>1.1</u>	
MnO	g 100g ⁻¹	<u>0.513</u>		<u>0.528</u>	<u>0.666</u>	<u>0.125</u>	<u>0.545</u>	<u>0.497</u>	<u>0.506</u>	<u>0.59</u>		<u>0.53</u>	<u>0.683</u>	<u>0.504</u>
MgO	g 100g ⁻¹	<u>1.58</u>	<u>1.56</u>	<u>1.51</u>	<u>1.458</u>	<u>3.35</u>	<u>1.619</u>	<u>1.55</u>	<u>1.51</u>	<u>1.54</u>		<u>1.47</u>	<u>1.63</u>	
CaO	g 100g ⁻¹	<u>1.44</u>	<u>1.5</u>	<u>1.48</u>	<u>1.448</u>	<u>6.92</u>	<u>1.481</u>	<u>1.47</u>	<u>1.44</u>	<u>1.47</u>		<u>1.44</u>	<u>1.53</u>	
Na2O	g 100g ⁻¹	<u>1.23</u>	<u>0.96</u>	<u>1.08</u>	<u>0.986</u>	<u>2.94</u>	<u>1.186</u>	<u>1.08</u>	<u>1.15</u>	<u>0.88</u>		<u>1.03</u>	<u>1.23</u>	
K2O	g 100g ⁻¹	<u>4.18</u>	<u>4.12</u>	<u>4.16</u>	<u>4.426</u>	<u>1.65</u>	<u>4.507</u>	<u>4.16</u>	<u>3.98</u>	<u>4.36</u>		<u>4.07</u>	<u>4.23</u>	
P2O5	g 100g ⁻¹	<u>0.181</u>	<u>0.15</u>	<u>0.21</u>	<u>0.178</u>		<u>0.192</u>	<u>0.192</u>		<u>0.19</u>		<u>0.19</u>	<u>0.196</u>	
H2O+	g 100g ⁻¹			<u>2.61</u>			<u>4.823</u>							
CO2	g 100g ⁻¹													
LOI	g 100g ⁻¹		<u>4.33</u>	<u>4.93</u>	<u>4.79</u>			<u>5.14</u>	<u>4.98</u>	<u>5.32</u>	<u>5.13</u>	<u>5.02</u>	<u>1.1</u>	
Ag	mg kg ⁻¹				<u>76.39</u>	<u>0.093</u>	<u>72.55</u>		<u>70.14</u>	<u>70</u>		<u>56</u>	<u>35.029</u>	
As	mg kg ⁻¹	<u>399</u>	<u>421.7</u>	<u>443.5</u>	<u>348.5</u>	<u>2.78</u>	<u>416</u>	<u>534.6</u>	<u>356.080</u>	<u>416</u>		<u>266</u>	<u>143.951</u>	
Au	mg kg ⁻¹											<u>65</u>		
B	mg kg ⁻¹			<u>120</u>										
Ba	mg kg ⁻¹	<u>752</u>	<u>888</u>	<u>780.3</u>	<u>873</u>	<u>761</u>	<u>807.1</u>	<u>855.1</u>		<u>892</u>	<u>988</u>	<u>904.2</u>	<u>319.839</u>	<u>828</u>
Be	mg kg ⁻¹		<u>20.35</u>	<u>23.17</u>	<u>16.43</u>	<u>0.84</u>	<u>21.47</u>					<u>26.3</u>	<u>7.262</u>	<u>22.3</u>
Bi	mg kg ⁻¹	<u>37</u>	<u>6.53</u>	<u>5.388</u>	<u>4.853</u>		<u>5.299</u>						<u>1.756</u>	<u>5.14</u>
Br	mg kg ⁻¹													
C(org)	mg kg ⁻¹			<u>3700</u>										
C(tot)	mg kg ⁻¹			<u>32500</u>	<u>8650</u>		<u>905.7</u>							
Cd	mg kg ⁻¹	<u>29</u>	<u>26.19</u>	<u>25.55</u>	<u>20.73</u>	<u>0.22</u>	<u>26.28</u>		<u>27.327</u>	<u>15</u>		<u>23</u>	<u>9.003</u>	
Ce	mg kg ⁻¹			<u>82.94</u>	<u>88.4</u>	<u>29.25</u>	<u>97.62</u>			<u>86</u>	<u>115</u>	<u>80.7</u>	<u>28.247</u>	<u>92.1</u>
Cl	mg kg ⁻¹			<u>72</u>						<u>23</u>				
Co	mg kg ⁻¹	<u>54</u>	<u>62.14</u>	<u>54.97</u>	<u>58.12</u>	<u>20.74</u>	<u>56.05</u>			<u>23</u>		<u>57.59</u>	<u>20.104</u>	<u>55.2</u>
Cr	mg kg ⁻¹	<u>228</u>	<u>61.06</u>	<u>257.5</u>	<u>214.8</u>	<u>15.7</u>	<u>176.1</u>	<u>209.4</u>	<u>230.477</u>	<u>236</u>		<u>97.79</u>	<u>60.934</u>	<u>228</u>
Cs	mg kg ⁻¹		<u>6</u>	<u>4.986</u>	<u>4.896</u>	<u>2.93</u>	<u>4.945</u>				<u>5.65</u>	<u>3.38</u>	<u>1.894</u>	<u>4.7</u>
Cu	mg kg ⁻¹	<u>1163</u>	<u>1227</u>	<u>1058</u>	<u>1099</u>		<u>1204</u>	<u>1332.100</u>	<u>1068.556</u>	<u>1171</u>		<u>1167</u>	<u>364.449</u>	<u>1178</u>
Dy	mg kg ⁻¹		<u>4.587</u>	<u>4.559</u>	<u>4.23</u>	<u>4.388</u>					<u>4.54</u>	<u>4.31</u>	<u>1.272</u>	<u>4.57</u>
Er	mg kg ⁻¹		<u>2.698</u>	<u>2.764</u>	<u>2.48</u>	<u>2.502</u>					<u>2.43</u>	<u>2.41</u>	<u>0.722</u>	<u>2.72</u>
Eu	mg kg ⁻¹			<u>1.254</u>	<u>1.415</u>	<u>1.11</u>	<u>1.279</u>				<u>1.23</u>	<u>1.27</u>	<u>0.414</u>	<u>1.26</u>
F	mg kg ⁻¹			<u>1834</u>						<u>1574</u>				
Ga	mg kg ⁻¹	<u>8</u>	<u>17.94</u>	<u>16.22</u>	<u>16.53</u>	<u>19.97</u>	<u>16.76</u>	<u>15.1</u>		<u>13</u>		<u>15.55</u>	<u>5.885</u>	<u>15.4</u>
Gd	mg kg ⁻¹			<u>5.13</u>	<u>5.199</u>		<u>5.329</u>			<u>5</u>	<u>7.17</u>	<u>5.08</u>	<u>1.924</u>	<u>5.41</u>
Ge	mg kg ⁻¹		<u>2.29</u>	<u>1.956</u>	<u>1.157</u>	<u>1.41</u>	<u>2.034</u>			<u>1</u>			<u>0.695</u>	
Hf	mg kg ⁻¹	<u>9</u>		<u>6.714</u>	<u>6.779</u>	<u>4.53</u>	<u>3.717</u>			<u>4</u>	<u>4.7</u>	<u>3.48</u>	<u>1.319</u>	<u>6.85</u>
Hg	mg kg ⁻¹		<u>6.24</u>	<u>6.183</u>					<u>35.465</u>					
Ho	mg kg ⁻¹			<u>0.984</u>	<u>0.94</u>	<u>0.98</u>	<u>0.855</u>				<u>0.96</u>	<u>0.87</u>	<u>0.245</u>	<u>0.93</u>
I	mg kg ⁻¹													
In	mg kg ⁻¹			<u>10.33</u>	<u>8.388</u>		<u>10.78</u>							
La	mg kg ⁻¹			<u>44.63</u>	<u>46.03</u>	<u>12.8</u>	<u>29.86</u>			<u>53</u>	<u>56.7</u>	<u>52.16</u>	<u>14.205</u>	<u>45.7</u>
Li	mg kg ⁻¹		<u>50.76</u>	<u>55</u>	<u>53.45</u>		<u>52.75</u>					<u>60.44</u>	<u>20.001</u>	<u>50.5</u>
Lu	mg kg ⁻¹			<u>0.421</u>	<u>0.414</u>	<u>0.42</u>	<u>0.365</u>				<u>0.4</u>	<u>0.35</u>	<u>0.103</u>	<u>0.42</u>
Mo	mg kg ⁻¹	<u>79</u>	<u>73.02</u>	<u>65.74</u>	<u>62.52</u>	<u>0.74</u>	<u>69.31</u>	<u>64.8</u>	<u>67.632</u>	<u>111</u>	<u>80.8</u>	<u>51.4</u>	<u>28.035</u>	<u>62.2</u>
N	mg kg ⁻¹													
Nb	mg kg ⁻¹	<u>24</u>	<u>53.57</u>	<u>20.27</u>	<u>23.02</u>	<u>5.47</u>	<u>25.35</u>	<u>24.5</u>		<u>54</u>	<u>27.5</u>	<u>25.98</u>	<u>9.009</u>	<u>24.2</u>
Nd	mg kg ⁻¹			<u>35.36</u>	<u>34.85</u>	<u>17.33</u>	<u>38.49</u>			<u>41</u>	<u>45.8</u>	<u>39.35</u>	<u>11.645</u>	<u>36.2</u>
Ni	mg kg ⁻¹	<u>248</u>	<u>243</u>	<u>212.8</u>	<u>216.8</u>	<u>5.12</u>	<u>235.1</u>	<u>284.1</u>	<u>254.741</u>	<u>247</u>		<u>252.4</u>	<u>77.358</u>	<u>223</u>
Pb	mg kg ⁻¹	<u>3948</u>	<u>3944</u>	<u>4212</u>	<u>4020</u>	<u>14.27</u>	<u>4214</u>	<u>3748.400</u>	<u>4192.286</u>		<u>7758</u>	<u>3924</u>	<u>1405.636</u>	<u>3870</u>
Pd	mg kg ⁻¹													
Pr	mg kg ⁻¹			<u>9.624</u>	<u>9.692</u>	<u>4.04</u>					<u>13.3</u>	<u>10.83</u>	<u>3.187</u>	<u>9.96</u>
Pt	mg kg ⁻¹													
Rb	mg kg ⁻¹	<u>156</u>	<u>164</u>	<u>156.2</u>	<u>152.5</u>	<u>61.6</u>	<u>159.7</u>	<u>165.7</u>		<u>167</u>	<u>167</u>	<u>159.3</u>	<u>57.025</u>	<u>152</u>
Re	mg kg ⁻¹				<u>0.017</u>									
Rh	mg kg ⁻¹													
S	mg kg ⁻¹			<u>4700</u>	<u>5100</u>					<u>3215</u>				
Sb	mg kg ⁻¹		<u>535</u>	<u>600.3</u>	<u>549.3</u>	<u>1.51</u>	<u>592.7</u>		<u>461.641</u>	<u>704</u>			<u>187.714</u>	
Sc	mg kg ⁻¹		<u>12.7</u>	<u>8.63</u>	<u>7.58</u>		<u>8.083</u>			<u>7</u>	<u>9.65</u>	<u>8.01</u>	<u>2.137</u>	<u>8.49</u>
Se	mg kg ⁻¹			<u>17.14</u>	<u>14.34</u>								<u>4.909</u>	
Sm	mg kg ⁻¹			<u>6.37</u>	<u>6.12</u>	<u>4.37</u>	<u>6.536</u>				<u>7.96</u>	<u>6.89</u>	<u>2.115</u>	<u>6.39</u>
Sn	mg kg ⁻¹			<u>4.09</u>	<u>2.53</u>	<u>2.44</u>	<u>3.335</u>						<u>1.13</u>	<u>3.17</u>
Sr	mg kg ⁻¹	<u>182</u>	<u>187.9</u>	<u>176.6</u>	<u>172.8</u>	<u>306</u>	<u>186.6</u>	<u>144</u>	<u>179.912</u>	<u>194</u>	<u>206</u>	<u>178.2</u>	<u>61.22</u>	<u>185</u>
Ta	mg kg ⁻¹			<u>1.513</u>	<u>1.553</u>	<u>0.45</u>	<u>1.982</u>				<u>1.49</u>	<u>1.54</u>	<u>0.63</u>	<u>1.44</u>
Tb	mg kg ⁻¹			<u>0.758</u>	<u>0.803</u>		<u>0.746</u>				<u>0.77</u>	<u>0.75</u>	<u>0.215</u>	<u>0.8</u>
Te	mg kg ⁻¹				<u>12.99</u>								<u>3.308</u>	
Th	mg kg ⁻¹	<u>18</u>	<u>20.17</u>	<u>18.57</u>	<u>17.78</u>	<u>4.55</u>	<u>20.6</u>	<u>54.5</u>			<u>22.1</u>	<u>17.87</u>	<u>6.205</u>	<u>18.6</u>
Tl	mg kg ⁻¹		<u>21.74</u>		<u>10.62</u>	<u>0.41</u>	<u>18.45</u>			<u>9</u>			<u>4.193</u>	<u>11.5</u>
Tm	mg kg ⁻¹			<u>0.393</u>	<u>0.386</u>	<u>0.4</u>	<u>0.382</u>				<u>0.41</u>		<u>0.106</u>	<u>0.42</u>
U	mg kg ⁻¹	<u>4</u>	<u>4.8</u>	<u>4.724</u>	<u>4.068</u>	<u>1.14</u>	<u>4.734</u>				<u>5.01</u>	<u>4.17</u>	<u>1.599</u>	<u>4.43</u>
V	mg kg ⁻¹	<u>71</u>	<u>81.47</u>	<u>66.36</u>	<u>74.89</u>	<u>149.9</u>	<u>75.26</u>	<u>52.5</u>		<u>62</u>		<u>76.8</u>	<u>27.866</u>	<u>71.5</u>
W	mg kg ⁻¹			<u>14.56</u>	<u>8.309</u>		<u>14.63</u>				<u>15.1</u>		<u>5.48</u>	
Y	mg kg ⁻¹		<u>19.25</u>	<u>26.89</u>	<u>25.36</u>		<u>22.47</u>	<u>10.4</u>			<u>26.4</u>	<u>26.13</u>	<u>6.195</u>	<u>27.2</u>
Yb	mg kg ⁻¹			<u>2.753</u>	<u>2.489</u>	<u>2.65</u>	<u>2.514</u>				<u>2.47</u>	<u>2.35</u>	<u>0.701</u>	<u>2.7</u>
Zn	mg kg ⁻¹	<u>3643</u>	<u>3070</u>	<u>3398</u>	<u>4548</u>	<u>93.2</u>	<u>4010</u>	<u>3693.800</u>	<u>4063.280</u>	<u>3904</u>		<u>3968</u>	<u>1470.850</u>	<u>3708</u>
Zr	mg kg ⁻¹	<u>156</u>		<u>258.3</u>	<u>262.8</u>	<u>151.6</u>	<u>135.8</u>	<u>300.2</u>		<u>104</u>	<u>167</u>	<u>136.2</u>	<u>47.702</u>	<u>257</u>

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

Table 1 - GeoPT35A Contributed data for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code		L18	L20	L21	L22	L23	L24	L25	L26	L28	L29	L31	L32	L33
SiO2	g 100g ⁻¹	<u>58.01</u>	64.85	66.25		63.62	<u>65.623</u>	64.83	<u>65.44</u>		<u>66.997</u>	62.69	<u>65.8</u>	65.772
TiO2	g 100g ⁻¹	<u>0.81</u>	0.55	0.55		0.54	<u>0.609</u>	0.51	<u>0.565</u>		<u>0.534</u>	0.54	<u>0.56</u>	0.576
Al2O3	g 100g ⁻¹	<u>17.25</u>	11.59	11.87		11.46	<u>12.32</u>	11.66	<u>11.83</u>		<u>11.929</u>	13.66	<u>12.2</u>	11.857
Fe2O3T	g 100g ⁻¹	<u>7.36</u>	6.39	6.4		6.38	<u>6.633</u>	6.35	<u>6.42</u>		<u>6.372</u>	6.96	<u>6.47</u>	6.448
Fe(II)O	g 100g ⁻¹		1.9											
MnO	g 100g ⁻¹	<u>0.114</u>	0.509	0.515		0.51	<u>0.556</u>	0.51	<u>0.504</u>		<u>0.513</u>	0.54	<u>0.51</u>	0.439
MgO	g 100g ⁻¹	<u>3.3</u>	1.42	1.51		1.47	<u>1.54</u>	1.51	<u>1.49</u>		<u>1.519</u>	2.29	<u>1.56</u>	1.541
CaO	g 100g ⁻¹	<u>6.65</u>	1.45	1.46		1.44	<u>1.466</u>	1.45	<u>1.45</u>		<u>1.397</u>	1.63	<u>1.46</u>	1.415
Na2O	g 100g ⁻¹	<u>2.85</u>	0.91	1.12		1.05	<u>1.103</u>	1.2	<u>1.12</u>		<u>1.157</u>	1.11	<u>1.21</u>	1.161
K2O	g 100g ⁻¹	<u>1.63</u>	4.13	4.16		3.97	<u>4.338</u>	4.08	<u>4.19</u>		<u>4.27</u>	4.57	<u>4.13</u>	4.256
P2O5	g 100g ⁻¹	<u>0.13</u>	0.19	0.184		0.18	<u>0.2</u>	0.16	<u>0.175</u>		<u>0.167</u>	0.21	<u>0.19</u>	0.187
H2O+	g 100g ⁻¹				<u>0.977</u>		<u>2.42</u>							
CO2	g 100g ⁻¹													
LOI	g 100g ⁻¹	<u>0.8</u>	4.97	4.87	<u>5.433</u>	5.29	<u>4.83</u>	5.4	<u>4.74</u>		<u>4.693</u>	5.59	<u>4.96</u>	4.73
Ag	mg kg ⁻¹				<u>65.3</u>			75.5	<u>101.3</u>			56		
As	mg kg ⁻¹		400		<u>391.4</u>			335.6				3550		
Au	mg kg ⁻¹													
B	mg kg ⁻¹													
Ba	mg kg ⁻¹	<u>718</u>	811		<u>813.6</u>	866	<u>889.7</u>	866.6	<u>853.5</u>	845		887		
Be	mg kg ⁻¹						<u>22.8</u>			22.9				
Bi	mg kg ⁻¹				<u>9.4</u>			11.9		5.23				
Br	mg kg ⁻¹				<u>4</u>			0.8						
C(org)	mg kg ⁻¹						<u>0.55</u>							
C(tot)	mg kg ⁻¹			8920			<u>0.97</u>							8800
Cd	mg kg ⁻¹				<u>22.5</u>			26.3				9		
Ce	mg kg ⁻¹	<u>35</u>	53		<u>85.1</u>		<u>89.75</u>	92.6		93.1				
Cl	mg kg ⁻¹							0.9						
Co	mg kg ⁻¹		52		<u>63.6</u>	56	<u>59.26</u>	56.4		55.8		8		
Cr	mg kg ⁻¹	<u>21</u>	240		<u>230.4</u>	265	<u>255.1</u>	211.2	<u>204.1</u>	231		7		
Cs	mg kg ⁻¹				<u>2.1</u>		<u>4.8</u>	3.2		4.74				
Cu	mg kg ⁻¹	<u>21</u>	<u>1131</u>	1150	<u>1174.500</u>	1762	<u>1202.100</u>	1004.800	<u>1148</u>	1183		2220		
Dy	mg kg ⁻¹						<u>4.77</u>			4.58				
Er	mg kg ⁻¹						<u>2.75</u>			2.77				
Eu	mg kg ⁻¹						<u>1.29</u>			1.27				
F	mg kg ⁻¹							<u>3151.600</u>						
Ga	mg kg ⁻¹	<u>27</u>			<u>12.3</u>	61	<u>16.17</u>	17.2		15.6				
Gd	mg kg ⁻¹						<u>4.93</u>			5.41				
Ge	mg kg ⁻¹				<u>1.9</u>			0.4						
Hf	mg kg ⁻¹				<u>10.1</u>		<u>6.45</u>	12		7.01				
Hg	mg kg ⁻¹							<u>27.1</u>						
Ho	mg kg ⁻¹						<u>0.93</u>			0.95				
I	mg kg ⁻¹							1.4						
In	mg kg ⁻¹				<u>11.6</u>									
La	mg kg ⁻¹	<u>6</u>	40		<u>44.2</u>		<u>46.46</u>	43.2		45.9				
Li	mg kg ⁻¹									50				
Lu	mg kg ⁻¹						<u>0.42</u>			0.42				
Mo	mg kg ⁻¹				<u>62.6</u>		<u>65.64</u>	55.9	<u>59.7</u>	62.9				
N	mg kg ⁻¹						<u>0.19</u>							
Nb	mg kg ⁻¹	<u>8</u>	21		<u>20.1</u>	22	<u>20.5</u>	20.3	<u>21.1</u>	23.9				
Nd	mg kg ⁻¹		23		<u>44.3</u>		<u>37.52</u>	34.7		36.4				
Ni	mg kg ⁻¹	<u>4</u>	224		<u>245.2</u>	237	<u>229.8</u>	216.9	<u>234</u>	227		36		
Pb	mg kg ⁻¹	<u>14</u>	<u>3743</u>	4740	<u>4049.700</u>	3526	<u>3931.700</u>	3623.900	<u>4062</u>	3795		3170		
Pd	mg kg ⁻¹													
Pr	mg kg ⁻¹						<u>10.25</u>			10				
Pt	mg kg ⁻¹													
Rb	mg kg ⁻¹	<u>55</u>	153		<u>150.2</u>	150	<u>153.920</u>	145.3	<u>153</u>	152		124		
Re	mg kg ⁻¹													
Rh	mg kg ⁻¹													
S	mg kg ⁻¹			5930			<u>0.48</u>	2826						
Sb	mg kg ⁻¹				<u>464.2</u>			489.3						
Sc	mg kg ⁻¹				<u>16.3</u>		<u>8.3</u>	15.5		8.51				
Se	mg kg ⁻¹				<u>13.4</u>			10.1						
Sm	mg kg ⁻¹				<u>5.7</u>		<u>6.69</u>	8.2		6.49				
Sr	mg kg ⁻¹				<u>1.3</u>		<u>3.58</u>			3.19				
Sn	mg kg ⁻¹	<u>384</u>	191		<u>182.3</u>	191	<u>196.9</u>	172.1	<u>179.7</u>	186		168		
Ta	mg kg ⁻¹				<u>1.6</u>		<u>1.45</u>	7.4		1.41				
Tb	mg kg ⁻¹						<u>0.69</u>			0.81				
Te	mg kg ⁻¹				<u>6.9</u>			10.8						
Th	mg kg ⁻¹		25		<u>16.4</u>		<u>17.95</u>	10.8		18.2				
Tl	mg kg ⁻¹				<u>16.2</u>		<u>10.34</u>	7.6		11.8				
Tm	mg kg ⁻¹						<u>0.42</u>			0.42				
U	mg kg ⁻¹		6			7	<u>4.38</u>	1.1		4.44				
V	mg kg ⁻¹	<u>133</u>	69		<u>77.2</u>	82	<u>80.2</u>	137.2	<u>80.6</u>	72		12		
W	mg kg ⁻¹				<u>18.9</u>		<u>14.5</u>	7.8						
Y	mg kg ⁻¹	<u>32</u>			<u>33.8</u>		<u>24.26</u>	29.7		27.3		107		
Yb	mg kg ⁻¹				<u>2.6</u>		<u>2.79</u>	6.1		2.72				
Zn	mg kg ⁻¹	<u>102</u>	<u>3639</u>	3727	<u>3897.800</u>	3905	<u>3723.400</u>	3637.700	<u>3682</u>	3763		2530		
Zr	mg kg ⁻¹	<u>154</u>	271		<u>261.9</u>	284	<u>250.650</u>	254.3	<u>258.8</u>	261		187		

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

Table 1 - GeoPT35A Contributed data for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code		L34	L35	L36	L37	L38	L39	L40	L41	L42	L43	L45	L46	L48
SiO2	g 100g ⁻¹	<u>65.92</u>		<u>65.2</u>	<u>66.03</u>	<u>64.8</u>	<u>66</u>	<u>64.71</u>	<u>64.9</u>		<u>66.7</u>	<u>65.26</u>		
TiO2	g 100g ⁻¹	<u>0.556</u>		<u>0.55</u>	<u>0.57</u>	<u>0.563</u>	<u>0.54</u>	<u>0.57</u>	<u>0.56</u>	<u>0.556</u>	<u>0.57</u>	<u>0.556</u>	<u>0.025</u>	
Al2O3	g 100g ⁻¹	<u>11.83</u>		<u>11.74</u>	<u>11.84</u>	<u>14.6</u>	<u>12</u>	<u>12.11</u>	<u>11.9</u>	<u>11.48</u>	<u>13.3</u>	<u>11.76</u>	<u>1.84</u>	<u>10.395</u>
Fe2O3T	g 100g ⁻¹	<u>6.425</u>		<u>6.38</u>	<u>6.49</u>	<u>7.84</u>	<u>6.91</u>	<u>5.97</u>	<u>6.35</u>	<u>6.524</u>	<u>6.43</u>	<u>6.428</u>	<u>4.507</u>	<u>5.03</u>
Fe(II)O	g 100g ⁻¹						<u>2.07</u>		<u>4.02</u>					
MnO	g 100g ⁻¹	<u>0.511</u>		<u>0.53</u>	<u>0.51</u>	<u>0.615</u>	<u>0.55</u>	<u>0.35</u>	<u>0.52</u>	<u>0.516</u>	<u>0.51</u>	<u>0.528</u>	<u>0.417</u>	<u>0.489</u>
MgO	g 100g ⁻¹	<u>1.546</u>		<u>1.53</u>	<u>1.48</u>	<u>1.98</u>	<u>1.54</u>	<u>1.39</u>	<u>1.46</u>	<u>1.553</u>	<u>1.55</u>	<u>1.44</u>	<u>0.851</u>	<u>1.307</u>
CaO	g 100g ⁻¹	<u>1.474</u>		<u>1.48</u>	<u>1.4</u>	<u>1.79</u>	<u>1.41</u>	<u>1.48</u>	<u>1.47</u>	<u>1.304</u>	<u>1.51</u>	<u>1.436</u>	<u>0.892</u>	<u>1.199</u>
Na2O	g 100g ⁻¹	<u>1.193</u>		<u>1.11</u>	<u>0.91</u>	<u>0.98</u>	<u>1.16</u>	<u>2.14</u>		<u>1.2</u>	<u>1.1</u>	<u>1.07</u>	<u>0.041</u>	<u>0.878</u>
K2O	g 100g ⁻¹	<u>4.249</u>		<u>4.15</u>	<u>4.21</u>	<u>4.47</u>	<u>3.99</u>	<u>1.97</u>	<u>4.07</u>	<u>4.135</u>	<u>4.14</u>	<u>4.231</u>	<u>0.304</u>	<u>3.789</u>
P2O5	g 100g ⁻¹	<u>0.183</u>		<u>0.186</u>	<u>0.186</u>	<u>0.281</u>	<u>0.21</u>	<u>0.21</u>	<u>0.18</u>	<u>0.165</u>	<u>0.201</u>	<u>0.182</u>	<u>0.116</u>	
H2O+	g 100g ⁻¹						<u>3.39</u>		<u>2.95</u>					
CO2	g 100g ⁻¹										<u>2.061</u>			
LOI	g 100g ⁻¹	<u>5.223</u>		<u>5.63</u>	<u>4.86</u>		<u>4.63</u>	<u>5.79</u>	<u>4.67</u>		<u>4.91</u>	<u>4.95</u>		
Ag	mg kg ⁻¹	<u>73.86</u>	<u>76</u>	<u>88</u>		<u>118</u>	<u>60.5</u>			<u>91.705</u>	<u>81.8</u>		<u>1.18</u>	
As	mg kg ⁻¹			<u>398</u>	<u>400</u>	<u>440</u>	<u>487</u>	<u>388</u>	<u>338</u>	<u>414.120</u>	<u>398</u>	<u>500</u>	<u>66.69</u>	
Au	mg kg ⁻¹						<u>3.4</u>			<u>0.794</u>				
B	mg kg ⁻¹									<u>117.2</u>			<u>11.84</u>	
Ba	mg kg ⁻¹	<u>865.7</u>		<u>870</u>	<u>865</u>	<u>829</u>	<u>825</u>	<u>9791</u>	<u>867</u>	<u>817.1</u>	<u>876</u>	<u>952</u>	<u>29.44</u>	<u>888.401</u>
Be	mg kg ⁻¹	<u>19.74</u>		<u>21.6</u>			<u>22.4</u>		<u>20.3</u>	<u>23.99</u>	<u>22.99</u>		<u>3.82</u>	<u>17.316</u>
Bi	mg kg ⁻¹	<u>4.88</u>			<u>12</u>			<u>12.3</u>	<u>4.49</u>	<u>5.161</u>			<u>0.93</u>	<u>4.353</u>
Br	mg kg ⁻¹													
C(org)	mg kg ⁻¹								<u>0.25</u>		<u>3757</u>			
C(tot)	mg kg ⁻¹								<u>0.89</u>		<u>9270</u>			<u>7500</u>
Cd	mg kg ⁻¹	<u>21.6</u>	<u>26</u>	<u>24.2</u>			<u>26.1</u>	<u>17.96</u>	<u>13.9</u>	<u>24.703</u>	<u>24.6</u>		<u>4.72</u>	<u>21.904</u>
Ce	mg kg ⁻¹	<u>90.4</u>		<u>84.7</u>	<u>86.75</u>		<u>117.3</u>	<u>79.1</u>	<u>93.9</u>	<u>87.76</u>	<u>78.3</u>		<u>39</u>	<u>89.303</u>
Cl	mg kg ⁻¹					<u>194</u>					<u>115</u>			
Co	mg kg ⁻¹	<u>50.63</u>		<u>57.7</u>	<u>61.86</u>		<u>52.1</u>		<u>49.7</u>	<u>59.43</u>	<u>50.4</u>		<u>2.71</u>	<u>45.79</u>
Cr	mg kg ⁻¹			<u>240</u>	<u>246</u>	<u>338</u>	<u>186</u>	<u>59</u>	<u>61</u>	<u>219.3</u>	<u>213</u>	<u>151</u>	<u>11</u>	<u>160.071</u>
Cs	mg kg ⁻¹			<u>4.6</u>					<u>4.29</u>	<u>4.319</u>				
Cu	mg kg ⁻¹	<u>1152</u>	<u>1185</u>	<u>1145</u>	<u>1205</u>	<u>1380</u>	<u>1090</u>	<u>1159</u>	<u>1159</u>	<u>1186.700</u>	<u>1141</u>	<u>1175</u>	<u>196.7</u>	<u>1201.950</u>
Dy	mg kg ⁻¹	<u>4.96</u>		<u>4.62</u>	<u>3.51</u>		<u>5.6</u>		<u>4.58</u>	<u>4.664</u>	<u>2.8</u>		<u>0.36</u>	<u>4.628</u>
Er	mg kg ⁻¹	<u>2.67</u>		<u>2.98</u>	<u>2.21</u>		<u>4.03</u>		<u>2.8</u>	<u>2.844</u>	<u>1.39</u>		<u>0.18</u>	<u>2.711</u>
Eu	mg kg ⁻¹	<u>1.32</u>		<u>1.26</u>	<u>1.49</u>		<u>1.19</u>		<u>1.42</u>	<u>1.138</u>	<u>0.98</u>		<u>0.11</u>	<u>1.27</u>
F	mg kg ⁻¹					<u>1570</u>			<u>0.18</u>					
Ga	mg kg ⁻¹			<u>15.6</u>					<u>12.7</u>	<u>14.19</u>				<u>13.519</u>
Gd	mg kg ⁻¹	<u>5.47</u>		<u>5.21</u>	<u>6.3</u>		<u>0.92</u>		<u>6.1</u>	<u>5.312</u>	<u>4.36</u>		<u>0.64</u>	<u>5.363</u>
Ge	mg kg ⁻¹							<u>55.9</u>	<u>0.2</u>				<u>0.01</u>	
Hf	mg kg ⁻¹			<u>7.1</u>					<u>1.36</u>	<u>6.63</u>				
Hg	mg kg ⁻¹	<u>8.11</u>		<u>7.34</u>			<u>6.58</u>			<u>6.719</u>				<u>6.648</u>
Ho	mg kg ⁻¹	<u>1.02</u>		<u>0.97</u>	<u>0.66</u>		<u>1.3</u>		<u>0.98</u>	<u>0.915</u>	<u>0.45</u>		<u>0.06</u>	<u>0.909</u>
I	mg kg ⁻¹													
In	mg kg ⁻¹			<u>9.6</u>					<u>8.29</u>	<u>9.169</u>				
La	mg kg ⁻¹	<u>45.1</u>		<u>42.9</u>			<u>52</u>	<u>47.8</u>	<u>47.5</u>	<u>44.94</u>	<u>49.6</u>		<u>20</u>	<u>44.845</u>
Li	mg kg ⁻¹	<u>44.9</u>		<u>56.3</u>				<u>73.3</u>	<u>55</u>	<u>53.8</u>	<u>53.1</u>		<u>7.73</u>	<u>39.282</u>
Lu	mg kg ⁻¹			<u>0.43</u>	<u>0.25</u>		<u>0.54</u>		<u>0.57</u>	<u>0.396</u>	<u>0.14</u>		<u>0.02</u>	<u>0.426</u>
Mo	mg kg ⁻¹	<u>60.52</u>		<u>71.1</u>	<u>55.36</u>	<u>71</u>	<u>54.1</u>	<u>52.6</u>	<u>51.6</u>	<u>63.463</u>	<u>56.7</u>		<u>13.17</u>	<u>51.914</u>
N	mg kg ⁻¹													
Nb	mg kg ⁻¹			<u>22.4</u>	<u>24</u>	<u>30</u>			<u>21.4</u>	<u>21.609</u>	<u>8.82</u>		<u>0.2</u>	
Nd	mg kg ⁻¹	<u>35.6</u>		<u>33.9</u>	<u>36.85</u>		<u>36.2</u>		<u>49.5</u>	<u>34.026</u>	<u>31.1</u>		<u>3.61</u>	<u>37.555</u>
Ni	mg kg ⁻¹	<u>196</u>	<u>230</u>	<u>220</u>	<u>226</u>	<u>255</u>	<u>227.6</u>	<u>182</u>	<u>176</u>	<u>233.020</u>	<u>228</u>	<u>236</u>	<u>39.33</u>	<u>160.362</u>
Pb	mg kg ⁻¹	<u>3910</u>	<u>4090</u>	<u>3860</u>	<u>4160</u>	<u>5010</u>	<u>4344</u>	<u>4600</u>	<u>1477</u>	<u>4100</u>	<u>3757</u>	<u>4335</u>	<u>750.560</u>	<u>4221.785</u>
Pd	mg kg ⁻¹													
Pr	mg kg ⁻¹	<u>9.76</u>		<u>9.44</u>	<u>9.98</u>		<u>10.43</u>		<u>10.6</u>	<u>9.695</u>	<u>8.51</u>		<u>0.93</u>	<u>10.411</u>
Pt	mg kg ⁻¹													
Rb	mg kg ⁻¹			<u>148.5</u>	<u>160.3</u>	<u>192</u>		<u>196</u>	<u>128</u>	<u>142.8</u>	<u>150</u>		<u>19</u>	<u>155.591</u>
Re	mg kg ⁻¹			<u>0.021</u>										
Rh	mg kg ⁻¹													
S	mg kg ⁻¹			<u>4900</u>		<u>4450</u>	<u>5487</u>	<u>10300</u>	<u>0.48</u>	<u>4852</u>	<u>4912</u>	<u>4378</u>		<u>1800</u>
Sb	mg kg ⁻¹	<u>581</u>		<u>534</u>	<u>505</u>	<u>629</u>	<u>540</u>		<u>173</u>	<u>541.260</u>	<u>483</u>			
Sc	mg kg ⁻¹			<u>7.8</u>			<u>8.03</u>		<u>6</u>		<u>7.3</u>		<u>0.44</u>	
Se	mg kg ⁻¹	<u>14.7</u>		<u>19</u>			<u>14.5</u>	<u>34.9</u>	<u>12</u>	<u>21.08</u>			<u>3.07</u>	
Sm	mg kg ⁻¹	<u>6.21</u>		<u>6.27</u>			<u>5.83</u>		<u>6.7</u>	<u>6.483</u>	<u>5.24</u>		<u>0.65</u>	<u>6.386</u>
Sn	mg kg ⁻¹	<u>2.7</u>		<u>2.7</u>				<u>184.6</u>	<u>2.6</u>	<u>3.29</u>			<u>0.03</u>	
Sr	mg kg ⁻¹	<u>185.8</u>		<u>187</u>	<u>182</u>	<u>225</u>	<u>185.9</u>	<u>146</u>	<u>189</u>	<u>169.9</u>	<u>186</u>	<u>313</u>	<u>40</u>	<u>174.647</u>
Ta	mg kg ⁻¹			<u>1.3</u>					<u>0.26</u>	<u>1.24</u>				
Tb	mg kg ⁻¹	<u>0.64</u>		<u>0.82</u>	<u>0.52</u>		<u>0.92</u>		<u>0.97</u>	<u>0.725</u>	<u>0.47</u>		<u>0.08</u>	<u>0.85</u>
Te	mg kg ⁻¹			<u>10.05</u>			<u>7.8</u>		<u>5.2</u>	<u>9.663</u>				<u>8.494</u>
Th	mg kg ⁻¹	<u>18.45</u>		<u>16.8</u>					<u>13</u>	<u>16.663</u>	<u>13.5</u>		<u>1.67</u>	
Tl	mg kg ⁻¹	<u>11.74</u>		<u>10.95</u>					<u>9.06</u>	<u>10.867</u>			<u>1.88</u>	<u>10.391</u>
Tm	mg kg ⁻¹			<u>0.43</u>	<u>0.27</u>		<u>0.59</u>		<u>0.57</u>	<u>0.391</u>	<u>0.14</u>		<u>0.02</u>	<u>0.409</u>
U	mg kg ⁻¹	<u>3.93</u>		<u>4.59</u>					<u>3.14</u>	<u>4.415</u>	<u>2.83</u>		<u>0.36</u>	<u>3.331</u>
V	mg kg ⁻¹	<u>65.4</u>		<u>74</u>	<u>82.46</u>		<u>68.7</u>	<u>111.6</u>	<u>73</u>	<u>75.2</u>	<u>72.8</u>	<u>72</u>	<u>22</u>	<u>61.243</u>
W	mg kg ⁻¹			<u>12</u>			<u>41.6</u>		<u>8.1</u>	<u>13</u>			<u>0.1</u>	
Y	mg kg ⁻¹	<u>23.78</u>		<u>25.8</u>	<u>19</u>	<u>45</u>	<u>25.2</u>	<u>31.5</u>	<u>25.6</u>	<u>23.213</u>	<u>22.99</u>		<u>8</u>	
Yb	mg kg ⁻¹	<u>2.88</u>			<u>1.74</u>		<u>3.53</u>		<u>2.7</u>	<u>2.825</u>	<u>1.25</u>		<u>0.14</u>	<u>2.843</u>
Zn	mg kg ⁻¹	<u>3648</u>	<u>3630</u>	<u>3710</u>	<u>3700</u>	<u>4390</u>	<u>3536</u>	<u>4450</u>	<u>3777</u>	<u>3744.400</u>	<u>3694</u>	<u>3960</u>	<u>634.350</u>	<u>3162.772</u>
Zr	mg kg ⁻¹			<u>279</u>	<u>280</u>	<u>367</u>	<u>230</u>	<u>65</u>	<u>54.2</u>	<u>223.330</u>	<u>252</u>		<u>0.72</u>	

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

Table 1 - GeoPT35A Contributed data for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code		L49	L50	L51	L52	L54	L55	L56	L57	L58	L59	L60	L61	L62
SiO2	g 100g ⁻¹	<u>65.71</u>	66.14	<u>60</u>	<u>65.09</u>	<u>66.23</u>	63.393		<u>64.76</u>	<u>44.54</u>		<u>65.77</u>		<u>64.902</u>
TiO2	g 100g ⁻¹	<u>0.56</u>	0.58	<u>0.527</u>	<u>0.54</u>	<u>0.57</u>	0.546	0.57	<u>0.56</u>	<u>0.51</u>		<u>0.57</u>		<u>0.542</u>
Al2O3	g 100g ⁻¹	<u>11.71</u>	11.71	<u>16.2</u>	<u>11.56</u>	<u>12.02</u>	11.404		<u>11.77</u>	<u>8.25</u>		<u>11.82</u>		<u>11.571</u>
Fe2O3T	g 100g ⁻¹	<u>6.29</u>	6.45	<u>5.55</u>	<u>6.3</u>	<u>6.75</u>	6.331	6.55	<u>6.44</u>	<u>6.1</u>	<u>6</u>	<u>6.4</u>		<u>6.393</u>
Fe(II)O	g 100g ⁻¹						1.531							
MnO	g 100g ⁻¹	<u>0.5</u>	0.48	<u>0.469</u>	<u>0.54</u>		0.49	0.48	<u>0.53</u>	<u>0.54</u>	<u>0.514</u>	<u>0.54</u>		<u>0.45</u>
MgO	g 100g ⁻¹	<u>1.54</u>	1.56		<u>1.53</u>	<u>1.5</u>	1.494		<u>1.54</u>	<u>1.06</u>	<u>1.5</u>	<u>1.52</u>		<u>1.512</u>
CaO	g 100g ⁻¹	<u>1.45</u>	1.37	<u>1.44</u>	<u>1.41</u>	<u>1.52</u>	1.398		<u>1.46</u>	<u>1.42</u>	<u>1.5</u>	<u>1.46</u>		<u>1.461</u>
Na2O	g 100g ⁻¹	<u>1.17</u>	1.15		<u>1.09</u>	<u>0.98</u>	1.223		<u>1.1</u>	<u>0.61</u>		<u>1.04</u>		<u>1.242</u>
K2O	g 100g ⁻¹	<u>4.11</u>	4.3	<u>4.1</u>	<u>4.17</u>	<u>4.14</u>	3.993		<u>4.15</u>	<u>3.8</u>		<u>4.16</u>		<u>4.152</u>
P2O5	g 100g ⁻¹	<u>0.19</u>	0.19		<u>0.19</u>	<u>0.18</u>	0.179	0.18	<u>0.18</u>	<u>0.1</u>		<u>0.181</u>		<u>0.184</u>
H2O+	g 100g ⁻¹													
CO2	g 100g ⁻¹			<u>1.14</u>										
LOI	g 100g ⁻¹	<u>5.15</u>	5.54		<u>4.35</u>	<u>5.94</u>			<u>4.7</u>			<u>5.62</u>		<u>4.92</u>
Ag	mg kg ⁻¹						44.169	99.7	<u>79</u>	100	<u>86</u>			
As	mg kg ⁻¹		43	<u>327</u>		<u>371</u>	338.515	321	<u>380</u>	364	<u>354</u>			<u>485</u>
Au	mg kg ⁻¹										<u>4</u>			
B	mg kg ⁻¹													
Ba	mg kg ⁻¹	<u>848</u>	900	<u>961</u>		<u>868</u>	797.138	849	<u>794</u>	781			914.8	<u>893</u>
Be	mg kg ⁻¹	<u>23.6</u>				<u>17</u>		21.5						
Bi	mg kg ⁻¹						4.297							
Br	mg kg ⁻¹													
C(org)	mg kg ⁻¹													
C(tot)	mg kg ⁻¹								<u>8800</u>			<u>9940</u>		
Cd	mg kg ⁻¹			<u>20.9</u>			8.293	21.8		15.9				
Ce	mg kg ⁻¹	<u>89.4</u>		<u>92.2</u>			82.526	92.2	<u>91</u>	82				<u>77</u>
Cl	mg kg ⁻¹						106							
Co	mg kg ⁻¹	<u>57.7</u>	37			<u>60.5</u>	51.285	58.4	<u>57</u>	50.7			58.5	
Cr	mg kg ⁻¹	<u>201</u>	204			<u>369.7</u>	216	226	<u>225</u>	46.1			254.2	<u>221</u>
Cs	mg kg ⁻¹	<u>4.66</u>		<u>10.2</u>			4.584	4.87	<u>4.99</u>					
Cu	mg kg ⁻¹	<u>1121</u>	963	<u>1020</u>		<u>1169.700</u>	1192.855	1090	<u>1110</u>	1110			1072.800	<u>1152</u>
Dy	mg kg ⁻¹	<u>4.43</u>					4.185	4.56	<u>4.34</u>					
Er	mg kg ⁻¹	<u>2.63</u>					2.397	2.67	<u>2.51</u>	3				
Eu	mg kg ⁻¹	<u>1.27</u>					1.109	1.33	<u>1.31</u>	4				
F	mg kg ⁻¹						1495.500							
Ga	mg kg ⁻¹	<u>15.8</u>					14.804	15.8	<u>15.4</u>				26	<u>13</u>
Gd	mg kg ⁻¹	<u>5.39</u>					4.358	5.73	<u>5.43</u>					
Ge	mg kg ⁻¹	<u>1.86</u>					1.983							
Hf	mg kg ⁻¹	<u>6.39</u>					6.81	8.58	<u>6.4</u>					
Hg	mg kg ⁻¹													
Ho	mg kg ⁻¹	<u>0.893</u>					0.847	0.93	<u>0.87</u>					
I	mg kg ⁻¹			<u>2.3</u>										
In	mg kg ⁻¹													
La	mg kg ⁻¹	<u>45.5</u>		<u>38.5</u>			41.218	49.9	<u>45.1</u>	45				<u>45</u>
Li	mg kg ⁻¹	<u>54.4</u>				<u>39.5</u>		49		105	<u>61</u>			
Lu	mg kg ⁻¹	<u>0.389</u>					0.378	0.42	<u>0.38</u>	2				
Mo	mg kg ⁻¹		<u>57</u>	<u>64.7</u>		<u>44.3</u>	61.743	53.2	<u>63</u>	24.6				
N	mg kg ⁻¹													
Nb	mg kg ⁻¹	<u>23.9</u>	12	<u>15.7</u>			23.07	20	<u>24.1</u>	0.8			22.3	<u>22</u>
Nd	mg kg ⁻¹	<u>36.2</u>		<u>42.3</u>			33.643	37	<u>36.7</u>	46				
Ni	mg kg ⁻¹	<u>235</u>	261	<u>177</u>		<u>242</u>	239	228	<u>220</u>	220			391.8	<u>240</u>
Pb	mg kg ⁻¹	<u>3624</u>	3951	<u>3480</u>		<u>3005</u>	3267.134	3829	<u>3800</u>	3750			3966.600	<u>3858</u>
Pd	mg kg ⁻¹													
Pr	mg kg ⁻¹	<u>9.92</u>		<u>9.2</u>			8.803	10.4	<u>10.1</u>	12				
Pt	mg kg ⁻¹													
Rb	mg kg ⁻¹	<u>146</u>	73	<u>145</u>			135.697	152	<u>152</u>				159.7	<u>162</u>
Re	mg kg ⁻¹													
Rh	mg kg ⁻¹													
S	mg kg ⁻¹			<u>5250</u>			5267.262		<u>4700</u>			<u>4510</u>		
Sb	mg kg ⁻¹			<u>630</u>		<u>467.5</u>	547.572	354		253				
Sc	mg kg ⁻¹	<u>8.47</u>	22				12	8.36		8.6			4.9	<u>12</u>
Se	mg kg ⁻¹					<u>64.5</u>	4			10.7				
Sm	mg kg ⁻¹	<u>6.38</u>					5.503	6.62	<u>6.46</u>	7				
Sn	mg kg ⁻¹						4.118	3.29	<u>4</u>					
Sr	mg kg ⁻¹	<u>184</u>	161	<u>171</u>		<u>202</u>	193.272	181	<u>188</u>	169			190.5	<u>182</u>
Ta	mg kg ⁻¹	<u>1.38</u>					1.292	1.22	<u>1.3</u>					
Tb	mg kg ⁻¹	<u>0.756</u>					0.708	0.83	<u>0.79</u>	3				
Te	mg kg ⁻¹			<u>10.3</u>										
Th	mg kg ⁻¹	<u>17.5</u>	<u>5</u>				15.201	17.7	<u>18</u>	33.7			46.6	<u>22</u>
Tl	mg kg ⁻¹							11.7	<u>8.6</u>					
Tm	mg kg ⁻¹	<u>0.394</u>						0.41	<u>0.38</u>	1				
U	mg kg ⁻¹	<u>4.26</u>	3				4.109	4.3	<u>4.43</u>				2.8	<u>5</u>
V	mg kg ⁻¹	<u>72.5</u>	87				68.047	74.1	<u>72</u>	59.5			88.7	<u>74</u>
W	mg kg ⁻¹						10.352	10.8	<u>12</u>					
Y	mg kg ⁻¹	<u>26.4</u>	43	<u>32</u>		<u>16</u>	24.665	25.4	<u>23</u>				19.1	<u>5</u>
Yb	mg kg ⁻¹	<u>2.59</u>					2.416	2.74	<u>2.53</u>					
Zn	mg kg ⁻¹	<u>3549</u>	3743	<u>3240</u>		<u>2765</u>	3415.173	3393	<u>3650</u>	3110			3646.500	<u>3328</u>
Zr	mg kg ⁻¹	<u>260</u>	212	<u>255</u>			257.701	290	<u>243</u>				283.7	<u>272</u>

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

Table 1 - GeoPT35A Contributed data for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code		L64	L65	L66	L68	L69	L70	L71	L72	L74	L75	L76	L77	L78
SiO2	g 100g ⁻¹	<u>65.790</u>	<u>66.15</u>	<u>65.64</u>	<u>63.7</u>	<u>65.8</u>	<u>66.02</u>		<u>64.8</u>	<u>66.041</u>	<u>66.05</u>	<u>65.95</u>	<u>65.28</u>	<u>59.51</u>
TiO2	g 100g ⁻¹	<u>0.538</u>	<u>0.571</u>	<u>0.56</u>	<u>0.51</u>	<u>0.57</u>	<u>0.56</u>		<u>0.555</u>	<u>0.567</u>	<u>0.55</u>	<u>0.57</u>	<u>0.561</u>	<u>0.530</u>
Al2O3	g 100g ⁻¹	<u>11.829</u>	<u>11.72</u>	<u>11.65</u>	<u>12.7</u>	<u>11.63</u>	<u>11.8</u>		<u>11.8</u>	<u>11.95</u>	<u>12.22</u>	<u>12.11</u>	<u>11.91</u>	<u>11.82</u>
Fe2O3T	g 100g ⁻¹	<u>6.457</u>	<u>6.443</u>	<u>6.49</u>	<u>6.54</u>	<u>6.47</u>	<u>6.48</u>		<u>6.34</u>	<u>6.486</u>	<u>6.01</u>	<u>6.6</u>	<u>6.572</u>	<u>6.44</u>
Fe(II)O	g 100g ⁻¹										<u>1.62</u>			
MnO	g 100g ⁻¹	<u>0.527</u>	<u>0.51</u>	<u>0.52</u>	<u>0.535</u>	<u>0.54</u>	<u>0.52</u>		<u>0.515</u>	<u>0.112</u>	<u>0.47</u>	<u>0.536</u>	<u>0.533</u>	<u>0.524</u>
MgO	g 100g ⁻¹	<u>1.533</u>	<u>1.516</u>	<u>1.45</u>	<u>1.67</u>	<u>1.52</u>	<u>1.53</u>		<u>1.47</u>	<u>3.279</u>	<u>1.53</u>	<u>1.56</u>	<u>1.546</u>	<u>1.97</u>
CaO	g 100g ⁻¹	<u>1.449</u>	<u>1.388</u>	<u>1.44</u>	<u>1.37</u>	<u>1.52</u>	<u>1.46</u>		<u>1.44</u>	<u>6.76</u>	<u>1.51</u>	<u>1.57</u>	<u>1.47</u>	<u>1.511</u>
Na2O	g 100g ⁻¹	<u>1.088</u>	<u>0.871</u>	<u>1.11</u>	<u>1.04</u>	<u>1.15</u>	<u>1.08</u>		<u>1.16</u>	<u>3.004</u>	<u>1.26</u>	<u>1.15</u>	<u>1.124</u>	<u>0.65</u>
K2O	g 100g ⁻¹	<u>4.198</u>	<u>4.226</u>	<u>4.18</u>	<u>4.13</u>	<u>4.23</u>	<u>4.21</u>		<u>4.1</u>	<u>1.688</u>	<u>4.19</u>	<u>4.35</u>	<u>4.234</u>	<u>4.28</u>
P2O5	g 100g ⁻¹	<u>0.185</u>	<u>0.183</u>	<u>0.564</u>	<u>0.188</u>	<u>0.19</u>	<u>0.187</u>		<u>0.181</u>	<u>0.127</u>	<u>0.18</u>	<u>0.204</u>	<u>0.195</u>	<u>0.180</u>
H2O+	g 100g ⁻¹													
CO2	g 100g ⁻¹													
LOI	g 100g ⁻¹	<u>5.497</u>	<u>4.642</u>	<u>4.35</u>	<u>8.5</u>	<u>4.91</u>	<u>4.57</u>		<u>4.57</u>	<u>0.65</u>	<u>5.29</u>	<u>4.87</u>	<u>5.064</u>	
Ag	mg kg ⁻¹	<u>81.715</u>				<u>77</u>	<u>75.2</u>				<u>121</u>			<u>215.3</u>
As	mg kg ⁻¹	<u>398.072</u>				<u>380</u>	<u>376</u>			<u>381.430</u>	<u>279</u>	<u>324</u>		<u>404.4</u>
Au	mg kg ⁻¹	<u>2.957</u>				<u>3.65</u>					<u>7.01</u>			
B	mg kg ⁻¹						<u>117</u>							
Ba	mg kg ⁻¹	<u>855.616</u>	<u>908</u>	<u>855</u>	<u>853</u>	<u>898</u>	<u>851</u>			<u>901.074</u>	<u>908</u>	<u>974</u>		<u>975</u>
Be	mg kg ⁻¹	<u>25.396</u>			<u>21</u>		<u>18.8</u>	<u>0.89</u>		<u>10.17</u>	<u>20.6</u>			
Bi	mg kg ⁻¹	<u>5.122</u>			<u>5</u>		<u>4.71</u>				<u>4.69</u>	<u>11</u>		
Br	mg kg ⁻¹	<u>1.826</u>												
C(org)	mg kg ⁻¹								<u>0.582</u>				<u>6967</u>	
C(tot)	mg kg ⁻¹	<u>9002.952</u>					<u>0.87</u>		<u>0.937</u>				<u>9380</u>	
Cd	mg kg ⁻¹	<u>27.532</u>			<u>26</u>		<u>24.48</u>			<u>24.94</u>	<u>25.3</u>			<u>66.1</u>
Ce	mg kg ⁻¹	<u>92.560</u>		<u>100</u>	<u>91.5</u>		<u>90.6</u>	<u>25.98</u>		<u>94.865</u>	<u>73.5</u>	<u>125</u>		<u>91.9</u>
Cl	mg kg ⁻¹													
Co	mg kg ⁻¹	<u>55.203</u>		<u>56</u>		<u>55</u>	<u>55.6</u>	<u>21.61</u>		<u>55.594</u>	<u>54.5</u>	<u>66</u>		
Cr	mg kg ⁻¹	<u>215.435</u>		<u>245</u>	<u>219</u>		<u>246</u>			<u>215.153</u>	<u>200</u>	<u>227</u>		<u>174.9</u>
Cs	mg kg ⁻¹				<u>5</u>		<u>4.4</u>				<u>4.66</u>	<u>21</u>		<u>10.1</u>
Cu	mg kg ⁻¹	<u>1158.828</u>			<u>1290</u>	<u>1254</u>	<u>1210</u>			<u>1149.173</u>	<u>1110</u>	<u>1176</u>		<u>1168</u>
Dy	mg kg ⁻¹	<u>4.631</u>					<u>4.9</u>	<u>4.41</u>			<u>3.75</u>			
Er	mg kg ⁻¹	<u>2.747</u>			<u>1.7</u>		<u>2.6</u>	<u>2.65</u>			<u>2.1</u>			
Eu	mg kg ⁻¹	<u>1.268</u>			<u>0.85</u>		<u>1.2</u>	<u>1.05</u>			<u>1.02</u>			
F	mg kg ⁻¹	<u>1481.314</u>			<u>1229</u>									
Ga	mg kg ⁻¹	<u>13.064</u>		<u>37</u>	<u>15.3</u>		<u>15</u>				<u>14.8</u>	<u>19</u>		<u>14.1</u>
Gd	mg kg ⁻¹	<u>5.703</u>			<u>3.53</u>		<u>5.6</u>	<u>4.57</u>			<u>4.62</u>			
Ge	mg kg ⁻¹	<u>1.870</u>					<u>0.2</u>							
Hf	mg kg ⁻¹	<u>7.305</u>					<u>7.2</u>				<u>74.4</u>	<u>9.4</u>		<u>41.7</u>
Hg	mg kg ⁻¹	<u>6.628</u>			<u>8</u>					<u>12.54</u>				
Ho	mg kg ⁻¹	<u>0.926</u>			<u>0.61</u>		<u>0.9</u>	<u>0.88</u>			<u>0.75</u>			
I	mg kg ⁻¹													
In	mg kg ⁻¹						<u>9.38</u>				<u>9.29</u>			<u>8.1</u>
La	mg kg ⁻¹	<u>46.255</u>			<u>42.5</u>		<u>46.6</u>	<u>11.08</u>		<u>44.809</u>	<u>37.2</u>	<u>40</u>		<u>43.3</u>
Li	mg kg ⁻¹				<u>48</u>		<u>48.4</u>				<u>51.2</u>			
Lu	mg kg ⁻¹	<u>0.414</u>					<u>0.4</u>	<u>0.33</u>			<u>0.34</u>			
Mo	mg kg ⁻¹	<u>65.402</u>			<u>64</u>	<u>64</u>	<u>64.2</u>				<u>76.7</u>	<u>66</u>		<u>69.7</u>
N	mg kg ⁻¹													
Nb	mg kg ⁻¹	<u>22.053</u>			<u>21</u>	<u>22</u>	<u>26</u>					<u>21</u>		<u>19.8</u>
Nd	mg kg ⁻¹	<u>37.686</u>		<u>40</u>	<u>35.9</u>		<u>39.4</u>	<u>16.78</u>			<u>30.2</u>	<u>46</u>		
Ni	mg kg ⁻¹	<u>242.138</u>		<u>213</u>	<u>249</u>	<u>254</u>	<u>241</u>			<u>238.069</u>		<u>237</u>		<u>232.8</u>
Pb	mg kg ⁻¹	<u>3918.281</u>		<u>3800</u>	<u>3963</u>	<u>3992</u>	<u>3835</u>			<u>3866.147</u>	<u>4485</u>	<u>3889</u>		<u>3752</u>
Pd	mg kg ⁻¹										<u>2.81</u>			
Pr	mg kg ⁻¹	<u>10.219</u>			<u>9.97</u>		<u>10.1</u>	<u>3.78</u>			<u>8.57</u>			
Pt	mg kg ⁻¹													
Rb	mg kg ⁻¹	<u>144.666</u>	<u>146</u>	<u>155</u>	<u>154</u>	<u>165</u>	<u>149.3</u>			<u>156.665</u>	<u>164</u>	<u>155</u>		
Re	mg kg ⁻¹													
Rh	mg kg ⁻¹										<u>0.1</u>			
S	mg kg ⁻¹	<u>4348.041</u>			<u>3766</u>	<u>4375</u>	<u>5132</u>		<u>0.387</u>	<u>968</u>				<u>4554</u>
Sb	mg kg ⁻¹				<u>530</u>	<u>550</u>	<u>531</u>				<u>501</u>			<u>726.2</u>
Sc	mg kg ⁻¹	<u>14.406</u>			<u>7</u>	<u>26</u>	<u>8</u>	<u>21.53</u>				<u>16</u>		
Se	mg kg ⁻¹	<u>17.674</u>					<u>15</u>			<u>15.245</u>		<u>7</u>		<u>3.1</u>
Sm	mg kg ⁻¹	<u>6.590</u>			<u>6.24</u>		<u>7</u>	<u>4.2</u>			<u>5.29</u>			
Sn	mg kg ⁻¹	<u>4.251</u>					<u>2.6</u>							<u>13.3</u>
Sr	mg kg ⁻¹	<u>191.768</u>	<u>171</u>	<u>180</u>	<u>176</u>	<u>187</u>	<u>176.6</u>			<u>182.406</u>	<u>206</u>	<u>190</u>		<u>173.2</u>
Ta	mg kg ⁻¹	<u>1.323</u>			<u>1.2</u>		<u>1.4</u>					<u>16</u>		
Tb	mg kg ⁻¹	<u>0.803</u>					<u>0.8</u>	<u>0.68</u>			<u>0.64</u>			
Te	mg kg ⁻¹	<u>10.257</u>			<u>9.5</u>		<u>9.5</u>				<u>11</u>			
Th	mg kg ⁻¹	<u>20.207</u>			<u>16.9</u>		<u>17.1</u>	<u>6.21</u>			<u>14.4</u>	<u>20</u>		<u>36.7</u>
Tl	mg kg ⁻¹	<u>10.216</u>			<u>11.1</u>		<u>11.27</u>	<u>0.42</u>		<u>13.458</u>	<u>11.2</u>			<u>19.7</u>
Tm	mg kg ⁻¹	<u>0.412</u>			<u>0.25</u>		<u>0.4</u>	<u>0.32</u>			<u>0.32</u>			
U	mg kg ⁻¹	<u>4.775</u>			<u>3.7</u>		<u>4.5</u>			<u>2.974</u>	<u>3.49</u>			
V	mg kg ⁻¹	<u>76.994</u>		<u>70</u>	<u>73.2</u>	<u>77</u>	<u>75</u>	<u>172.210</u>		<u>70.342</u>	<u>70.7</u>	<u>80</u>		<u>81.5</u>
W	mg kg ⁻¹	<u>15.772</u>			<u>10</u>		<u>13</u>				<u>110</u>	<u>15</u>		
Y	mg kg ⁻¹	<u>25.685</u>		<u>37</u>		<u>32</u>	<u>24.7</u>	<u>22.41</u>			<u>21.8</u>	<u>27</u>		<u>18.5</u>
Yb	mg kg ⁻¹	<u>2.733</u>			<u>1.6</u>		<u>2.6</u>	<u>2.49</u>			<u>2.17</u>	<u>4.6</u>		
Zn	mg kg ⁻¹	<u>3764.939</u>		<u>648</u>	<u>3910</u>	<u>3845</u>	<u>3736</u>			<u>3584.976</u>	<u>3680</u>	<u>3866</u>		<u>3586</u>
Zr	mg kg ⁻¹	<u>271.637</u>	<u>274</u>	<u>198</u>	<u>219</u>	<u>269</u>	<u>268</u>				<u>275</u>	<u>273</u>		<u>258</u>

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

Table 1 - GeoPT35A Contributed data for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code		L80	L82	L83	L84	L85	L86	L87	L88	L89	L91	L92	L93	L94
SiO2	g 100g ⁻¹			65.25	<u>63.17</u>		<u>65.45</u>	65.464	65.64	<u>65.083</u>	67.9	66.25	65.02	65.43
TiO2	g 100g ⁻¹	<u>0.58</u>	0.636	0.57	<u>0.54</u>	0.517	<u>0.565</u>	0.552	0.579	<u>0.554</u>	0.578	0.565	0.558	0.544
Al2O3	g 100g ⁻¹		11.692	11.83	<u>11.59</u>		<u>11.84</u>	11.924	11.82	<u>11.747</u>	12.308	11.74	11.53	11.84
Fe2O3T	g 100g ⁻¹		6.369	6.67	<u>6.36</u>	6.722	<u>6.49</u>	6.373	6.309	<u>6.334</u>	6.644	6.52	6.269	6.3
Fe(II)O	g 100g ⁻¹								2.14					
MnO	g 100g ⁻¹	<u>0.53</u>	0.519	0.51	<u>0.516</u>	0.465	<u>0.52</u>	0.532	0.543	<u>0.49</u>	0.494	0.52	0.522	0.512
MgO	g 100g ⁻¹	<u>1.38</u>	1.887	1.47	<u>1.46</u>		<u>1.53</u>	1.491	1.56	<u>1.515</u>	1.58	1.57	1.554	1.55
CaO	g 100g ⁻¹	<u>1.44</u>	1.409	1.45	<u>1.44</u>		<u>1.5</u>	1.429	1.65	<u>1.464</u>	1.514	1.81	1.471	1.47
Na2O	g 100g ⁻¹	<u>1.08</u>	1.078	1.19	<u>1.06</u>		<u>0.98</u>	1.17	1.13	<u>1.157</u>	1.16	1.09	0.98	1.06
K2O	g 100g ⁻¹	<u>4.07</u>	4.174	4.18	<u>4.24</u>		<u>4.21</u>	4.23	4.19	<u>4.169</u>	4.33	4.18	4.133	4.13
P2O5	g 100g ⁻¹	<u>0.21</u>		0.17	<u>0.17</u>		<u>0.189</u>	0.19	0.189	<u>0.186</u>	0.194	0.189	0.159	0.181
H2O+	g 100g ⁻¹								3.41					
CO2	g 100g ⁻¹								1.047					
LOI	g 100g ⁻¹			4.95	<u>5.24</u>		<u>4.77</u>		5.1	<u>5.468</u>	5.54	5.2	5.16	5.273
Ag	mg kg ⁻¹		80.1	71			<u>66</u>	88.8	<u>73.38</u>		65.3		76.2	79.9
As	mg kg ⁻¹		413	332		359	<u>430</u>	409			373		317	390
Au	mg kg ⁻¹		8.79											
B	mg kg ⁻¹													
Ba	mg kg ⁻¹	<u>855</u>	810	951	<u>860</u>	786	<u>852</u>	902.7	<u>799.530</u>		818	828		850.8
Be	mg kg ⁻¹							22.43	<u>19.12</u>			22.6		
Bi	mg kg ⁻¹							5.183						7.4
Br	mg kg ⁻¹		1.71				<u>2</u>							
C(org)	mg kg ⁻¹						<u>6428</u>		6665					
C(tot)	mg kg ⁻¹				<u>9150</u>		<u>9405</u>		9525	<u>9003</u>				
Cd	mg kg ⁻¹		<u>21.4</u>			24	<u>27</u>	26.433	<u>23</u>		20.6		24.3	26.2
Ce	mg kg ⁻¹	<u>75.7</u>	90.3	108		87.249	<u>76</u>	83.6	81.7		81.61	92.8	<u>100</u>	79
Cl	mg kg ⁻¹		<u>74</u>				<u>127</u>							
Co	mg kg ⁻¹	<u>48.3</u>	57.76	63	<u>58</u>	46	<u>58</u>	57.333	<u>49.27</u>	<u>51</u>	48.5	56.9		57.7
Cr	mg kg ⁻¹	<u>144</u>	245	212	<u>240</u>	172	<u>211</u>	230.5	<u>199.160</u>	<u>106.7</u>	253	248.5	276	222.7
Cs	mg kg ⁻¹	<u>4.31</u>	4.72			5.069		5.433			4.29	4.9		
Cu	mg kg ⁻¹	<u>1033</u>	1352	1098	<u>1030</u>	1163	<u>1120</u>	1210	<u>1075.560</u>	<u>1182</u>	1020	<u>875.2</u>	<u>1148</u>	1199.700
Dy	mg kg ⁻¹	<u>3.92</u>	4.35			3.401		4.94	4.36		4.35	4.5	4.67	
Er	mg kg ⁻¹	<u>2.34</u>				1.667		3.107	2.55		2.606	2.7	2.83	
Eu	mg kg ⁻¹	<u>1.06</u>	1.253			1.151		1	1.15		1.18	1.2	1.25	
F	mg kg ⁻¹						<u>1368</u>		1690	<u>2721</u>				<u>1800</u>
Ga	mg kg ⁻¹		<u>12.4</u>	17		10	<u>17</u>	15.9	<u>15</u>		15.1	15.6	<u>13</u>	14.9
Gd	mg kg ⁻¹	<u>4.45</u>				4.525		6.107	5.28		4.88	5.7	5.5	
Ge	mg kg ⁻¹								<u>2.82</u>					
Hf	mg kg ⁻¹		7.975	7		8.945	<u>7</u>	4.627	<u>4.73</u>		5.93	7.2	<u>22.3</u>	
Hg	mg kg ⁻¹		8.38				<u>9</u>	7.127	6.805					
Ho	mg kg ⁻¹	<u>0.79</u>				0.616		1.05	0.82		0.888	0.9	0.95	
I	mg kg ⁻¹													
In	mg kg ⁻¹		9.88											
La	mg kg ⁻¹	<u>39.2</u>	45.58	62	<u>45</u>	44.631	<u>40</u>	43.33	43.3		42.25	47.3	<u>57.2</u>	42.4
Li	mg kg ⁻¹	<u>43.9</u>				51.107		53.37	51.4		48.26		29	
Lu	mg kg ⁻¹	<u>0.34</u>	0.377			0.244		0.433	0.39		0.395	0.4	0.4	
Mo	mg kg ⁻¹		74	54		67	<u>61</u>	66.4		<u>71.2</u>	51	71.9	65.8	73.4
N	mg kg ⁻¹													
Nb	mg kg ⁻¹			20		21.835	<u>20</u>	21.5			20.5	23.1	<u>22.7</u>	24.7
Nd	mg kg ⁻¹	<u>31.6</u>	37.03	40		35.547	<u>32</u>	34.93	34.7		32.94	38.5	36.9	29.7
Ni	mg kg ⁻¹	<u>188</u>	211	236	<u>230</u>	200	<u>225</u>	236	<u>193.170</u>	<u>179.2</u>	221	200.4	220	241.5
Pb	mg kg ⁻¹			3820		3763	<u>4000</u>	4053.330	<u>4029.590</u>	<u>3598</u>	3663	<u>3253.500</u>	<u>4055</u>	4222.700
Pd	mg kg ⁻¹													
Pr	mg kg ⁻¹	<u>8.48</u>				10.14	<u>12</u>	10.5	9.36		9.165	10.6	9.89	
Pt	mg kg ⁻¹													
Rb	mg kg ⁻¹	<u>119</u>	164	155		154.7	<u>142</u>	157.670	<u>134.280</u>		134	154.2	<u>150</u>	158.6
Re	mg kg ⁻¹													
Rh	mg kg ⁻¹													
S	mg kg ⁻¹				<u>4480</u>		<u>2955</u>	4733.330	4417	<u>4792</u>		6946		
Sb	mg kg ⁻¹		565	485		477	<u>432</u>	582.330			433		573	445
Sc	mg kg ⁻¹		8.19	13		10		7.8			14.4	8.1	<u>16.3</u>	8.2
Se	mg kg ⁻¹		14.4				<u>7</u>	29.367					19.5	13.9
Sm	mg kg ⁻¹	<u>5.49</u>	6.51	8		6.162	<u>6</u>	6.42	5.88		5.94	6.6	6.43	
Sn	mg kg ⁻¹					6	<u>20</u>					2.6	<u>1.9</u>	2.9
Sr	mg kg ⁻¹	<u>164</u>	<u>163</u>	184		178.1	<u>195</u>	188.670	170.3		167.7	188.1	<u>176</u>	187.9
Ta	mg kg ⁻¹		1.35			1.321	<u>6</u>				1.49	1.4		
Tb	mg kg ⁻¹	<u>0.63</u>	0.787			0.623		0.87	0.78		0.733	0.8	0.78	
Te	mg kg ⁻¹													6.5
Th	mg kg ⁻¹	<u>15.4</u>	18.9	11		16.851	8	16.6	<u>21.74</u>		17.37	19.2	12	30.2
Tl	mg kg ⁻¹					11.693	<u>1</u>	12.9			11.1	12.1	10.1	11.3
Tm	mg kg ⁻¹	<u>0.34</u>				0.282		0.463	0.37		0.389	0.4	0.4	
U	mg kg ⁻¹	<u>3.72</u>	3.68	2		3.605	<u>4</u>	3.637	<u>2.47</u>		4.35	4.6	2.46	4.2
V	mg kg ⁻¹	<u>65.9</u>	74.8	89	<u>68</u>	63	<u>79</u>	71.5	<u>71.52</u>	<u>79.3</u>	73.1	75.8	72.4	82.8
W	mg kg ⁻¹		14	26			<u>19</u>	13.767				12.4	<u>20.2</u>	7.4
Y	mg kg ⁻¹	<u>19.8</u>		35	<u>23</u>	21.604	<u>42</u>	25.6	23.86		23.6	28.6	<u>32</u>	26.4
Yb	mg kg ⁻¹	<u>2.28</u>	2.705			1.578		2.957	2.63		2.586	2.7	2.74	
Zn	mg kg ⁻¹	<u>3360</u>	3790	3757	<u>3470</u>	3457	<u>3790</u>	3713.330	<u>3981.810</u>	<u>3403</u>	3685	<u>3924</u>	<u>3908</u>	3685.100
Zr	mg kg ⁻¹		320	261	<u>240</u>	249	<u>248</u>	252.5	<u>250.760</u>		275	270.1	<u>262</u>	262.8

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

Table 1 - GeoPT35A Contributed data for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code		L96	L99	L100	L103	L104	L105	L106	L108	L109	L110	L113	-	-
SiO2	g 100g ⁻¹	<u>79.12</u>	<u>61</u>	<u>65.4</u>	<u>65.6</u>		<u>65.57</u>	<u>65.54</u>		<u>65.448</u>	<u>65.57</u>	<u>65.95</u>		
TiO2	g 100g ⁻¹	<u>0.48</u>	<u>0.569</u>	<u>0.56</u>	<u>0.58</u>		<u>0.56</u>	<u>0.56</u>		<u>0.543</u>	<u>0.56</u>	<u>0.57</u>		
Al2O3	g 100g ⁻¹	<u>3.91</u>	<u>14</u>	<u>11.84</u>	<u>11.9</u>		<u>11.88</u>	<u>11.85</u>		<u>11.583</u>	<u>11.62</u>	<u>11.54</u>		
Fe2O3T	g 100g ⁻¹	<u>7.51</u>	<u>6.75</u>	<u>6.34</u>	<u>6.62</u>		<u>6.45</u>	<u>6.46</u>		<u>6.455</u>	<u>6.55</u>	<u>6.57</u>		
Fe(II)O	g 100g ⁻¹			<u>2.34</u>										
MnO	g 100g ⁻¹	<u>0.058</u>	<u>0.598</u>	<u>0.515</u>	<u>0.53</u>		<u>0.531</u>	<u>0.54</u>		<u>0.509</u>	<u>0.46</u>	<u>0.523</u>		
MgO	g 100g ⁻¹	<u>0.98</u>	<u>1.7</u>	<u>1.62</u>	<u>1.55</u>		<u>1.48</u>	<u>1.53</u>		<u>1.552</u>	<u>1.58</u>	<u>1.62</u>		
CaO	g 100g ⁻¹	<u>1.57</u>	<u>1.69</u>	<u>1.48</u>	<u>1.5</u>		<u>1.47</u>	<u>1.48</u>		<u>1.453</u>	<u>1.6</u>	<u>1.54</u>		
Na2O	g 100g ⁻¹	<u>1.98</u>	<u>0.917</u>	<u>1.2</u>	<u>1.07</u>		<u>0.91</u>	<u>1.05</u>		<u>1.07</u>	<u>1.08</u>	<u>1.23</u>		
K2O	g 100g ⁻¹	<u>4.17</u>	<u>491</u>	<u>4.14</u>	<u>4.15</u>		<u>4.25</u>	<u>4.18</u>		<u>4.282</u>	<u>4.18</u>	<u>4.24</u>		
P2O5	g 100g ⁻¹	<u>0.09</u>	<u>0.252</u>	<u>0.18</u>			<u>0.183</u>	<u>0.19</u>		<u>0.186</u>	<u>0.23</u>	<u>0.181</u>		
H2O+	g 100g ⁻¹			<u>3.26</u>							<u>2.46</u>			
CO2	g 100g ⁻¹			<u>1.33</u>	<u>3.72</u>						<u>1.25</u>			
LOI	g 100g ⁻¹		<u>4.65</u>	<u>5.34</u>			<u>5.23</u>	<u>5.02</u>		<u>5.15</u>	<u>4.65</u>	<u>4.78</u>		
Ag	mg kg ⁻¹	<u>75.8</u>	<u>0.007</u>	<u>91.7</u>		<u>36.35</u>	<u>88.6</u>	<u>83.6</u>	<u>87.18</u>			<u>69.9</u>		
As	mg kg ⁻¹	<u>167.960</u>	<u>0.053</u>	<u>436</u>		<u>326.1</u>	<u>394</u>	<u>435</u>	<u>311.7</u>		<u>394</u>	<u>385.3</u>		
Au	mg kg ⁻¹						<u>2.11</u>		<u>1.981</u>					
B	mg kg ⁻¹													
Ba	mg kg ⁻¹		<u>0.082</u>	<u>866</u>	<u>876.6</u>	<u>872.5</u>	<u>886</u>	<u>866</u>	<u>869.2</u>	<u>868</u>	<u>900</u>	<u>946.3</u>		
Be	mg kg ⁻¹			<u>23.3</u>			<u>24.6</u>	<u>20.5</u>			<u>0.95</u>			
Bi	mg kg ⁻¹			<u>4.34</u>	<u>4.5</u>	<u>5.05</u>	<u>4.08</u>	<u>4.92</u>	<u>5.253</u>			<u>8.8</u>		
Br	mg kg ⁻¹											<u>2.8</u>		
C(org)	mg kg ⁻¹			<u>8400</u>										
C(tot)	mg kg ⁻¹											<u>17972</u>		
Cd	mg kg ⁻¹	<u>26.12</u>		<u>29.2</u>		<u>25.93</u>	<u>23.6</u>	<u>24.4</u>			<u>40</u>	<u>25.3</u>		
Ce	mg kg ⁻¹	<u>97.44</u>		<u>92.4</u>	<u>92.88</u>	<u>89.32</u>	<u>101</u>	<u>87.8</u>	<u>92.22</u>		<u>93</u>	<u>77.3</u>		
Cl	mg kg ⁻¹													
Co	mg kg ⁻¹	<u>67.45</u>	<u>0.004</u>	<u>54.9</u>	<u>48</u>	<u>52.52</u>	<u>64.7</u>	<u>55</u>	<u>57.37</u>	<u>53</u>	<u>62</u>	<u>75</u>		
Cr	mg kg ⁻¹	<u>316.710</u>	<u>0.024</u>	<u>223</u>		<u>168.060</u>	<u>213</u>	<u>244</u>	<u>67.8</u>	<u>213</u>	<u>185</u>	<u>179.4</u>		
Cs	mg kg ⁻¹	<u>6.79</u>		<u>4.97</u>	<u>5.3</u>	<u>4.695</u>	<u>4.55</u>	<u>3.02</u>	<u>5.44</u>		<u>5</u>			
Cu	mg kg ⁻¹	<u>1472</u>	<u>0.129</u>	<u>1166</u>	<u>1093</u>	<u>1090.900</u>	<u>1166</u>	<u>1195</u>	<u>1192</u>	<u>797</u>	<u>1280</u>	<u>1102.800</u>		
Dy	mg kg ⁻¹			<u>4.29</u>	<u>4.77</u>	<u>4.336</u>	<u>3.52</u>		<u>4.024</u>		<u>4.23</u>			
Er	mg kg ⁻¹			<u>2.57</u>	<u>2.77</u>	<u>2.36</u>	<u>1.98</u>		<u>2.537</u>		<u>2.42</u>			
Eu	mg kg ⁻¹			<u>1.33</u>	<u>1.29</u>	<u>1.171</u>	<u>1.64</u>		<u>1.29</u>		<u>1.17</u>			
F	mg kg ⁻¹		<u>0.227</u>	<u>1550</u>						<u>1402</u>				
Ga	mg kg ⁻¹	<u>20.05</u>		<u>15.7</u>		<u>15.87</u>	<u>16.3</u>	<u>17.5</u>		<u>20</u>	<u>16.8</u>	<u>14.6</u>		
Gd	mg kg ⁻¹			<u>5.76</u>	<u>5.76</u>	<u>5.534</u>	<u>5.57</u>		<u>6.657</u>		<u>5.35</u>			
Ge	mg kg ⁻¹			<u>2.62</u>				<u>1.3</u>						
Hf	mg kg ⁻¹			<u>8.42</u>	<u>7.21</u>	<u>7.563</u>			<u>3.231</u>		<u>6.06</u>	<u>0.4</u>		
Hg	mg kg ⁻¹			<u>7.8</u>										
Ho	mg kg ⁻¹			<u>0.9</u>	<u>0.99</u>	<u>0.834</u>	<u>0.66</u>		<u>0.861</u>		<u>0.91</u>			
I	mg kg ⁻¹													
In	mg kg ⁻¹			<u>9.72</u>			<u>9.46</u>	<u>10.5</u>						
La	mg kg ⁻¹	<u>25.83</u>		<u>49.5</u>	<u>48.75</u>	<u>45.47</u>	<u>48.8</u>	<u>42.2</u>	<u>45.8</u>		<u>42.3</u>	<u>44.6</u>		
Li	mg kg ⁻¹			<u>49.9</u>	<u>0.43</u>	<u>64.23</u>	<u>48.5</u>	<u>46.5</u>		<u>50</u>	<u>58</u>			
Lu	mg kg ⁻¹			<u>0.43</u>		<u>0.361</u>	<u>0.253</u>		<u>0.329</u>		<u>0.4</u>			
Mo	mg kg ⁻¹			<u>65.9</u>		<u>70.55</u>	<u>63</u>	<u>66.8</u>	<u>70.77</u>		<u>68</u>	<u>60.1</u>		
N	mg kg ⁻¹													
Nb	mg kg ⁻¹	<u>29.86</u>	<u>0.003</u>	<u>23</u>	<u>24</u>	<u>27.043</u>	<u>19</u>	<u>22.8</u>	<u>21.3</u>		<u>20.8</u>	<u>20.1</u>		
Nd	mg kg ⁻¹	<u>24.8</u>		<u>41.6</u>	<u>37.58</u>	<u>36.088</u>	<u>34.7</u>		<u>36.64</u>		<u>32.4</u>	<u>29.2</u>		
Ni	mg kg ⁻¹	<u>329.3</u>	<u>0.026</u>	<u>205</u>		<u>234.220</u>	<u>239</u>	<u>230</u>	<u>234.2</u>	<u>208</u>	<u>280</u>	<u>239.9</u>		
Pb	mg kg ⁻¹	<u>5085.760</u>	<u>0.451</u>	<u>4236</u>	<u>3926</u>	<u>4183.900</u>	<u>3897</u>	<u>4062</u>	<u>3952</u>	<u>3777</u>	<u>3780</u>	<u>3734.900</u>		
Pd	mg kg ⁻¹								<u>0.665</u>					
Pr	mg kg ⁻¹			<u>11.1</u>	<u>10.39</u>	<u>9.929</u>	<u>10</u>	<u>9.25</u>	<u>10.16</u>		<u>9</u>			
Pt	mg kg ⁻¹								<u>2.181</u>					
Rb	mg kg ⁻¹	<u>154.030</u>	<u>0.018</u>	<u>149</u>	<u>158.4</u>	<u>148.030</u>	<u>148</u>	<u>155</u>	<u>154.1</u>		<u>140</u>	<u>150.5</u>		
Re	mg kg ⁻¹													
Rh	mg kg ⁻¹													
S	mg kg ⁻¹		<u>0.456</u>	<u>4550</u>	<u>4588</u>							<u>9352</u>		
Sb	mg kg ⁻¹		<u>0.057</u>	<u>548</u>		<u>439.1</u>	<u>440</u>	<u>418</u>	<u>559.1</u>			<u>504.3</u>		
Sc	mg kg ⁻¹	<u>0.34</u>		<u>8.34</u>	<u>13.79</u>	<u>8.651</u>	<u>9.52</u>	<u>4.28</u>	<u>7.91</u>		<u>8.5</u>	<u>9.3</u>		
Se	mg kg ⁻¹			<u>25.65</u>		<u>17.48</u>		<u>21.2</u>				<u>18.3</u>		
Sm	mg kg ⁻¹			<u>6.99</u>	<u>6.98</u>	<u>6.3</u>	<u>6.83</u>		<u>6.427</u>		<u>5.97</u>	<u>1.8</u>		
Sn	mg kg ⁻¹			<u>3.19</u>		<u>2.78</u>	<u>3</u>	<u>2.18</u>	<u>3.099</u>			<u>3.5</u>		
Sr	mg kg ⁻¹	<u>135.3</u>	<u>0.022</u>	<u>183</u>	<u>189.8</u>	<u>181.950</u>	<u>180</u>	<u>181</u>	<u>187.1</u>	<u>247</u>	<u>195</u>	<u>176.6</u>		
Ta	mg kg ⁻¹	<u>0.76</u>		<u>1.41</u>	<u>1.53</u>	<u>1.498</u>			<u>1.252</u>		<u>1.8</u>			
Tb	mg kg ⁻¹			<u>0.81</u>	<u>0.83</u>	<u>0.794</u>	<u>0.768</u>		<u>0.907</u>		<u>0.77</u>			
Te	mg kg ⁻¹			<u>9.4</u>			<u>8.1</u>	<u>9023</u>				<u>14.2</u>		
Th	mg kg ⁻¹			<u>18.2</u>	<u>19.46</u>	<u>17.82</u>	<u>16.2</u>	<u>14.2</u>	<u>17.88</u>		<u>15</u>	<u>11.8</u>		
Tl	mg kg ⁻¹			<u>12.5</u>		<u>16.04</u>	<u>9.72</u>	<u>8.76</u>	<u>12.29</u>		<u>10.2</u>	<u>11.9</u>		
Tm	mg kg ⁻¹			<u>0.42</u>	<u>0.42</u>	<u>0.359</u>	<u>0.259</u>		<u>0.317</u>		<u>0.42</u>			
U	mg kg ⁻¹			<u>4.1</u>	<u>4.45</u>	<u>4.239</u>	<u>3.77</u>	<u>2.41</u>	<u>4.303</u>		<u>3.8</u>	<u>2.7</u>		
V	mg kg ⁻¹	<u>59.9</u>	<u>0.009</u>	<u>73</u>	<u>78.6</u>	<u>75.28</u>	<u>81.5</u>	<u>72.8</u>	<u>75.32</u>		<u>72</u>	<u>67.7</u>		
W	mg kg ⁻¹			<u>11.7</u>				<u>5.9</u>	<u>10.53</u>			<u>9</u>		
Y	mg kg ⁻¹	<u>12.6</u>		<u>25.5</u>	<u>27.35</u>	<u>32.41</u>	<u>22</u>	<u>28</u>	<u>20.2</u>	<u>20</u>	<u>24</u>	<u>31.6</u>		
Yb	mg kg ⁻¹			<u>2.74</u>	<u>2.78</u>	<u>2.314</u>	<u>1.74</u>		<u>2.244</u>		<u>2.4</u>	<u>3.1</u>		
Zn	mg kg ⁻¹	<u>2060</u>	<u>0.391</u>	<u>3679</u>	<u>3527</u>	<u>3092</u>	<u>3666</u>	<u>3749</u>	<u>3783</u>	<u>3253</u>	<u>4100</u>	<u>3812.900</u>		
Zr	mg kg ⁻¹	<u>265.610</u>	<u>0.032</u>	<u>250</u>	<u>269.2</u>	<u>320.830</u>	<u>255</u>	<u>268</u>	<u>106.3</u>	<u>274</u>	<u>263</u>	<u>255.1</u>		

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

Table 2 - GeoPT35A Assigned values and statistical summary for Metalliferous sediment, SdAR-H1.

	Assigned Value	Uncertainty of assigned value	Horwitz Target Value	Uncertainty/ Target	Number of reported results	Robust Mean of results	Median of results	Status of consensus value	Type of consensus value
	X_a	s_{dm}	H_a	s_{dm}/H_a	n				
	g 100g ⁻¹	g 100g ⁻¹	g 100g ⁻¹			g 100g ⁻¹	g 100g ⁻¹		
SiO2	65.45	0.08798	0.6977	0.1261	71	65.4	65.45	Assigned	Median
TiO2	0.56	0.001668	0.01222	0.1365	79	0.5574	0.56	Assigned	Median
Al2O3	11.83	0.03146	0.1631	0.1929	76	11.85	11.83	Assigned	Median
Fe2O3T	6.448	0.01701	0.09742	0.1747	79	6.457	6.448	Assigned	Median
MnO	0.515	0.002502	0.01138	0.2198	79	0.5143	0.515	Assigned	Median
MgO	1.532	0.007737	0.02873	0.2693	77	1.532	1.53	Assigned	Robust Mean
CaO	1.462	0.004113	0.02762	0.1489	78	1.469	1.462	Assigned	Median
Na2O	1.102	0.01347	0.02171	0.6203	75	1.102	1.103	Provisional	Robust Mean
K2O	4.171	0.01238	0.06729	0.1841	77	4.171	4.17	Assigned	Robust Mean
P2O5	0.1854	0.001489	0.00478	0.3116	72	0.1854	0.186	Assigned	Robust Mean
	mg kg ⁻¹	mg kg ⁻¹	mg kg ⁻¹			mg kg ⁻¹	mg kg ⁻¹		
Ag	75.86	2.655	3.163	0.8394	45	75.86	76	Provisional	Robust Mean
Ba	865.9	5.886	25.02	0.2352	74	859.4	865.9	Assigned	Median
Be	22.07	0.61	1.108	0.5505	34	20.31	21.23	Provisional	Mode
Bi	5.131	0.1667	0.3209	0.5196	32	5.733	5.131	Provisional	Median
Cd	25.2	0.42	1.24	0.3387	48	23.54	24.44	Provisional	Mode
Ce	89.32	1.053	3.634	0.2897	61	87.5	89.32	Assigned	Median
Co	55.59	0.6609	2.429	0.2721	65	54.54	55.59	Assigned	Median
Cs	4.781	0.117	0.3022	0.3872	40	4.781	4.77	Assigned	Robust Mean
Cu	1159	8.078	32.06	0.252	76	1145	1159	Assigned	Median
Dy	4.41	0.04862	0.2821	0.1723	41	4.38	4.41	Assigned	Median
Er	2.603	0.03889	0.1803	0.2157	42	2.554	2.603	Assigned	Median
Eu	1.253	0.01741	0.09687	0.1797	43	1.217	1.253	Assigned	Median
Ga	15.64	0.3311	0.827	0.4004	52	15.64	15.6	Assigned	Robust Mean
Gd	5.35	0.08163	0.3325	0.2455	41	5.239	5.35	Assigned	Median
Hf	6.85	0.3635	0.4101	0.8864	41	6.727	6.85	Provisional	Median
Ho	0.9	0.01227	0.07314	0.1678	41	0.8821	0.9	Assigned	Median
In	9.53	0.23	0.5429	0.4237	14	9.567	9.53	Provisional	Median
La	44.89	0.4866	2.025	0.2403	60	44.32	44.89	Assigned	Median
Li	50.54	1.252	2.24	0.559	37	50.54	50.76	Assigned	Robust Mean
Lu	0.398	0.005978	0.03657	0.1635	40	0.3854	0.398	Assigned	Median
Mo	64	1.172	2.737	0.4283	60	62.98	64	Assigned	Median
Nb	21.85	0.4316	1.099	0.3929	60	21.85	21.92	Assigned	Robust Mean
Nd	36.2	0.4598	1.687	0.2726	55	35.75	36.2	Assigned	Median
Ni	230	2.078	8.115	0.2561	75	225.2	230	Assigned	Median
Pb	3893	36.94	89.73	0.4117	75	3893	3910	Assigned	Robust Mean
Pr	9.965	0.1106	0.5639	0.1962	44	9.813	9.965	Assigned	Median
Rb	152.3	1.124	5.716	0.1966	68	150.9	152.3	Assigned	Median
Sc	8.2	0.14	0.4778	0.293	48	9.548	8.48	Provisional	Mode
Sm	6.386	0.08348	0.3864	0.216	47	6.266	6.386	Assigned	Median
Sr	182.2	1.431	6.657	0.215	76	182.2	182.4	Assigned	Robust Mean
Ta	1.41	0.03857	0.1071	0.3602	34	1.41	1.405	Assigned	Robust Mean
Tb	0.78	0.01088	0.06476	0.168	41	0.7619	0.78	Assigned	Median
Th	17.74	0.4725	0.9204	0.5134	56	17.14	17.74	Assigned	Median
Tl	11.1	0.2567	0.618	0.4153	40	10.87	11.1	Assigned	Median
Tm	0.394	0.006173	0.03626	0.1703	39	0.3789	0.394	Assigned	Median
U	4.068	0.09429	0.2634	0.3579	53	3.838	4.068	Assigned	Median
V	73.15	0.8346	3.067	0.2722	72	73.8	73.15	Assigned	Median
Y	25.41	0.7428	1.249	0.5947	63	25.41	25.4	Provisional	Robust Mean
Yb	2.6	0.04067	0.1801	0.2258	45	2.56	2.6	Assigned	Median
Zn	3684	28.87	85.61	0.3373	78	3619	3684	Assigned	Median
Zr	257.9	2.697	8.942	0.3016	68	245.8	257.9	Provisional	Median

Table 3 - GeoPT35A Z-scores for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code	L1	L2	L3	L4	L6	L7	L9	L10	L11	L13	L14	L16	L17
SiO2	<u>-0.80</u>	<u>-0.15</u>	<u>-0.40</u>	<u>0.92</u>	*	<u>-0.65</u>	<u>0.07</u>	<u>0.32</u>	<u>3.54</u>	*	<u>-0.33</u>	<u>-0.32</u>	*
TiO2	<u>0.16</u>	<u>-11.46</u>	<u>0.00</u>	<u>2.17</u>	<u>23.97</u>	<u>2.13</u>	<u>0.65</u>	<u>-0.29</u>	<u>-0.82</u>	*	<u>-3.27</u>	<u>-0.49</u>	<u>-0.90</u>
Al2O3	<u>1.93</u>	<u>-4.20</u>	<u>-0.86</u>	<u>1.04</u>	<u>31.69</u>	<u>3.13</u>	<u>0.00</u>	<u>-1.01</u>	<u>0.86</u>	*	<u>-1.35</u>	<u>4.47</u>	*
Fe2O3T	<u>0.93</u>	<u>-0.20</u>	<u>1.56</u>	<u>-0.74</u>	<u>9.88</u>	<u>1.21</u>	<u>0.12</u>	<u>-0.45</u>	<u>3.92</u>	*	<u>1.46</u>	<u>-3.74</u>	*
MnO	<u>-0.09</u>	*	<u>1.14</u>	<u>6.63</u>	<u>-34.27</u>	<u>2.65</u>	<u>-1.58</u>	<u>-0.40</u>	<u>6.59</u>	*	<u>1.32</u>	<u>7.38</u>	<u>-0.97</u>
MgO	<u>0.84</u>	<u>0.49</u>	<u>-0.75</u>	<u>-1.28</u>	<u>63.29</u>	<u>3.04</u>	<u>0.64</u>	<u>-0.38</u>	<u>0.29</u>	*	<u>-2.15</u>	<u>1.71</u>	*
CaO	<u>-0.41</u>	<u>0.68</u>	<u>0.63</u>	<u>-0.26</u>	<u>197.57</u>	<u>0.67</u>	<u>0.27</u>	<u>-0.41</u>	<u>0.27</u>	*	<u>-0.81</u>	<u>1.22</u>	*
Na2O	<u>2.96</u>	<u>-3.26</u>	<u>-0.99</u>	<u>-2.66</u>	<u>84.67</u>	<u>3.89</u>	<u>-0.99</u>	<u>1.12</u>	<u>-10.20</u>	*	<u>-3.30</u>	<u>2.96</u>	*
K2O	<u>0.07</u>	<u>-0.38</u>	<u>-0.16</u>	<u>1.89</u>	<u>-37.47</u>	<u>4.99</u>	<u>-0.16</u>	<u>-1.42</u>	<u>2.81</u>	*	<u>-1.50</u>	<u>0.44</u>	*
P2O5	<u>-0.47</u>	<u>-3.71</u>	<u>5.14</u>	<u>-0.78</u>	*	<u>1.29</u>	<u>1.37</u>	*	<u>0.95</u>	*	<u>0.95</u>	<u>1.10</u>	*
Ag	*	*	*	<u>0.08</u>	<u>-23.96</u>	<u>-1.05</u>	*	<u>-0.90</u>	<u>-1.85</u>	*	<u>-3.14</u>	<u>-6.45</u>	*
Ba	<u>-2.27</u>	<u>0.44</u>	<u>-3.42</u>	<u>0.14</u>	<u>-4.19</u>	<u>-2.35</u>	<u>-0.21</u>	*	<u>1.04</u>	<u>4.88</u>	<u>1.53</u>	<u>-10.91</u>	<u>-1.51</u>
Be	*	<u>-0.78</u>	<u>0.99</u>	<u>-2.55</u>	<u>-19.16</u>	<u>-0.54</u>	*	*	*	*	<u>3.82</u>	<u>-6.68</u>	<u>0.21</u>
Bi	<u>49.66</u>	<u>2.18</u>	<u>0.80</u>	<u>-0.43</u>	*	<u>0.52</u>	*	*	*	*	*	<u>-5.26</u>	<u>0.03</u>
Cd	<u>1.53</u>	<u>0.40</u>	<u>0.28</u>	<u>-1.80</u>	<u>-20.14</u>	<u>0.87</u>	*	<u>0.86</u>	<u>-8.22</u>	*	<u>-0.89</u>	<u>-6.53</u>	*
Ce	*	*	<u>-1.76</u>	<u>-0.13</u>	<u>-16.53</u>	<u>2.28</u>	*	*	<u>-0.91</u>	<u>7.07</u>	<u>-2.37</u>	<u>-8.40</u>	<u>0.77</u>
Co	<u>-0.33</u>	<u>1.35</u>	<u>-0.26</u>	<u>0.52</u>	<u>-14.35</u>	<u>0.19</u>	*	*	<u>-13.42</u>	*	<u>0.82</u>	<u>-7.31</u>	<u>-0.16</u>
Cs	*	<u>2.02</u>	<u>0.68</u>	<u>0.19</u>	<u>-6.13</u>	<u>0.54</u>	*	*	*	<u>2.87</u>	<u>-4.64</u>	<u>-4.78</u>	<u>-0.27</u>
Cu	<u>0.06</u>	<u>1.06</u>	<u>-3.15</u>	<u>-0.93</u>	*	<u>1.41</u>	<u>2.70</u>	<u>-1.41</u>	<u>0.38</u>	*	<u>0.25</u>	<u>-12.39</u>	<u>0.60</u>
Dy	*	*	<u>0.63</u>	<u>0.26</u>	<u>-0.64</u>	<u>-0.08</u>	*	*	*	<u>0.46</u>	<u>-0.35</u>	<u>-5.56</u>	<u>0.57</u>
Er	*	*	<u>0.53</u>	<u>0.45</u>	<u>-0.68</u>	<u>-0.56</u>	*	*	*	<u>-0.96</u>	<u>-1.07</u>	<u>-5.22</u>	<u>0.65</u>
Eu	*	*	<u>0.01</u>	<u>0.84</u>	<u>-1.48</u>	<u>0.27</u>	*	*	*	<u>-0.24</u>	<u>0.18</u>	<u>-4.33</u>	<u>0.07</u>
Ga	<u>-4.62</u>	<u>1.39</u>	<u>0.70</u>	<u>0.54</u>	<u>5.24</u>	<u>1.36</u>	<u>-0.33</u>	*	<u>-3.19</u>	*	<u>-0.11</u>	<u>-5.90</u>	<u>-0.29</u>
Gd	*	*	<u>-0.66</u>	<u>-0.23</u>	*	<u>-0.06</u>	*	*	<u>-1.05</u>	<u>5.47</u>	<u>-0.81</u>	<u>-5.15</u>	<u>0.18</u>
Hf	<u>2.62</u>	*	<u>-0.33</u>	<u>-0.09</u>	<u>-5.66</u>	<u>-7.64</u>	*	*	<u>-6.95</u>	<u>-5.24</u>	<u>-8.22</u>	<u>-6.74</u>	<u>0.00</u>
Ho	*	*	<u>1.15</u>	<u>0.27</u>	<u>1.09</u>	<u>-0.61</u>	*	*	*	<u>0.82</u>	<u>-0.41</u>	<u>-4.48</u>	<u>0.41</u>
In	*	*	<u>1.47</u>	<u>-1.05</u>	*	<u>2.30</u>	*	*	*	*	*	*	*
La	*	*	<u>-0.13</u>	<u>0.28</u>	<u>-15.84</u>	<u>-7.42</u>	*	*	<u>4.00</u>	<u>5.83</u>	<u>3.59</u>	<u>-7.58</u>	<u>0.40</u>
Li	*	<u>0.05</u>	<u>1.99</u>	<u>0.65</u>	*	<u>0.99</u>	*	*	*	*	<u>4.42</u>	<u>-6.82</u>	<u>-0.02</u>
Lu	*	*	<u>0.63</u>	<u>0.22</u>	<u>0.60</u>	<u>-0.91</u>	*	*	*	<u>0.05</u>	<u>-1.31</u>	<u>-4.03</u>	<u>0.60</u>
Mo	<u>2.74</u>	<u>1.65</u>	<u>0.64</u>	<u>-0.27</u>	<u>-23.11</u>	<u>1.94</u>	<u>0.15</u>	<u>0.66</u>	<u>17.17</u>	<u>6.14</u>	<u>-2.30</u>	<u>-6.57</u>	<u>-0.66</u>
Nb	<u>0.98</u>	<u>14.44</u>	<u>-1.44</u>	<u>0.53</u>	<u>-14.91</u>	<u>3.19</u>	<u>1.21</u>	*	<u>29.27</u>	<u>5.15</u>	<u>3.76</u>	<u>-5.84</u>	<u>2.14</u>
Nd	*	*	<u>-0.50</u>	<u>-0.40</u>	<u>-11.19</u>	<u>1.36</u>	*	*	<u>2.85</u>	<u>5.69</u>	<u>1.87</u>	<u>-7.28</u>	<u>0.00</u>
Ni	<u>1.11</u>	<u>0.80</u>	<u>-2.12</u>	<u>-0.81</u>	<u>-27.71</u>	<u>0.63</u>	<u>3.33</u>	<u>1.52</u>	<u>2.09</u>	*	<u>2.76</u>	<u>-9.40</u>	<u>-0.86</u>
Pb	<u>0.31</u>	<u>0.28</u>	<u>3.55</u>	<u>0.71</u>	<u>-43.23</u>	<u>3.58</u>	<u>-0.81</u>	<u>1.67</u>	*	<u>21.54</u>	<u>0.34</u>	<u>-13.86</u>	<u>-0.26</u>
Pr	*	*	<u>-0.60</u>	<u>-0.24</u>	<u>-10.51</u>	*	*	*	*	<u>5.91</u>	<u>1.53</u>	<u>-6.01</u>	<u>-0.01</u>
Rb	<u>0.33</u>	<u>1.03</u>	<u>0.69</u>	<u>0.02</u>	<u>-15.86</u>	<u>1.30</u>	<u>1.18</u>	*	<u>2.58</u>	<u>2.58</u>	<u>1.23</u>	<u>-8.33</u>	<u>-0.04</u>
Sc	*	<u>4.71</u>	<u>0.90</u>	<u>-0.65</u>	*	<u>-0.24</u>	*	*	<u>-2.51</u>	<u>3.03</u>	<u>-0.40</u>	<u>-6.34</u>	<u>0.61</u>
Sm	*	*	<u>-0.04</u>	<u>-0.34</u>	<u>-5.22</u>	<u>0.39</u>	*	*	*	<u>4.07</u>	<u>1.30</u>	<u>-5.53</u>	<u>0.01</u>
Sr	<u>-0.01</u>	<u>0.43</u>	<u>-0.84</u>	<u>-0.71</u>	<u>18.60</u>	<u>0.66</u>	<u>-2.87</u>	<u>-0.17</u>	<u>1.77</u>	<u>3.58</u>	<u>-0.60</u>	<u>-9.09</u>	<u>0.42</u>
Ta	*	*	<u>0.97</u>	<u>0.67</u>	<u>-8.96</u>	<u>5.35</u>	*	*	*	<u>0.75</u>	<u>1.22</u>	<u>-3.64</u>	<u>0.28</u>
Tb	*	*	<u>-0.34</u>	<u>0.18</u>	*	<u>-0.52</u>	*	*	*	<u>-0.15</u>	<u>-0.46</u>	<u>-4.36</u>	<u>0.31</u>
Th	<u>0.14</u>	<u>1.32</u>	<u>0.90</u>	<u>0.02</u>	<u>-14.33</u>	<u>3.11</u>	<u>19.97</u>	*	*	<u>4.74</u>	<u>0.14</u>	<u>-6.27</u>	<u>0.93</u>
Tl	*	<u>8.61</u>	*	<u>-0.39</u>	<u>-17.30</u>	<u>11.89</u>	*	*	<u>-3.40</u>	*	*	<u>-5.59</u>	<u>0.65</u>
Tm	*	*	<u>-0.03</u>	<u>-0.11</u>	<u>0.17</u>	<u>-0.33</u>	*	*	*	<u>0.44</u>	*	<u>-3.97</u>	<u>0.72</u>
U	<u>-0.13</u>	<u>1.39</u>	<u>2.49</u>	<u>0.00</u>	<u>-11.11</u>	<u>2.53</u>	*	*	*	<u>3.58</u>	<u>0.39</u>	<u>-4.69</u>	<u>1.37</u>
V	<u>-0.35</u>	<u>1.36</u>	<u>-2.21</u>	<u>0.28</u>	<u>25.03</u>	<u>0.69</u>	<u>-3.37</u>	*	<u>-3.64</u>	*	<u>1.19</u>	<u>-7.38</u>	<u>-0.54</u>
Y	*	<u>-2.47</u>	<u>1.18</u>	<u>-0.02</u>	*	<u>-2.36</u>	<u>-6.01</u>	*	*	<u>0.79</u>	<u>0.57</u>	<u>-7.69</u>	<u>1.43</u>
Yb	*	*	<u>0.85</u>	<u>-0.31</u>	<u>0.28</u>	<u>-0.48</u>	*	*	*	<u>-0.72</u>	<u>-1.39</u>	<u>-5.27</u>	<u>0.56</u>
Zn	<u>-0.24</u>	<u>-3.58</u>	<u>-3.33</u>	<u>5.05</u>	<u>-41.94</u>	<u>3.81</u>	<u>0.06</u>	<u>2.22</u>	<u>2.58</u>	*	<u>3.32</u>	<u>-12.92</u>	<u>0.29</u>
Zr	<u>-5.69</u>	*	<u>0.05</u>	<u>0.28</u>	<u>-11.88</u>	<u>-13.65</u>	<u>2.37</u>	*	<u>-17.20</u>	<u>-10.16</u>	<u>-13.60</u>	<u>-11.75</u>	<u>-0.10</u>

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

Table 3 - GeoPT35A Z-scores for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code	L18	L20	L21	L22	L23	L24	L25	L26	L28	L29	L31	L32	L33
SiO2	<u>-5.33</u>	-0.86	1.15	*	-2.62	<u>0.12</u>	-0.89	<u>-0.01</u>	*	<u>1.11</u>	-3.96	<u>0.25</u>	0.46
TiO2	<u>10.23</u>	-0.82	-0.82	*	-1.64	<u>2.00</u>	-4.09	<u>0.20</u>	*	<u>-1.06</u>	-1.64	<u>0.00</u>	1.31
Al2O3	<u>16.61</u>	-1.47	0.25	*	-2.27	<u>1.50</u>	-1.04	<u>0.00</u>	*	<u>0.30</u>	11.22	<u>1.13</u>	0.17
Fe2O3T	<u>4.68</u>	-0.60	-0.49	*	-0.70	<u>0.95</u>	-1.01	<u>-0.14</u>	*	<u>-0.39</u>	5.26	<u>0.11</u>	0.00
MnO	<u>-17.60</u>	-0.53	0.00	*	-0.44	<u>1.80</u>	-0.44	<u>-0.48</u>	*	<u>-0.09</u>	2.20	<u>-0.22</u>	-6.68
MgO	<u>30.78</u>	-3.89	-0.75	*	-2.15	<u>0.14</u>	-0.75	<u>-0.73</u>	*	<u>-0.22</u>	26.39	<u>0.49</u>	0.32
CaO	<u>93.90</u>	-0.45	-0.09	*	-0.81	<u>0.06</u>	-0.45	<u>-0.23</u>	*	<u>-1.19</u>	6.06	<u>-0.05</u>	-1.72
Na2O	<u>40.26</u>	-8.82	0.85	*	-2.37	<u>0.03</u>	4.53	<u>0.42</u>	*	<u>1.28</u>	0.39	<u>2.50</u>	2.74
K2O	<u>-18.88</u>	-0.61	-0.16	*	-2.99	<u>1.24</u>	-1.35	<u>0.14</u>	*	<u>0.74</u>	5.93	<u>-0.31</u>	1.26
P2O5	<u>-5.80</u>	0.95	-0.30	*	-1.14	<u>1.52</u>	-5.32	<u>-1.09</u>	*	<u>-1.93</u>	5.14	<u>0.48</u>	0.32
Ag	*	*	*	<u>-1.67</u>	*	*	-0.11	<u>4.02</u>	*	*	-6.28	*	*
Ba	<u>-2.95</u>	-2.19	*	<u>-1.04</u>	0.01	<u>0.48</u>	0.03	<u>-0.25</u>	-0.83	*	0.85	*	*
Be	*	*	*	*	*	<u>0.33</u>	*	*	0.75	*	*	*	*
Bi	*	*	*	<u>6.65</u>	*	*	21.10	*	0.31	*	*	*	*
Cd	*	*	*	<u>-1.09</u>	*	*	0.89	*	*	*	-13.06	*	*
Ce	<u>-7.47</u>	-10.00	*	<u>-0.58</u>	*	<u>0.06</u>	0.90	*	1.04	*	*	*	*
Co	*	-1.48	*	<u>1.65</u>	0.17	<u>0.75</u>	0.33	*	0.08	*	-19.60	*	*
Cs	*	*	*	<u>-4.44</u>	*	<u>0.03</u>	-5.23	*	-0.14	*	*	*	*
Cu	<u>-17.75</u>	<u>-0.44</u>	-0.28	<u>0.24</u>	18.81	<u>0.67</u>	-4.81	<u>-0.17</u>	0.75	*	33.10	*	*
Dy	*	*	*	*	*	<u>0.64</u>	*	*	0.60	*	*	*	*
Er	*	*	*	*	*	<u>0.41</u>	*	*	0.93	*	*	*	*
Eu	*	*	*	*	*	<u>0.19</u>	*	*	0.18	*	*	*	*
Ga	<u>6.87</u>	*	*	<u>-2.02</u>	54.85	<u>0.32</u>	1.89	*	-0.05	*	*	*	*
Gd	*	*	*	*	*	<u>-0.63</u>	*	*	0.18	*	*	*	*
Hf	*	*	*	<u>3.96</u>	*	<u>-0.49</u>	12.56	*	0.39	*	*	*	*
Ho	*	*	*	*	*	<u>0.21</u>	*	*	0.68	*	*	*	*
In	*	*	*	<u>1.91</u>	*	*	*	*	*	*	*	*	*
La	<u>-9.60</u>	-2.42	*	<u>-0.17</u>	*	<u>0.39</u>	-0.84	*	0.50	*	*	*	*
Li	*	*	*	*	*	*	*	*	-0.24	*	*	*	*
Lu	*	*	*	*	*	<u>0.30</u>	*	*	0.60	*	*	*	*
Mo	*	*	*	<u>-0.26</u>	*	<u>0.30</u>	-2.96	<u>-0.79</u>	-0.40	*	*	*	*
Nb	<u>-6.30</u>	-0.77	*	<u>-0.80</u>	0.14	<u>-0.61</u>	-1.41	<u>-0.34</u>	1.87	*	*	*	*
Nd	*	-7.82	*	<u>2.40</u>	*	<u>0.39</u>	-0.89	*	0.12	*	*	*	*
Ni	<u>-13.92</u>	-0.74	*	<u>0.94</u>	0.86	<u>-0.01</u>	-1.61	<u>0.25</u>	-0.37	*	-23.91	*	*
Pb	<u>-21.61</u>	<u>-0.84</u>	9.44	<u>0.87</u>	-4.09	<u>0.22</u>	-3.00	<u>0.94</u>	-1.09	*	-8.06	*	*
Pr	*	*	*	*	*	<u>0.25</u>	*	*	0.06	*	*	*	*
Rb	<u>-8.51</u>	0.13	*	<u>-0.18</u>	-0.39	<u>0.15</u>	-1.22	<u>0.07</u>	-0.04	*	-4.94	*	*
Sc	*	*	*	<u>8.48</u>	*	<u>0.10</u>	15.28	*	0.65	*	*	*	*
Sm	*	*	*	<u>-0.89</u>	*	<u>0.39</u>	4.69	*	0.27	*	*	*	*
Sr	<u>15.16</u>	1.32	*	<u>0.01</u>	1.32	<u>1.10</u>	-1.52	<u>-0.19</u>	0.57	*	-2.13	*	*
Ta	*	*	*	<u>0.89</u>	*	<u>0.19</u>	55.95	*	0.00	*	*	*	*
Tb	*	*	*	*	*	<u>-0.69</u>	*	*	0.46	*	*	*	*
Th	*	7.89	*	<u>-0.73</u>	*	<u>0.11</u>	-7.54	*	0.50	*	*	*	*
Tl	*	*	*	<u>4.13</u>	*	<u>-0.61</u>	-5.66	*	1.13	*	*	*	*
Tm	*	*	*	*	*	<u>0.36</u>	*	*	0.72	*	*	*	*
U	*	7.33	*	*	11.13	<u>0.59</u>	-11.27	*	1.41	*	*	*	*
V	<u>9.76</u>	-1.35	*	<u>0.66</u>	2.89	<u>1.15</u>	20.89	<u>1.21</u>	-0.38	*	-19.94	*	*
Y	<u>2.64</u>	*	*	<u>3.36</u>	*	<u>-0.46</u>	3.43	*	1.51	*	65.32	*	*
Yb	*	*	*	<u>0.00</u>	*	<u>0.53</u>	19.43	*	0.67	*	*	*	*
Zn	<u>-20.92</u>	<u>-0.26</u>	0.51	<u>1.25</u>	2.59	<u>0.23</u>	-0.53	<u>-0.01</u>	0.93	*	-13.47	*	*
Zr	<u>-5.81</u>	1.47	*	<u>0.23</u>	2.92	<u>-0.40</u>	-0.40	<u>0.05</u>	0.35	*	-7.92	*	*

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

Table 3 - GeoPT35A Z-scores for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code	L34	L35	L36	L37	L38	L39	L40	L41	L42	L43	L45	L46	L48
SiO2	<u>0.34</u>	*	<u>-0.18</u>	<u>0.42</u>	<u>-0.47</u>	0.79	<u>-0.53</u>	-0.79	*	<u>0.90</u>	<u>-0.14</u>	*	*
TiO2	<u>-0.16</u>	*	<u>-0.41</u>	<u>0.41</u>	<u>0.12</u>	-1.64	<u>0.41</u>	0.00	<u>-0.16</u>	<u>0.41</u>	<u>-0.16</u>	<u>-21.89</u>	*
Al2O3	<u>0.00</u>	*	<u>-0.28</u>	<u>0.03</u>	8.49	1.04	<u>0.86</u>	0.43	<u>-1.07</u>	4.51	<u>-0.21</u>	<u>-30.62</u>	-8.80
Fe2O3T	<u>-0.12</u>	*	<u>-0.35</u>	<u>0.22</u>	7.14	4.74	<u>-2.45</u>	-1.01	<u>0.39</u>	<u>-0.09</u>	<u>-0.10</u>	<u>-9.96</u>	-14.56
MnO	<u>-0.18</u>	*	<u>0.66</u>	<u>-0.22</u>	4.39	3.08	<u>-7.25</u>	0.44	<u>0.04</u>	<u>-0.22</u>	<u>0.57</u>	<u>-4.31</u>	-2.28
MgO	<u>0.25</u>	*	<u>-0.03</u>	<u>-0.90</u>	7.80	0.29	<u>-2.47</u>	-2.50	<u>0.37</u>	<u>0.32</u>	<u>-1.60</u>	<u>-11.85</u>	-7.82
CaO	<u>0.21</u>	*	<u>0.32</u>	<u>-1.13</u>	5.93	-1.90	<u>0.32</u>	0.27	<u>-2.87</u>	<u>0.86</u>	<u>-0.48</u>	<u>-10.33</u>	-9.54
Na2O	<u>2.11</u>	*	<u>0.19</u>	<u>-4.41</u>	<u>-2.80</u>	2.69	<u>23.91</u>	*	<u>2.27</u>	<u>-0.04</u>	<u>-0.73</u>	<u>-24.42</u>	-10.30
K2O	<u>0.58</u>	*	<u>-0.16</u>	<u>0.29</u>	<u>2.22</u>	-2.69	<u>-16.36</u>	-1.50	<u>-0.27</u>	<u>-0.23</u>	<u>0.45</u>	<u>-28.74</u>	-5.68
P2O5	<u>-0.26</u>	*	<u>0.06</u>	<u>0.06</u>	<u>10.00</u>	5.14	<u>2.57</u>	-1.14	<u>-2.14</u>	<u>1.63</u>	<u>-0.36</u>	<u>-7.27</u>	*
Ag	<u>-0.32</u>	<u>0.02</u>	<u>1.92</u>	*	<u>6.66</u>	-4.86	*	*	<u>2.50</u>	<u>0.94</u>	*	<u>-11.81</u>	*
Ba	<u>-0.00</u>	*	<u>0.08</u>	<u>-0.02</u>	<u>-0.74</u>	-1.63	<u>178.33</u>	0.05	<u>-0.97</u>	<u>0.20</u>	<u>1.72</u>	<u>-16.71</u>	0.90
Be	<u>-1.05</u>	*	<u>-0.21</u>	*	*	0.30	*	-1.60	<u>0.87</u>	<u>0.42</u>	*	<u>-8.24</u>	-4.29
Bi	<u>-0.39</u>	*	*	<u>10.70</u>	*	*	<u>11.17</u>	-2.00	<u>0.05</u>	*	*	<u>-6.55</u>	-2.43
Cd	<u>-1.45</u>	<u>0.32</u>	<u>-0.40</u>	*	*	0.73	<u>-2.92</u>	-9.11	<u>-0.20</u>	<u>-0.24</u>	*	<u>-8.26</u>	-2.66
Ce	<u>0.15</u>	*	<u>-0.64</u>	<u>-0.35</u>	*	7.70	<u>-1.41</u>	1.26	<u>-0.21</u>	<u>-1.52</u>	*	<u>-6.92</u>	-0.00
Co	<u>-1.02</u>	*	<u>0.43</u>	<u>1.29</u>	*	-1.44	*	-2.43	<u>0.79</u>	<u>-1.07</u>	*	<u>-10.89</u>	-4.04
Cs	*	*	<u>-0.30</u>	*	*	*	*	-1.63	<u>-0.76</u>	*	*	*	*
Cu	<u>-0.11</u>	<u>0.41</u>	<u>-0.22</u>	<u>0.72</u>	<u>3.45</u>	-2.15	<u>0.00</u>	0.00	<u>0.43</u>	<u>-0.28</u>	<u>0.25</u>	<u>-15.01</u>	1.34
Dy	<u>0.97</u>	*	<u>0.37</u>	<u>-1.60</u>	*	4.22	*	0.60	<u>0.45</u>	<u>-2.85</u>	*	<u>-7.18</u>	0.77
Er	<u>0.19</u>	*	<u>1.05</u>	<u>-1.09</u>	*	7.92	*	1.09	<u>0.67</u>	<u>-3.36</u>	*	<u>-6.72</u>	0.60
Eu	<u>0.35</u>	*	<u>0.04</u>	<u>1.22</u>	*	-0.65	*	1.72	<u>-0.59</u>	<u>-1.41</u>	*	<u>-5.90</u>	0.18
Ga	*	*	<u>-0.02</u>	*	*	*	*	-3.55	<u>-0.88</u>	*	*	*	-2.56
Gd	<u>0.18</u>	*	<u>-0.21</u>	<u>1.43</u>	*	-13.32	*	2.26	<u>-0.06</u>	<u>-1.49</u>	*	<u>-7.08</u>	0.04
Hf	*	*	<u>0.30</u>	*	*	*	*	-13.39	<u>-0.27</u>	*	*	*	*
Ho	<u>0.82</u>	*	<u>0.48</u>	<u>-1.64</u>	*	5.47	*	1.09	<u>0.10</u>	<u>-3.08</u>	*	<u>-5.74</u>	0.12
In	*	*	<u>0.06</u>	*	*	*	*	-2.28	<u>-0.33</u>	*	*	*	*
La	<u>0.05</u>	*	<u>-0.49</u>	*	*	3.51	<u>0.72</u>	1.29	<u>0.01</u>	<u>1.16</u>	*	<u>-6.14</u>	-0.02
Li	<u>-1.26</u>	*	<u>1.28</u>	*	*	*	<u>5.08</u>	1.99	<u>0.73</u>	<u>0.57</u>	*	<u>-9.56</u>	-5.03
Lu	*	*	<u>0.44</u>	<u>-2.02</u>	*	3.88	*	4.70	<u>-0.03</u>	<u>-3.53</u>	*	<u>-5.17</u>	0.77
Mo	<u>-0.64</u>	*	<u>1.30</u>	<u>-1.58</u>	<u>1.28</u>	-3.62	<u>-2.08</u>	-4.53	<u>-0.10</u>	<u>-1.33</u>	*	<u>-9.28</u>	-4.42
Nb	*	*	<u>0.25</u>	<u>0.98</u>	<u>3.71</u>	*	*	-0.41	<u>-0.11</u>	<u>-5.93</u>	*	<u>-9.85</u>	*
Nd	<u>-0.18</u>	*	<u>-0.68</u>	<u>0.19</u>	*	0.00	*	7.88	<u>-0.64</u>	<u>-1.51</u>	*	<u>-9.66</u>	0.80
Ni	<u>-2.09</u>	<u>0.00</u>	<u>-0.62</u>	<u>-0.25</u>	<u>1.54</u>	-0.30	<u>-2.96</u>	-6.65	<u>0.19</u>	<u>-0.12</u>	<u>0.37</u>	<u>-11.75</u>	-8.58
Pb	<u>0.09</u>	<u>1.10</u>	<u>-0.18</u>	<u>1.49</u>	<u>6.22</u>	5.03	<u>3.94</u>	-26.92	<u>1.15</u>	<u>-0.76</u>	<u>2.46</u>	<u>-17.51</u>	3.66
Pr	<u>-0.18</u>	*	<u>-0.47</u>	<u>0.01</u>	*	0.82	*	1.13	<u>-0.24</u>	<u>-1.29</u>	*	<u>-8.01</u>	0.79
Rb	*	*	<u>-0.33</u>	<u>0.70</u>	<u>3.48</u>	*	<u>3.83</u>	-4.24	<u>-0.83</u>	<u>-0.20</u>	*	<u>-11.66</u>	0.58
Sc	*	*	<u>-0.42</u>	*	*	-0.36	*	-4.60	*	<u>-0.94</u>	*	<u>-8.12</u>	*
Sm	<u>-0.23</u>	*	<u>-0.15</u>	*	*	-1.44	*	0.81	<u>0.13</u>	<u>-1.48</u>	*	<u>-7.42</u>	0.00
Sr	<u>0.27</u>	*	<u>0.36</u>	<u>-0.01</u>	<u>3.22</u>	0.56	<u>-2.72</u>	1.02	<u>-0.92</u>	<u>0.29</u>	<u>9.82</u>	<u>-10.68</u>	-1.13
Ta	*	*	<u>-0.51</u>	*	*	*	*	-10.74	<u>-0.79</u>	*	*	*	*
Tb	<u>-1.08</u>	*	<u>0.31</u>	<u>-2.01</u>	*	2.16	*	2.93	<u>-0.42</u>	<u>-2.39</u>	*	<u>-5.40</u>	1.08
Th	<u>0.39</u>	*	<u>-0.51</u>	*	*	*	*	-5.15	<u>-0.59</u>	<u>-2.30</u>	*	<u>-8.73</u>	*
Tl	<u>0.52</u>	*	<u>-0.12</u>	*	*	*	*	-3.30	<u>-0.19</u>	*	*	<u>-7.46</u>	-1.15
Tm	*	*	<u>0.50</u>	<u>-1.71</u>	*	5.41	*	4.85	<u>-0.04</u>	<u>-3.50</u>	*	<u>-5.16</u>	0.41
U	<u>-0.26</u>	*	<u>0.99</u>	*	*	*	*	-3.52	<u>0.66</u>	<u>-2.35</u>	*	<u>-7.04</u>	-2.80
V	<u>-1.26</u>	*	<u>0.14</u>	<u>1.52</u>	*	-1.45	<u>6.27</u>	-0.05	<u>0.33</u>	<u>-0.06</u>	<u>-0.19</u>	<u>-8.34</u>	-3.88
Y	<u>-0.65</u>	*	<u>0.16</u>	<u>-2.57</u>	<u>7.84</u>	-0.17	<u>2.44</u>	0.15	<u>-0.88</u>	<u>-0.97</u>	*	<u>-6.97</u>	*
Yb	<u>0.78</u>	*	*	<u>-2.39</u>	*	5.16	*	0.56	<u>0.62</u>	<u>-3.75</u>	*	<u>-6.83</u>	1.35
Zn	<u>-0.21</u>	<u>-0.31</u>	<u>0.15</u>	<u>0.10</u>	<u>4.13</u>	-1.72	<u>4.48</u>	1.09	<u>0.36</u>	<u>0.06</u>	<u>1.61</u>	<u>-17.81</u>	-6.08
Zr	*	*	<u>1.18</u>	<u>1.24</u>	<u>6.10</u>	-3.11	<u>-10.78</u>	-22.77	<u>-1.93</u>	<u>-0.33</u>	*	<u>-14.38</u>	*

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

Table 3 - GeoPT35A Z-scores for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code	L49	L50	L51	L52	L54	L55	L56	L57	L58	L59	L60	L61	L62
SiO2	<u>0.19</u>	0.99	<u>-3.91</u>	<u>-0.26</u>	<u>0.56</u>	-2.95	*	<u>-0.49</u>	<u>-14.99</u>	*	<u>0.23</u>	*	<u>-0.39</u>
TiO2	<u>0.00</u>	1.64	<u>-1.35</u>	<u>-0.82</u>	<u>0.41</u>	-1.15	0.82	<u>0.00</u>	<u>-2.05</u>	*	<u>0.41</u>	*	<u>-0.74</u>
Al2O3	<u>-0.37</u>	-0.74	<u>13.39</u>	<u>-0.83</u>	<u>0.58</u>	-2.61	*	<u>-0.18</u>	<u>-10.97</u>	*	<u>-0.03</u>	*	<u>-0.79</u>
Fe2O3T	<u>-0.81</u>	0.02	<u>-4.61</u>	<u>-0.76</u>	<u>1.55</u>	-1.20	1.05	<u>-0.04</u>	<u>-1.79</u>	<u>-2.30</u>	<u>-0.25</u>	*	<u>-0.28</u>
MnO	<u>-0.66</u>	-3.08	<u>-2.02</u>	<u>1.10</u>	*	-2.20	-3.08	<u>0.66</u>	<u>1.10</u>	<u>-0.04</u>	<u>1.10</u>	*	<u>-2.86</u>
MgO	<u>0.14</u>	0.99	*	<u>-0.03</u>	<u>-0.55</u>	-1.31	*	<u>0.14</u>	<u>-8.21</u>	<u>-0.55</u>	<u>-0.20</u>	*	<u>-0.34</u>
CaO	<u>-0.23</u>	-3.35	<u>-0.41</u>	<u>-0.95</u>	<u>1.04</u>	-2.33	*	<u>-0.05</u>	<u>-0.77</u>	<u>0.68</u>	<u>-0.05</u>	*	<u>-0.03</u>
Na2O	<u>1.58</u>	2.23	*	<u>-0.27</u>	<u>-2.80</u>	5.59	*	<u>-0.04</u>	<u>-11.32</u>	*	<u>-1.42</u>	*	<u>3.23</u>
K2O	<u>-0.45</u>	1.92	<u>-0.53</u>	<u>-0.01</u>	<u>-0.23</u>	-2.65	*	<u>-0.16</u>	<u>-2.76</u>	*	<u>-0.08</u>	*	<u>-0.14</u>
P2O5	<u>0.48</u>	0.95	*	<u>0.48</u>	<u>-0.57</u>	-1.35	-1.14	<u>-0.57</u>	<u>-8.94</u>	*	<u>-0.47</u>	*	<u>-0.15</u>
Ag	*	*	*	*	*	-10.02	7.54	<u>0.50</u>	7.63	<u>1.60</u>	*	*	*
Ba	<u>-0.36</u>	1.36	<u>1.90</u>	*	<u>0.04</u>	-2.75	-0.67	<u>-1.44</u>	-3.39	*	*	1.96	<u>0.54</u>
Be	<u>0.69</u>	*	*	*	<u>-2.29</u>	*	-0.51	*	*	*	*	*	*
Bi	*	*	*	*	*	-2.60	*	*	*	*	*	*	*
Cd	*	*	<u>-1.73</u>	*	*	-13.63	-2.74	*	-7.50	*	*	*	*
Ce	<u>0.01</u>	*	<u>0.40</u>	*	*	-1.87	0.79	<u>0.23</u>	-2.01	*	*	*	<u>-1.70</u>
Co	<u>0.43</u>	-7.66	*	*	<u>1.01</u>	-1.77	1.16	<u>0.29</u>	-2.01	*	*	1.20	*
Cs	<u>-0.20</u>	*	<u>8.97</u>	*	*	-0.65	0.29	<u>0.35</u>	*	*	*	*	*
Cu	<u>-0.59</u>	-6.11	<u>-2.17</u>	*	<u>0.17</u>	1.06	-2.15	<u>-0.76</u>	-1.53	*	*	-2.69	<u>-0.11</u>
Dy	<u>0.04</u>	*	*	*	*	-0.80	0.53	<u>-0.12</u>	-15.63	*	*	*	*
Er	<u>0.07</u>	*	*	*	*	-1.14	0.37	<u>-0.26</u>	2.20	*	*	*	*
Eu	<u>0.09</u>	*	*	*	*	-1.49	0.79	<u>0.29</u>	28.36	*	*	*	*
Ga	<u>0.10</u>	*	*	*	*	-1.01	0.19	<u>-0.14</u>	*	*	*	12.53	<u>-1.60</u>
Gd	<u>0.06</u>	*	*	*	*	-2.98	1.14	<u>0.12</u>	-16.09	*	*	*	*
Hf	<u>-0.56</u>	*	*	*	*	-0.10	4.22	<u>-0.55</u>	<u>-8.35</u>	*	*	*	*
Ho	<u>-0.05</u>	*	*	*	*	-0.72	0.41	<u>-0.21</u>	*	*	*	*	*
La	<u>0.15</u>	*	<u>-1.58</u>	*	*	-1.81	2.47	<u>0.05</u>	0.05	*	*	*	<u>0.03</u>
Li	<u>0.86</u>	*	*	*	<u>-2.46</u>	*	-0.69	*	24.31	<u>2.33</u>	*	*	*
Lu	<u>-0.12</u>	*	*	*	*	-0.55	0.60	<u>-0.25</u>	43.81	*	*	*	*
Mo	*	<u>-1.28</u>	<u>0.13</u>	*	<u>-3.60</u>	-0.82	-3.95	<u>-0.18</u>	-14.39	*	*	*	*
Nb	<u>0.93</u>	-8.96	<u>-2.80</u>	*	*	1.11	-1.68	<u>1.03</u>	-19.16	*	*	0.41	<u>0.07</u>
Nd	<u>0.00</u>	*	<u>1.81</u>	*	*	-1.52	0.47	<u>0.15</u>	5.81	*	*	*	*
Ni	<u>0.31</u>	3.82	<u>-3.27</u>	*	<u>0.74</u>	1.11	-0.25	<u>-0.62</u>	-1.23	*	*	19.94	<u>0.62</u>
Pb	<u>-1.50</u>	0.65	<u>-2.30</u>	*	<u>-4.95</u>	-6.98	-0.71	<u>-0.52</u>	-1.59	*	*	0.82	<u>-0.20</u>
Pr	<u>-0.04</u>	*	<u>-0.68</u>	*	*	-2.06	0.77	<u>0.12</u>	3.61	*	*	*	*
Rb	<u>-0.55</u>	-13.86	<u>-0.63</u>	*	*	-2.90	-0.04	<u>-0.02</u>	*	*	*	1.30	<u>0.85</u>
Sc	<u>0.28</u>	28.88	*	*	*	7.95	0.33	*	0.84	*	*	-6.91	<u>3.98</u>
Sm	<u>-0.01</u>	*	*	*	*	-2.29	0.61	<u>0.10</u>	1.59	*	*	*	*
Sr	<u>0.14</u>	-3.18	<u>-0.84</u>	*	<u>1.49</u>	1.67	-0.18	<u>0.44</u>	-1.98	*	*	1.25	<u>-0.01</u>
Ta	<u>-0.14</u>	*	*	*	*	-1.10	-1.77	<u>-0.51</u>	-13.17	*	*	*	*
Tb	<u>-0.19</u>	*	*	*	*	-1.11	0.77	<u>0.08</u>	34.28	*	*	*	*
Th	<u>-0.13</u>	<u>-6.92</u>	*	*	*	-2.76	-0.04	<u>0.14</u>	17.34	*	*	31.36	<u>2.31</u>
Tl	*	*	*	*	*	*	0.97	<u>-2.02</u>	*	*	*	*	*
Tm	<u>0.00</u>	*	*	*	*	*	0.44	<u>-0.19</u>	16.71	*	*	*	*
U	<u>0.36</u>	-4.05	*	*	*	0.16	0.88	<u>0.69</u>	-15.44	*	*	-4.81	<u>1.77</u>
V	<u>-0.11</u>	4.52	*	*	*	-1.66	0.31	<u>-0.19</u>	-4.45	*	*	5.07	<u>0.14</u>
Y	<u>0.40</u>	14.08	<u>2.64</u>	*	<u>-3.77</u>	-0.60	-0.01	<u>-0.97</u>	*	*	*	-5.05	<u>-8.17</u>
Yb	<u>-0.03</u>	*	*	*	*	-1.02	0.78	<u>-0.19</u>	*	*	*	*	*
Zn	<u>-0.79</u>	0.69	<u>-2.59</u>	*	<u>-5.36</u>	-3.13	-3.39	<u>-0.20</u>	-6.70	*	*	-0.43	<u>-2.08</u>
Zr	<u>0.12</u>	-5.13	<u>-0.16</u>	*	*	-0.02	3.60	<u>-0.83</u>	<u>-14.42</u>	*	*	2.89	<u>0.79</u>

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

Table 3 - GeoPT35A Z-scores for Metalliferous sediment, SdAR-H1. 13/06/2014

Lab Code	L64	L65	L66	L68	L69	L70	L71	L72	L74	L75	L76	L77	L78
SiO2	<u>0.24</u>	<u>0.50</u>	0.27	<u>-1.25</u>	0.50	<u>0.41</u>	*	<u>-0.47</u>	0.85	0.86	0.72	<u>-0.12</u>	-8.51
TiO2	<u>-0.88</u>	<u>0.45</u>	0.00	<u>-2.05</u>	0.82	<u>0.00</u>	*	<u>-0.20</u>	0.57	-0.82	0.82	<u>0.03</u>	-2.42
Al2O3	<u>-0.00</u>	<u>-0.34</u>	-1.10	<u>2.67</u>	-1.23	<u>-0.09</u>	*	<u>-0.09</u>	0.74	2.39	1.72	<u>0.25</u>	-0.06
Fe2O3T	<u>0.05</u>	<u>-0.03</u>	0.43	<u>0.47</u>	0.23	<u>0.16</u>	*	<u>-0.55</u>	0.39	-4.50	1.56	<u>0.64</u>	-0.08
MnO	<u>0.51</u>	<u>-0.22</u>	0.44	<u>0.88</u>	2.20	<u>0.22</u>	*	<u>0.00</u>	-35.41	-3.95	1.85	<u>0.77</u>	0.76
MgO	<u>0.03</u>	<u>-0.27</u>	-2.84	<u>2.41</u>	-0.41	<u>-0.03</u>	*	<u>-1.07</u>	60.82	-0.06	0.99	<u>0.25</u>	15.26
CaO	<u>-0.25</u>	<u>-1.35</u>	-0.81	<u>-1.67</u>	2.08	<u>-0.05</u>	*	<u>-0.41</u>	191.78	1.72	3.89	<u>0.14</u>	1.76
Na2O	<u>-0.31</u>	<u>-5.31</u>	0.39	<u>-1.42</u>	2.23	<u>-0.50</u>	*	<u>1.35</u>	87.62	7.30	2.23	<u>0.52</u>	-20.80
K2O	<u>0.20</u>	<u>0.41</u>	0.13	<u>-0.31</u>	0.88	<u>0.29</u>	*	<u>-0.53</u>	-36.90	0.28	2.66	<u>0.47</u>	1.62
P2O5	<u>-0.03</u>	<u>-0.26</u>	79.20	<u>0.27</u>	0.95	<u>0.16</u>	*	<u>-0.47</u>	-12.23	-1.14	3.88	<u>0.99</u>	-1.10
Ag	<u>0.93</u>	*	*	*	0.36	<u>-0.10</u>	*	*	*	14.27	*	*	44.09
Ba	<u>-0.20</u>	<u>0.84</u>	-0.43	<u>-0.26</u>	1.28	<u>-0.30</u>	*	*	1.41	1.68	4.32	*	4.36
Be	<u>1.50</u>	*	*	<u>-0.48</u>	*	<u>-1.48</u>	<u>-9.56</u>	*	-10.74	-1.33	*	*	*
Bi	<u>-0.01</u>	*	*	<u>-0.20</u>	*	<u>-0.66</u>	*	*	*	-1.37	18.29	*	*
Cd	<u>0.94</u>	*	*	<u>0.32</u>	*	<u>-0.29</u>	*	*	-0.21	0.08	*	*	32.98
Ce	<u>0.45</u>	*	<u>1.47</u>	<u>0.30</u>	*	<u>0.18</u>	<u>-8.72</u>	*	1.53	-4.35	9.82	*	0.71
Co	<u>-0.08</u>	*	0.17	*	-0.24	<u>0.00</u>	<u>-7.00</u>	*	0.00	-0.45	4.28	*	*
Cs	*	*	*	<u>0.36</u>	*	<u>-0.63</u>	*	*	*	-0.40	53.67	*	17.60
Cu	<u>-0.00</u>	*	*	<u>2.04</u>	2.97	<u>0.80</u>	*	*	-0.30	-1.53	0.53	*	0.28
Dy	<u>0.39</u>	*	*	*	*	<u>0.87</u>	<u>0.00</u>	*	*	-2.34	*	*	*
Er	<u>0.40</u>	*	*	<u>-2.50</u>	*	<u>-0.01</u>	<u>0.13</u>	*	*	-2.79	*	*	*
Eu	<u>0.08</u>	*	*	<u>-2.08</u>	*	<u>-0.27</u>	<u>-1.05</u>	*	*	-2.41	*	*	*
Ga	<u>-1.56</u>	*	25.83	<u>-0.21</u>	*	<u>-0.39</u>	*	*	*	-1.01	4.06	*	-1.86
Gd	<u>0.53</u>	*	*	<u>-2.74</u>	*	<u>0.38</u>	<u>-1.17</u>	*	*	-2.20	*	*	*
Hf	<u>0.55</u>	*	*	*	*	<u>0.43</u>	*	*	*	164.70	6.22	*	84.97
Ho	<u>0.18</u>	*	*	<u>-1.98</u>	*	<u>0.00</u>	<u>-0.14</u>	*	*	-2.05	*	*	*
In	*	*	*	*	*	<u>-0.14</u>	*	*	*	-0.44	*	*	-2.63
La	<u>0.34</u>	*	*	<u>-0.59</u>	*	<u>0.42</u>	<u>-8.35</u>	*	-0.04	-3.80	-2.42	*	-0.79
Li	*	*	*	<u>-0.57</u>	*	<u>-0.48</u>	*	*	*	0.29	*	*	*
Lu	<u>0.22</u>	*	*	*	*	<u>0.03</u>	<u>-0.93</u>	*	*	-1.59	*	*	*
Mo	<u>0.26</u>	*	*	<u>0.00</u>	0.00	<u>0.04</u>	*	*	*	4.64	0.73	*	2.08
Nb	<u>0.09</u>	*	*	<u>-0.39</u>	0.14	<u>1.89</u>	*	*	*	*	-0.77	*	-1.86
Nd	<u>0.44</u>	*	<u>1.13</u>	<u>-0.09</u>	*	<u>0.95</u>	<u>-5.76</u>	*	*	-3.56	5.81	*	*
Ni	<u>0.75</u>	*	-2.09	<u>1.17</u>	2.96	<u>0.68</u>	*	*	0.99	*	0.86	*	0.35
Pb	<u>0.14</u>	*	<u>-0.52</u>	<u>0.39</u>	1.10	<u>-0.32</u>	*	*	-0.30	6.60	-0.05	*	-1.57
Pr	<u>0.22</u>	*	*	<u>0.00</u>	*	<u>0.12</u>	<u>-5.48</u>	*	*	-2.47	*	*	*
Rb	<u>-0.66</u>	<u>-0.55</u>	0.48	<u>0.15</u>	2.23	<u>-0.26</u>	*	*	0.77	2.06	0.48	*	*
Sc	<u>6.49</u>	*	*	<u>-1.26</u>	37.25	<u>-0.21</u>	<u>13.95</u>	*	*	*	16.32	*	*
Sm	<u>0.26</u>	*	*	<u>-0.19</u>	*	<u>0.79</u>	<u>-2.83</u>	*	*	-2.84	*	*	*
Sr	<u>0.72</u>	<u>-0.84</u>	-0.33	<u>-0.46</u>	0.72	<u>-0.42</u>	*	*	0.03	3.58	1.17	*	-1.35
Ta	<u>-0.40</u>	*	*	<u>-0.98</u>	*	<u>-0.04</u>	*	*	*	*	136.27	*	*
Tb	<u>0.18</u>	*	*	*	*	<u>0.15</u>	<u>-0.77</u>	*	*	-2.16	*	*	*
Th	<u>1.34</u>	*	*	<u>-0.46</u>	*	<u>-0.35</u>	<u>-6.26</u>	*	*	-3.63	2.46	*	20.60
Tl	<u>-0.72</u>	*	*	<u>0.00</u>	*	<u>0.14</u>	<u>-8.64</u>	*	3.82	0.16	*	*	13.92
Tm	<u>0.25</u>	*	*	<u>-1.99</u>	*	<u>0.08</u>	<u>-1.02</u>	*	*	-2.04	*	*	*
U	<u>1.34</u>	*	*	<u>-0.70</u>	*	<u>0.82</u>	*	*	-4.15	-2.19	*	*	*
V	<u>0.63</u>	*	-1.03	<u>0.01</u>	1.26	<u>0.30</u>	<u>16.15</u>	*	-0.92	-0.80	2.23	*	2.72
Y	<u>0.11</u>	*	<u>4.64</u>	*	5.27	<u>-0.29</u>	<u>-1.20</u>	*	*	-2.89	1.27	*	-5.53
Yb	<u>0.37</u>	*	*	<u>-2.78</u>	*	<u>0.00</u>	<u>-0.31</u>	*	*	-2.39	11.10	*	*
Zn	<u>0.48</u>	*	-35.46	<u>1.32</u>	1.89	<u>0.31</u>	*	*	-1.15	-0.04	2.13	*	-1.14
Zr	<u>0.77</u>	<u>0.90</u>	<u>-3.35</u>	<u>-2.17</u>	1.25	<u>0.57</u>	*	*	*	1.92	1.69	*	0.02

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

Table 3 - GeoPT35A Z-scores for Metalliferous sediment, SdAR-H1. 13/06/2014

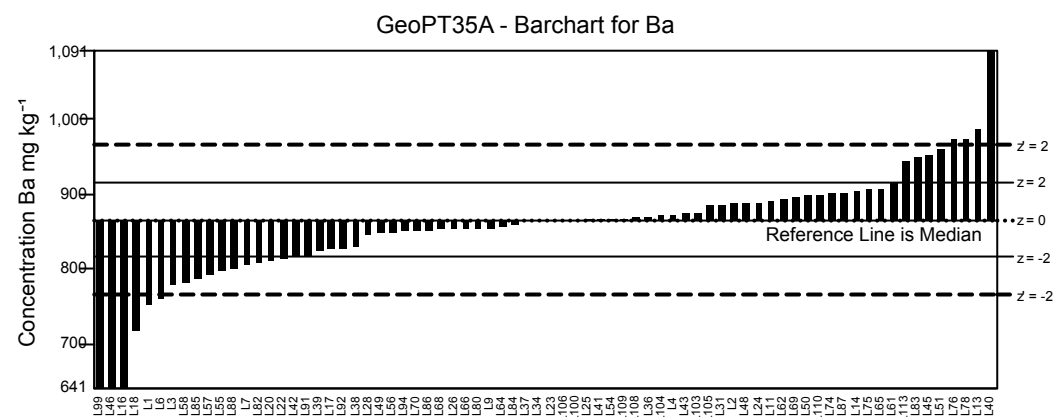
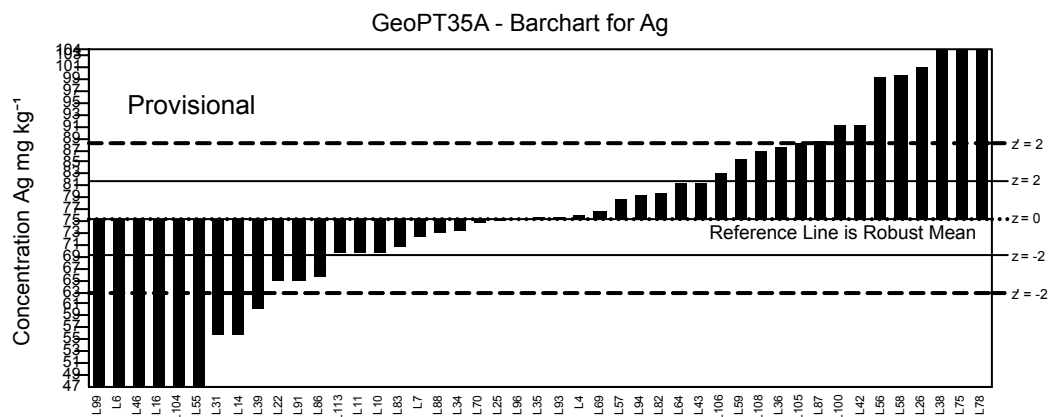
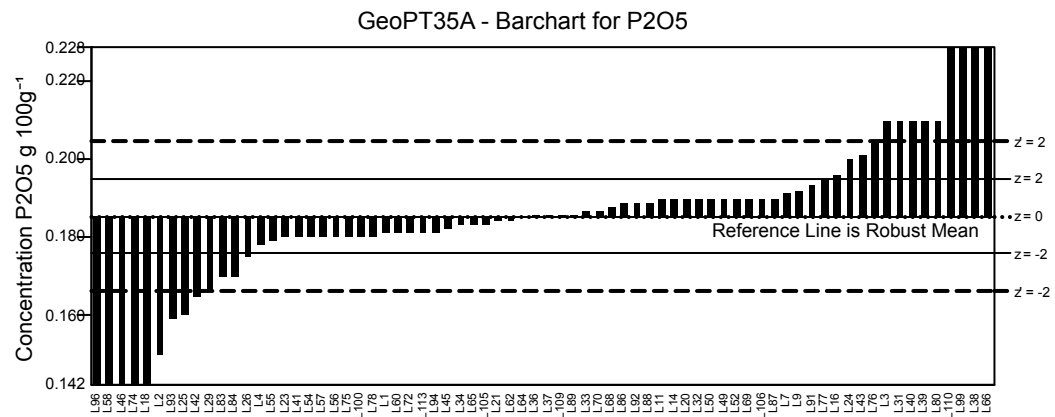
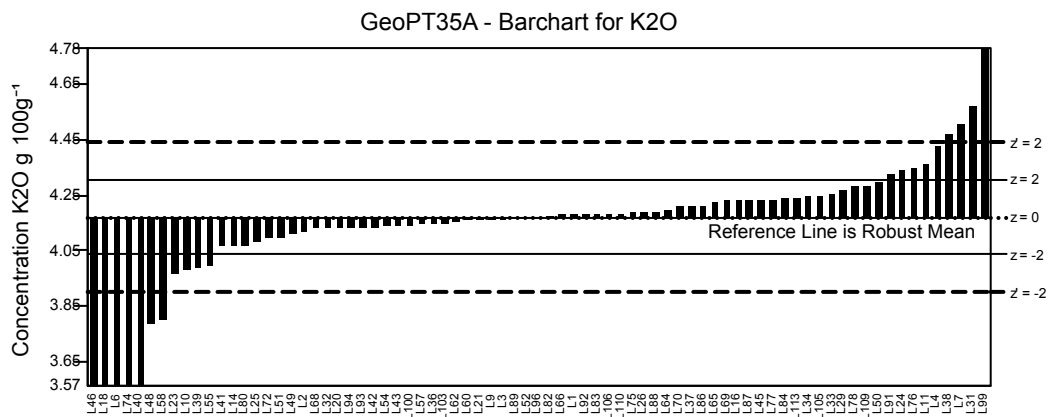
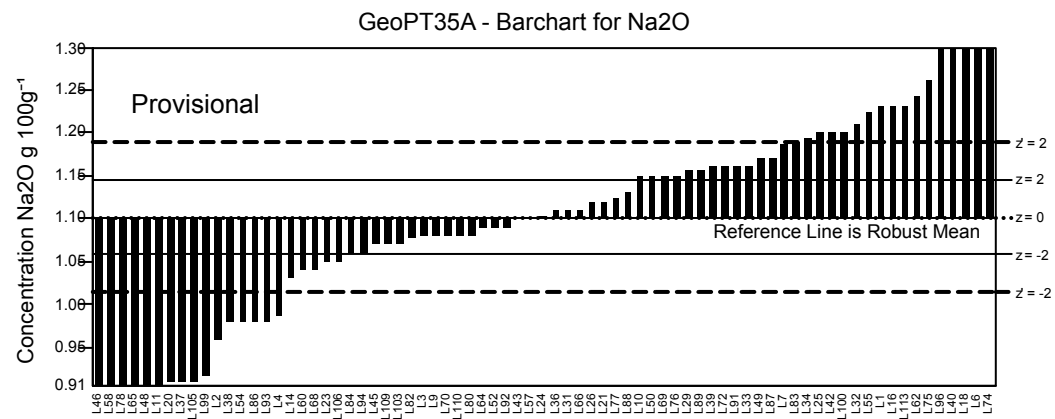
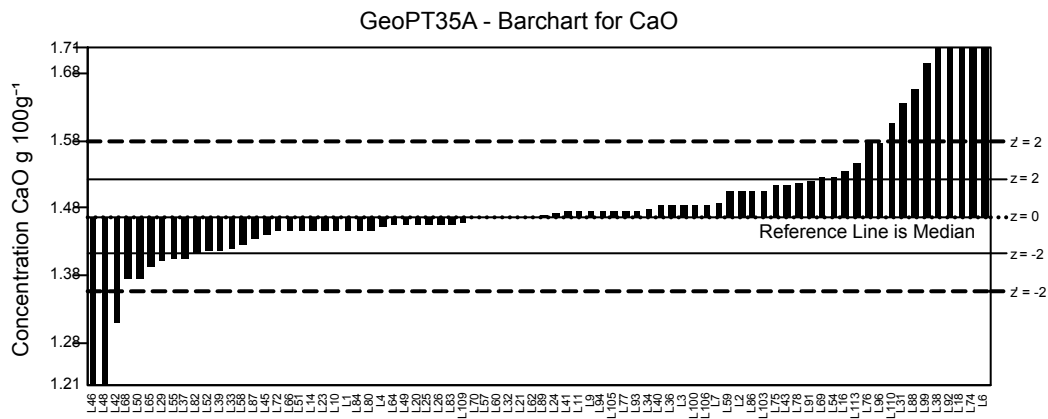
Lab Code	L80	L82	L83	L84	L85	L86	L87	L88	L89	L91	L92	L93	L94
SiO2	*	*	-0.29	<u>-1.63</u>	*	<u>0.00</u>	0.02	0.27	<u>-0.26</u>	3.51	1.15	-0.62	-0.03
TiO2	<u>0.82</u>	6.22	0.82	<u>-0.82</u>	-3.52	<u>0.20</u>	-0.65	1.55	<u>-0.25</u>	1.51	0.41	-0.16	-1.31
Al2O3	*	-0.85	0.00	<u>-0.74</u>	*	<u>0.03</u>	0.58	-0.06	<u>-0.25</u>	2.93	-0.55	-1.84	0.06
Fe2O3T	*	-0.81	2.28	<u>-0.45</u>	2.81	<u>0.22</u>	-0.77	-1.43	<u>-0.59</u>	2.01	0.74	-1.84	-1.52
MnO	<u>0.66</u>	0.35	-0.44	<u>0.04</u>	-4.39	<u>0.22</u>	1.49	2.46	<u>-1.10</u>	-1.89	0.44	0.62	-0.26
MgO	<u>-2.64</u>	12.37	-2.15	<u>-1.25</u>	*	<u>-0.03</u>	-1.42	0.99	<u>-0.29</u>	1.68	1.33	0.78	0.64
CaO	<u>-0.41</u>	-1.94	-0.45	<u>-0.41</u>	*	<u>0.68</u>	-1.21	6.79	<u>0.03</u>	1.86	12.58	0.31	0.27
Na2O	<u>-0.50</u>	-1.09	4.07	<u>-0.96</u>	*	<u>-2.80</u>	3.15	1.31	<u>1.28</u>	2.69	-0.53	-5.60	-1.91
K2O	<u>-0.75</u>	0.04	0.13	<u>0.51</u>	*	<u>0.29</u>	0.88	0.28	<u>-0.02</u>	2.36	0.13	-0.57	-0.61
P2O5	<u>2.57</u>	*	-3.23	<u>-1.62</u>	*	<u>0.37</u>	0.95	0.74	<u>0.06</u>	1.68	0.74	-5.53	-0.93
Ag	*	1.34	-1.54	*	*	<u>-1.56</u>	4.09	<u>-0.39</u>	*	-3.34	*	0.11	1.28
Ba	<u>-0.22</u>	-2.23	3.40	<u>-0.12</u>	-3.19	<u>-0.28</u>	1.47	<u>-1.33</u>	*	-1.91	-1.51	*	-0.60
Be	*	*	*	*	*	*	0.32	<u>-1.33</u>	*	*	0.48	*	*
Bi	*	*	*	*	*	*	0.16	*	*	*	*	*	7.07
Cd	*	<u>-1.53</u>	*	*	-0.97	<u>0.73</u>	0.99	<u>-0.89</u>	*	-3.71	*	-0.73	0.81
Ce	<u>-1.87</u>	0.27	5.14	*	-0.57	<u>-1.83</u>	-1.57	-2.10	*	-2.12	0.96	<u>1.47</u>	-2.84
Co	<u>-1.50</u>	0.89	3.05	<u>0.50</u>	-3.95	<u>0.50</u>	0.72	<u>-1.30</u>	<u>-0.95</u>	-2.92	0.54	*	0.87
Cs	<u>-0.78</u>	-0.20	*	*	0.95	*	2.16	*	*	-1.63	0.39	*	*
Cu	<u>-1.96</u>	6.02	-1.90	<u>-2.01</u>	0.13	<u>-0.61</u>	1.59	<u>-1.30</u>	<u>0.36</u>	-4.33	<u>-4.43</u>	<u>-0.17</u>	1.27
Dy	<u>-0.87</u>	-0.21	*	*	-3.58	*	1.88	-0.18	*	-0.21	0.32	0.92	*
Er	<u>-0.73</u>	*	*	*	-5.19	*	2.80	-0.29	*	0.02	0.54	1.26	*
Eu	<u>-1.00</u>	0.00	*	*	-1.05	*	-2.61	-1.06	*	-0.75	-0.55	-0.03	*
Ga	*	<u>-1.96</u>	1.65	*	-6.82	<u>0.82</u>	0.32	<u>-0.39</u>	*	-0.65	-0.05	<u>-1.60</u>	-0.89
Gd	<u>-1.35</u>	*	*	*	-2.48	*	2.28	-0.21	*	-1.41	1.05	0.45	*
Hf	*	2.74	0.37	*	5.11	<u>0.18</u>	-5.42	<u>-2.58</u>	*	-2.24	0.85	<u>18.84</u>	*
Ho	<u>-0.75</u>	*	*	*	-3.88	*	2.05	-1.09	*	-0.16	0.00	0.68	*
In	*	0.64	*	*	*	*	*	*	*	*	*	*	*
La	<u>-1.41</u>	0.34	8.45	<u>0.03</u>	-0.13	<u>-1.21</u>	-0.77	-0.79	*	-1.30	1.19	<u>3.04</u>	-1.23
Li	<u>-1.48</u>	*	*	*	0.25	*	1.26	0.38	*	-1.02	*	-9.62	*
Lu	<u>-0.79</u>	-0.57	*	*	-4.21	*	0.96	-0.22	*	-0.08	0.05	0.05	*
Mo	*	3.65	-3.65	*	1.10	<u>-0.55</u>	0.88	*	<u>1.32</u>	-4.75	2.89	0.66	3.43
Nb	*	*	-1.68	*	-0.01	<u>-0.84</u>	-0.32	*	*	-1.23	1.14	<u>0.39</u>	2.60
Nd	<u>-1.36</u>	0.49	2.25	*	-0.39	<u>-1.24</u>	-0.75	-0.89	*	-1.93	1.36	0.41	-3.85
Ni	<u>-2.59</u>	<u>-1.17</u>	0.74	<u>0.00</u>	-3.70	<u>-0.31</u>	0.74	<u>-2.27</u>	<u>-3.13</u>	-1.11	-3.65	-1.23	1.42
Pb	*	*	-0.81	*	-1.45	<u>0.60</u>	1.79	<u>0.76</u>	<u>-1.64</u>	-2.56	<u>-3.56</u>	<u>0.90</u>	3.67
Pr	<u>-1.32</u>	*	*	*	0.31	<u>1.80</u>	0.95	-1.07	*	-1.42	1.13	-0.13	*
Rb	<u>-2.91</u>	2.06	0.48	*	0.43	<u>-0.90</u>	0.95	<u>-1.57</u>	*	-3.19	0.34	<u>-0.20</u>	1.11
Sc	*	-0.02	10.05	*	3.77	*	-0.84	*	*	12.97	-0.21	<u>8.48</u>	0.00
Sm	<u>-1.16</u>	0.32	4.18	*	-0.58	<u>-0.50</u>	0.09	-1.31	*	-1.15	0.55	0.11	*
Sr	<u>-1.37</u>	<u>-1.44</u>	0.27	*	-0.61	<u>0.96</u>	0.97	-1.79	*	-2.18	0.89	<u>-0.46</u>	0.86
Ta	*	-0.56	*	*	-0.83	<u>21.44</u>	*	*	*	0.75	-0.09	*	*
Tb	<u>-1.16</u>	0.11	*	*	-2.42	*	1.39	0.00	*	-0.73	0.31	0.00	*
Th	<u>-1.27</u>	1.26	-7.32	*	-0.97	<u>-5.29</u>	-1.24	<u>2.17</u>	*	-0.40	1.59	-6.24	13.54
Tl	*	*	*	*	0.96	<u>-8.17</u>	2.91	*	*	0.00	1.62	-1.62	0.32
Tm	<u>-0.74</u>	*	*	*	-3.09	*	1.90	-0.66	*	-0.14	0.17	0.17	*
U	<u>-0.66</u>	-1.47	-7.85	*	-1.76	<u>-0.13</u>	-1.64	<u>-3.03</u>	*	1.07	2.02	-6.10	0.50
V	<u>-1.18</u>	0.54	5.17	<u>-0.84</u>	-3.31	<u>0.95</u>	-0.54	<u>-0.27</u>	<u>1.00</u>	-0.02	0.86	-0.24	3.15
Y	<u>-2.25</u>	*	7.68	<u>-0.97</u>	-3.05	<u>6.64</u>	0.15	-1.24	*	-1.45	2.55	<u>2.64</u>	0.79
Yb	<u>-0.89</u>	0.58	*	*	-5.67	*	1.98	0.17	*	-0.08	0.56	0.78	*
Zn	<u>-1.89</u>	1.24	0.86	<u>-1.25</u>	-2.65	<u>0.62</u>	0.35	<u>1.74</u>	<u>-1.64</u>	0.02	<u>1.40</u>	<u>1.31</u>	0.02
Zr	*	6.95	0.35	<u>-1.00</u>	-0.99	<u>-0.55</u>	-0.60	<u>-0.40</u>	*	1.92	1.37	<u>0.23</u>	0.55

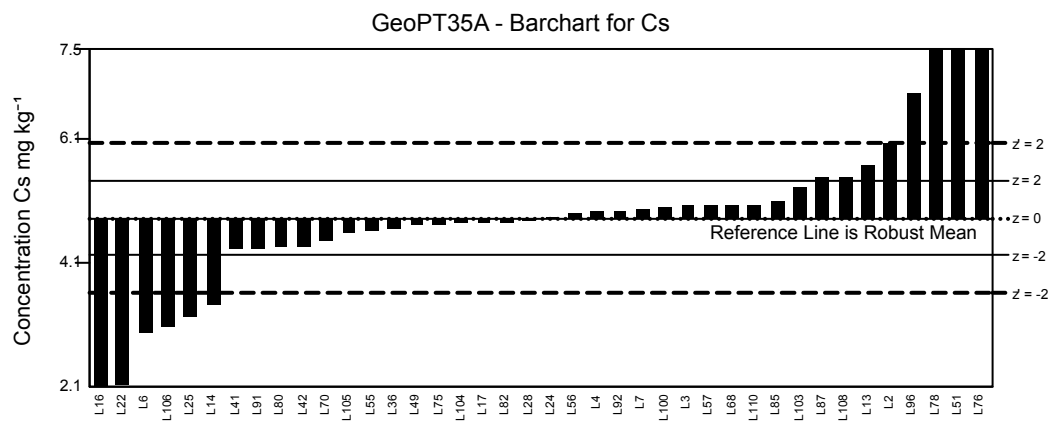
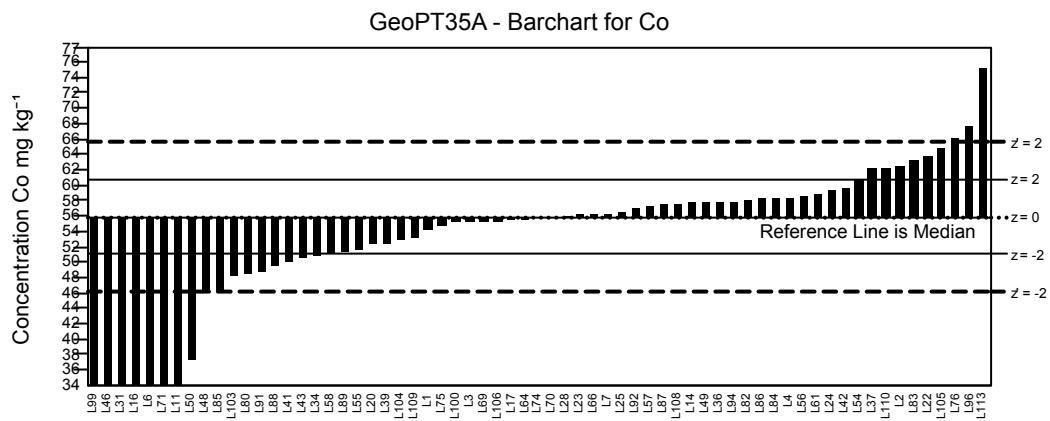
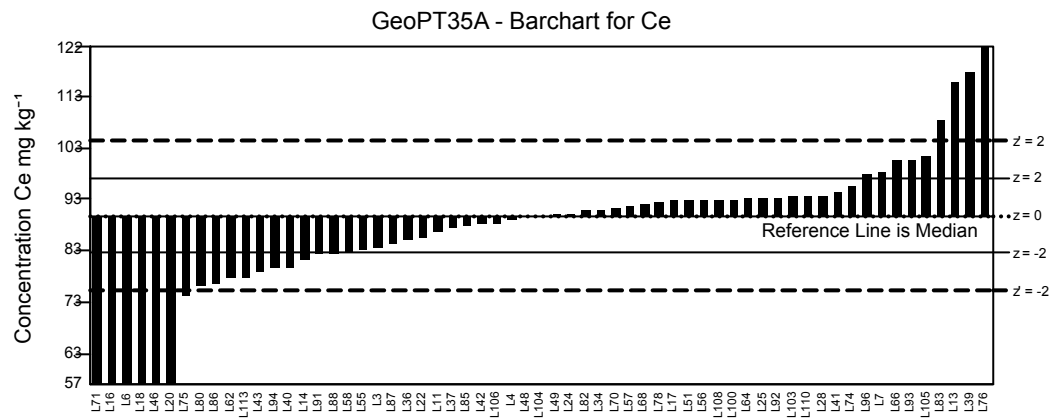
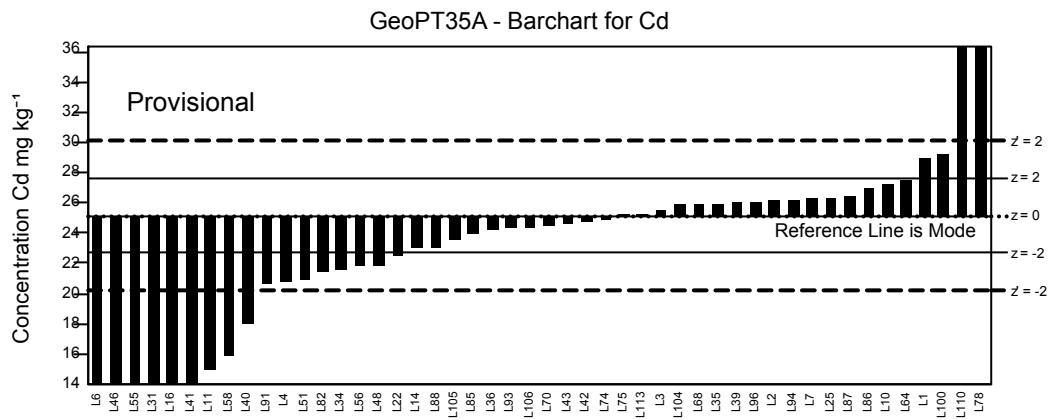
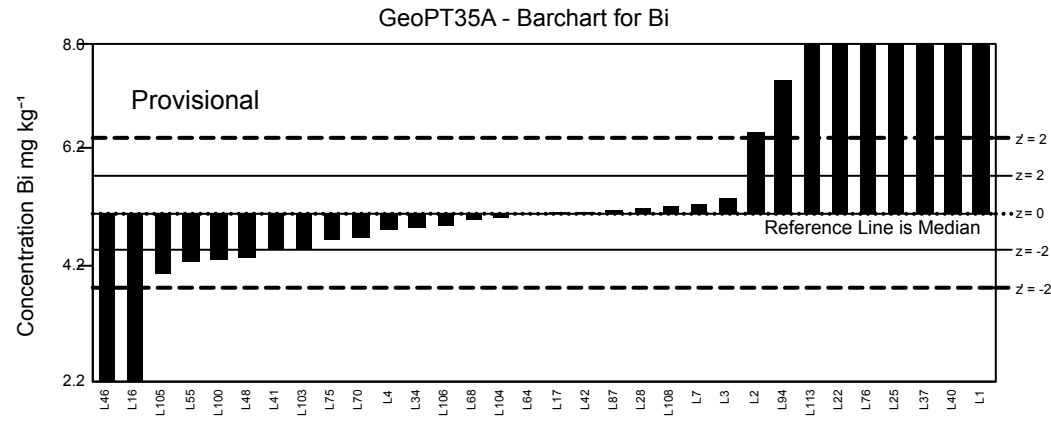
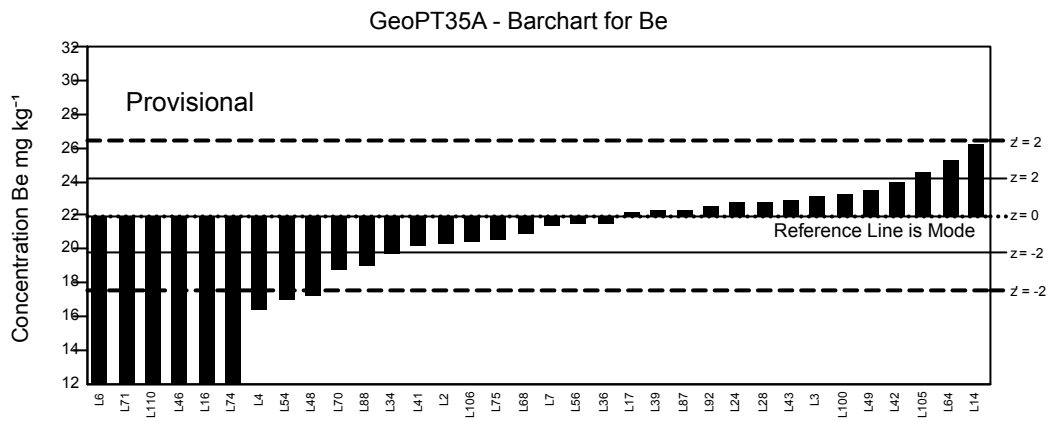
Bold entries are Data Quality 1 - Underlined entries are Data Quality 2

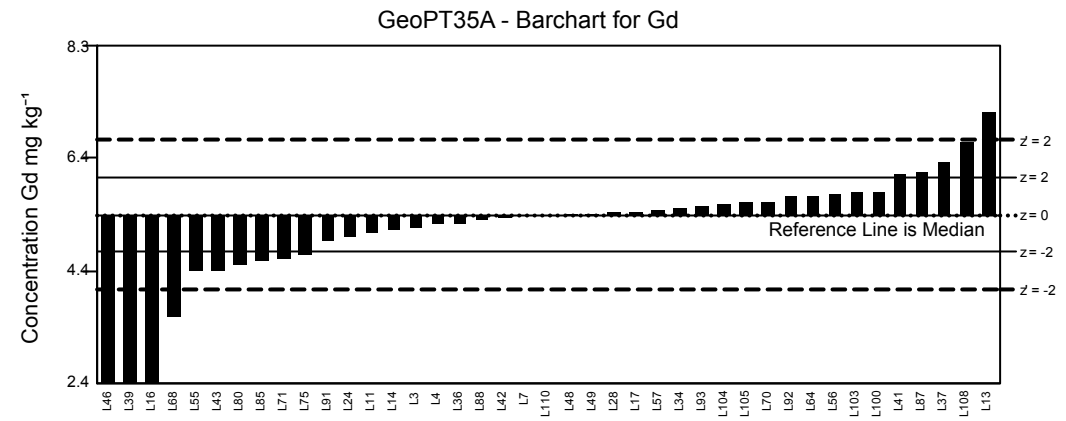
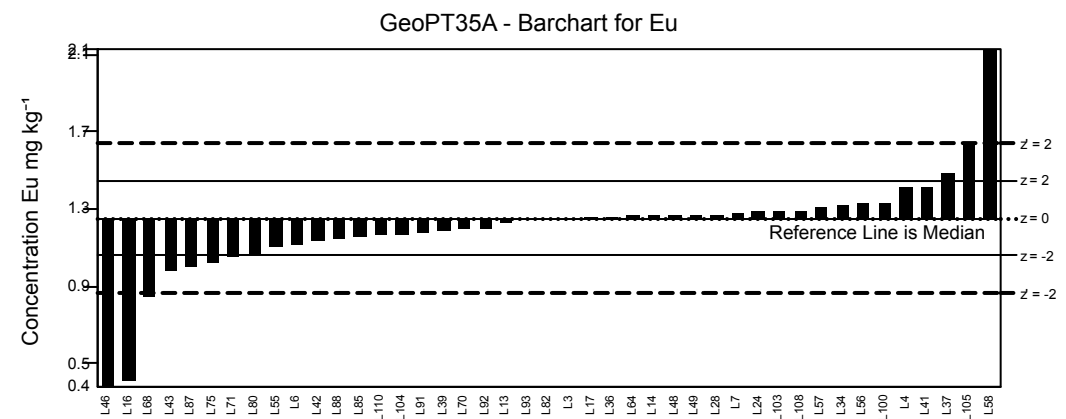
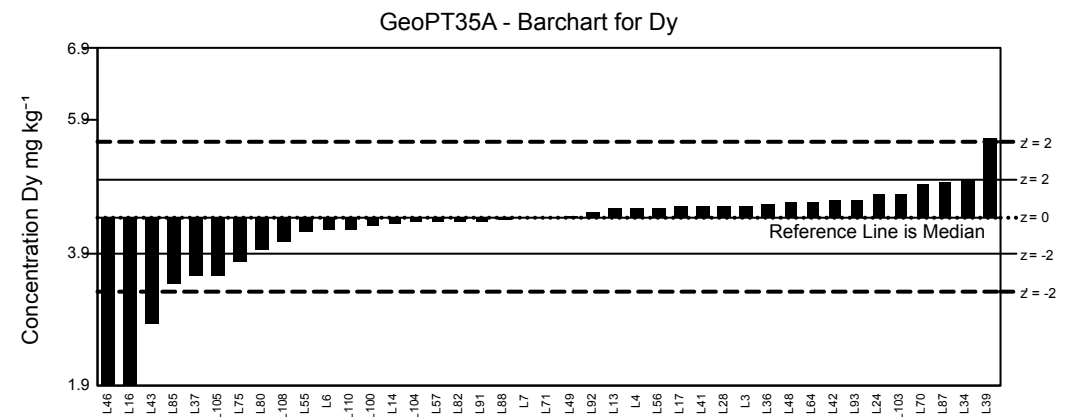
Table 3 - GeoPT35A Z-scores for Metalliferous sediment, SdAR-H1. 13/06/2014

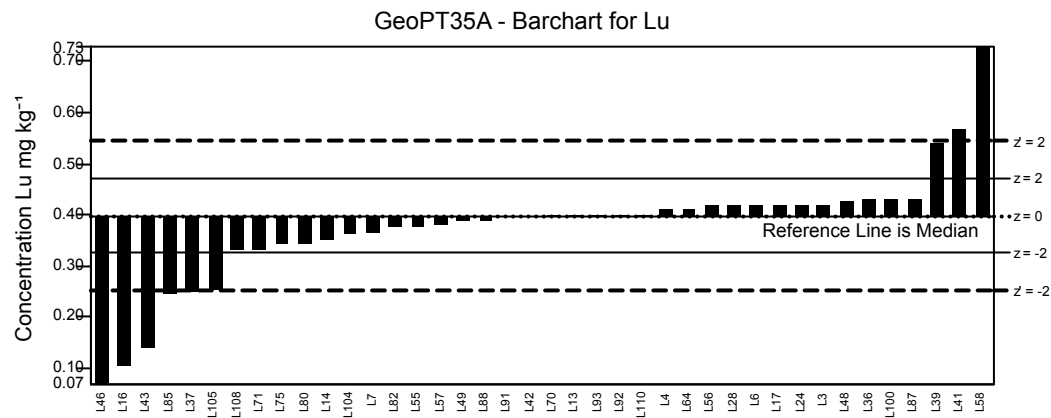
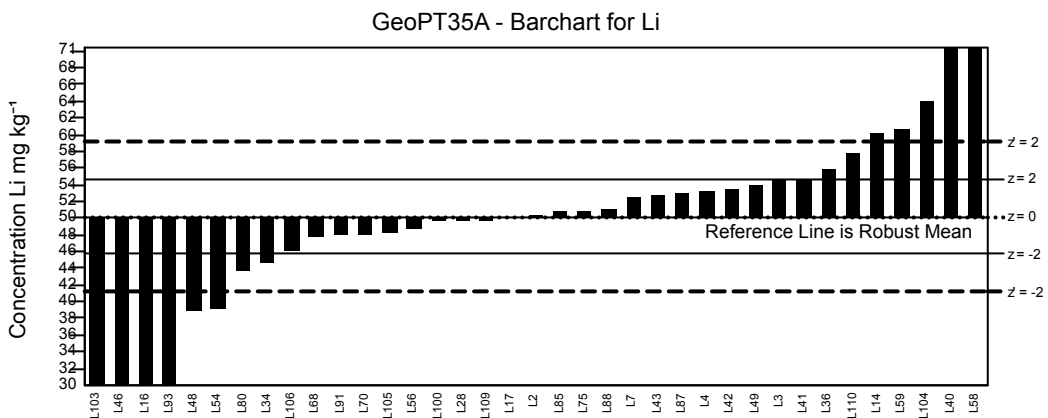
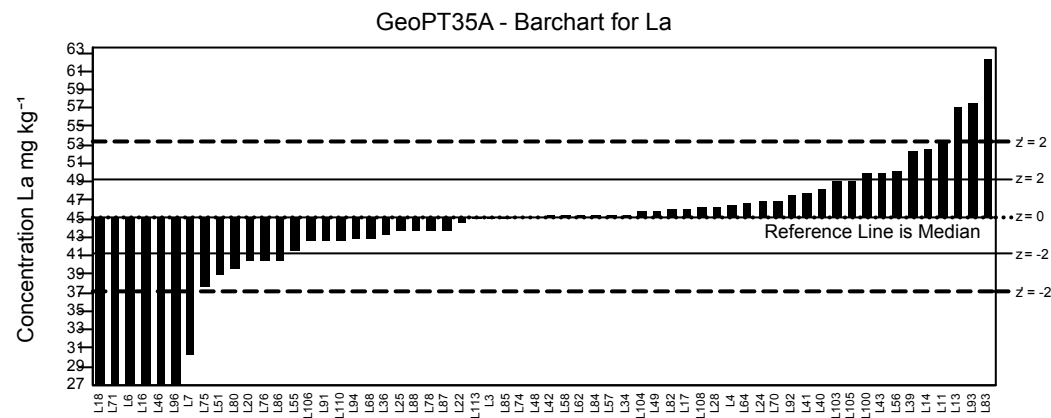
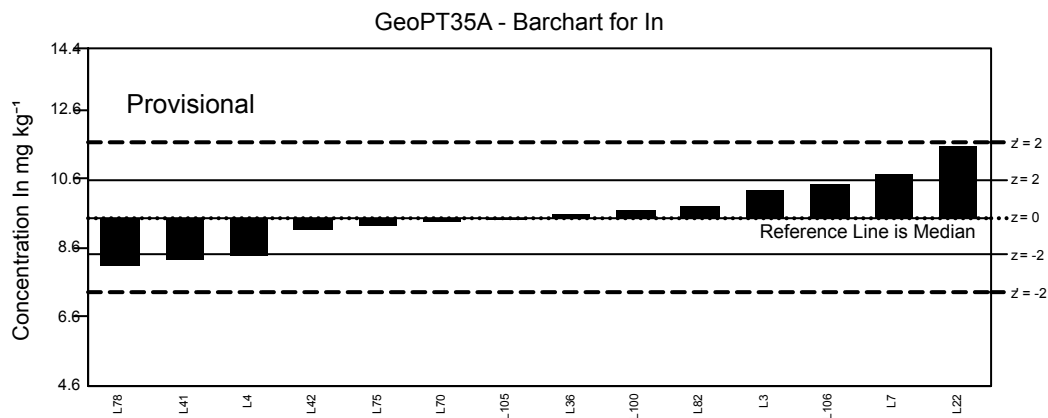
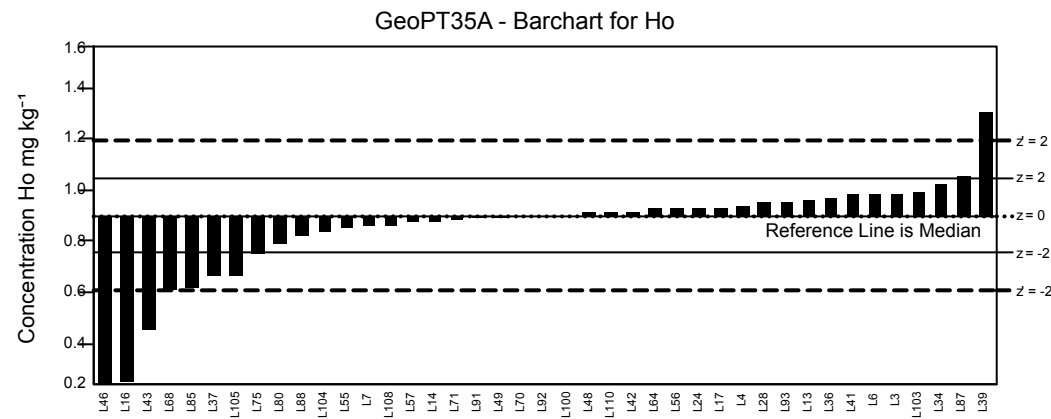
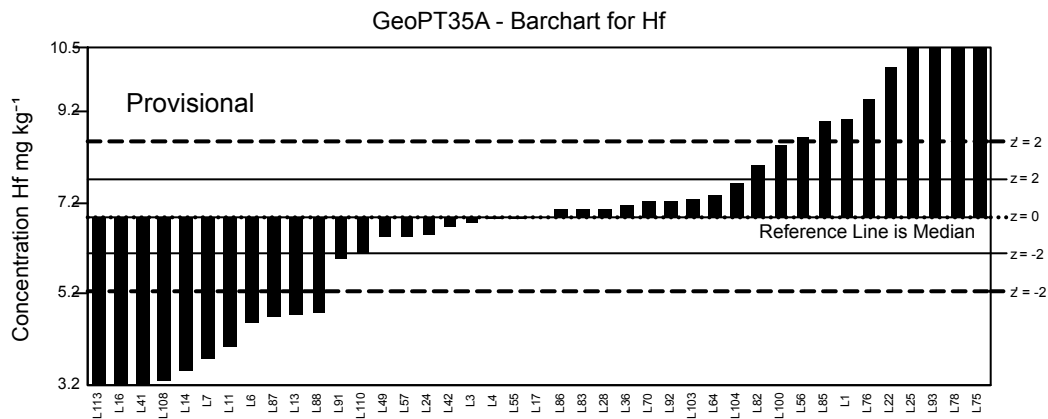
Lab Code	L96	L99	L100	L103	L104	L105	L106	L108	L109	L110	L113
SiO2	<u>9.80</u>	<u>-3.19</u>	<u>-0.07</u>	<u>0.11</u>	*	<u>0.09</u>	<u>0.06</u>	*	<u>-0.00</u>	<u>0.09</u>	<u>0.36</u>
TiO2	<u>-3.27</u>	<u>0.37</u>	<u>0.00</u>	<u>0.82</u>	*	<u>0.00</u>	<u>0.00</u>	*	<u>-0.70</u>	<u>0.00</u>	<u>0.41</u>
Al2O3	<u>-24.28</u>	<u>6.65</u>	<u>0.06</u>	<u>0.21</u>	*	<u>0.15</u>	<u>0.06</u>	*	<u>-0.76</u>	<u>-0.64</u>	<u>-0.89</u>
Fe2O3T	<u>5.45</u>	<u>1.55</u>	<u>-1.11</u>	<u>0.88</u>	*	<u>0.01</u>	<u>0.06</u>	*	<u>0.04</u>	<u>0.52</u>	<u>0.63</u>
MnO	<u>-20.08</u>	<u>3.65</u>	<u>0.00</u>	<u>0.66</u>	*	<u>0.70</u>	<u>1.10</u>	*	<u>-0.26</u>	<u>-2.42</u>	<u>0.35</u>
MgO	<u>-9.60</u>	<u>2.93</u>	<u>3.07</u>	<u>0.32</u>	*	<u>-0.90</u>	<u>-0.03</u>	*	<u>0.35</u>	<u>0.84</u>	<u>1.54</u>
CaO	<u>1.95</u>	<u>4.12</u>	<u>0.63</u>	<u>0.68</u>	*	<u>0.14</u>	<u>0.32</u>	*	<u>-0.17</u>	<u>2.49</u>	<u>1.40</u>
Na2O	<u>20.23</u>	<u>-4.25</u>	<u>4.53</u>	<u>-0.73</u>	*	<u>-4.41</u>	<u>-1.19</u>	*	<u>-0.73</u>	<u>-0.50</u>	<u>2.96</u>
K2O	<u>-0.01</u>	<u>3617.58</u>	<u>-0.46</u>	<u>-0.16</u>	*	<u>0.59</u>	<u>0.07</u>	*	<u>0.82</u>	<u>0.07</u>	<u>0.51</u>
P2O5	<u>-9.99</u>	<u>6.96</u>	<u>-1.14</u>	*	*	<u>-0.26</u>	<u>0.48</u>	*	<u>0.06</u>	<u>4.66</u>	<u>-0.47</u>
Ag	<u>-0.01</u>	<u>-11.99</u>	<u>5.01</u>	*	<u>-6.25</u>	<u>2.01</u>	<u>1.22</u>	<u>3.58</u>	*	*	<u>-0.94</u>
Ba	*	<u>-17.30</u>	<u>0.01</u>	<u>0.21</u>	<u>0.27</u>	<u>0.40</u>	<u>0.00</u>	<u>0.13</u>	<u>0.04</u>	<u>0.68</u>	<u>1.61</u>
Be	*	*	<u>1.11</u>	*	*	<u>1.14</u>	<u>-0.71</u>	*	*	<u>-9.53</u>	*
Bi	*	*	<u>-2.47</u>	<u>-0.98</u>	<u>-0.13</u>	<u>-1.64</u>	<u>-0.33</u>	<u>0.38</u>	*	*	<u>5.72</u>
Cd	<u>0.37</u>	*	<u>3.23</u>	*	<u>0.29</u>	<u>-0.65</u>	<u>-0.32</u>	*	*	<u>5.97</u>	<u>0.04</u>
Ce	<u>1.12</u>	*	<u>0.85</u>	<u>0.49</u>	<u>0.00</u>	<u>1.61</u>	<u>-0.21</u>	<u>0.80</u>	*	<u>1.01</u>	<u>-1.65</u>
Co	<u>2.44</u>	<u>-11.44</u>	<u>-0.29</u>	<u>-1.56</u>	<u>-1.27</u>	<u>1.87</u>	<u>-0.12</u>	<u>0.73</u>	<u>-0.53</u>	<u>1.32</u>	<u>3.99</u>
Cs	<u>3.32</u>	*	<u>0.62</u>	<u>0.86</u>	<u>-0.29</u>	<u>-0.38</u>	<u>-2.91</u>	<u>2.18</u>	*	<u>0.36</u>	<u>-7.91</u>
Cu	<u>4.88</u>	<u>-18.07</u>	<u>0.22</u>	<u>-1.03</u>	<u>-2.12</u>	<u>0.11</u>	<u>0.56</u>	<u>1.03</u>	<u>-5.64</u>	<u>1.89</u>	<u>-0.88</u>
Dy	*	*	<u>-0.43</u>	<u>0.64</u>	<u>-0.26</u>	<u>-1.58</u>	*	<u>-1.37</u>	*	<u>-0.64</u>	*
Er	*	*	<u>-0.18</u>	<u>0.46</u>	<u>-1.35</u>	<u>-1.73</u>	*	<u>-0.37</u>	*	<u>-1.02</u>	*
Eu	*	*	<u>0.79</u>	<u>0.19</u>	<u>-0.85</u>	<u>2.00</u>	*	<u>0.38</u>	*	<u>-0.86</u>	*
Ga	<u>2.67</u>	*	<u>0.07</u>	*	<u>0.28</u>	<u>0.40</u>	<u>1.13</u>	*	<u>2.64</u>	<u>0.70</u>	<u>-0.63</u>
Gd	*	*	<u>1.23</u>	<u>0.62</u>	<u>0.55</u>	<u>0.33</u>	*	<u>3.93</u>	*	<u>0.00</u>	*
Hf	*	*	<u>3.83</u>	<u>0.44</u>	<u>1.74</u>	*	*	<u>-8.82</u>	*	<u>-0.96</u>	<u>-7.86</u>
Ho	*	*	<u>0.00</u>	<u>0.62</u>	<u>-0.90</u>	<u>-1.64</u>	*	<u>-0.53</u>	*	<u>0.14</u>	*
In	*	*	<u>0.35</u>	*	*	<u>-0.06</u>	<u>0.89</u>	*	*	*	*
La	<u>-4.71</u>	*	<u>2.27</u>	<u>0.95</u>	<u>0.29</u>	<u>0.96</u>	<u>-0.66</u>	<u>0.45</u>	*	<u>-1.28</u>	<u>-0.07</u>
Li	*	*	<u>-0.29</u>	<u>-11.19</u>	<u>3.06</u>	<u>-0.46</u>	<u>-0.90</u>	*	<u>-0.12</u>	<u>1.66</u>	*
Lu	*	*	<u>0.88</u>	*	<u>-1.01</u>	<u>-1.98</u>	*	<u>-1.90</u>	*	<u>0.03</u>	*
Mo	*	*	<u>0.69</u>	*	<u>1.20</u>	<u>-0.18</u>	<u>0.51</u>	<u>2.47</u>	*	<u>0.73</u>	<u>-0.71</u>
Nb	<u>3.65</u>	<u>-9.94</u>	<u>1.05</u>	<u>0.98</u>	<u>4.73</u>	<u>-1.30</u>	<u>0.43</u>	<u>-0.50</u>	*	<u>-0.48</u>	<u>-0.80</u>
Nd	<u>-3.38</u>	*	<u>3.20</u>	<u>0.41</u>	<u>-0.07</u>	<u>-0.44</u>	*	<u>0.26</u>	*	<u>-2.25</u>	<u>-2.07</u>
Ni	<u>6.12</u>	<u>-14.17</u>	<u>-3.08</u>	*	<u>0.52</u>	<u>0.55</u>	<u>0.00</u>	<u>0.52</u>	<u>-1.36</u>	<u>3.08</u>	<u>0.61</u>
Pb	<u>6.65</u>	<u>-21.69</u>	<u>3.82</u>	<u>0.18</u>	<u>3.24</u>	<u>0.02</u>	<u>0.94</u>	<u>0.66</u>	<u>-0.65</u>	<u>-0.63</u>	<u>-0.88</u>
Pr	*	*	<u>2.01</u>	<u>0.38</u>	<u>-0.06</u>	<u>0.03</u>	<u>-0.63</u>	<u>0.35</u>	*	<u>-1.71</u>	*
Rb	<u>0.16</u>	<u>-13.32</u>	<u>-0.57</u>	<u>0.54</u>	<u>-0.74</u>	<u>-0.37</u>	<u>0.24</u>	<u>0.32</u>	*	<u>-2.14</u>	<u>-0.15</u>
Sc	<u>-8.22</u>	*	<u>0.29</u>	<u>5.85</u>	<u>0.94</u>	<u>1.38</u>	<u>-4.10</u>	<u>-0.61</u>	*	<u>0.31</u>	<u>1.15</u>
Sm	*	*	<u>1.56</u>	<u>0.77</u>	<u>-0.22</u>	<u>0.57</u>	*	<u>0.11</u>	*	<u>-1.08</u>	<u>-5.93</u>
Sr	<u>-3.52</u>	<u>-13.68</u>	<u>0.12</u>	<u>0.57</u>	<u>-0.04</u>	<u>-0.16</u>	<u>-0.09</u>	<u>0.74</u>	<u>4.87</u>	<u>0.96</u>	<u>-0.42</u>
Ta	<u>-3.03</u>	*	<u>0.00</u>	<u>0.56</u>	<u>0.83</u>	*	*	<u>-1.47</u>	*	<u>1.82</u>	<u>-6.58</u>
Tb	*	*	<u>0.46</u>	<u>0.39</u>	<u>0.11</u>	<u>-0.09</u>	*	<u>1.97</u>	*	<u>-0.15</u>	*
Th	*	*	<u>0.50</u>	<u>0.93</u>	<u>0.09</u>	<u>-0.84</u>	<u>-1.92</u>	<u>0.15</u>	*	<u>-1.49</u>	<u>-3.23</u>
Tl	*	*	<u>2.27</u>	*	<u>4.00</u>	<u>-1.12</u>	<u>-1.89</u>	<u>1.93</u>	*	<u>-0.73</u>	<u>0.65</u>
Tm	*	*	<u>0.72</u>	<u>0.36</u>	<u>-0.97</u>	<u>-1.86</u>	*	<u>-2.12</u>	*	<u>0.36</u>	*
U	*	*	<u>0.12</u>	<u>0.73</u>	<u>0.65</u>	<u>-0.57</u>	<u>-3.15</u>	<u>0.89</u>	*	<u>-0.51</u>	<u>-2.60</u>
V	<u>-2.16</u>	<u>-11.93</u>	<u>-0.05</u>	<u>0.89</u>	<u>0.69</u>	<u>1.36</u>	<u>-0.06</u>	<u>0.71</u>	*	<u>-0.19</u>	<u>-0.89</u>
Y	<u>-5.13</u>	*	<u>0.07</u>	<u>0.78</u>	<u>5.60</u>	<u>-1.37</u>	<u>1.04</u>	<u>-4.17</u>	<u>-2.17</u>	<u>-0.57</u>	<u>2.48</u>
Yb	*	*	<u>0.78</u>	<u>0.50</u>	<u>-1.59</u>	<u>-2.39</u>	*	<u>-1.98</u>	*	<u>-1.11</u>	<u>1.39</u>
Zn	<u>-9.48</u>	<u>-21.51</u>	<u>-0.05</u>	<u>-0.91</u>	<u>-6.91</u>	<u>-0.10</u>	<u>0.38</u>	<u>1.16</u>	<u>-2.51</u>	<u>2.43</u>	<u>0.76</u>
Zr	<u>0.43</u>	<u>-14.42</u>	<u>-0.88</u>	<u>0.63</u>	<u>7.04</u>	<u>-0.16</u>	<u>0.57</u>	<u>-16.95</u>	<u>0.90</u>	<u>0.29</u>	<u>-0.15</u>

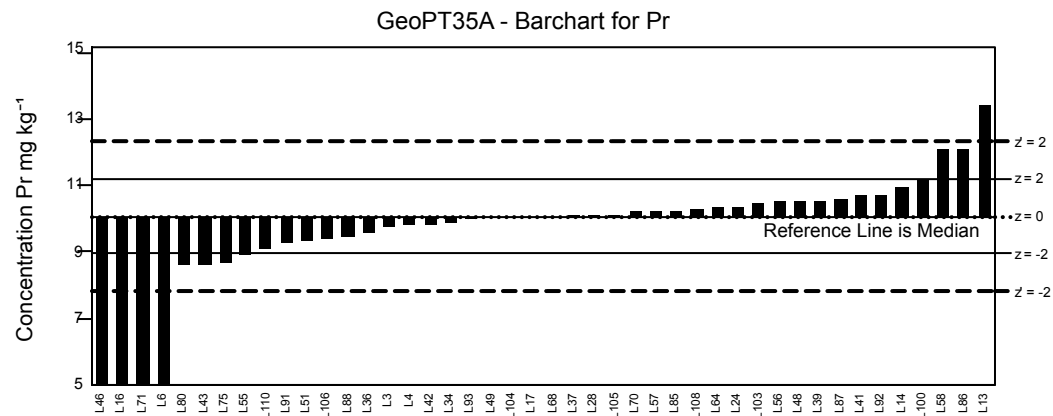
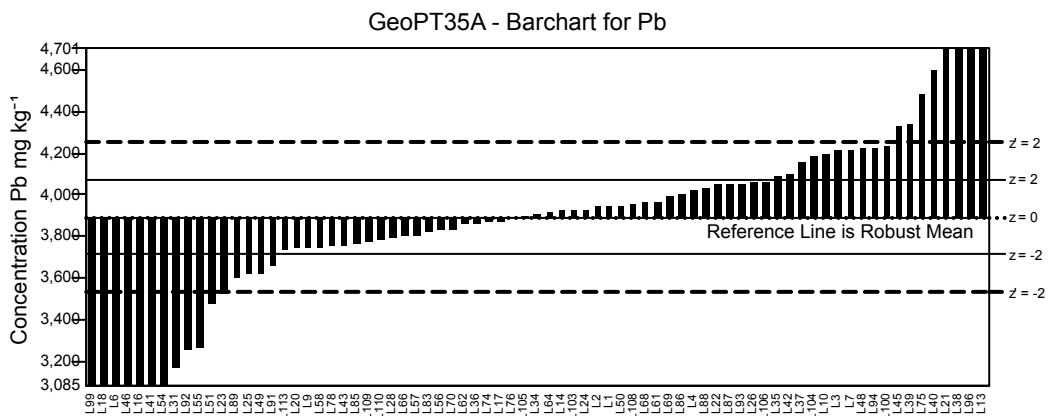
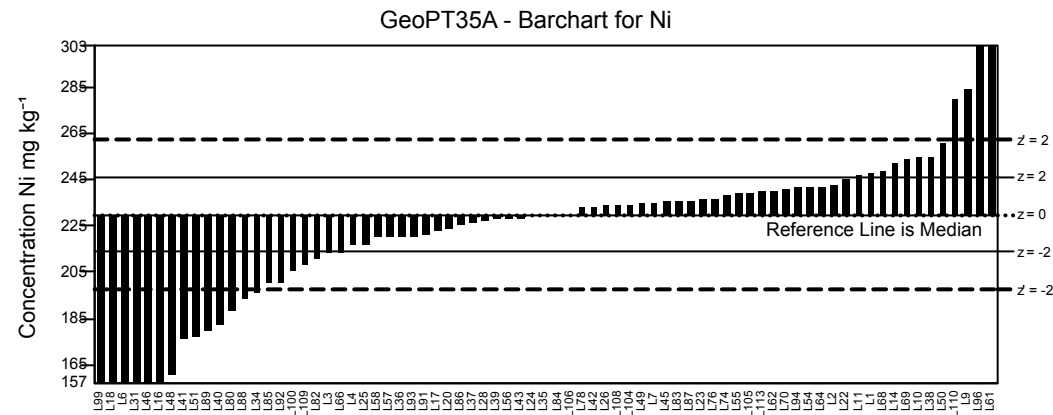
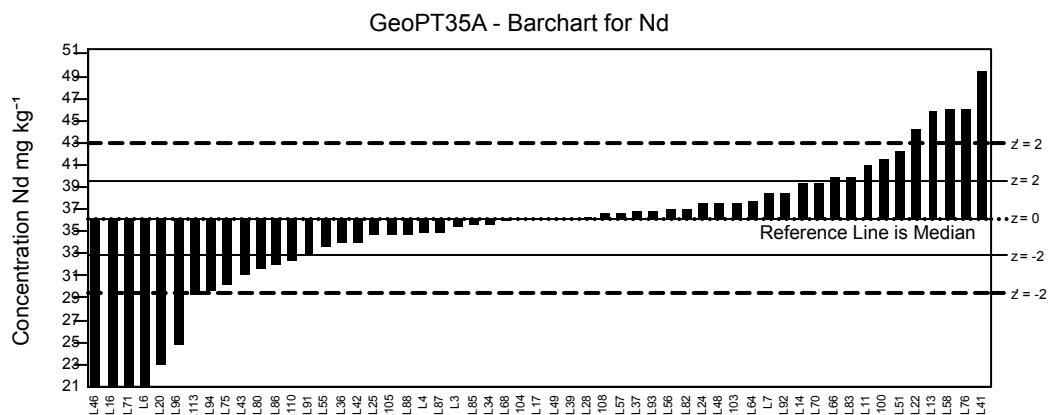
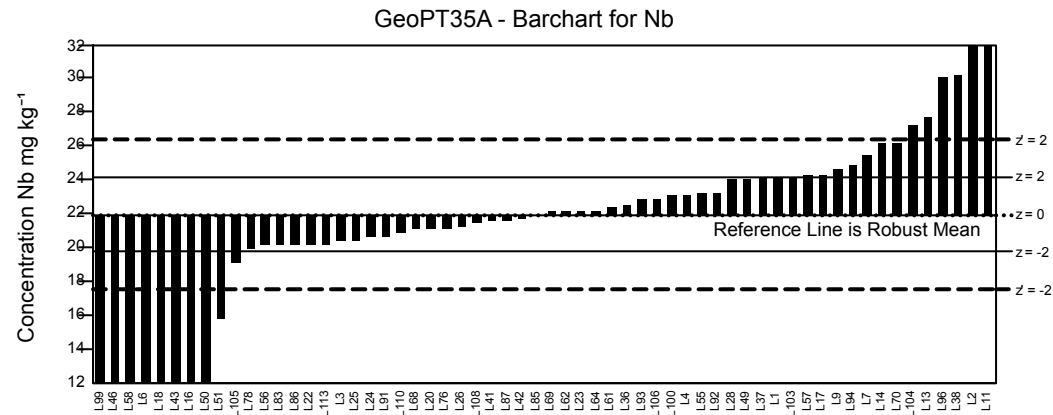
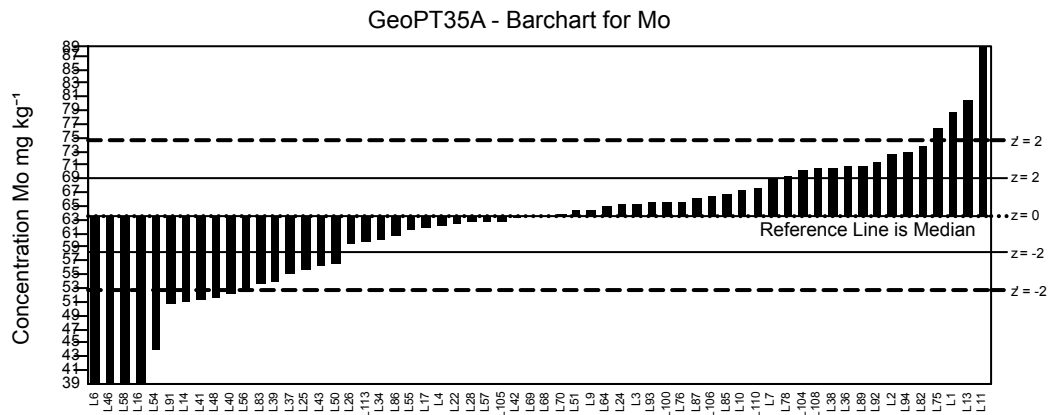
Bold entries are Data Quality 1 - Underlined entries are Data Quality 2



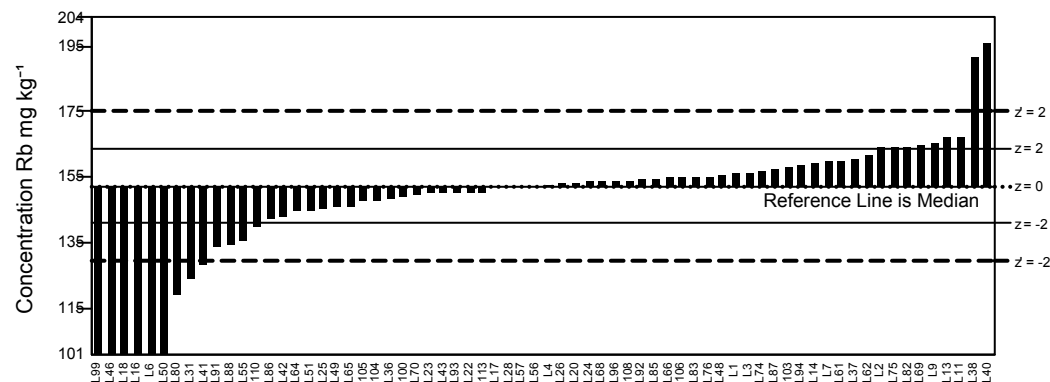




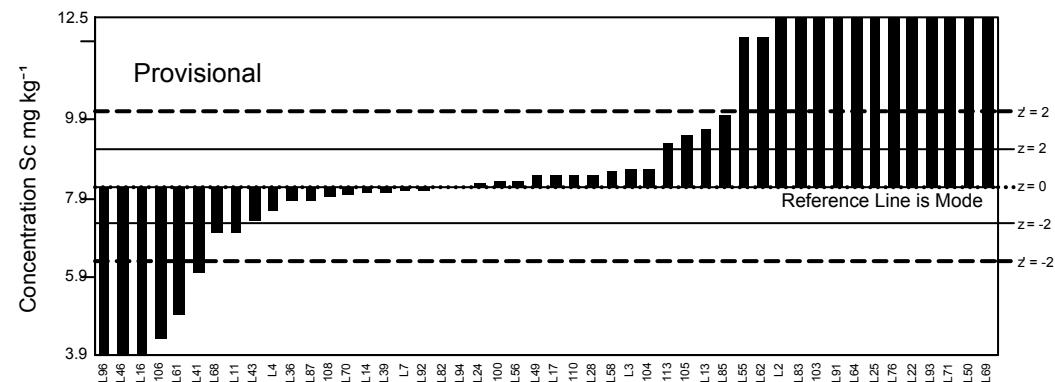




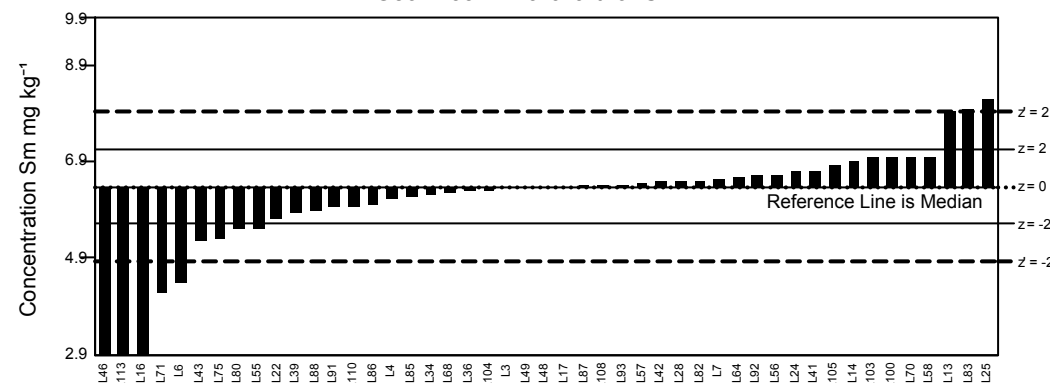
GeoPT35A - Barchart for Rb



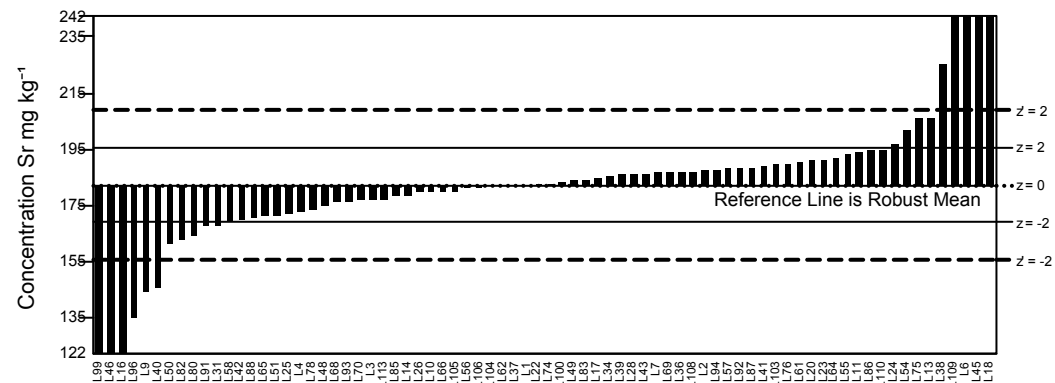
GeoPT35A - Barchart for Sc



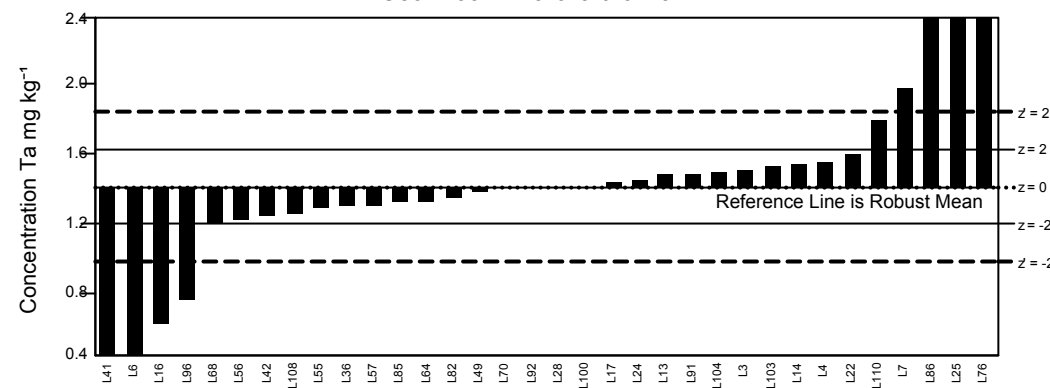
GeoPT35A - Barchart for Sm



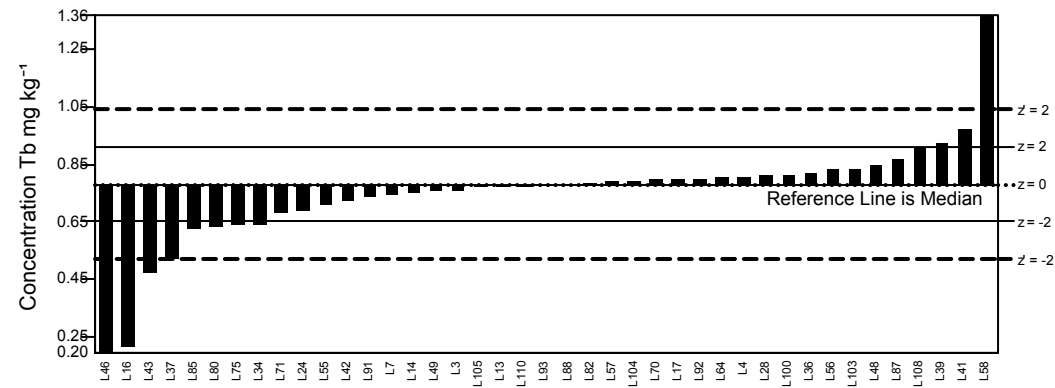
GeoPT35A - Barchart for Sr

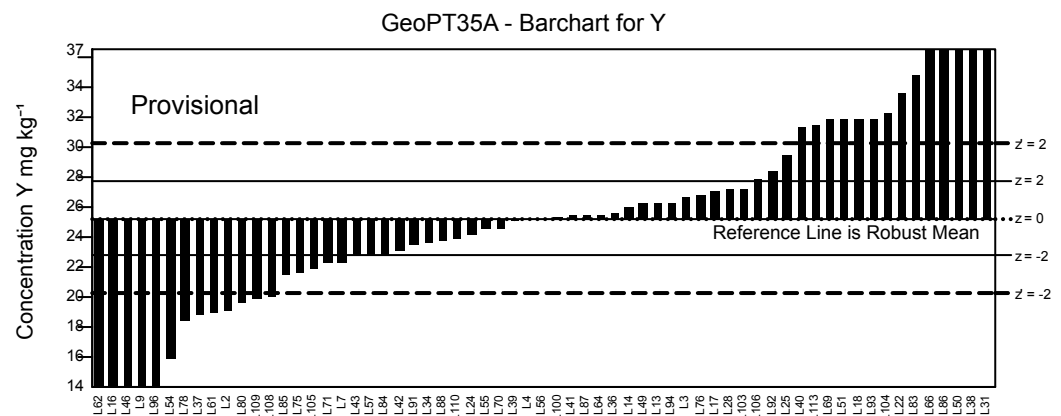
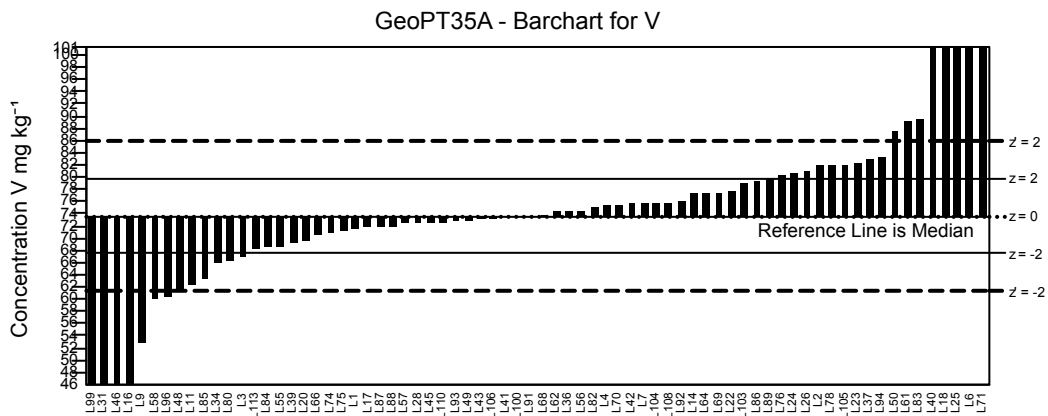
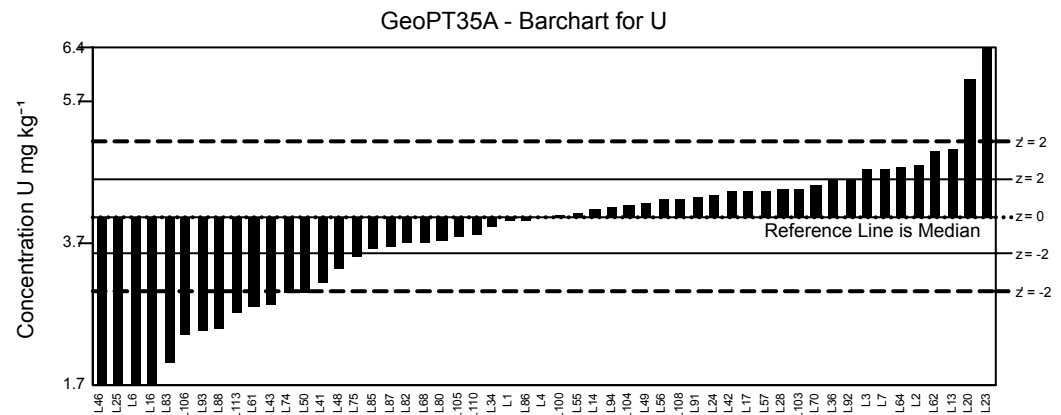
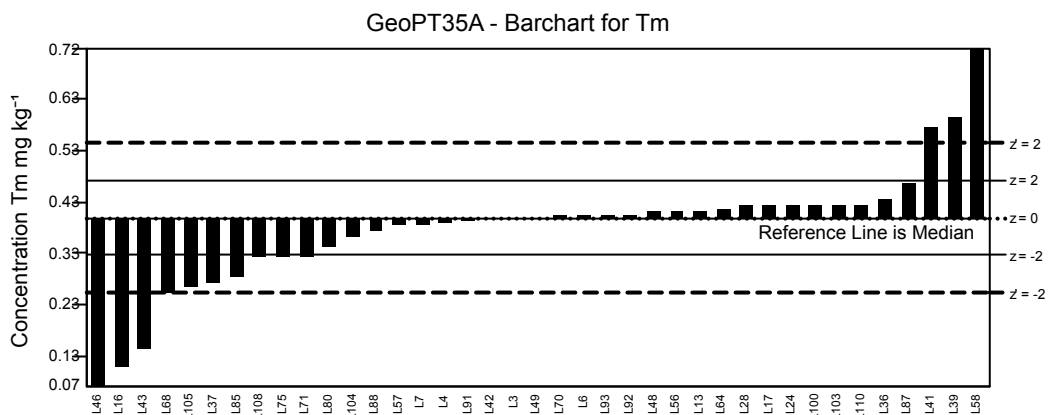
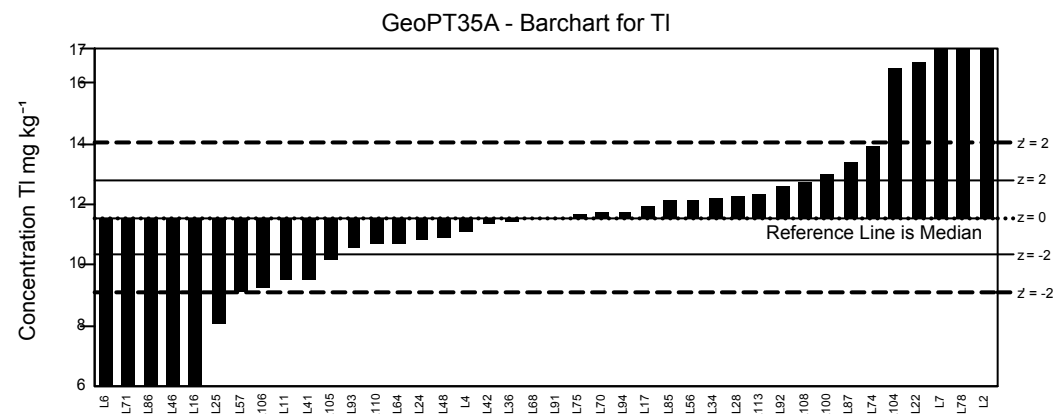
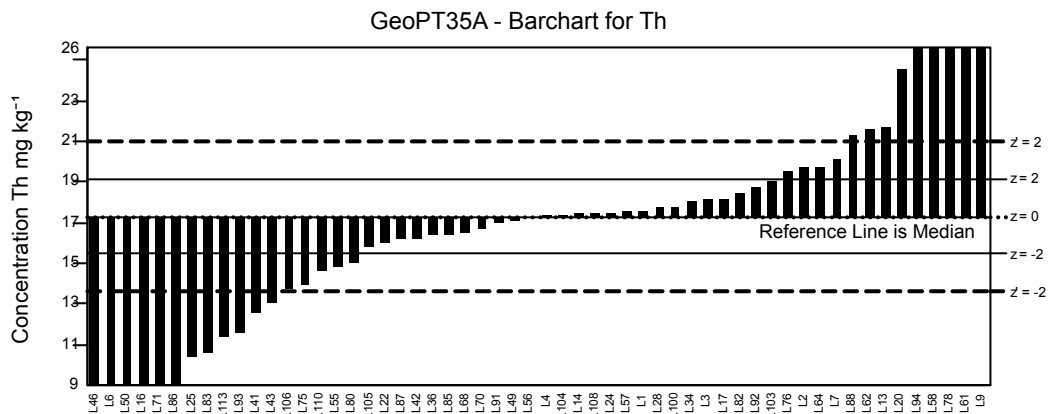


GeoPT35A - Barchart for Ta



GeoPT35A - Barchart for Tb





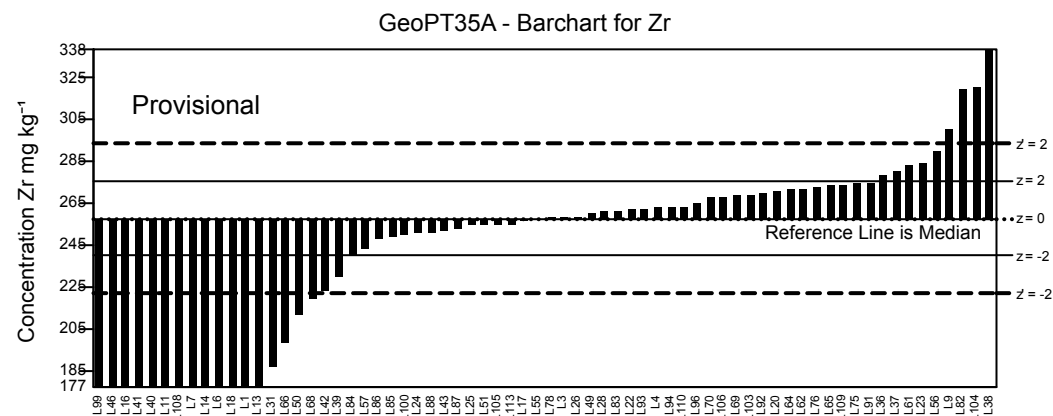
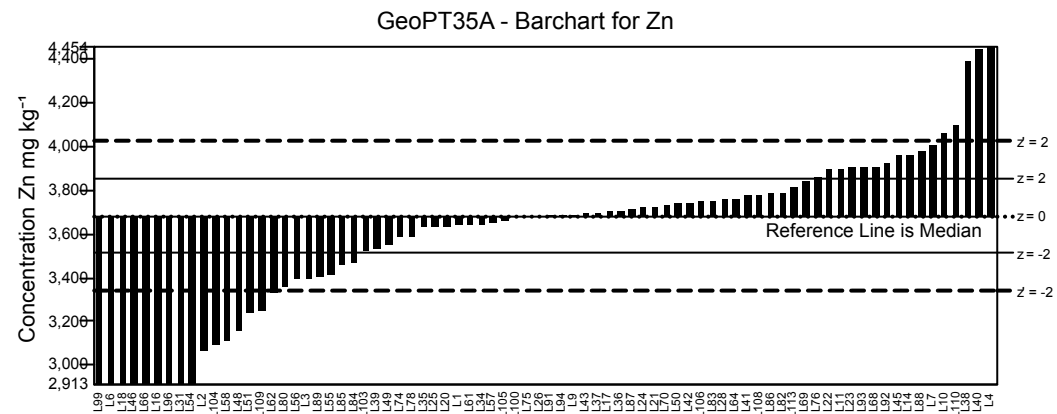
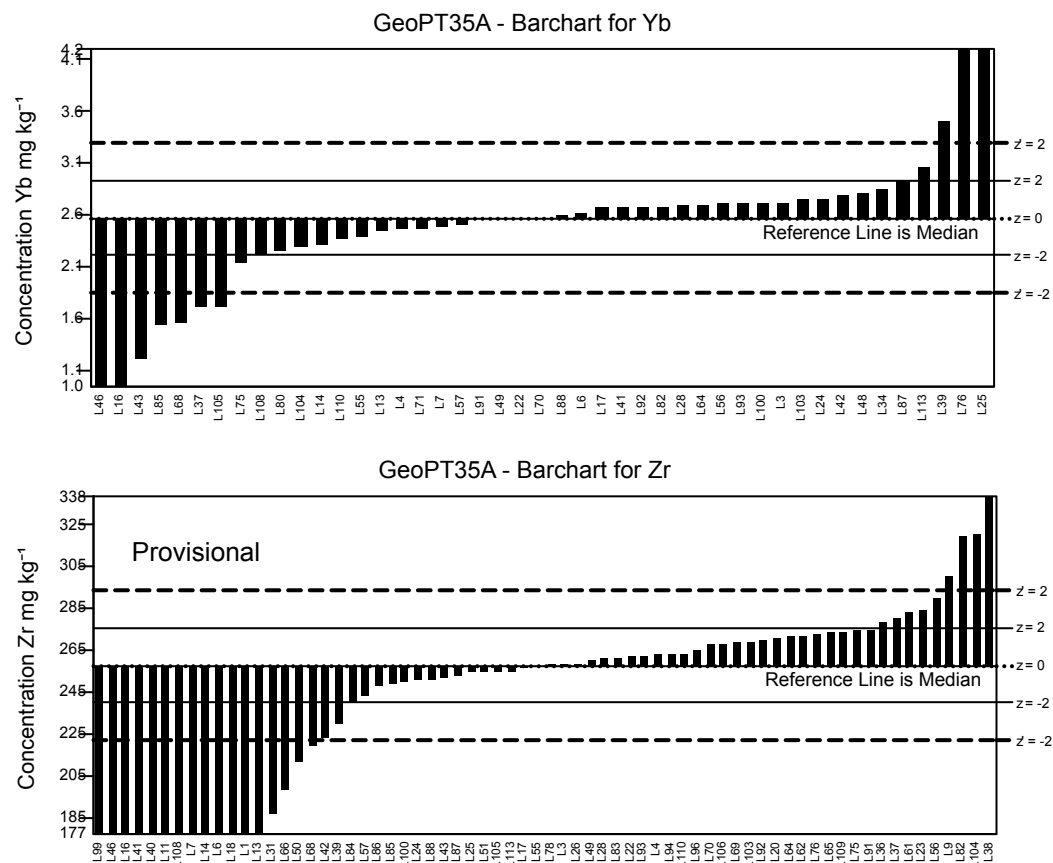
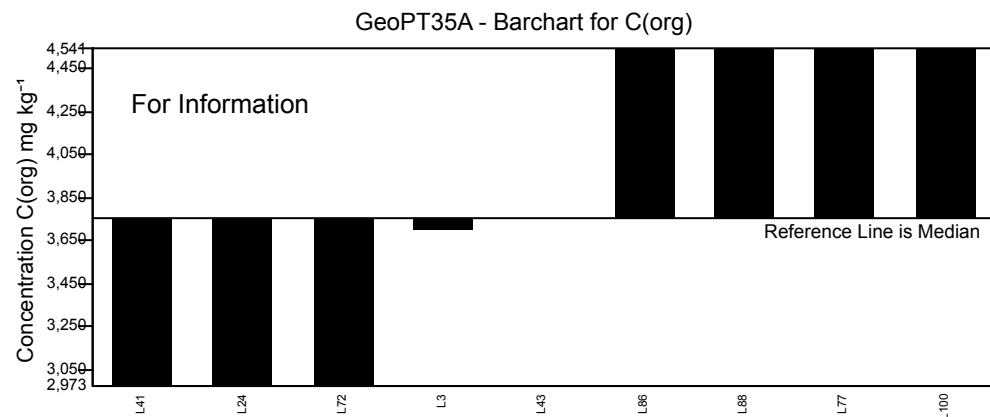
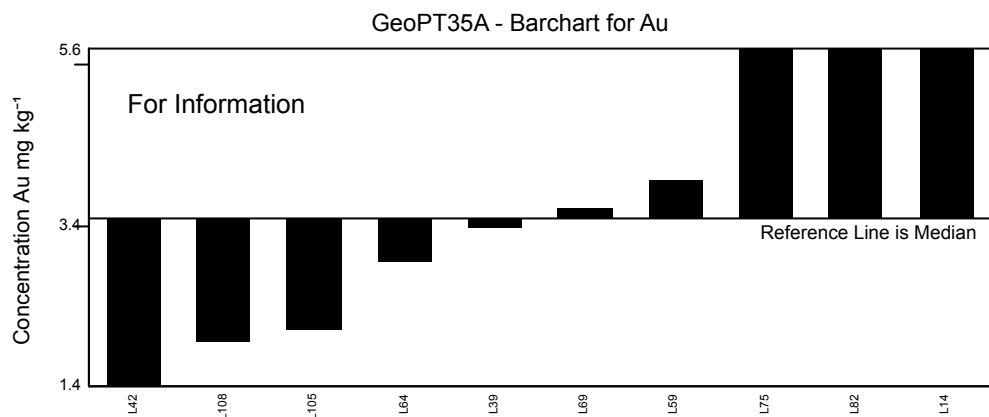
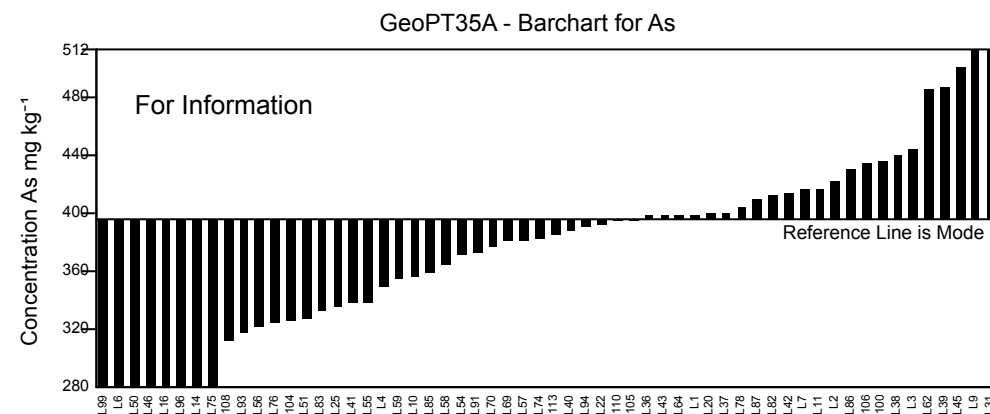
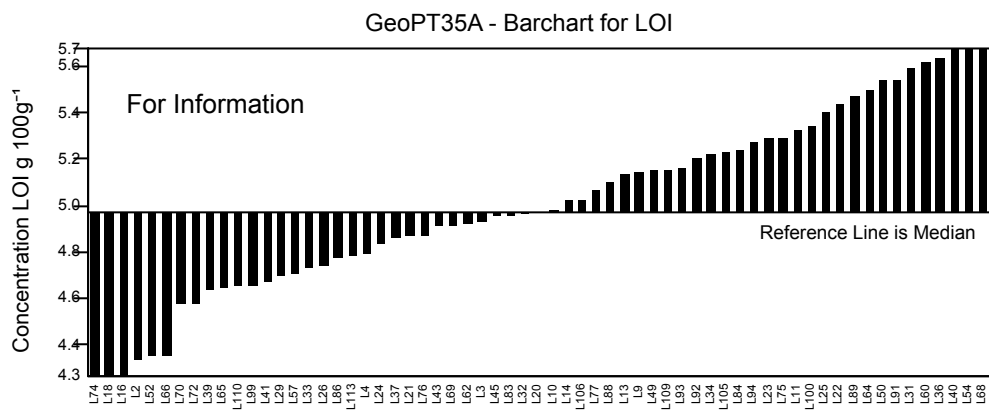
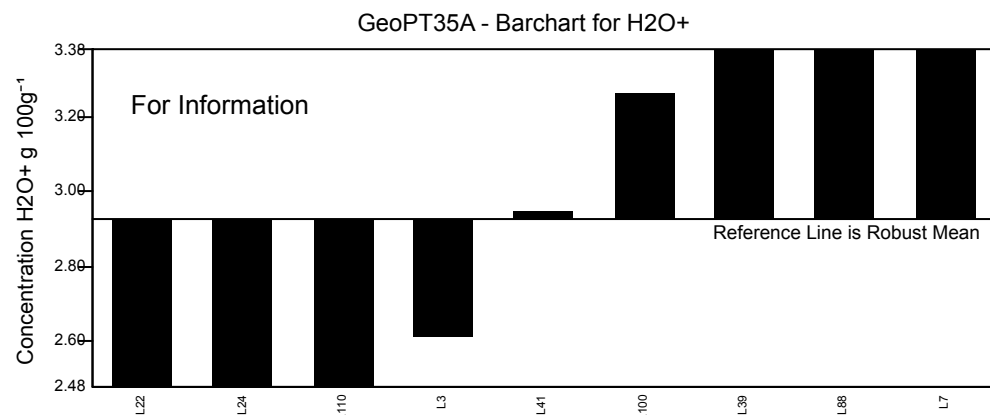
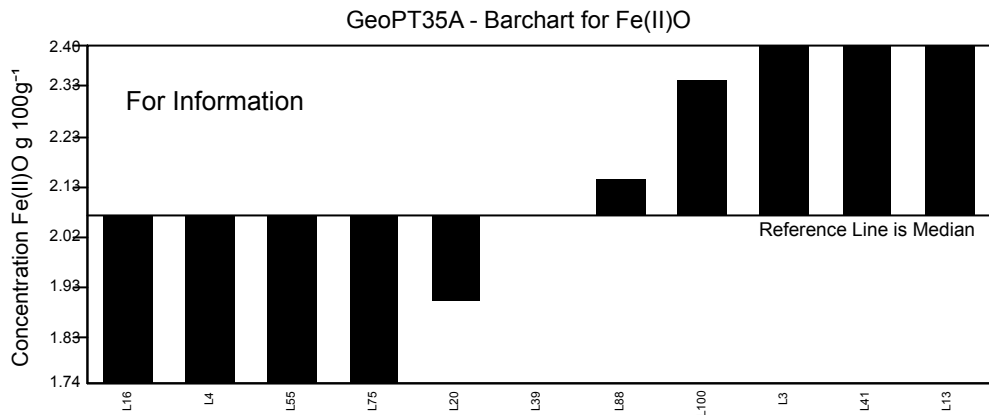
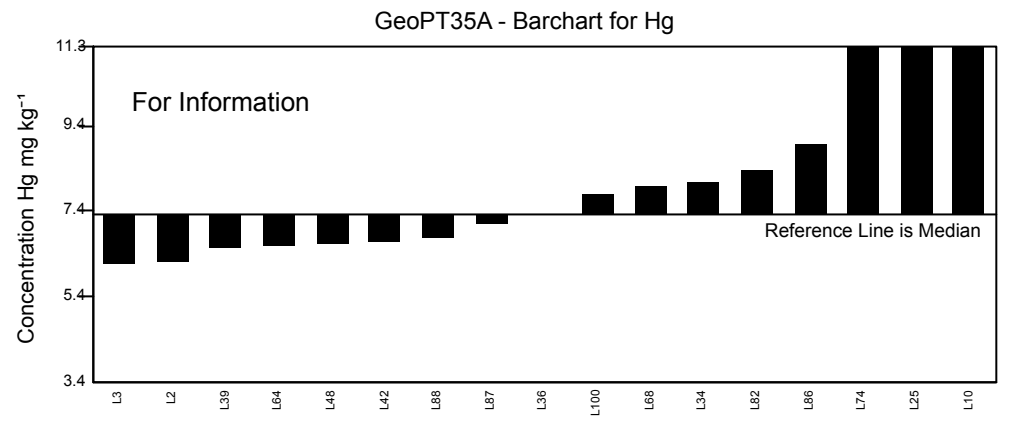
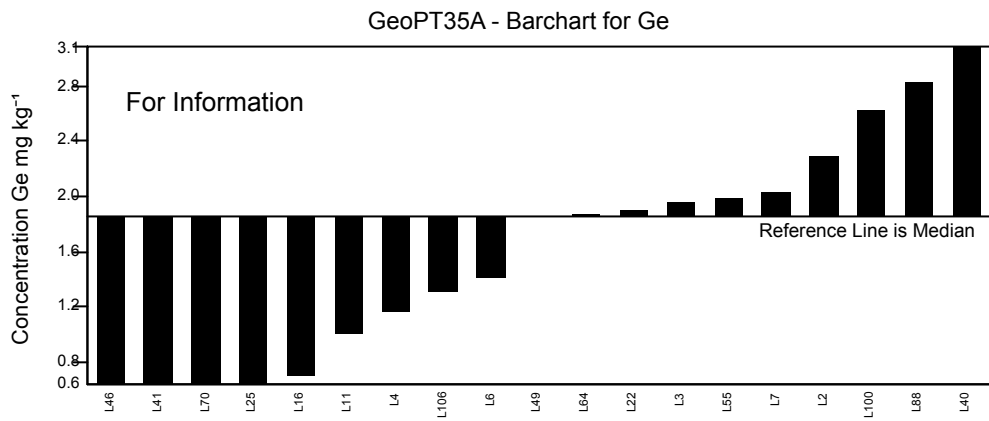
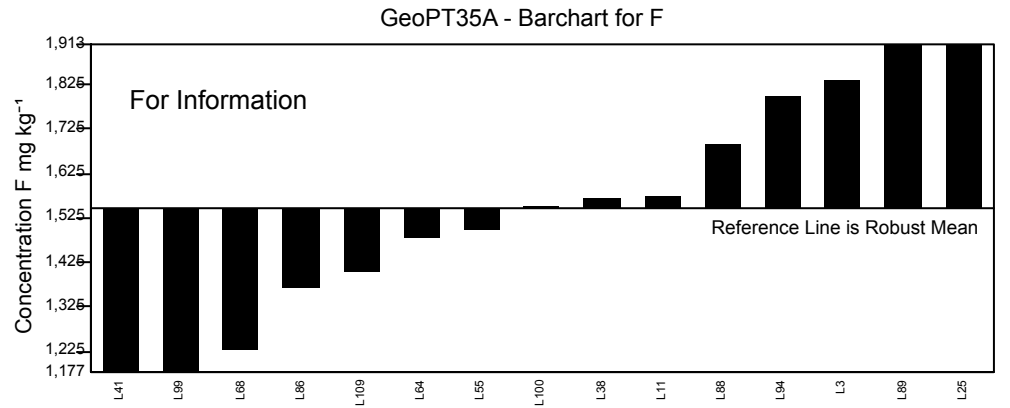
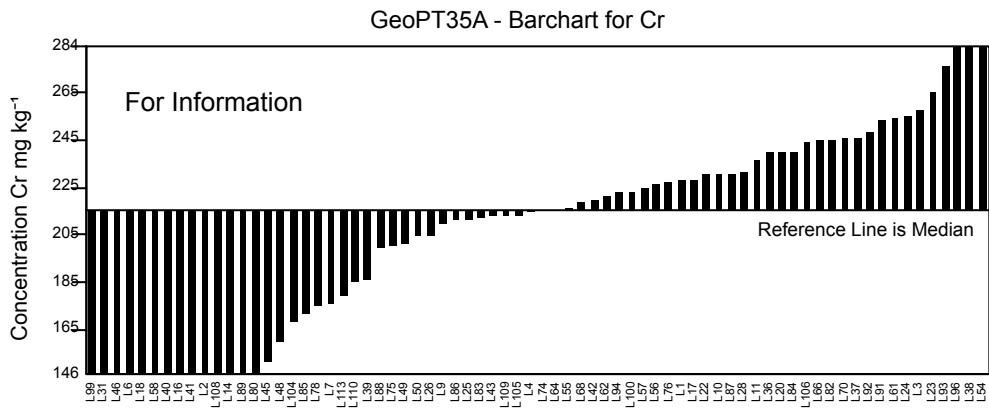
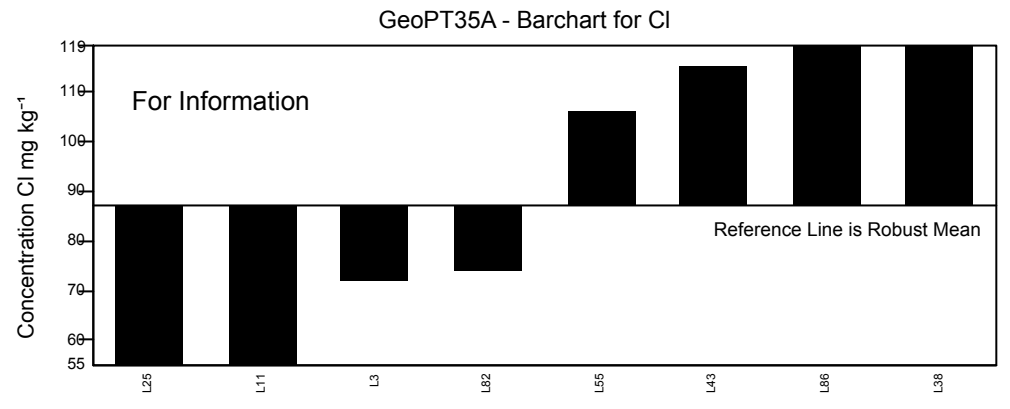
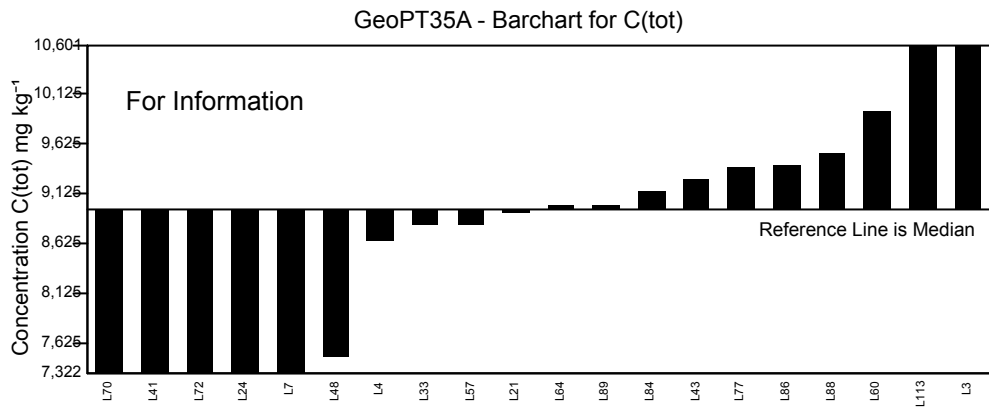


Figure 1: GeoPT35A - Metalliferous sediment, SdAR-H1. Data distribution charts for elements for which values were assigned or provisional values given for guidance. Horizontal lines show the limits for $-2 < z < 2$ for pure geochemistry labs (solid lines) and $-2 < z' < 2$ for applied geochemistry labs (pecked lines).





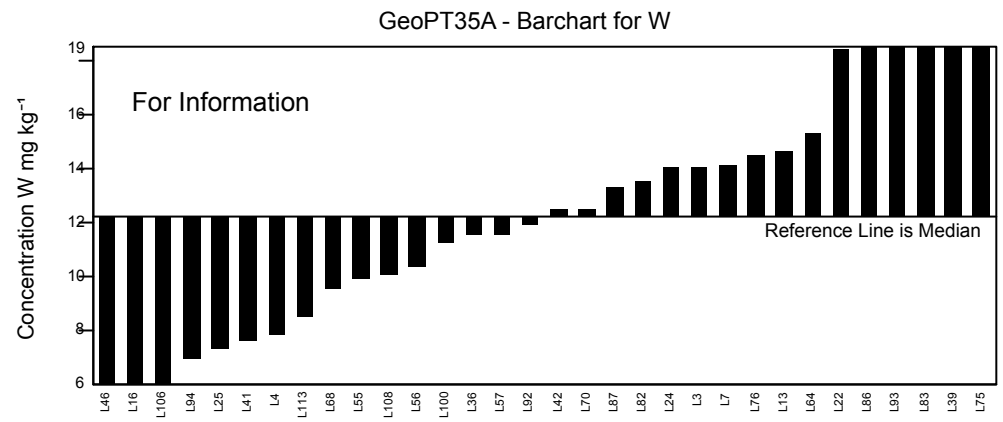
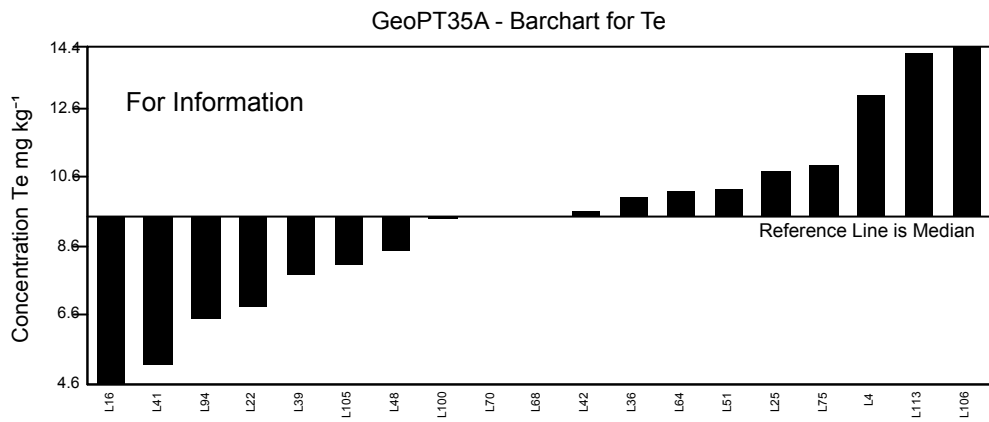
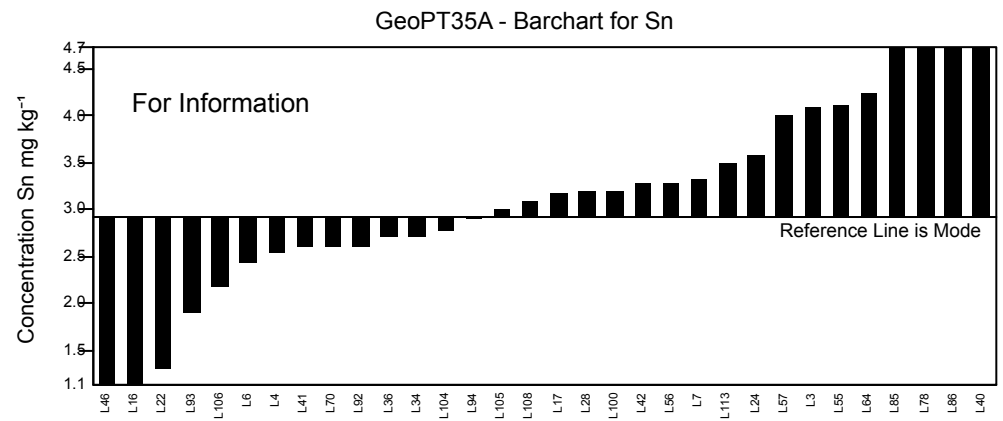
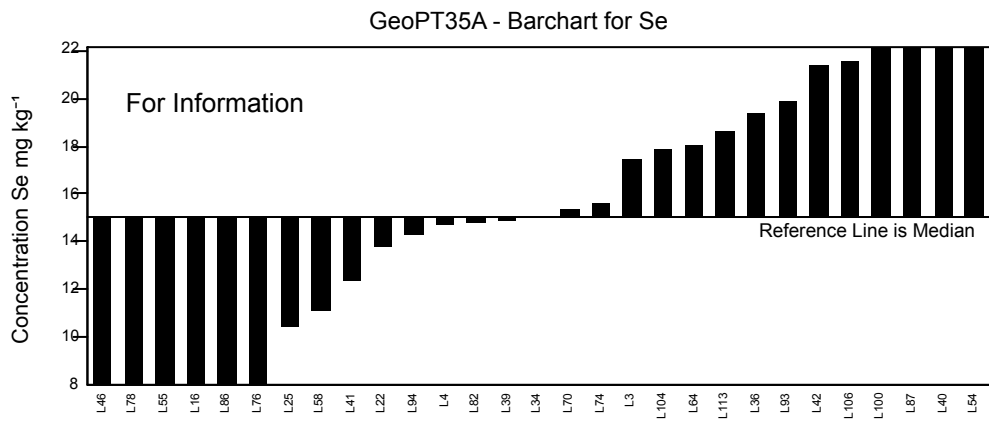
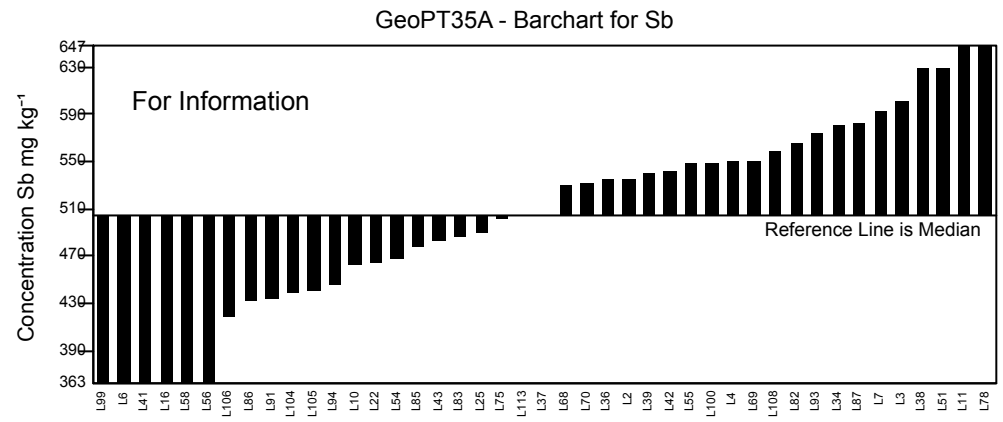
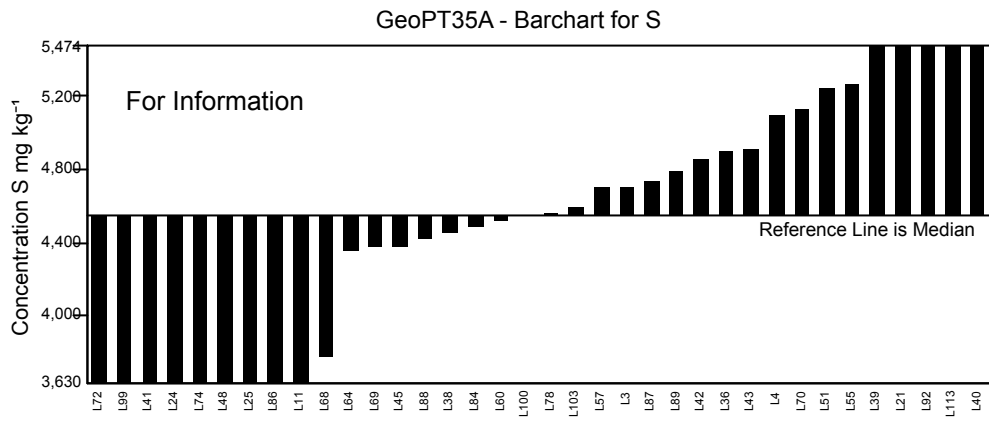


Figure 2: GeoPT35A - Metalliferous sediment, SdAR-H1. Data distribution charts provided for information only for elements for which values could not be assigned.

Multiple Z-Score Chart for GeoPT35A

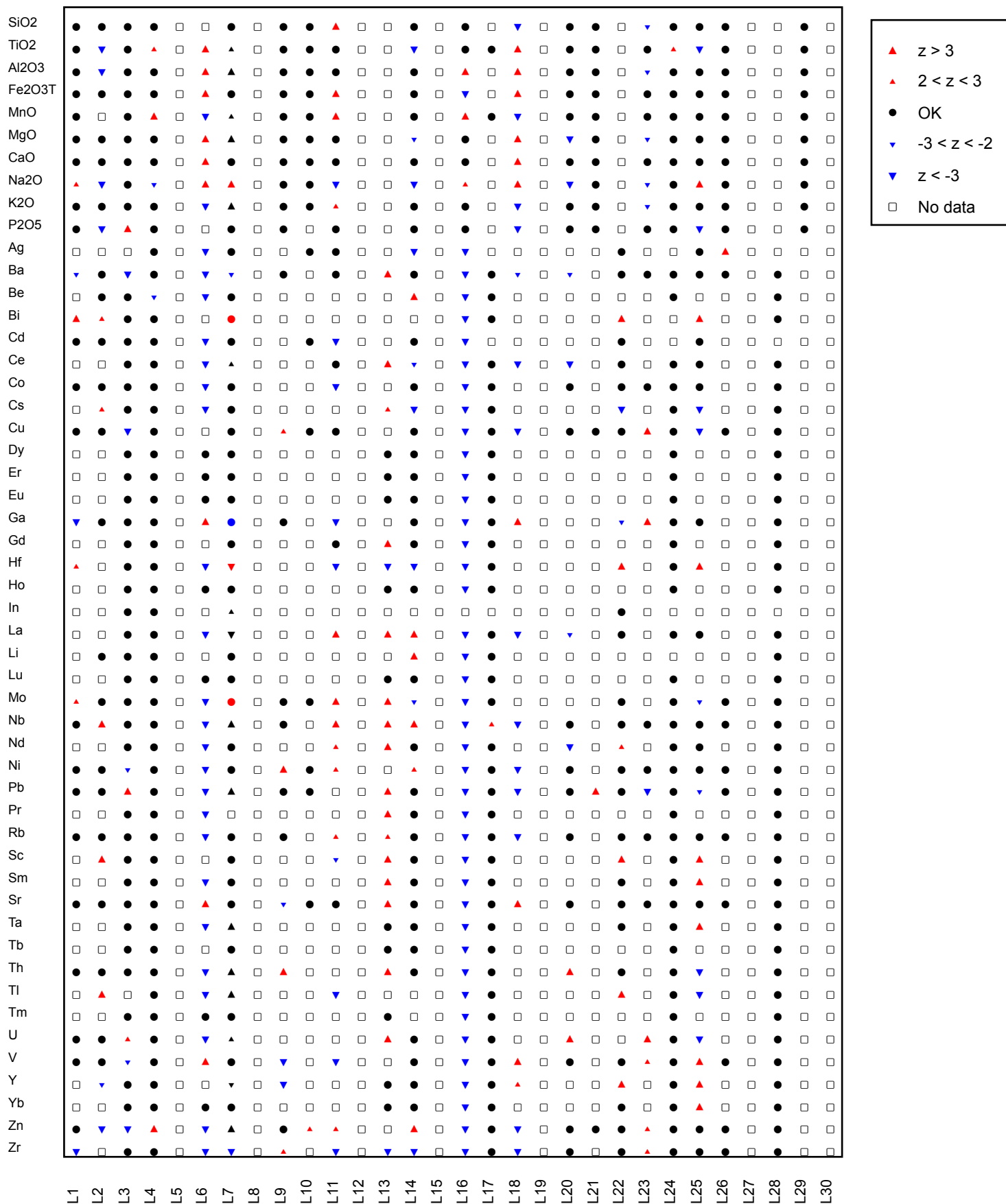


Figure 3: GeoPT35A - Metalliferous sediment, SdAR-H1. Multiple z-score charts for laboratories participating in the GeoPT35A round. Symbols indicate whether or not an elemental result complies with the $-2 < z < +2$ criteria (see key).

Multiple Z-Score Chart for GeoPT35A

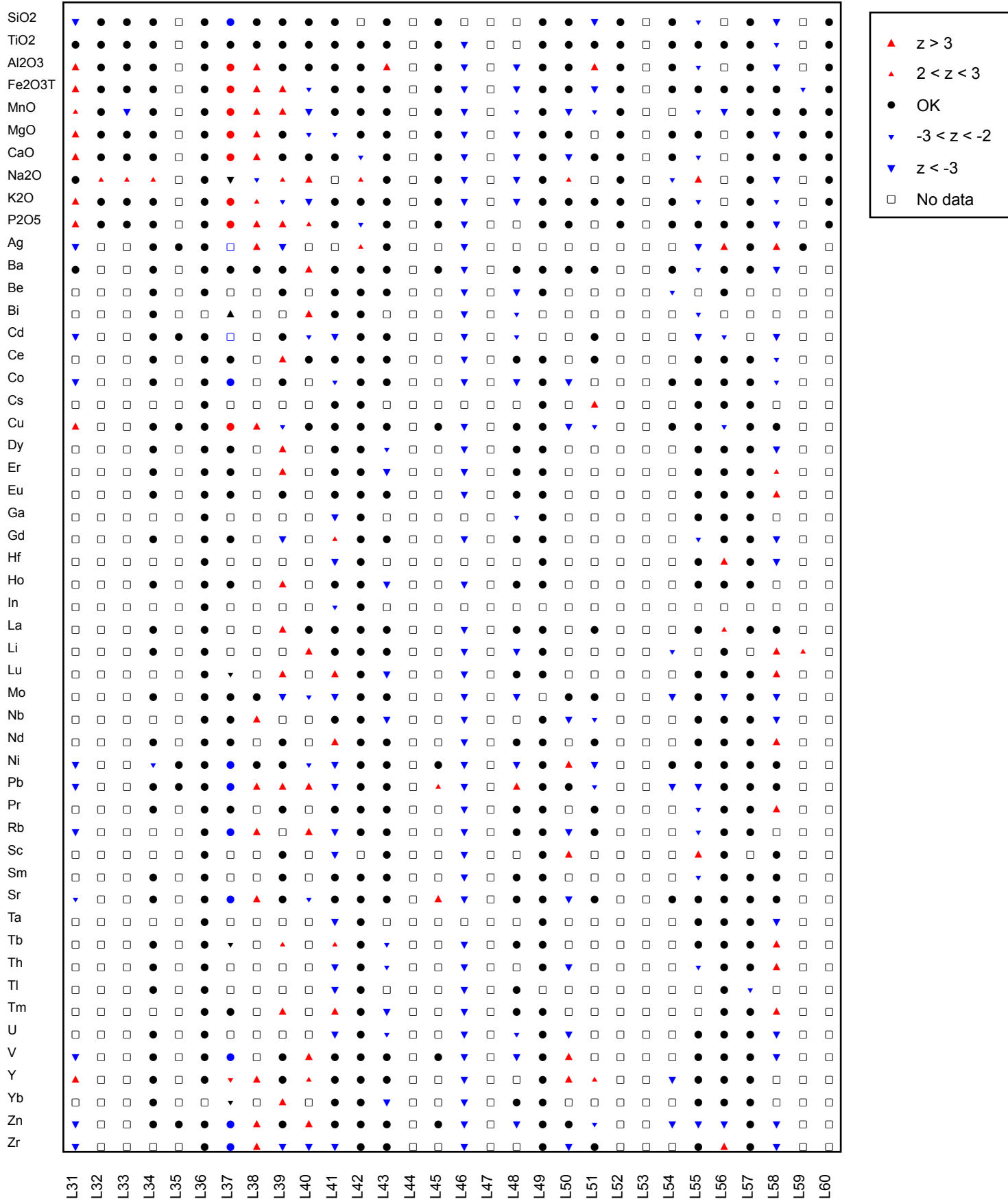


Figure 3: GeoPT35A - Metalliferous sediment, SdAR-H1. Multiple z-score charts for laboratories participating in the GeoPT35A round. Symbols indicate whether or not an elemental result complies with the $-2 < z < +2$ criteria (see key).

Multiple Z-Score Chart for GeoPT35A

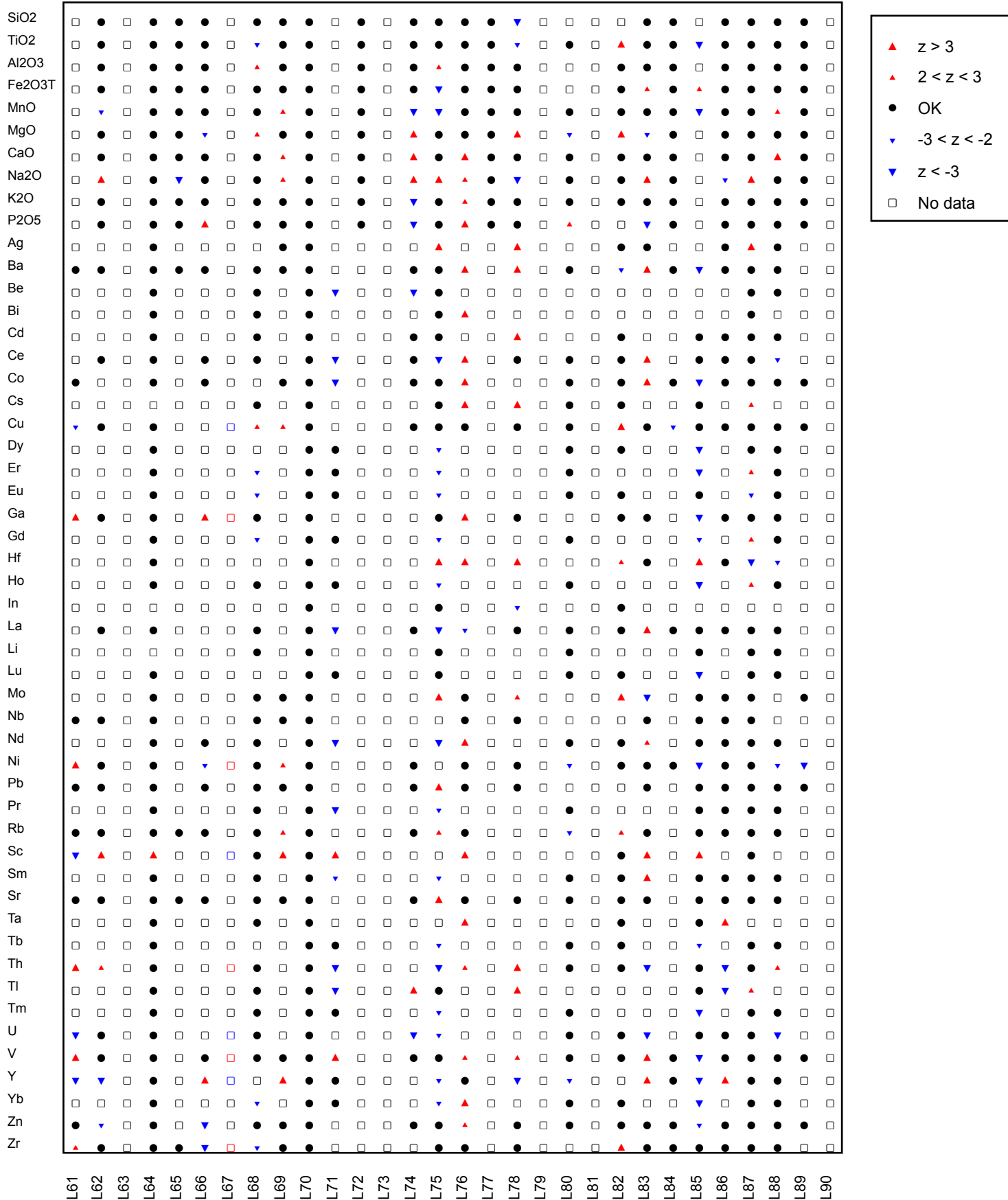


Figure 3: GeoPT35A - Metalliferous sediment, SdAR-H1. Multiple z-score charts for laboratories participating in the GeoPT35A round. Symbols indicate whether or not an elemental result complies with the $-2 < z < +2$ criteria (see key).

Multiple Z-Score Chart for GeoPT35A

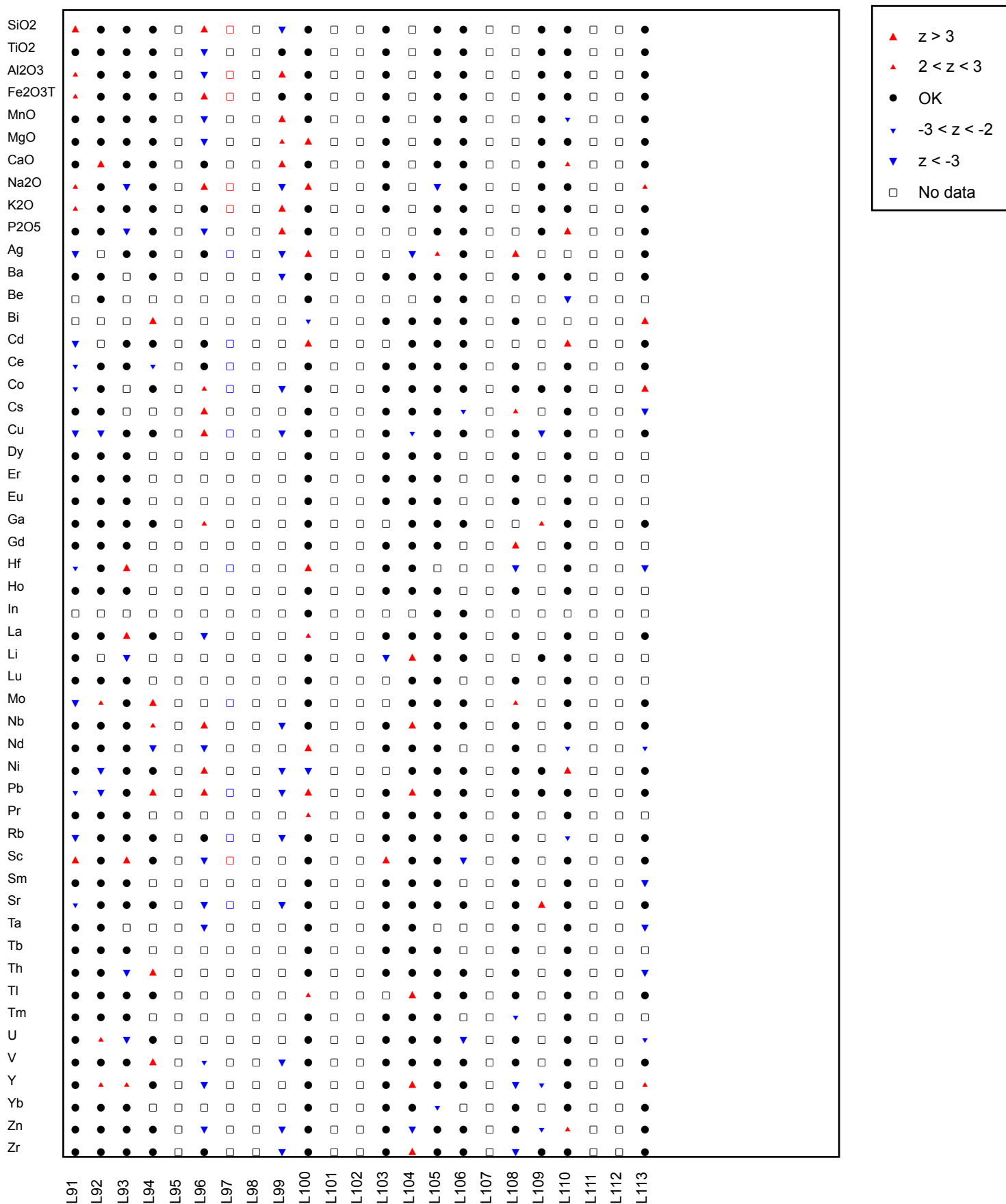


Figure 3: GeoPT35A - Metalliferous sediment, SdAR-H1. Multiple z-score charts for laboratories participating in the GeoPT35A round. Symbols indicate whether or not an elemental result complies with the $-2 < z < +2$ criteria (see key).