Geo*PT*55 — AN INTERNATIONAL PROFICIENCY TEST FOR ANALYTICAL GEOCHEMISTRY LABORATORIES — REPORT ON ROUND 55

(Slate, SMB-1) / July 2024

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Abstract

Results are presented for Round 55 of the Geo*PT* Proficiency Testing programme for analytical geochemistry laboratories organised by the International Association of Geoanalysts (IAG). The test material distributed was identified as Slate, SMB-1, which was collected by Dr Wiedenbeck from the Barberton Greenstone belt of South Africa. In this report, results contributed by 110 laboratories are listed, together with an assessment of consensus values, consequent *z*-scores and a series of charts to show for each analyte the distribution of contributed results and the overall performance of participating laboratories.

Introduction

This fifty-fifth round of Geo*PT*, the international proficiency testing programme for geoanalytical laboratories, was conducted in a similar manner to earlier rounds (previous reports listed in the Appendix). The programme is designed to be a key part of the routine quality assurance procedures employed by an analytical geochemistry laboratory. It is organised by the International Association of Geoanalysts (IAG) and is conducted in accordance with a published protocol (IAG, 2020). The overall aim of the programme is to provide participating laboratories with information on their performance in the form of *z*-scores for each reported measurement result so that individual laboratories can decide whether the quality of their data is satisfactory in relation both to their chosen fitness-for-purpose criteria and to the performance of other laboratories participating in this round. In circumstances where a *z*-score from a reported result is unsatisfactory, a participating laboratory is encouraged to investigate for unsuspected analytical bias and to take corrective action when it appears justified.

Steering Committee for Round 55:

P.C. Webb (administrator and results assessor), P.J. Potts (results reviewer), C.J.B. Gowing (distribution manager and results reviewer), M. Thompson (statistical advisor), M. Wiedenbeck (supplier of SMB-1 material).

Timetable for Round 55:

Distribution of sample: March/April 2024
Results accepted from: 22nd April 2024
Results submission deadline: 26th June 2024
Release of report: July/August 2024

Geo*PT*55 Test Material Details

The test material, identified as Slate SMB-1, but more appropriately regarded as a quartzose greywacke was collected by Dr Michael Wiedenbeck (Deutsches GeoForschungsZentrum, GFZ, Potsdam, Germany) from the south side of the R23 highway, previously mapped as the lower part of the Moodies Group (Anhaeusser, et al. 1981), at location S 25°41'00.2" E 31°09'42.7", in the Barberton Greenstone Belt near Barberton Town, Mpumalanga Province, South Africa. The material was processed first at the Deutsches GeoForschungsZentrum GFZ, Potsdam by Dr Johannes Glodny, and subsequently at the British Geological Survey (BGS), Keyworth, where it was homogenised, divided and packeted under the direction of Dr Charles Gowing. Note that milling to fine powder was carried out in chrome steel equipment which could cause metallic contamination and might result in an elevated mass fraction of Cr.

The test material was evaluated for homogeneity by ICP-MS measurement at the BGS and an assessment of the results showed that this material was sufficiently homogeneous to be suitable for use in this proficiency test.

Submission of Results

For Geo*PT*55 (SMB-1), a total of 4033 measurement results were submitted by 110 laboratories and are listed in Table 1. Of the measurements submitted, 1681 results were designated by their originators as data quality 1 (see the ***z*-score analysis section** below for an explanation of data quality) and are shown in **bold**, whereas 2352 results were specified as data quality 2 and are shown underlined. Results from all laboratories submitting data were used to assess consensus values for each measurand.

Anomalies in reporting were recognised as follows:

> **Several laboratories reported some of their results in units of g/100g instead of mg/kg**, including **two for Ctot; another for Cl, F and S**, which is **counter to instructions** and would result in any *z*-scores being hugely inflated. **One laboratory reported numerous values of '0' (i.e. zero) in this round**, which, with **the possible exception of such a value for LOI**, is also contrary to instructions. Based on the presence of unexplained outliers in distribution diagrams, there may also have been instances where the decimal point was inserted in the wrong place.

As a result of the **incorrect reporting, we must remind participants that measurement results for all constituents listed as trace elements should be reported in mg/kg. Also, we also ask you NOT to report zeros** unless it is a genuine result from a LOI determination. **Please** be aware that **erroneous results cannot be altered or removed once they have been submitted** and that corresponding ***z*-scores will be adversely affected**.

For some time now we have included as an addendum to our reports a section entitled "**Explicit advice to analysts for reporting of procedures involving ignition and fusion"** where we have requested that participants check carefully the procedure they have recorded for their LOI measurement. For LOI in this round there is a relatively well-defined distribution of results, but a wide variety of measurement procedures were recorded. This is unexpected and gives rise to concerns as to whether all of the procedures involved are being recorded correctly. Please use Figures 0.1 and 0.2 to review your reported LOI procedure. If it is not correct, please revise your procedural details for use in future rounds. Our concerns arise because a number of laboratories report XRF, ICP-MS and ICP-OES/AES as the method for LOI determination. Unless LOI is estimated by a procedure involving matrix calculations, it is hard to understand how these methods can be employed. It is also apparent that some laboratories are reporting 'other' when the accompanying description clearly describes gravimetry. Please specify gravimetry when it is the basis of the method used.

Turning to LOI sample preparation procedures. LOI, by its very nature conventionally involves combustion of material as untreated powder, for which drying as directed is the only form of sample preparation that should be involved. Therefore, many of the recorded forms of sample preparation identified in Figure 0.2 are clearly inappropriate. It is perhaps understandable that combustion (CB & PY – see Figure 0.1 key) is chosen in many cases as it is part of the gravimetric method, although it does not represent the actual sample preparation prior to undertaking the procedure.

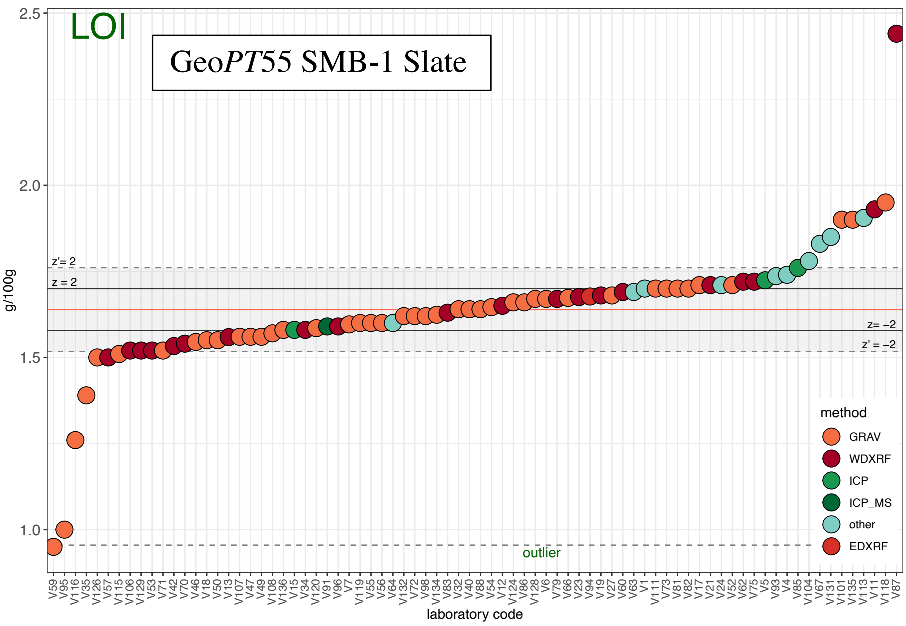


Figure 0.1 A sequential data distribution plot for SMB-1 of sorted LOI results distinguished according to method of measurement, showing a well-defined distribution but some of the recorded procedures are unexpected.

Key to methods: GRAV – Gravimetry; WDXRF – Wavelength dispersive XRF; ICP – Inductively coupled plasma - atomic/optical emission spectrometry; ICP-MS – Inductively coupled plasma - mass spectrometry; other – not defined; EDXRF – Energy dispersive XRF. Results marked as outliers have their true magnitude suppressed.

However, such forms of sample preparation as FM, FD, FM_AD, and especially AD and PP (see Figure 0.2 key) cannot be a precursor to LOI measurement.

Assigned values and results summary

Following procedures described in earlier rounds, and detailed fully in the Geo*PT* protocol (IAG, 2020), robust statistical procedures were used to derive consensus values for measurands in this test material: these consensus values being judged to be the best available estimates of its true composition. Values were credited with assigned status on the basis that: i) sufficient laboratories (15 or more) had contributed data for effective estimation of the consensus, ii) visual assessment gave confidence that a substantial proportion of the results' distribution was symmetrically disposed about the consensus value, iii) the ratio of the uncertainty in the location estimate to the target precision was an acceptably small value (usually < 0.5), and iv) an evaluation of measurement results by analytical procedure – including both the method of analysis and the form of sample preparation – indicated either that no significant procedural bias was discernible amongst measurement results from which the consensus was derived or that sufficient data judged to be unbiased was available from which the consensus value was determined. Where these criteria were largely, but not fully met, or where obvious anomalies in the dataset could be accommodated by judicious selection of the consensus, values were credited with 'provisional' rather than 'assigned' status.

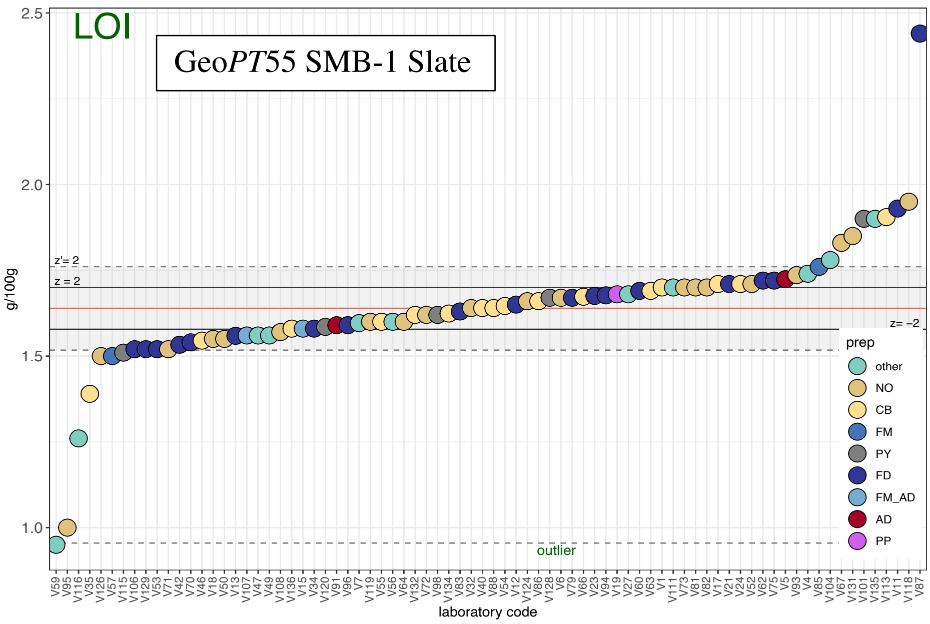


Figure 0.2 A sequential data distribution plot for SMB-1 of sorted LOI results distinguished according to recorded forms of sample preparation showing a well-defined distribution but some sample preparation procedures are unexpected.

Key to sample preparation: other – not defined, NO – No preparation; CB – Combustion; FM – Fusion melt; PY – Pyrolysis; FD – Fusion disc, FM_AD – Fusion followed by acid digestion; AD – Acid digestion; PP – Powder pellet. Results marked as outliers have their true magnitude suppressed.

Data assessments involved an examination of barcharts showing the distribution of results contributed for each measurand (as presented in Figures 1 and 2). In addition, a variety of plots, permitting discrimination of data by method of measurement and by sample preparation procedure, as developed by Thomas Meisel using the statistical package 'R' and made available using the Shiny App (*https://www.shinyapps.io*), were also examined. This approach has enabled us, when necessary, to refine the selection of consensus values by taking account of data distributions according to measurement procedure. Kernel density distributions of such datasets (Shiny App 'ridges' plots) have proved valuable in this respect.

As first notified to participants in 2022, the facility now exists for participants to inspect for themselves Geo*PT* data distributions for all elements in a similar way using Shiny App graphics through the link: *https://geoanalyst.shinyapps.io/GeoPTcommon2/*. This package permits participants to view all data submitted according to: the principle of measurement, the method of sample preparation, and the chosen fitness-for-purpose criterion, using several forms of graphical display.

Consensus values derived from the contributed data are listed in Table 2. They were provided in 20 instances by the Huber robust mean, a procedure that provides limited accommodation of outliers, but is unreliable when too many outliers are present or when a dataset is skewed. In such circumstances, the median is often a more robust estimator of the consensus and was employed in 22 cases. For more severely skewed and strongly tailed datasets, even the median may not be a suitable estimator and a mode can often provide a more effective means of estimating the location of the consensus. In this round the use of a mode as a consensus estimator was preferred in 16 cases, and in 15 of those, the distribution of data was sufficiently compatible with the conditions outlined above to justify the designation of an assigned value. Although the choice of a mode may sometimes be used to 'fine tune' the location of the consensus, the use of modes is more often necessary when datasets are skewed or robust means and medians appeared to be significantly affected by gross outliers. Sometimes the source of the skew can be attributed to a known analytical problem. The procedure used to determine modes was mostly as described by Thompson (2017) involving the estimation of the mass fraction corresponding to the maximum value of the kernel density distribution for the dataset. Such modes can provide a robust estimate of the consensus location that represents the most coherent part of the data distribution where the data are often symmetrically disposed, although the dataset as a whole may be asymmetric.

Table 2 lists consensus values conferred with assigned or provisional status for 12 major components and 46 trace elements in Geo*PT*55 (SMB-1). Barcharts for datasets from which these consensus values were derived are shown in Figure 1. Statistical data, consensus values and status designations are listed in full in Table 2 for the 58 analytes: SiO_2, TiO_2, Al_2O_3, Fe_2O_3T, Fe(II)O*, MnO, MgO, CaO, Na_2O*, K_2O, P_2O_5, LOI*, Ag*, As, Ba, Be, Bi, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Ga, Gd, Ge, Hf, Ho, In*, La, Li, Lu, Mo, Nb, Nd, Ni, Pb, Pr, Rb, Sb, Sc, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb, Zn and Zr. Of these, the measurands of the 5 analytes marked '*' were credited only with provisional status. Provisional status was conferred because either: i) a relatively small number of results (less than 15, but at least 8) contributed to the consensus, or ii) the results were unduly dispersed in relation to the target value, or iii) the distribution of results was significantly skewed, or iv) the dataset was affected by bias in one or more methods employed but the remaining data defined a viable consensus.

Note that recognition of the Fe(II)O distribution as suitable to provide a provisional value was a marginal decision considered to be of assistance to participants who do not normally have the benefit of receiving z-scores for their Fe(II)O results. The provisional designation for Na_2O was considered justified on account of the symmetrical distribution of results and the compatibility of ICP-MS and XRF fused glass disc results as seen on 'ridges' plots (Figure 0.3), alongside the probability that the Horwitz function may be too stringent for major elements at low mass fractions (especially at < 0.5 g/100g) as suggested by Thompson *et al.* (2014). Indium was given a provisional status on account of the small number of results submitted, although almost all of them were in exceptionally good agreement. For both Ag and Ge there were sufficient results in good agreement for a provisional value to be quoted, but a number of results were significantly discrepant. LOI results were much less dispersed than frequently observed for Geo*PT* datasets, and that, combined with the symmetry of the results distribution, justified its provisional status. The Cr data features significantly high and low tails, but the symmetry of the dataset, with sufficient data contributing to the consensus and the agreement between methods as recognised on 'ridges' plots, justifies its status as assigned. Many of the lower group of results were by ICP-AES/OES and ICP-MS prepared by acid digestion.

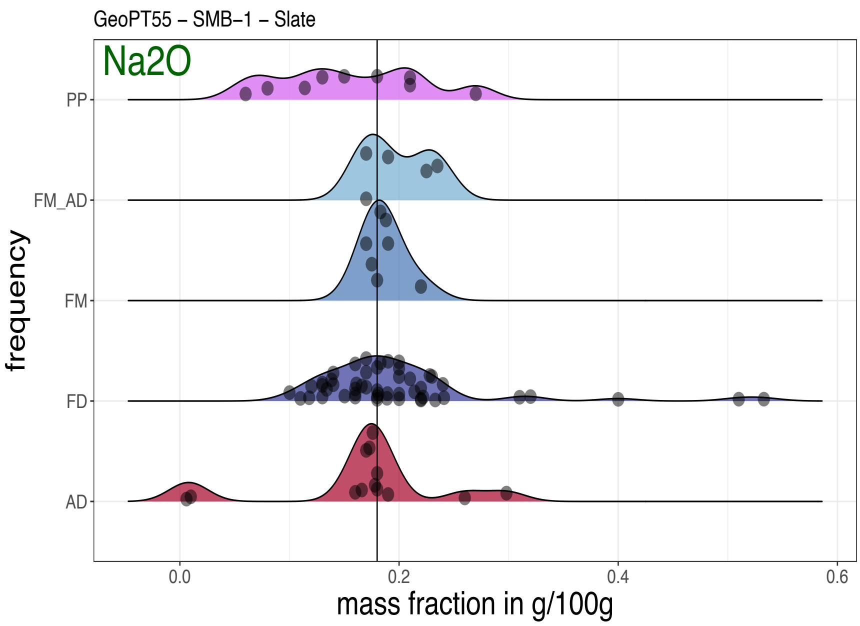


Figure 0.3 A 'ridges' plot for Na_2O in SMB-1 in which smoothed distributions of results presented according to method of sample preparation show that the chosen consensus value is compatible with ICP-MS (FM_AD, FM and AD) and XRF glass disc (FD) measurements.

Key to sample preparation: PP – Powder pellet (XRF); FM_AD – Fusion followed by acid digestion; FM – Fusion melt; FD – Fusion disc (XRF); AD – Acid digestion.

Bar charts for the 8 analytes: H_2O^+, C(tot), Cd, Cl, F, S, Se and Te are plotted in Figure 2 for information only, as the data were either insufficient in number, or their distribution was too highly skewed or too highly dispersed for a sufficiently reliable determination of a consensus for the estimation of *z*-scores.

Data distributions for many HREE (Dy, Ho, Er, Tm, Yb, Lu) and Y feature a clustering of acid digestion results at low mass fractions producing a form of 'shelf' in the results distribution, as exemplified by the Yb dataset shown in Figure 0.4. This observation suggests the probable presence of a mineral host for HREEs that is resistant to dissolution. With numerous low AD values also observed for Zr, it is likely that they are hosted by zircon, which is comparable to the conclusions of Potts *et al*. (2014). Account was taken of these discrepancies to avoid bias in the selection of appropriate concensus values. In other respects, the dispersion associated with the majority of results for most of the REEs is remarkably small, with near perfect distributions for La, Pr, Eu and Gd.

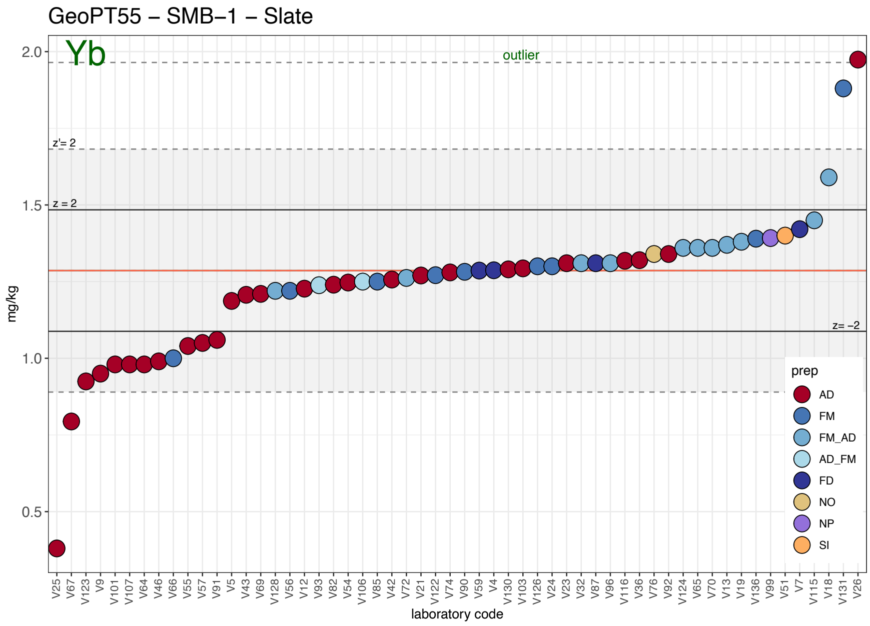


Figure 0.4 A sequential data distribution plot for SMB-1 of sorted Yb results distinguished according to sample preparation procedure, showing a clustering of acid digestion results at low mass fractions producing a form of 'shelf' in the results distribution.

Key to sample preparation: AD – Acid digestion; FM – Fusion melt; FM_AD – Fusion followed by acid digestion; AD_FM – Acid digestion, followed by fusion, FD – Fusion disc; NO – No preparation; NP – Nano-particulate powder pellet; SI – Sintering. Results marked as outliers have their true magnitude suppressed.

Although there were fewer high tails in this dataset than in some previous rounds, they are apparent for Ag, As, Bi, Pb, Sn, Ta and Zn. As shown in Figure 0.5, the high tail for Pb is dominantly produced by XRF results. This could well be on account of poor measurement precision through the use of the Pb Lβ line to avoid interference of AsKα on the PbLα line, combined with suppression of values below recognised detection limits for Pb. In some cases (As, Sn and Zn), comparable low tails provide balance for the dataset, but in other instances the dataset is skewed requiring the use of the mode to provide the consensus value.

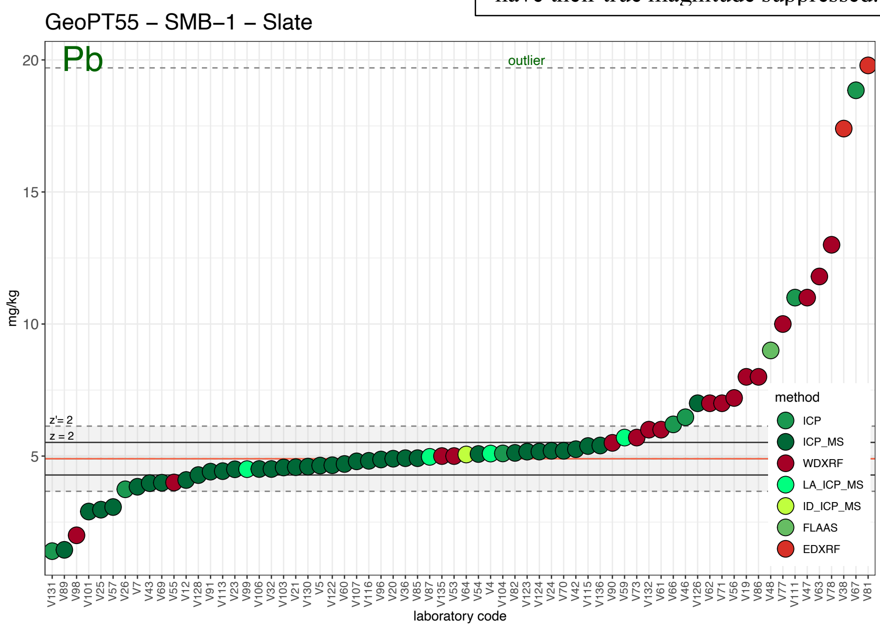


Figure 0.5 A sequential data distribution plot for SMB-1 showing sorted Pb results distinguished according to method of measurement where XRF measurement results contribute significantly to the large tail at high values, whereas other data define a satisfactory consensus.

Key to methods: ICP – Inductively coupled plasma - atomic/optical emission spectrometry; ICP-MS – Inductively coupled plasma - mass spectrometry; WDXRF – Wavelength dispersive XRF spectrometry; LA-ICP_MS – Laser ablation - Inductively coupled plasma - mass spectrometry; ID_ICP_MS – Isotope dilution – inductively coupled plasma - mass spectrometry; FLAAS – Flame atomic absorption spectrometry; EDXRF – Energy dispersive XRF spectrometry. Results marked as outliers have their reported magnitude suppressed.

As is often observed, some sets of results, including those of TiO_2, MnO, CaO, Na_2O, P_2O_5, Bi, Ho, Lu, Nb, Sc, Tl, Tm, Th, Y and Zn feature notably stepped distributions caused by the over-rounding of some of the contributed data. We continue to recommend that for proficiency testing purposes all measurements should be quoted to **at least one decimal place more than would be routinely presented** to a client. This recommendation would enable our statistical procedures to define consensus values more effectively, which is especially relevant for distributions of both major element components and trace elements when reported at low mass fractions.

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.

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.

The **standard deviation for proficiency** (σ_{pt}) – also referred to as the target precision – for each measurand assessed was calculated from a modified form of the Horwitz function as follows:

$$\sigma_{pt} = k.x_{pt}^{0.8495}$$

Where x_{pt} is the mass fraction of the element; the factor k = 0.01 for pure geochemistry laboratories (quality 1) and
k = 0.02 for applied geochemistry laboratories (quality 2).

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

$$z_i = [x_i - x_{pt}] / \sigma_{pt}$$

Where x_i is the contributed measurement result, x_{pt} is the assigned (or provisional) value and σ_{pt} is the target standard deviation (all as mass fractions). *Z*-scores for results contributed to Geo*PT*55 are listed in Table 3. Those of results designated as data **quality 1** are shown in **bold**: those of data quality 2 are shown underlined. *Z*-scores derived from *provisional value*s of measurands are shown in *italics*.

Participating laboratories are invited to assess their performance using the following criteria:–

> *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 participating laboratory). If the *z*-score for an element falls outside this range, more especially if it is outside the range $-3<z<3$, laboratories are advised to examine their procedures, and if necessary, take appropriate action to ensure that their determinations are not subject to unsuspected analytical bias.

Overall performance

A summary of the overall performance of individual laboratories for this round is plotted in multiple *z*-score charts in Figure 3. In these charts, the *z*-score performance for each element is distinguished by symbols that make it easy to identify whether the results from your laboratory were satisfactory or gave *z*-scores that exceeded the action limits. This chart is designed to help individual laboratories judge their overall performance in this proficiency testing round. Participants should always review their *z*-scores in accordance 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 Round 56, the test materials for which will be distributed during September 2024.

Acknowledgements

The authors once again thank Andrea Mills (BGS) for much-valued assistance in distributing these samples. We are also grateful to Johannes Glodny for preliminary sample preparation at Deutsches GeoForschungsZentrum, GFZ, Potsdam, and to Sarah Glynn (University of Witwatersrand, RSA) for assistance in the field with collection if the test material. We are especially grateful to Thomas Meisel (Montanuniversität Leoben, Austria) for both maintaining and continuing to improve the system by developing procedures that involve the package 'R' and the Shiny App, which has greatly assisted in the investigation of data according to analytical procedure, and has provided the graphics featured in Figures 0.1, 0.2, 0.3, 0.4 and 0.5, as well as facilitating the analysis of datasets involving modes derived according to Thompson (2017).

References

Anhaeusser C.R., Robb L.J., Viljoen M.J. (1981). Provisional Geological Map of the Barberton Greenstone Belt and Surrounding Granitic Terrane, Eastern Transvaal and Swaziland. Geological Society of South Africa, Map Sheet 1:250 000.

IAG (2020) Protocol for the operation of the Geo*PT* Proficiency testing scheme. International Association of Geoanalysts (Keyworth, UK), 18pp. *http://www.geoanalyst.org/wp-content/uploads/2020/07/GeoPT-revised-protocol-2020.pdf*.

Meisel, T. C., Webb, P. C., and Rachetti, A. (2022). Highlights from 25 Years of the Geo*PT* Programme: What Can be Learnt for the Advancement of Geoanalysis. *Geostandards and Geoanalytical Research*. *https://onlinelibrary.wiley.com/doi/10.1111/ggr.12424*

Thompson M., Webb P.C. and Potts P.J. (2014) The Geo*PT* Proficiency Testing Scheme for Laboratories Routinely Analysing Silicate Rocks: A Review of the Operating Protocol and Proposals for its Modification. *Geostandards and Geoanalytical Research,* **39**, 433-442.

Thompson, M. (2017) On the role of the mode as a location parameter for the results of proficiency tests in chemical measurement. *Anal. Methods*, **9**, p.5554-5550.

References of more general relevance

Potts P.J., Webb, P.C. and Thompson M. (2013) An assessment of performance in the routine analysis of silicate rocks based on an analysis of data submitted to the Geo*PT* proficiency testing programme for geochemical laboratories (2001–2011) *Geostandards and Geoanalytical Research*, **37**, 403–416.

Potts P.J., Thompson M., and Webb, P.C. (2015) The reliability of assigned values from the Geo*PT* proficiency testing programme from an evaluation of data for six test materials that have been characterised as certified reference materials. *Geostandards and Geoanalytical Research*, **39**, 407–417.

Potts P.J., Webb P.C. and Thompson M. (2014) Bias in the determination of Zr, Y and rare earth element concentrations in selected silicate rocks by ICP-MS when using some routine acid dissolution procedures: Evidence from the Geo*PT* proficiency testing programme. *Geostandards and Geoanalytical Research*, 39, 403–416.

Potts P.J., Webb, P.C. and Thompson M. (2019) The Geo*PT* proficiency testing programme as a scheme for the certification of geological reference materials. *Geostandards and Geoanalytical Research*, **43**, 409–418.

Potts P.J. and Webb, P.C (2019) An evaluation of methods for assessing the competence of laboratories based on performance in the Geo*PT* proficiency testing scheme. *Geostandards and Geoanalytical Research*, **43**, 217–22.

Webb, P.C., Potts P.J., Thompson M., Wilson, S.A. and Gowing, C.J.B. (2019) The long-term robustness and stability of consensus values as composition location estimators for a typical geochemical test material in the Geo*PT* proficiency testing programme. *Geostandards and Geoanalytical Research*, **43**, 397–408.

ADDENDUM
— IMPORTANT NOTICES TO ANALYSTS

Participant access to graphical displays of Geo*PT* data distributions

As previously reported, participants can view their data according to analytical procedure online, using the Shiny App implementation produced and arranged by Thomas Meisel:
https://www.geoanalyst.shinyapps.io/GeoPTcommon2

Reminder about correct reporting of Loss On Ignition (LOI) procedures

As demonstrated in the text, it is a concern that procedures for LOI determination are not recorded accurately by all participants. Please check your recorded LOI procedure before submitting results in the next round of Geo*PT*.

Appendix 1

Publication status of proficiency testing reports.

Previous Geo*PT* reports are available for download from the IAG website (*http://www.geoanalyst.org/*).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix 1 (Cont'd)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Geo*PT*36
Webb, P.C., Thompson, M., Potts, P.J and Wilson, S. (2015)
Geo*PT*36 - an international proficiency test for analytical geochemistry laboratories - report on round 36 (Gabbro, GSM-1) / January 2015. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*36A
Webb, P.C., Thompson, M., Potts, P.J and Wilson, S. (2015)
Geo*PT*36A - an international proficiency test for analytical geochemistry laboratories - report on round 36A (Metal-rich sediment, SdAR-M2) / January 2015. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*37
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Burnham, M. (2015)
Geo*PT*37 - an international proficiency test for analytical geochemistry laboratories - report on round 37 (Rhyolite, ORPT-1) / July 2015. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*37A
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Wilson, S. (2015)
Geo*PT*37A - an international proficiency test for analytical geochemistry laboratories - report on round 37A (Blended sediment, SdAR-L2) / July 2015. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*38
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Wilson, S.A. (2016)
Geo*PT*38 - an international proficiency test for analytical geochemistry laboratories - report on round 38 (Gabbro, OU-7) / January 2016. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*38A
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Meisel, T. (2016)
Geo*PT*38A - an international proficiency test for analytical geochemistry laboratories – special report on round 38A (Modified harzburgite, HARZ01) / June 2016. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*39
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Wilson, S.A. (2016)
Geo*PT*39 - an international proficiency test for analytical geochemistry laboratories - report on round 39 (Syenite, SyMP-1) / July 2016. International Association of Geoanalysts: Unpublished report.

Appendix 1 (Cont'd)

Geo*PT*39A
Webb, P.C., Thompson, M., Potts, P.J, and Gowing, C.J.B. (2016) Geo*PT*39A - an international proficiency test for analytical geochemistry laboratories - report on round 39A (Nepheline syenite, MNS-1) / July 2016. International Association of Geoanalysts: Unpublished report.

Geo*PT*40
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Wilson, S.A. (2017)
Geo*PT*40 - an international proficiency test for analytical geochemistry laboratories - report on round 40 (Silty marine shale, ShWYO-1) / January 2017. International Association of Geoanalysts: Unpublished report.

Geo*PT*40A
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Wilson, S.A. (2017)
Geo*PT*40A - an international proficiency test for analytical geochemistry laboratories - report on round 40A (Calcareous organic-rich shale, ShTX-1) / January 2017. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*41
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Wilson, S.A. (2017)
Geo*PT*41 - an international proficiency test for analytical geochemistry laboratories - report on round 41 (Andesite, ORA-1) / July 2017. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*41A
Webb, P.C., Thompson, M., Potts, P.J, Gowing, C.J.B. and Wilson, S.A. (2017)
Geo*PT*41A - an international proficiency test for analytical geochemistry laboratories - report on round 41A (Mineralized stream sediment, SSCO-1) / July 2017. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*42
Webb, P.C., Thompson, M., Potts, P.J., Gowing, C.J.B. and Burnham, M. (2018)
Geo*PT*42 – an international proficiency test for analytical geochemistry laboratories – report on round 42 (Queenston shale, QS-1) / January 2018. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*43
Webb, P.C., Potts, P.J., Thompson, M. and Gowing, C.J.B. (2018)
Geo*PT*43 – an international proficiency test for analytical geochemistry laboratories – report on round 43 (Dolerite, ADS-1) / July 2018. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*44
Webb, P.C., Potts, P.J., Thompson, M., Gowing, C.J.B. (2019)
Geo*PT*44 – an international proficiency test for analytical geochemistry laboratories – report on round 44 (Calcareous shale, ShCX-1) / January 2019. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*44A
Webb, P.C., Potts, P.J., Thompson, M. Gowing, C.J.B. and Wilson, S.A. (2019)
Geo*PT*44A – an international proficiency test for analytical geochemistry laboratories – report on round 44A (Calcareous mudrock, CM-1) / January 2019. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*45
Webb, P.C., Potts, P.J., Thompson, M. Gowing, C.J.B. and Wilson, S.A. (2019)
Geo*PT*45 – an international proficiency test for analytical geochemistry laboratories – report on round 45 (Silicified siltstone, GONV-1) / July 2019. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*46
Webb, P.C., Potts, P.J., Thompson, M. and Gowing, C.J.B. (2020)
Geo*PT*46 – an international proficiency test for analytical geochemistry laboratories – report on round 46 (Granodiorite, HG-1) / January 2020. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*46A
Webb, P.C., Potts, P.J., Thompson, M. Gowing, C.J.B. and Wilson, S.A. (2020)
Geo*PT*46A – an international proficiency test for analytical geochemistry laboratories – report on round 46A (Phosphate rock, POLC-1) / January 2020. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*47
Webb, P.C., Potts, P.J., Thompson, M. and Gowing, C.J.B. (2020)
Geo*PT*47 – an international proficiency test for analytical geochemistry laboratories – report on round 47 (Silty Soil BIM-1) / December 2020. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*47A
Webb, P.C., Potts, P.J., Thompson, M. and Gowing, C.J.B. (2020)
Geo*PT*47A – an international proficiency test for analytical geochemistry laboratories – report on round 47A (Silty Soil, NES-1) / December 2020. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*48
Webb, P.C., Potts, P.J., Thompson, M., Gowing, C.J.B., Glodny, J., Wiedenbeck, M. (2021)
Geo*PT*48 – an international proficiency test for analytical geochemistry laboratories – report on round 48 (Monzonite, MzBP-1) / April 2021. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*49
Webb, P.C., Potts, P.J., Thompson, M., Gowing, C.J.B., and Wilson, S.A. (2021)
Geo*PT*49 – an international proficiency test for analytical geochemistry laboratories – report on round 49 (Basalt, BVA-1) / July 2021. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*50
Webb, P.C., Potts, P.J., Thompson, M., and Gowing, C.J.B. (2022)
Geo*PT*50 – an international proficiency test for analytical geochemistry laboratories – report on round 50 (Calcified sediment, CSd-1) / January 2022. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*51
Webb, P.C., Potts, P.J., Thompson, M., Gowing, C.J.B. and Renno, A.D. (2022)
Geo*PT*51 – an international proficiency test for analytical geochemistry laboratories – report on round 51 (Leucomonzogranite, GMN-1) / July 2022. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*51A
Webb, P.C., Potts, P.J., Thompson, M. and Gowing, C.J.B. (2022)
Geo*PT*51A – an international proficiency test for analytical geochemistry laboratories – report on round 51A (Granite, MEG-1) / July 2022. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*52
Webb, P.C., Potts, P.J., Gowing, C.J.B., Thompson, M., Wind, J., (2023)
Geo*PT*52 – an international proficiency test for analytical geochemistry laboratories – report on round 52 (Metalliferous Shale, EMS-1) / January 2023. International Association of Geoanalysts, Keyworth. Unpublished report.

Geo*PT*53
Webb, P.C., Potts, P.J., Gowing, C.J.B., Thompson, M., Wiedenbeck, M., Glodney, J. (2023) Geo*PT*53 – an international proficiency test for analytical geochemistry laboratories – report on round 53 (Tonalite, TLB-1) / July 2023. International Association of Geoanalysts, Keyworth. Unpublished report.

Appendix 1 (Cont'd)

Geo*PT*54
Webb, P.C., Potts, P.J, Gowing, C.J.B. Thompson, M., Sigmarsson, O. and Wiedenbeck, M (2024)
Geo*PT*54 - an international proficiency test for analytical geochemistry laboratories - report on round 54 (Tholeiitic Basalt, BNA-1) / February 2024. International Association of Geoanalysts: Unpublished report.

Geo*PT*54A
Webb, P.C., Potts, P.J, Gowing, C.J.B. Thompson, M., and Enzweiler, J (2024)
Geo*PT*54A - an international proficiency test for analytical geochemistry laboratories - report on round 54A (Basalt, CSQ-1) / February 2024. International Association of Geoanalysts: Unpublished report.

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V1	V2	V4	V5	V6	V7	V9	V11	V12	V13	V15	V17	V18
SiO2	$g\ 100g^{-1}$	**74.14**	77.07	75.155	**72.81**	73.542	**74.028**	74.04	73.8	**74.124**	74.157	**73.8**	69.7	73.93
TiO2	$g\ 100g^{-1}$	**0.51**	0.58	0.496	**0.489**	0.479	**0.503**	0.481	0.483	**0.496**	0.507	**0.497**	0.53	0.499
Al2O3	$g\ 100g^{-1}$	**9.78**	10.12	9.735	**9.207**	10.28	**9.699**	9.67	9.69	**9.588**	9.657	**9.68**	11.96	9.67
Fe2O3T	$g\ 100g^{-1}$	**6.16**	7.53	5.929	**6.319**	5.769	**6.168**	6.09	6.1	**6.126**	6.073	**6.07**	6.82	6.19
Fe(II)O	$g\ 100g^{-1}$													
MnO	$g\ 100g^{-1}$	**0.07**	0.08	0.061	**0.067**	0.059	**0.064**	0.059	0.064	**0.068**	0.062	**0.066**	0.06	0.068
MgO	$g\ 100g^{-1}$	**2.33**	2.76	2.356	**2.194**	2.375	**2.363**	2.39	2.36	**2.351**	2.395	**2.47**	2.79	2.44
CaO	$g\ 100g^{-1}$	**0.49**	0.34	0.700	**0.389**	0.440	**0.469**	0.4	0.446	**0.45**	0.422	**0.45**	0.71	0.46
Na2O	$g\ 100g^{-1}$	**0.24**	0.21	0.184	**0.176**	0.533	**0.228**		0.241	**0.12**	0.13	**0.235**	0.26	0.2
K2O	$g\ 100g^{-1}$	**4.45**	4.03	4.223	**4.475**	4.264	**4.389**	4.28	4.52	**4.399**	4.478	**4.52**	4.94	4.298
P2O5	$g\ 100g^{-1}$	**0.18**	0.37	0.157	**0.157**	0.160	**0.163**	0.161	0.156	**0.155**	0.156	**0.163**	0.16	0.172
H2O+	$g\ 100g^{-1}$													
CO2	$g\ 100g^{-1}$			0.262					0.177					
LOI	$g\ 100g^{-1}$	**1.7**		1.74	**1.724**	**1.67**	**1.596**		1.93	**1.65**	1.559	**1.58**	1.71	1.55
Ag	$mg\ kg^{-1}$			0.034			**0.028**			**0.035**				
As	$mg\ kg^{-1}$	**8**	7	8.313			**3.087**	9			13.6		7.6	8.75
Au	$mg\ kg^{-1}$													
B	$mg\ kg^{-1}$													
Ba	$mg\ kg^{-1}$	**900**	724	863.056	**921**	1016	**896.2**	854		**907.4**		**911.4**	902.3	888
Be	$mg\ kg^{-1}$				**1.414**			1.38		**1.189**				
Bi	$mg\ kg^{-1}$			0.150			**0.149**			**0.145**	0.15		8.3	
Br	$mg\ kg^{-1}$						**7.9**							
C(org)	$mg\ kg^{-1}$								725					
C(tot)	$mg\ kg^{-1}$			713.130		**0.06**			242	**757**				
Cd	$mg\ kg^{-1}$						**0.063**			**0.005**				
Ce	$mg\ kg^{-1}$	**55**		55.669	**57.694**		**55.634**	55.27		**52.97**	54			58.6
Cl	$mg\ kg^{-1}$					132	**0.031**							
Co	$mg\ kg^{-1}$	**35**	19	33.747	**34.194**			32.41		**33.69**	34.2	**34.1**	33.1	32.8
Cr	$mg\ kg^{-1}$	**1433**	1213	1224.550	**1250.900**	1212	**1233.200**	1084	116	**1289**	1203	**1331.600**	888.6	1304
Cs	$mg\ kg^{-1}$			5.569	**6.122**		**6.02**	6.22		**5.932**	6.5			6.2
Cu	$mg\ kg^{-1}$	53	52	57.167	**53.761**	50	**41.8**	52		**51.86**	52	**43.2**	50.3	61.8
Dy	$mg\ kg^{-1}$			2.644	**2.487**		**2.72**	2.03		**2.595**	2.7			2.91
Er	$mg\ kg^{-1}$			1.364	**1.286**		**1.39**	0.94		**1.367**	1.5			1.59
Eu	$mg\ kg^{-1}$			1.035	**1.076**		**1.108**	1.92		**1.044**	1.1			1.22
F	$mg\ kg^{-1}$					859	**0.055**		400					
Ga	$mg\ kg^{-1}$		10	11.349	**12.02**		**11.856**	11.89			12.2			11.3
Gd	$mg\ kg^{-1}$			3.775	**3.901**		**3.809**	4.34		**3.572**	3.9			3.81
Ge	$mg\ kg^{-1}$						**0.891**	1.11						1.01
Hf	$mg\ kg^{-1}$			3.914	**3.259**		**3.592**			**3.63**	3.8			11.8
Hg	$mg\ kg^{-1}$													0.317
Ho	$mg\ kg^{-1}$			0.494	**0.464**		**0.507**	0.4		**0.483**	0.49			0.545
In	$mg\ kg^{-1}$													
La	$mg\ kg^{-1}$	**25**		26.707	**27.83**		**26.933**	26.78		**26.78**	28.8		26.6	29.2
Li	$mg\ kg^{-1}$				**28.59**			27.66		**27.23**	27.9		27.6	
Lu	$mg\ kg^{-1}$			0.186	**0.178**		**0.200**	0.19		**0.192**	0.2			0.226
Mo	$mg\ kg^{-1}$			2.606	**2.383**		**2.18**			**2.242**	2.3		1.5	
N	$mg\ kg^{-1}$													
Nb	$mg\ kg^{-1}$	**7**	6	6.007	**6.46**		**6.708**	8.43		**6.115**	6.6			
Nd	$mg\ kg^{-1}$			23.084	**23.8**		**23.543**	22.8		**22.47**	25.5			24.9
Ni	$mg\ kg^{-1}$	**219**	117	188.384	**216.6**	212	**206.270**	207		**209.6**	206	**201**	232	217
Pb	$mg\ kg^{-1}$			5.095	**4.64**		**3.838**			**4.094**				
Pd	$mg\ kg^{-1}$													
Pr	$mg\ kg^{-1}$			6.067	**6.428**		**6.24**	6.02		**6.126**	6.3			6.58
Pt	$mg\ kg^{-1}$													
Rb	$mg\ kg^{-1}$	**115**	121	107.920	**118.8**	112	**113.648**	110		**123.1**	112			108
Re	$mg\ kg^{-1}$													
Rh	$mg\ kg^{-1}$													
S	$mg\ kg^{-1}$		165	77.87			**0.056**			**235**			218	
Sb	$mg\ kg^{-1}$			0.933			**0.98**			**1.012**	1.04		11.2	
Sc	$mg\ kg^{-1}$	**13**		14.616	**12.61**		**12.8**	11.74		**14.03**	12.2		11.6	13.5
Se	$mg\ kg^{-1}$													
Sm	$mg\ kg^{-1}$			4.498	**4.545**		**4.62**	5.61		**4.404**	4.6			4.64
Sn	$mg\ kg^{-1}$						**2.417**			**1.167**	1.38			1.2
Sr	$mg\ kg^{-1}$	54	49	44.922	**47.67**	49	**46.854**	51		**49.08**	47	**48**	47	56
Ta	$mg\ kg^{-1}$			0.469	**0.465**		**2.896**			**0.37**				0.688
Tb	$mg\ kg^{-1}$			0.502	**0.493**		**0.524**	0.42		**0.475**	0.51			0.522
Te	$mg\ kg^{-1}$													
Th	$mg\ kg^{-1}$		10	8.778	**8.931**		**8.926**	8.97		**9.123**	8.25			8.88
Tl	$mg\ kg^{-1}$						**0.2**				0.49			
Tm	$mg\ kg^{-1}$			0.189			**0.202**	0.18		**0.191**	0.2			0.226
U	$mg\ kg^{-1}$			2.543	**2.45**		**2.38**	2.32		**2.397**	2.74			2.79
V	$mg\ kg^{-1}$		160	108.248	**111.8**	110	**113.7**	94		**120.8**	109	**103**	104.7	106
W	$mg\ kg^{-1}$				**3.88**					**3.509**	4.6			
Y	$mg\ kg^{-1}$	**15**	14	13.507	**12.71**		**15.088**	18		**13.37**	14.6		9.8	14.8
Yb	$mg\ kg^{-1}$			1.287	**1.187**		**1.421**	0.95		**1.227**	1.37			1.59
Zn	$mg\ kg^{-1}$	**21**	19	22.602	**20.29**		**22.7**	22		**21.27**	22.6		26.4	27.3
Zr	$mg\ kg^{-1}$	**148**	145	128.477	**128.4**	157	**153.781**	140		**128.4**	136	**142.6**	111	140

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V19	V20	V21	V23	V24	V25	V26	V27	V32	V33	V34	V35	V36
SiO2	g 100g^{-1}	73.01		74.23	**74.343**	74.65			73.9	**73.95**	75.16	73.2	**74.66**	**71.05**
TiO2	g 100g^{-1}	0.5	0.5	0.47	**0.498**	0.49	0.32		0.466	**0.498**	0.478	0.5	**0.509**	**0.471**
Al2O3	g 100g^{-1}	9.81	10	9.54	**9.583**	9.79	3.127		9.85	**9.63**	9.655	9.22	**9.78**	**9.45**
Fe2O3T	g 100g^{-1}	6.91	6.3	6.08	**6.109**	6.16	4.74		6	**6.1**	6.63	6.25	**6.28**	**5.94**
Fe(II)O	g 100g^{-1}				**2.85**									
MnO	g 100g^{-1}	0.06	0.065	0.06	**0.064**	0.06	0.06			**0.064**	0.049	0.06	**7.07**	**0.061**
MgO	g 100g^{-1}	2.33	2.2	2.42	**2.414**	2.42	2.003		2.43	**2.46**	2.374	2.29	**2.48**	**2.35**
CaO	g 100g^{-1}	0.4	0.38	0.47	**0.453**	0.54	0.429		0.391	**0.48**	0.435	0.42	**0.433**	**0.432**
Na2O	g 100g^{-1}		0.16	0.2	**0.189**	0.22	0.006			**0.16**	0.181		**0.22**	**0.178**
K2O	g 100g^{-1}	4.18	4.8	4.37	**4.432**	4.37	1.705		4.36	**4.43**	4.415	4.43	**4.29**	**4.41**
P2O5	g 100g^{-1}	0.13		0.16	**0.156**	0.16	0.151		0.158	**0.163**	0.169	0.17	**0.16**	**0.165**
H2O+	g 100g^{-1}												**0.33**	
CO2	g 100g^{-1}													
LOI	g 100g^{-1}	1.68		1.71	**1.675**	1.71			1.68	**1.64**		1.58	**1.39**	
Ag	mg kg^{-1}						0.015	1.184						
As	mg kg^{-1}	8.3					3.85	15.425						
Au	mg kg^{-1}													
B	mg kg^{-1}						1.16							
Ba	mg kg^{-1}	973	901	872	**866**	869.3	149.570	519.496		**896**			**959**	**875.1**
Be	mg kg^{-1}	1.33		1.35	**1.29**	1.4	0.3							
Bi	mg kg^{-1}	0.33			**0.15**		0.08							
Br	mg kg^{-1}													
C(org)	mg kg^{-1}													
C(tot)	mg kg^{-1}													
Cd	mg kg^{-1}						0.004	0.817						
Ce	mg kg^{-1}	55.8	56	55	**56.5**	57.7	59.05	59.965		**56.77**			**40**	**55.05**
Cl	mg kg^{-1}													
Co	mg kg^{-1}	38	32	33.9	**31.7**	34.5	29.34	35.147					**34**	**33.26**
Cr	mg kg^{-1}	1270		1227	**1206**	1345.300	807.840	1166.185		**1242**			**1254**	**1205**
Cs	mg kg^{-1}	6.24		6	**6.1**	6.1	5.51			**6.08**				**5.75**
Cu	mg kg^{-1}	52	40	52.4	**48.1**	51.1	35.41	47.599		**51**			**46**	**51.59**
Dy	mg kg^{-1}	2.85	2.2	2.67	**2.83**	2.7	1.22	4.386		**2.78**				**2.55**
Er	mg kg^{-1}	1.44	1.08	1.39	**1.42**	1.4	0.53	1.04		**1.4**				**1.3**
Eu	mg kg^{-1}	1.13		1.08	**1.15**	1.1	0.58	2.193		**1.11**				**1.02**
F	mg kg^{-1}													
Ga	mg kg^{-1}	12		11.4	**12**	11.8		25.522		**12**			**10**	**11.64**
Gd	mg kg^{-1}	3.86		3.78	**3.68**	3.9	3.26	13.839		**3.8**				**3.76**
Ge	mg kg^{-1}	0.71		1			0.25							
Hf	mg kg^{-1}	4.5		3.42	**3.81**	3.9				**3.63**				**3.31**
Hg	mg kg^{-1}													
Ho	mg kg^{-1}	0.54		0.5	**0.53**	0.5	0.2			**0.53**				**0.47**
In	mg kg^{-1}													
La	mg kg^{-1}	27.6	27	26	**27.7**	28.4	28.12	28.592		**27.74**			**29**	**26.5**
Li	mg kg^{-1}	25.17	26.1	27.5	**26.7**		15.57	21.207						**25.18**
Lu	mg kg^{-1}	0.22		0.19	**0.2**	0.2	0.06			**0.19**				**0.199**
Mo	mg kg^{-1}	1.51			**2.02**	2.4	0.73							**1.85**
N	mg kg^{-1}					202.2								
Nb	mg kg^{-1}	9		6.96	**6.28**	6.8	0.03			**6.47**			**6.1**	**6.55**
Nd	mg kg^{-1}	24	25	22.5	**23.2**	24.3	22.43	17.456		**23.93**			**25**	**23.97**
Ni	mg kg^{-1}	191	224	202	**213**		185.140	180.902		**186**			**196**	**222.9**
Pb	mg kg^{-1}	8	4.9	4.58	**4.5**	5.2	2.97	3.742		**4.51**				**4.92**
Pd	mg kg^{-1}													
Pr	mg kg^{-1}	6.4	6.5	6.21	**6.42**	6.5	5.84			**6.44**				**6.53**
Pt	mg kg^{-1}													
Rb	mg kg^{-1}	112.5	110	112	**114**	116.3	89.67			**114**			**109**	**111.9**
Re	mg kg^{-1}													
Rh	mg kg^{-1}													
S	mg kg^{-1}						35.61							
Sb	mg kg^{-1}	1.49					0.02							
Sc	mg kg^{-1}	10		12.4	**11.7**	11.63		13.889		**12.1**			**13**	**12.09**
Se	mg kg^{-1}						0.02							
Sm	mg kg^{-1}	4.5	4.9	4.32	**4.66**	4.4	3.7	14.607		**4.55**			**7.2**	**4.56**
Sn	mg kg^{-1}				**1.43**	1.6	0.11							
Sr	mg kg^{-1}	52		46.6	**45.7**	51.1	18.61	56.592		**46**			**43**	**46.62**
Ta	mg kg^{-1}	0.55		0.5	**0.52**	2.5				**0.55**				**0.448**
Tb	mg kg^{-1}	0.57		0.51	**0.52**	0.5	0.29			**0.53**				**0.523**
Te	mg kg^{-1}	0.04												
Th	mg kg^{-1}	8.4		8.19	**8.77**	9.2	7.67	44.289		**8.83**			**11**	**8.98**
Tl	mg kg^{-1}	0.44			**0.52**	0.4	0.43							
Tm	mg kg^{-1}	0.22		0.2	**0.2**	0.2	0.06			**0.21**				**0.195**
U	mg kg^{-1}	2.7	2.46	2.39	**2.53**	2.5	1.12			**2.41**				**2.48**
V	mg kg^{-1}	103	114	106	**106**	118.4	48.24	108.988		**108**			**121**	**108.4**
W	mg kg^{-1}	2.24			**3.49**	3.6	0.22							
Y	mg kg^{-1}	15	9.1	15	**13.8**	15.1	4.63	19.568		**15.06**			**14**	**14.13**
Yb	mg kg^{-1}	1.38		1.27	**1.31**	1.3	0.38	3.959		**1.31**				**1.32**
Zn	mg kg^{-1}	23	23	22.5	**23**	25.8	25.15	24.881		**21**			**20**	**17.15**
Zr	mg kg^{-1}	142		141	**146**	149.5	4.41			**145**			**140**	**125.3**

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V38	V40	V42	V43	V46	V47	V48	V49	V50	V51	V52	V53	V54
SiO2	g 100g^{-1}	66.3	73.66	74.47		**74.211**	74.22	74.05	74.078	72.433		**74.5**	72.49	**74.356**
TiO2	g 100g^{-1}	0.588	0.51	0.503		**0.496**	0.49	0.51	0.479	0.498			0.5	**0.483**
Al2O3	g 100g^{-1}		9.63	9.689		**9.564**	9.76	9.63	9.694	9.600			9.87	**9.499**
Fe2O3T	g 100g^{-1}	6.18	6.02	6.110		**6.214**	6.08	6.16	6.196	6.336			6.14	**5.913**
Fe(II)O	g 100g^{-1}			3.03		**2.87**		3.11						
MnO	g 100g^{-1}	0.062	0.07	0.060		**0.062**	0.07	0.06	0.07	0.067			0.061	**0.063**
MgO	g 100g^{-1}		2.69	2.418		**2.36**	2.41	2.41	2.422	2.255			2.42	**2.421**
CaO	g 100g^{-1}	0.417	0.43	0.429		**0.421**	0.45	0.44	0.374	0.427			0.42	**0.438**
Na2O	g 100g^{-1}		0.27	0.189		**0.118**	0.14	0.27	0.19				0.2	**0.22**
K2O	g 100g^{-1}	4.62	4.58	4.326		**4.377**	4.48	4.35	4.446	4.363			4.47	**4.362**
P2O5	g 100g^{-1}		0.16	0.150		**0.142**	0.14	0.16	0.161	0.164			0.167	**0.162**
H2O+	g 100g^{-1}													
CO2	g 100g^{-1}						1.56							
LOI	g 100g^{-1}		1.64	1.533		**1.545**	1.56		1.56	1.55		**1.71**	1.52	**1.646**
Ag	mg kg^{-1}				**0.414**									
As	mg kg^{-1}				**8.095**	**8.61**	7						6.7	
Au	mg kg^{-1}													
B	mg kg^{-1}													
Ba	mg kg^{-1}	891	850	867	**725**	**906.130**	874	904	908				812.5	**878.9**
Be	mg kg^{-1}			1.214	**1.284**	**1.25**	37							**1.339**
Bi	mg kg^{-1}			0.15	**0.144**									**0.156**
Br	mg kg^{-1}													
C(org)	mg kg^{-1}													
C(tot)	mg kg^{-1}			729									0.08	
Cd	mg kg^{-1}				**0.208**									
Ce	mg kg^{-1}	57.7	58	55.26	**51.35**	**53.69**	1361	54			**61.85**		42.4	**55.75**
Cl	mg kg^{-1}													
Co	mg kg^{-1}		32	33.743	**32.03**	**33.79**		31					32.8	**33.38**
Cr	mg kg^{-1}	1380	1334	1277.200	**1265.600**	**1330**		1287	1420	1347			1091.600	**1293.300**
Cs	mg kg^{-1}			6.076	**5.469**	**5.86**							4.3	**5.954**
Cu	mg kg^{-1}	56.4	57	51.24	**50.34**	**54.78**	49	51	50	105			43.4	**50.26**
Dy	mg kg^{-1}			2.664	**2.539**	**2.04**		2.2			**3.03**			**2.562**
Er	mg kg^{-1}			1.392	**1.36**	**0.96**		1.7			**1.45**			**1.283**
Eu	mg kg^{-1}			1.059	**1.21**	**1.07**		1			**1.33**			**1.066**
F	mg kg^{-1}													
Ga	mg kg^{-1}		15	11.7	**12.67**	**11.98**	9						11.6	**11.45**
Gd	mg kg^{-1}			3.669	**4.208**	**3.28**		5			**4.7**			**3.765**
Ge	mg kg^{-1}				**3.251**	**0.43**								
Hf	mg kg^{-1}			3.735	**3.733**	**2.5**							10.3	**3.7**
Hg	mg kg^{-1}													
Ho	mg kg^{-1}			0.508	**0.472**	**0.37**					**0.55**			**0.478**
In	mg kg^{-1}			0.023										
La	mg kg^{-1}	24.9		27.203	**24.04**	**25.96**	27	28	24		**28.85**		23.2	**26.46**
Li	mg kg^{-1}			26.25	**22.2**	**24.89**		26						**29.63**
Lu	mg kg^{-1}			0.200	**0.183**	**0.15**					**0.22**			**0.188**
Mo	mg kg^{-1}			2.067	**2.105**	**1.94**							3.2	
N	mg kg^{-1}													
Nb	mg kg^{-1}			6.106	**4.718**	**5.98**	7	6					6.3	**5.93**
Nd	mg kg^{-1}	28.6		23.23	**21.73**	**21.71**		23			**25.25**		15.2	**22.99**
Ni	mg kg^{-1}		218	207.9	**206.540**	**207.430**	200	211	211	180			176.5	**211.010**
Pb	mg kg^{-1}	17.4		5.26	**3.974**	**6.47**	11	9					5	**5.078**
Pd	mg kg^{-1}				**0.439**									
Pr	mg kg^{-1}			6.256	**5.686**			7			**6.43**			**6.123**
Pt	mg kg^{-1}													
Rb	mg kg^{-1}	119	115	109.060	**82.94**	**112.820**	114	117	116	383			106.7	**112.630**
Re	mg kg^{-1}													
Rh	mg kg^{-1}													
S	mg kg^{-1}													
Sb	mg kg^{-1}			0.99	**0.682**	**1.04**								**1.049**
Sc	mg kg^{-1}			11.17	**10.44**	**11.94**	13	11					11.7	**11.96**
Se	mg kg^{-1}													
Sm	mg kg^{-1}			4.299	**4.162**			4.7			**4.7**		5.5	**4.445**
Sn	mg kg^{-1}			1.26	**1.189**	**1.31**							5	**1.37**
Sr	mg kg^{-1}	49.7	42	44.1	**38.86**	**47.74**	50	45	46				43.1	**44.31**
Ta	mg kg^{-1}			0.518	**0.376**	**0.59**								**0.547**
Tb	mg kg^{-1}			0.498	**0.518**	**0.42**					**0.6**			**0.479**
Te	mg kg^{-1}			0.035		**0.04**								
Th	mg kg^{-1}			8.662		**8.07**	11	10					7.7	**8.815**
Tl	mg kg^{-1}			0.476	**0.465**	**0.43**								
Tm	mg kg^{-1}			0.199	**0.184**	**0.14**					**0.22**			**0.184**
U	mg kg^{-1}			2.429		**2.3**	2	1.7					2.2	**2.596**
V	mg kg^{-1}			112.110	**112.260**	**115.680**	118	108					102.2	**114.720**
W	mg kg^{-1}			3.476	**1.859**	**3.4**							2.5	
Y	mg kg^{-1}		28	13.951	**12.16**	**9.5**	14	9.4			**15.6**		12.7	**12**
Yb	mg kg^{-1}			1.257	**1.207**	**0.99**					**1.4**			**1.247**
Zn	mg kg^{-1}	18.5	35	23.7	**26.73**	**21.07**	21	25	24				19.9	**22.23**
Zr	mg kg^{-1}	141	126	147.8	**150.920**	**106.480**	132	126					130.8	**146.850**

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V55	V56	V57	V59	V60	V61	V62	V63	V64	V65	V66	V67	V69
SiO2	g 100g^{-1}	73.41	68.7	73.18	73.159	73.9	70.53	74.81	**73.64**	75.05	72.22	74.33	71.6	
TiO2	g 100g^{-1}	0.501	0.38	0.474	0.525	0.51	0.5	0.5	**0.5**	0.515	0.49	0.488	0.527	
Al2O3	g 100g^{-1}	10.29	9.81	9.76	9.615	9.71	10.83	9.6	**9.74**	9.98	9.48	9.674	9.96	
Fe2O3T	g 100g^{-1}	6.2	6.9	6.02	5.86	6.08	5.97	6.08	**6.07**	6.38	5.94	6.099	7.71	
Fe(II)O	g 100g^{-1}											3.229		
MnO	g 100g^{-1}	0.064	0.06	0.066	0.066	0.06	0.06	0.07	**0.07**	0.059	0.07	0.065	0.082	
MgO	g 100g^{-1}	2.52	3.83	2.37	2.395	2.32	4.03	2.83	**2.35**	2.38	2.32	2.377	2.36	
CaO	g 100g^{-1}	0.43	0.57	0.5	0.396	0.46	0.42	0.44	**0.47**	0.39	0.42	0.434	0.437	
Na2O	g 100g^{-1}	0.21	0.51	0.18	0.161	0.22	0.06	0.31	**0.16**	0.18	0.15	0.222	0.114	
K2O	g 100g^{-1}	4.25	4.15	4.55	4.419	4.46	4.36	4.41	**4.38**	4.43	4.3	4.419	4.76	
P2O5	g 100g^{-1}	0.165	0.15	0.154	0.151	0.09	0.15	0.16	**0.14**	0.162	0.15	0.165	0.145	
H2O+	g 100g^{-1}											1.8		
CO2	g 100g^{-1}											0.22		
LOI	g 100g^{-1}	1.6	1.6	1.5	0.211	1.69		1.72	**1.69**	1.6		1.673	1.83	
Ag	mg kg^{-1}				0.055					0.1				**0.16**
As	mg kg^{-1}	8	18.9	8.36	7.33	7.8			**9.3**	6.33	0.46	8		**8.99**
Au	mg kg^{-1}													
B	mg kg^{-1}													
Ba	mg kg^{-1}	897	1050	843.7	881	875	907	819	**854**	836	886	862	868.061	**840**
Be	mg kg^{-1}		0.97	1.46	0.112					1.3	1.2	1.19		**1.31**
Bi	mg kg^{-1}			0.16	0.094	0.13				0.35		0.2		**0.15**
Br	mg kg^{-1}													
C(org)	mg kg^{-1}													
C(tot)	mg kg^{-1}											767		
Cd	mg kg^{-1}		0.98	0.1						0.2				**0.04**
Ce	mg kg^{-1}	62.4	67.76	57.65	55.87			65	**59.2**	53	51.83	55		**53.75**
Cl	mg kg^{-1}													
Co	mg kg^{-1}		31.69	33.09	32.89	30	28	27	**34.1**	34.3	25	32.9	25.357	**34.03**
Cr	mg kg^{-1}	1313	1224	988.540	1237	1214	1667	1118	**1214.700**	1090	1208	1140	1663	**921**
Cs	mg kg^{-1}		6.7	5.2	6.111					6.2		6		**5.72**
Cu	mg kg^{-1}		57.8	53.68	50.86	59	46	51	**42.5**	55.3	49	49.2	128	**52.26**
Dy	mg kg^{-1}	2.29	2.47	2.2	2.702					2.3	2.56	2.6		**2.55**
Er	mg kg^{-1}	1.12	1.08	1.06	1.373					1.08	1.54	3		**1.31**
Eu	mg kg^{-1}	1.18	1.35	1.16	1.061					1.11	1.94	0.7		**1.09**
F	mg kg^{-1}										173			
Ga	mg kg^{-1}		22.4	22.12	11.83	10.7	10		**10.5**	11.1	14	12		**13.93**
Gd	mg kg^{-1}	3.75	4.88	3.59	3.781					2.9	3.95	4.6		**3.81**
Ge	mg kg^{-1}		1.91	1	0.938						1			**3.73**
Hf	mg kg^{-1}		2.92		3.224				**2.8**	3.1	3.26	3		**3.5**
Hg	mg kg^{-1}										0.001			
Ho	mg kg^{-1}	0.41	0.45	0.4	0.488					0.38	0.43	0.4		**0.47**
In	mg kg^{-1}													**0.03**
La	mg kg^{-1}	29.9	59.1	28.19	26.23			24	**44.4**	26	26.75	25		**26.48**
Li	mg kg^{-1}			25.52						27		27.3		**27.27**
Lu	mg kg^{-1}	0.16	0.17	0.18	0.189						0.19	0.16		**0.18**
Mo	mg kg^{-1}		3.88	2.04	2.057	2.1			**1.6**	2.29		2.3		**2.65**
N	mg kg^{-1}													
Nb	mg kg^{-1}		6.06		6.475		6	7	**5.8**	6.1	8	7		**6.12**
Nd	mg kg^{-1}	26.2	27.8	23.98	22.71				**23.8**	21	23.05	25		**22.92**
Ni	mg kg^{-1}	192	217	163.650	202.3	243	177	154	**176.3**	220	181	205	195.970	**214**
Pb	mg kg^{-1}	4	7.2	3.07	5.7	4.7	6	7	**11.8**	5.06		6.2	18.85	**3.99**
Pd	mg kg^{-1}													
Pr	mg kg^{-1}	7		6.32	6.147					5.6	5.77	6.6		**6.15**
Pt	mg kg^{-1}													
Rb	mg kg^{-1}	108	118	106.780	110.9		99	113	**108.5**	110	116	110	102.3	**108**
Re	mg kg^{-1}													
Rh	mg kg^{-1}													
S	mg kg^{-1}			178.120						48				
Sb	mg kg^{-1}		1.95	0.99	0.864	1						1		**1.25**
Sc	mg kg^{-1}	13.4	11	9.71	10.23		14		**16.3**	11	12		14.17	**11.25**
Se	mg kg^{-1}		1.61	0.2							0.114			**1.72**
Sm	mg kg^{-1}	5	5.5	4.51	4.361				**4.2**	3.8	4.19	4.1		**4.38**
Sn	mg kg^{-1}		1.54		1.286					1.34	0.78			**1.36**
Sr	mg kg^{-1}	59	47.3	41.96	43.82	48	44	47	**44.9**	49	45	44.5	71.98	**42.89**
Ta	mg kg^{-1}		3.72		0.514					0.42	0.53	0.5		**1.11**
Tb	mg kg^{-1}	0.49	0.51	0.44	0.520					0.39	0.6	0.44		**0.49**
Te	mg kg^{-1}													
Th	mg kg^{-1}	9.48	11.9	8.49	8.44		8	7		9.03	6.41	8.2		**7.88**
Tl	mg kg^{-1}		0.6		0.373							0.5		**0.4**
Tm	mg kg^{-1}	0.15	0.2	0.17	0.201						0.19	0.18		**0.18**
U	mg kg^{-1}	3	3.27	2.03	2.499			2	**2.7**	2.46	2.48	1.8		**2.37**
V	mg kg^{-1}	97	117	85.67	109.1	83	110	96	**119.9**	1.07	106	108	77.86	**110**
W	mg kg^{-1}		4.14		3.24				**19.3**	4.3		3		**3.96**
Y	mg kg^{-1}	9.8	10.8	9.38	13.15	11	16	15	**14.3**	10.2	13	12.1		**12.4**
Yb	mg kg^{-1}	1.04	1.22	1.05	1.286					0.98	1.36	1	0.794	**1.21**
Zn	mg kg^{-1}	24	77.8	24.99	23.22	28	21	23	**22**	26	20	20	18.7	
Zr	mg kg^{-1}	119	141		131.2		120	137	**136.4**	123	133	137	157.680	**135**

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V70	V71	V72	V73	V74	V75	V76	V77	V78	V79	V81	V82	V83
SiO2	g 100g^{-1}	73.48	**73.91**	**73.57**	**74.1**		**74.41**	**51.34**	71.52	**74.59**	**74.51**	74.23	**73.52**	**74.06**
TiO2	g 100g^{-1}	0.5	**0.511**	**0.514**	**0.49**	0.5	**0.5**	**0.5**	0.5	**0.48**	**0.558**	0.49	**0.496**	**0.5**
Al2O3	g 100g^{-1}	9.55	**9.609**	**9.75**	**9.696**	9.75	**9.74**	**9.41**	9.45	**9.61**	**9.71**	9.58	**9.65**	**9.79**
Fe2O3T	g 100g^{-1}	6.1	**6.119**	**6.2**	**6.098**	6.09	**6.06**	**6.02**	5.54	**6.11**	**6.082**	6.07	**6.06**	**6.02**
Fe(II)O	g 100g^{-1}									**3.17**				
MnO	g 100g^{-1}	0.07	**0.064**	**0.059**	**0.061**	0.066	**0.07**	**0.064**	0.06	**0.063**	**0.069**	0.074	**0.064**	**0.06**
MgO	g 100g^{-1}	2.36	**2.359**	**2.37**	**2.435**	2.4	**2.23**	**2.54**	3.05	**2.18**	**2.247**	2.41	**2.39**	**2.29**
CaO	g 100g^{-1}	0.42	**0.445**	**0.45**	**0.427**	0.44	**0.41**	**0.39**	0.4	**0.4**	**0.435**	0.3	**0.45**	**0.42**
Na2O	g 100g^{-1}	0.1	**0.166**	**0.11**	**0.14**			**0.185**	0.13	**0.4**	**0.183**	0.18	**0.13**	
K2O	g 100g^{-1}	4.51	**4.477**	**4.52**	**4.473**	4.31	**4.32**	**4.4**	4.44	**4.46**	**4.436**	4.42	**4.4**	**4.34**
P2O5	g 100g^{-1}	0.15	**0.156**	**0.16**	**0.156**	0.17	**0.15**		0.15	**0.15**	**0.173**	0.16	**0.16**	**0.16**
H2O+	g 100g^{-1}				**0.08**					**1.81**				
CO2	g 100g^{-1}									**0.2**				
LOI	g 100g^{-1}	1.54	**1.52**	**1.62**	**1.7**		**1.72**				**1.67**	1.7	**1.7**	**1.63**
Ag	mg kg^{-1}	0.03												
As	mg kg^{-1}	8.4			**8.1**			**8.1**		4	**13**	12.1		
Au	mg kg^{-1}													
B	mg kg^{-1}													
Ba	mg kg^{-1}	890	**901.4**	**855**	**866**	867		**890**	820	**884**	**903**	434.4	**912**	**890**
Be	mg kg^{-1}	1.17				1.41								
Bi	mg kg^{-1}	0.14												
Br	mg kg^{-1}													
C(org)	mg kg^{-1}													
C(tot)	mg kg^{-1}	700												
Cd	mg kg^{-1}													
Ce	mg kg^{-1}	59.8	52.4	**55.81**	**56.5**	58.4		**59.4**		**64**	**59**	49	**59.7**	
Cl	mg kg^{-1}							**180**		66				
Co	mg kg^{-1}	35.4	**33.4**	**35.9**	**34.2**	34.4		**33.9**	20	**25**	**38**		**34**	
Cr	mg kg^{-1}	1240	**1105**	**1291**	**1257.300**	1250		**1280**	1318	**1243**	**1455**	49.8	**1228**	**1300**
Cs	mg kg^{-1}	6.32		**5.84**	**8.2**	6.06		**6.1**		**4**	**9**		**6.33**	
Cu	mg kg^{-1}	55.2	**46.8**		**44.9**	54			47	**53**	**50**	56.7	**54**	
Dy	mg kg^{-1}	2.81		**2.694**		2.84		**3.3**					**2.63**	
Er	mg kg^{-1}	1.52		**1.384**		1.49							**1.32**	
Eu	mg kg^{-1}	1.1		**1.116**		1.23		**1.06**					**1.08**	
F	mg kg^{-1}		422							434			1047	
Ga	mg kg^{-1}	12.9	**10.8**	**12.52**	**10.9**	12.3		**11**	13	**11**	**12**	8.1	11	
Gd	mg kg^{-1}	4.07	3.4	**3.643**		3.73							**3.87**	
Ge	mg kg^{-1}	1.28												
Hf	mg kg^{-1}	3.59		**3.74**	**3.1**	3.9		**3.5**		**4**		2.5	**3.14**	
Hg	mg kg^{-1}													
Ho	mg kg^{-1}	0.54		**0.506**		0.56							**0.49**	
In	mg kg^{-1}	0.022												
La	mg kg^{-1}	29.2	29.1	**27.09**	**26.3**	28.7		**27.7**		**29**	**20**	23	**28.2**	
Li	mg kg^{-1}	27				28.7							**30**	
Lu	mg kg^{-1}	0.19		**0.190**		0.19		**0.159**					**0.19**	
Mo	mg kg^{-1}	2			**2.1**					**2**		2.7		
N	mg kg^{-1}													
Nb	mg kg^{-1}	5.9	**6.3**	**5.72**	**6**	5.44			7	**8**		5.7	6.27	
Nd	mg kg^{-1}	24.6	21.3	**23.321**	**30.4**	24.1		**22**		**28**	**22**	20.3	**23.7**	
Ni	mg kg^{-1}	223	**191.9**	**208.6**	**198.7**			**170**	180	**209**	**201**	27.1	**225**	**150**
Pb	mg kg^{-1}	5.2	7		**5.7**				10	**13**		50.1	**5.12**	
Pd	mg kg^{-1}													
Pr	mg kg^{-1}	6.39	7.2	**6.073**		6.17							**6.55**	
Pt	mg kg^{-1}													
Rb	mg kg^{-1}	116	**108.2**	**123**	**111**	114		**112**	107	**112**	**115**	45.1	**119**	
Re	mg kg^{-1}													
Rh	mg kg^{-1}													
S	mg kg^{-1}													
Sb	mg kg^{-1}	1.19				1		**1.09**						
Sc	mg kg^{-1}	13.2			**13**	11.7		**12.52**	10	**13**	**13**			
Se	mg kg^{-1}													
Sm	mg kg^{-1}	4.9	4.9	**4.487**		4.71		**4.1**					**4.6**	
Sn	mg kg^{-1}	2				1.46				**1**		4.9		
Sr	mg kg^{-1}	59.9	**49.4**	**51**	**45.5**	39.8			46	**44**	**50**	219.2	**46.3**	
Ta	mg kg^{-1}	0.5		**0.486**				**0.47**		**3**			**0.52**	
Tb	mg kg^{-1}	0.55		**0.529**		0.55		**0.47**					**0.5**	
Te	mg kg^{-1}	0.04												
Th	mg kg^{-1}	8.98	**8**	**8.42**	**10**	8.45		**8.8**		**10**	**9**	5.7	**8.55**	
Tl	mg kg^{-1}	0.5			**1.3**									
Tm	mg kg^{-1}	0.22		**0.196**		0.22							**0.19**	
U	mg kg^{-1}	2.49		**2.51**	**2.5**	2.21		**2.1**		**3**			**2.41**	
V	mg kg^{-1}	119	**111.6**	**116.2**	**108.8**	111		**120**	112	**112**	**123**		**109**	**100**
W	mg kg^{-1}	3.96			**4.2**	3.47		**3.6**		**10**				
Y	mg kg^{-1}	14.3	16.2	**15.18**	**13.6**	14.3			15	**14**	**14**	14.9	**12.9**	
Yb	mg kg^{-1}	1.36		**1.262**		1.28		**1.34**					**1.24**	
Zn	mg kg^{-1}	20.9	**21.9**	**47.5**	**21.8**			**15**	21	**25**	**23**	77.7	**23**	
Zr	mg kg^{-1}	142	139.1	**153.3**	**135.7**			**180**	138	**152**	**137**	149	**129**	**130**

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V84	V85	V86	V87	V88	V89	V90	V91	V92	V93	V94	V95	V96
SiO2	g 100g^{-1}	**73.92**	**74.05**	74.08	**73.55**	73.612	73.5	72.83	**74.19**		73.98	**89.789**	71.18	74
TiO2	g 100g^{-1}	**0.48**	**0.51**	0.5	**0.49**	0.522	0.48	0.531	**0.5**	**0.465**	0.504	**0.546**	0.46	0.49
Al2O3	g 100g^{-1}	**10.88**	**9.79**	9.59	**9.53**	9.619	9.06	9.17	**9.75**	**9.414**	9.322	**9.944**	11.95	9.73
Fe2O3T	g 100g^{-1}	**5.95**	**6.26**	6.12	**5.87**	6.122	5.92	5.760	**6.1**	**5.984**	6.08	**6.027**	7.23	6.14
Fe(II)O	g 100g^{-1}		**2.935**								2.913			3.03
MnO	g 100g^{-1}	**0.07**	**0.065**	0.07	**0.06**	0.068	0.06	0.066	**0.064**	**0.061**	0.072	**0.082**	0.1	
MgO	g 100g^{-1}	**2.76**	**2.39**	2.36	**2.35**	2.396		2.383	**2.37**	**2.301**	2.51	**2.143**	3.32	2.34
CaO	g 100g^{-1}	**0.47**	**0.44**	0.43	**0.43**	0.455	0.4	0.411	**0.39**	**0.415**	0.552	**0.543**	0.39	0.43
Na2O	g 100g^{-1}		**0.19**		**0.16**	0.134	0.17	0.183	**0.17**	**0.166**	0.257	**0.138**	0.08	0.18
K2O	g 100g^{-1}	**4.77**	**4.54**	4.51	**4.41**	4.407	3.99	4.381	**4.4**	**4.332**	4.247	**4.628**	4.46	4.46
P2O5	g 100g^{-1}	**0.24**	**0.14**	0.16	**0.158**	0.175		0.155	**0.159**	**0.149**	0.15	**0.207**	0.15	0.166
H2O+	g 100g^{-1}		**1.721**								1.9			1.51
CO2	g 100g^{-1}										0.109			
LOI	g 100g^{-1}		**1.76**	1.66	**2.44**	1.64			**1.59**		1.736	**1.677**	1	1.59
Ag	mg kg^{-1}								**0.2**					0.02
As	mg kg^{-1}		**7.54**					9	**8.87**					8.53
Au	mg kg^{-1}							0.012						
B	mg kg^{-1}		**194.643**						**115**					
Ba	mg kg^{-1}	**1200**	**820**	878	**870**	872.8	910	838.4	**959**	**883**	564.3		2300	886
Be	mg kg^{-1}		**1.21**					1.25	**1.35**	**1.357**				1.24
Bi	mg kg^{-1}		**0.14**					0.138	**0.14**	**0.160**				
Br	mg kg^{-1}													
C(org)	mg kg^{-1}		**168**								543.3			
C(tot)	mg kg^{-1}		**620**								841.7			
Cd	mg kg^{-1}		**0.02**						**0.015**					
Ce	mg kg^{-1}		**53.3**		**56.14**	56.8		55	**27.8**	**56.62**	49.05			57.4
Cl	mg kg^{-1}	**200**	**130.485**		143	220							300	
Co	mg kg^{-1}	**100**	**32.1**	35			34.96	32.6	**34.6**	**32.98**				33.6
Cr	mg kg^{-1}	**1200**	**1318**	1233	**1234**	1317.700	1443	1269.700	**1352**	**1228**			1600	1365
Cs	mg kg^{-1}		**5.6**		**6.06**			6.17	**6.35**	**6.246**				5.73
Cu	mg kg^{-1}	**100**	**54.7**		**53.5**	49.3	46.01	50.1	**54.4**	**52.77**				48.9
Dy	mg kg^{-1}		**2.65**		**2.88**			2.544	**2.2**	**2.799**	2.61			2.71
Er	mg kg^{-1}		**1.34**		**1.47**			1.335	**1.1**	**1.462**	1.366			1.38
Eu	mg kg^{-1}		**1.02**		**1.09**			1.101	**1.24**	**1.104**	1.313			1.15
F	mg kg^{-1}		**391**			626.7					440			
Ga	mg kg^{-1}		**11.8**		**11.77**	11.9		10.9	**11.6**					11.5
Gd	mg kg^{-1}		**3.46**		**3.91**			3.686	**4.03**	**3.867**	3.871			3.59
Ge	mg kg^{-1}		**0.97**					0.894	**0.197**					
Hf	mg kg^{-1}		**3.24**		**3.73**			3.77	**3.66**	**3.746**				2.79
Hg	mg kg^{-1}		**0.002**					0.008						
Ho	mg kg^{-1}		**0.516**		**0.55**			0.500	**0.39**	**0.528**	0.486			0.51
In	mg kg^{-1}		**0.02**					0.005		**0.023**				
La	mg kg^{-1}		**25.5**		**27.44**			29	**27.8**	**27.37**	23.893			27.4
Li	mg kg^{-1}		**28.735**						**28.1**	**28.59**	23.225			26.7
Lu	mg kg^{-1}		**0.182**		**0.21**			0.198	**0.159**	**0.199**	0.188			0.19
Mo	mg kg^{-1}		**1.9**		**1.91**			2.21	**1.91**	**2.108**				2.03
N	mg kg^{-1}													
Nb	mg kg^{-1}		**5.28**		**6.62**	6.5		6.03	**5.35**	**6.182**				6.51
Nd	mg kg^{-1}		**21.9**		**23.67**			22.148	**24.8**	**23.58**	20.853			24.8
Ni	mg kg^{-1}	**200**	**196**	196	**210.1**	198.7	209.8	204.6	**218**	**209.6**			300	203
Pb	mg kg^{-1}		**4.92**	8	**4.97**		1.45	5.5	**4.41**					4.87
Pd	mg kg^{-1}													
Pr	mg kg^{-1}		**5.86**		**6.31**			6.209	**6.43**	**6.353**	5.523			6.2
Pt	mg kg^{-1}													
Rb	mg kg^{-1}	**100**	**111**	105	**112.5**	113	104	109.540	**115.5**	**114.2**				112
Re	mg kg^{-1}													
Rh	mg kg^{-1}													
S	mg kg^{-1}	**100**											200	
Sb	mg kg^{-1}		**1**					0.603	**1**					1.02
Sc	mg kg^{-1}		**12.49**		**14.5**			10.5	**12.2**	**12.2**				12.2
Se	mg kg^{-1}		**0.104**					0.575						0.145
Sm	mg kg^{-1}		**4.22**		**4.55**			4.185	**4.65**	**4.512**	3.91			4.49
Sn	mg kg^{-1}	**100**	**1.25**						**1.41**	**1.369**				1.34
Sr	mg kg^{-1}	**100**	**43**	45	**41.6**	47.5	43	44.62	**47.3**	**45.47**	42.3			47.7
Ta	mg kg^{-1}		**0.55**		**0.55**			0.5	**0.344**	**0.513**				0.46
Tb	mg kg^{-1}		**0.483**		**0.54**			0.504	**0.439**	**0.526**	0.514			0.42
Te	mg kg^{-1}							0.033						
Th	mg kg^{-1}		**8.25**	20	**8.9**			8.2	**5.18**	**8.853**				8.64
Tl	mg kg^{-1}							0.391	**0.496**	**0.507**				0.458
Tm	mg kg^{-1}		**0.196**		**0.21**			0.191	**0.146**	**0.209**	0.186			0.19
U	mg kg^{-1}		**2.25**		**2.47**			2.2	**2.25**	**2.527**				2.43
V	mg kg^{-1}	**100**	**104**	111	**112.9**	110.1	122.9	109.9	**112**	**104.2**				119
W	mg kg^{-1}		**3.75**					3.09	**3.63**	**3.248**				3.61
Y	mg kg^{-1}		**13**	13	**15.2**	13.9		12.76	**9.27**	**14.56**	13.04			13
Yb	mg kg^{-1}		**1.25**		**1.31**			1.282	**1.06**	**1.34**	1.238			1.31
Zn	mg kg^{-1}		**24.4**	13	**19.3**	22.4	18.5	22.85	**28.7**					22.2
Zr	mg kg^{-1}		**129**	134	**141.9**	140.8		136	**143**	**152**				107.5

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V98	V99	V101	V103	V104	V105	V106	V107	V108	V110	V111	V113	V115
SiO2	g 100g^{-1}	74.526	**81.73**	**73.63**		72.63	71.62	**73.12**	73.87	**74.18**	49	**74.6**	**73.7**	74.46
TiO2	g 100g^{-1}	0.528	**0.547**	**0.5**		0.52	0.5	**0.51**	0.505	**0.49**	0.48	**0.49**	**0.494**	0.5
Al2O3	g 100g^{-1}	9.504	**10.41**	**9.65**		9.4	9.7	**9.5**	9.68	**9.67**	4.9	**9.69**	**9.631**	9.63
Fe2O3T	g 100g^{-1}	6.069		**6.07**		6.28	6.2	**6.22**	6.15	**5.97**	6.1	**6.04**	**6.153**	6.09
Fe(II)O	g 100g^{-1}		**4.66**						2.94					
MnO	g 100g^{-1}	0.054	**0.071**	**0.06**		0.06	0.065	**0.06**	0.061	**0.075**	0.056	0.07	**0.066**	0.06
MgO	g 100g^{-1}	2.423	**2.537**	**2.51**		2.52	2.43	**2.39**	2.41	**2.38**	1.2	**2.53**	**2.46**	2.38
CaO	g 100g^{-1}	0.425	**0.481**	**0.41**		0.4	0.428	**0.45**	0.44	**0.43**	0.52	**0.43**	**0.417**	0.43
Na2O	g 100g^{-1}	0.233	**0.234**	**0.18**		0.19	0.17	**0.32**	0.298	**0.13**		**0.17**	**0.19**	0.18
K2O	g 100g^{-1}	4.455	**4.55**	**4.42**		4.76	4.34	**4.4**	4.36	**4.46**	4.3	**4.46**	**4.386**	4.43
P2O5	g 100g^{-1}	0.163	**0.167**	**0.2**		0.17	0.156	**0.36**	0.166	**0.15**	1.1	**0.13**	**0.156**	0.16
H2O+	g 100g^{-1}			**0.08**						**0.18**				
CO2	g 100g^{-1}													
LOI	g 100g^{-1}	1.62		**1.9**		1.78		**1.52**	1.56	**1.57**		**1.7**	**1.905**	1.51
Ag	mg kg^{-1}													0.029
As	mg kg^{-1}		**7.49**	**6.59**		8		**4.1**						8.5
Au	mg kg^{-1}			**0.035**										
B	mg kg^{-1}								170					
Ba	mg kg^{-1}	886.5	**932**	**841**	**1038.400**		904	**963**	918	**550**	740		**892.410**	925
Be	mg kg^{-1}		**1.398**	**0.95**	**1.534**	0.92		**1.4**					**1.387**	1.21
Bi	mg kg^{-1}			**0.26**				**0.09**						0.132
Br	mg kg^{-1}													
C(org)	mg kg^{-1}													300
C(tot)	mg kg^{-1}			**600**						**850**				700
Cd	mg kg^{-1}			**0.57**	0.050	1								0.005
Ce	mg kg^{-1}	67	**58.9**	**49.4**	**58.35**		58	**61.5**	55.2					55.9
Cl	mg kg^{-1}			**231**		164					45			
Co	mg kg^{-1}	30.2	**37.4**	**35**	35.095	34	39	**40.6**	31.2		90			35.3
Cr	mg kg^{-1}	1317.800	**1466**	**1064**	1426	1109	1341	**1464**	1240	**1170**	690			1385
Cs	mg kg^{-1}			**6**	**6.461**			**6.48**						6.52
Cu	mg kg^{-1}	58.4		**46.4**	53.91	47	48	**61.2**	54.1		50	**57**	**52.77**	52.5
Dy	mg kg^{-1}		**2.945**	**2.04**	**2.848**			**2.77**	2.56					2.96
Er	mg kg^{-1}		**1.495**	**0.98**	**1.372**			**1.35**	1.18					1.64
Eu	mg kg^{-1}		**1.093**	**1.04**	**1.150**			**1.22**	1.16					1.03
F	mg kg^{-1}			**122**					980					
Ga	mg kg^{-1}		**12.39**	**10**	12.374			**12.5**	10.5				**12.209**	11.7
Gd	mg kg^{-1}		**3.913**	**3.48**	**3.844**			**4.04**	3.7					4.12
Ge	mg kg^{-1}		**1.165**					**2.43**						0.11
Hf	mg kg^{-1}		**4.03**	**2.18**	**3.358**			**3.61**	6				**3.606**	3.89
Hg	mg kg^{-1}					0.001								
Ho	mg kg^{-1}		**0.551**	**0.36**	**0.519**			**0.46**	0.37					0.57
In	mg kg^{-1}			**0.07**										0.024
La	mg kg^{-1}	34	**26.17**	**25.9**	**27.834**		26	**29.3**	28					28.2
Li	mg kg^{-1}		**41**	**27.3**	**29.81**			**32.5**	21.9				**30.01**	28.2
Lu	mg kg^{-1}		**0.211**	**0.18**	**0.194**			**0.21**	0.15					0.19
Mo	mg kg^{-1}			**0.78**	**2.444**			**5.79**						2.18
N	mg kg^{-1}													
Nb	mg kg^{-1}	9.6	**7.105**	**9.7**	**6.928**			**7.22**						6.42
Nd	mg kg^{-1}		**23.28**	**19.9**	**25.855**			**27**	21.8					25.3
Ni	mg kg^{-1}	217.1	**225.8**	**178**	217.2	192	220	**251**	197.9	**210**	170	**210**		218
Pb	mg kg^{-1}	2	**4.505**	**2.9**	**4.569**	5.1		**4.51**	4.8			**11**	**4.429**	5.38
Pd	mg kg^{-1}													
Pr	mg kg^{-1}		**6.16**	**6.49**	**6.704**			**7.54**	5.96					6.39
Pt	mg kg^{-1}			**0.021**										
Rb	mg kg^{-1}	107.9		**106**	**121**			**124**	113.8		110			121.5
Re	mg kg^{-1}													0.001
Rh	mg kg^{-1}													
S	mg kg^{-1}			**38**						**50**	50			0.01
Sb	mg kg^{-1}			**1.22**	1.052	12.3		**0.86**						1.05
Sc	mg kg^{-1}		**14.61**	**11.3**	**13**			**11.2**	11.9				**12.44**	12.9
Se	mg kg^{-1}			**3.94**		0.8								0.153
Sm	mg kg^{-1}		**4.479**	**4.64**	**4.744**			**4.97**	4.15					4.77
Sn	mg kg^{-1}			**1.58**	**1.114**	0.34		**1.64**						1.42
Sr	mg kg^{-1}	54.7	**47.44**	**41.6**	**48.83**	85		**52**	45.8		45	**39**	**47.2**	51.3
Ta	mg kg^{-1}		**0.6**	**0.67**	**0.535**			**0.64**						0.49
Tb	mg kg^{-1}		**0.544**		**0.549**			**0.61**	0.42					0.49
Te	mg kg^{-1}					7.2								0.041
Th	mg kg^{-1}	8.4	**9.9**	**9.1**	**8.426**			**8.29**	8.4		9.9		**8.87**	8.52
Tl	mg kg^{-1}		**0.463**	**0.5**	**0.548**	0.25		**0.53**	0.44					0.478
Tm	mg kg^{-1}		**0.217**	**0.13**	**0.207**			**0.18**	0.14					0.22
U	mg kg^{-1}		**2.8**	**2.4**	**2.41**			**2.46**					**2.499**	2.38
V	mg kg^{-1}	105.3	**123.6**	**108**	**114.580**	97	101	**134.4**	116.6	**100**	120	**121**	**110.080**	123
W	mg kg^{-1}			**5.4**	3.431			**2.88**						3.95
Y	mg kg^{-1}	26.5	**15.43**	**8.2**	**15.11**		14	**16.9**	14				**14.06**	15.5
Yb	mg kg^{-1}		**1.392**	**0.98**	**1.293**			**1.25**	0.98					1.45
Zn	mg kg^{-1}	19	**22.96**	**17**	**22.171**	30	22	**24.1**	20.5		22	**35**	**24.56**	25.4
Zr	mg kg^{-1}	126.3	**159**	**72**	144.6		123	**153**	140		130		**146.250**	158

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V116	V118	V119	V120	V122	V123	V124	V126	V127	V128	V129	V130	V131
SiO2	g 100g^{-1}	**74.7**	**72.78**	74	74.25	69.03		**74.33**	73.45	69.446	71.07	74.15		**72.16**
TiO2	g 100g^{-1}	**0.489**	**0.47**	0.5	0.498	0.524	0.471	**0.493**	0.503	0.457	0.44	0.498	**0.5**	**0.5**
Al2O3	g 100g^{-1}	**9.56**	**9.67**	9.77	9.646	9.391	10	**9.72**	9.56	8.803	8.82	9.66	**9.71**	**10.5**
Fe2O3T	g 100g^{-1}	**6.01**	**5.3**	5.93	6.083	5.805	6.064	**6.13**	6.09	5.877	5.63	6.15	**6.24**	**6.11**
Fe(II)O	g 100g^{-1}													
MnO	g 100g^{-1}	**0.064**	**0.07**	0.06	0.065	0.062	0.062	**0.064**	0.065	0.054	0.055	0.066	**0.06**	**0.08**
MgO	g 100g^{-1}	**2.4**	**2.14**	2.45	2.373	2.332	2.28	**2.42**	2.36	2.468	2.19	2.39	**2.43**	**2.22**
CaO	g 100g^{-1}	**0.439**	**0.42**	0.44	0.44	0.444	0.422	**0.441**	0.45	0.383	0.42	0.46	**0.45**	**0.44**
Na2O	g 100g^{-1}	**0.225**		0.2	0.214	0.175	0.173	**0.188**	0.18		0.17	0.23	**0.18**	**0.2**
K2O	g 100g^{-1}	**4.29**	**4.6**	4.46	4.469	4.374	4.677	**4.45**	4.36	4.448	4	4.43	**4.34**	**4.66**
P2O5	g 100g^{-1}	**0.179**	**0.17**	0.15	0.164	0.165	0.154	**0.16**	0.16	0.138	0.15	0.161	**0.16**	**0.13**
H2O+	g 100g^{-1}													
CO2	g 100g^{-1}													
LOI	g 100g^{-1}	**1.26**	**1.95**	1.6	1.585			**1.66**	1.5		1.67	1.52		**1.85**
Ag	mg kg^{-1}					0.031	0.028						**0.018**	**0.03**
As	mg kg^{-1}				11.59	8.338	8.222	**8.41**	7	11.919	7.28			**19.85**
Au	mg kg^{-1}													
B	mg kg^{-1}													
Ba	mg kg^{-1}	**894**			855	886.1	883.9	**831**	925	982.986	860.230	900	**841**	**971.780**
Be	mg kg^{-1}	**1.27**				1.319	0.986	**1.06**	1		1.04		**1.28**	**0.05**
Bi	mg kg^{-1}					0.136	0.148						**0.15**	**1.06**
Br	mg kg^{-1}									5.339				
C(org)	mg kg^{-1}													
C(tot)	mg kg^{-1}				631							789		
Cd	mg kg^{-1}	**0.061**					0.013			3.279				**0.06**
Ce	mg kg^{-1}	**56.4**			39.58	57.22	54.38	**55.1**	57.2	36.503	61.86	79	**56.9**	**75.9**
Cl	mg kg^{-1}													
Co	mg kg^{-1}	**33.6**			32.51	32.69	34.61	**32.6**	32	31.22	31	37	**33.5**	**35.63**
Cr	mg kg^{-1}	**1314**			1330	1257	1412	**1234**	1160	1264.950	1214.150	1278	**1335**	**1453.080**
Cs	mg kg^{-1}	**6.16**				5.96	6.273		6.3	5.295	5.87		**5.92**	**16.13**
Cu	mg kg^{-1}	**48.8**			53.42	56.75	51.6	**48.3**	50	45.373	43.41	49	**49.9**	**52.01**
Dy	mg kg^{-1}	**2.73**				2.676	1.916	**2.73**	2.7		2.73		**2.75**	**0.47**
Er	mg kg^{-1}	**1.424**				1.452	0.993	**1.44**	1.3		1.33		**1.42**	**1.45**
Eu	mg kg^{-1}	**1.058**				1.091	1.058	**1.12**	1.01		1		**1.11**	**1.05**
F	mg kg^{-1}													
Ga	mg kg^{-1}	**11.39**			11.84	11	9.636	10.3	12	10.013	11.09	12	**11.8**	**3.12**
Gd	mg kg^{-1}	**3.73**				3.549	3.246	**3.95**	3.6		3.5		**3.67**	**2.44**
Ge	mg kg^{-1}					0.925								**0.85**
Hf	mg kg^{-1}	**3.69**				3.285	2.152	**3.68**	3.2		3.08	2	**3.39**	**6.67**
Hg	mg kg^{-1}													
Ho	mg kg^{-1}	**0.534**				0.489	0.375	**0.51**	0.5		0.47		**0.51**	**0.55**
In	mg kg^{-1}					0.023								
La	mg kg^{-1}	**26.7**			18.31	27.66	26.73	**27.6**	26.9	20.158	25.82	45	**26.4**	**27.79**
Li	mg kg^{-1}	**27.7**				27.36	22.6	**40.9**					**26.8**	**28.42**
Lu	mg kg^{-1}	**0.195**				0.199	0.155	**0.19**	0.2		0.18		**0.19**	**0.51**
Mo	mg kg^{-1}	**2.06**				2.079	2.111	**1.88**	2		1.56		**2.09**	**3.14**
N	mg kg^{-1}													
Nb	mg kg^{-1}	**6.48**			5.762	6.735	5.972	**6.15**	6	6.224	4.65		**6.47**	**8.37**
Nd	mg kg^{-1}	**23.2**			22.76	23.15	23.32	**23.8**	23.6	12.349	22.21	25	**23.3**	**25**
Ni	mg kg^{-1}	**204**			199.3	204.2	218.5	**199**	200	232.385	192.6	205	**228**	**242.480**
Pb	mg kg^{-1}	**4.82**				4.653	5.168	**5.17**	7		4.28		**4.6**	**1.4**
Pd	mg kg^{-1}													
Pr	mg kg^{-1}	**6.31**				6.189	5.997	**5.96**	6.45		5.98	9	**6.18**	**0.94**
Pt	mg kg^{-1}													
Rb	mg kg^{-1}	**114.3**			118.8	110	114.5	102	115	105.891	108.720	106	**111**	**125.8**
Re	mg kg^{-1}													
Rh	mg kg^{-1}													
S	mg kg^{-1}						44.33							
Sb	mg kg^{-1}	**1.144**				0.991	1.145	**0.99**	0.8		0.04			**1.7**
Sc	mg kg^{-1}	**12.81**			12.11	13.15		**9.21**	12		11.07		**12.7**	**11.97**
Se	mg kg^{-1}						0.112	**2.14**			0.12			
Sm	mg kg^{-1}	**4.44**				4.38	4.452	**4.67**	4.8		4.43	5	**4.46**	**2.94**
Sn	mg kg^{-1}	**1.44**				1.353	1.341		1				**1.28**	**0.13**
Sr	mg kg^{-1}	**46.3**			47.31	45.9	41.05	**39.1**	49	45.263	50.11	47	**48**	**66.42**
Ta	mg kg^{-1}	**0.503**					0.476	**0.35**	0.5		0.44		**0.5**	**5.27**
Tb	mg kg^{-1}	**0.515**				0.496	0.429	**0.51**	0.5		0.47		**0.51**	**0.82**
Te	mg kg^{-1}													
Th	mg kg^{-1}	**8.12**				8.585	8.605	**8.25**	8.9		9.08		**8.2**	**11.16**
Tl	mg kg^{-1}	**0.489**				0.452	0.502	**0.48**	0.4		0.41		**0.27**	**0.66**
Tm	mg kg^{-1}	**0.21**				0.187	0.148	**0.21**	0.2		0.18		**0.2**	**0.15**
U	mg kg^{-1}	**2.41**				2.42	2.452	**2.23**	2.6		2.65		**2.31**	**14.62**
V	mg kg^{-1}	**99**			114	109.6	121.6	**113**	114	108.734	105.540	114	**111**	**127.690**
W	mg kg^{-1}	**3.36**				3.422	3.634		5		3.02		**3.71**	**1.37**
Y	mg kg^{-1}	**13.88**			13.28	13.47	9.043	**13.9**	13	13.035	12.36	13	**14.5**	**8.78**
Yb	mg kg^{-1}	**1.318**				1.271	0.925	**1.36**	1.3		1.22		**1.29**	**1.88**
Zn	mg kg^{-1}	**12.27**			21.74	21.9	20.95	**20.7**		20.57	22.21	22	**20.8**	**20.05**
Zr	mg kg^{-1}	**152.4**			138.8	156.3	80.59	**158**	136	138.539	116.520	139	**140**	**99.43**

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

Table 1 - GeoPT55 Contributed data for Slate, SMB-1. 26/06/2024

Lab Code		V132	V133	V134	V135	V136	V137	-	-	-	-	-	-	-
SiO2	g 100g^{-1}	**74.49**	50.75	74.34	71.69	74.09	**72.502**							
TiO2	g 100g^{-1}	**0.465**	0.21	0.485	0.57	0.49	**0.485**							
Al2O3	g 100g^{-1}	**9.546**	4.44	9.601	10.92	9.66	**9.829**							
Fe2O3T	g 100g^{-1}	**6.112**	5.31	6.154	6.63	6.09	**6.495**							
Fe(II)O	g 100g^{-1}		4.87											
MnO	g 100g^{-1}	**0.065**	0.05	0.067	0.08	0.06	**0.077**							
MgO	g 100g^{-1}	**2.475**	0.67	2.399	2.62	2.38	**2.361**							
CaO	g 100g^{-1}	**0.436**	0.41	0.440	0.53	0.42	**0.437**							
Na2O	g 100g^{-1}	**0.17**	0.01	0.150	0.21	0.16	**0.17**							
K2O	g 100g^{-1}	**4.466**	4.85	4.503	4.71	4.43	**4.516**							
P2O5	g 100g^{-1}	**0.157**	0.14	0.152	0.16	0.159	**0.131**							
H2O+	g 100g^{-1}		0.02											
CO2	g 100g^{-1}													
LOI	g 100g^{-1}	1.62		1.624	1.9	1.58								
Ag	mg kg^{-1}		8.01											
As	mg kg^{-1}	**10**			8	8.5								
Au	mg kg^{-1}						**1.07**							
B	mg kg^{-1}					206								
Ba	mg kg^{-1}	**879**	0.003	821	773	919.3	**165.420**							
Be	mg kg^{-1}					1.05								
Bi	mg kg^{-1}					0.16								
Br	mg kg^{-1}													
C(org)	mg kg^{-1}													
C(tot)	mg kg^{-1}		3000			600								
Cd	mg kg^{-1}						**2.04**							
Ce	mg kg^{-1}	**57**			25	54.5								
Cl	mg kg^{-1}	**105**												
Co	mg kg^{-1}	**20**	31.38		25	33.7	**38.32**							
Cr	mg kg^{-1}	**231**	702.560	1355	882	1271	**883.9**							
Cs	mg kg^{-1}				10	6.2								
Cu	mg kg^{-1}	**48**	15.88		49	54.4	**52.51**							
Dy	mg kg^{-1}					2.6								
Er	mg kg^{-1}					1.4								
Eu	mg kg^{-1}					1.2								
F	mg kg^{-1}	**341**												
Ga	mg kg^{-1}	**13**			10	11.5								
Gd	mg kg^{-1}					3.91								
Ge	mg kg^{-1}					1.1								
Hf	mg kg^{-1}	**4**	1.5		2	3								
Hg	mg kg^{-1}													
Ho	mg kg^{-1}					0.5								
In	mg kg^{-1}													
La	mg kg^{-1}	**34**			20	26.3								
Li	mg kg^{-1}		64.07			26.2								
Lu	mg kg^{-1}					0.2								
Mo	mg kg^{-1}		70.5		2.6	2.1	**2.8**							
N	mg kg^{-1}													
Nb	mg kg^{-1}	**6**	90		6	6.5								
Nd	mg kg^{-1}	**36**			9	23								
Ni	mg kg^{-1}	**222**	164.750	220	190	213.6	**230.460**							
Pb	mg kg^{-1}	**6**			5	5.4								
Pd	mg kg^{-1}													
Pr	mg kg^{-1}					6.2								
Pt	mg kg^{-1}													
Rb	mg kg^{-1}	**123**	27.13	117	122	113.1								
Re	mg kg^{-1}													
Rh	mg kg^{-1}		122											
S	mg kg^{-1}		1700											
Sb	mg kg^{-1}					1.1								
Sc	mg kg^{-1}	**13**			24	11.4								
Se	mg kg^{-1}													
Sm	mg kg^{-1}					4.4								
Sn	mg kg^{-1}		75.78			1.4								
Sr	mg kg^{-1}	**45**	30.12	52	62	46.6								
Ta	mg kg^{-1}					0.58								
Tb	mg kg^{-1}					0.5								
Te	mg kg^{-1}													
Th	mg kg^{-1}	**7**			10	8.8								
Tl	mg kg^{-1}					0.5								
Tm	mg kg^{-1}					0.2								
U	mg kg^{-1}				3	2.55	**2.29**							
V	mg kg^{-1}	**123**			90	112								
W	mg kg^{-1}				4	4								
Y	mg kg^{-1}	**18**	13.25		17	12.9								
Yb	mg kg^{-1}					1.39								
Zn	mg kg^{-1}	**60**	8.42		21	21	**28.72**							
Zr	mg kg^{-1}	**128**	110	147	125	145								

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

Table 2 - GeoPT55 Consensus values and statistical summary for Slate, SMB-1.

	Consensus Value	Uncertainty of consensus value	Horwitz Target Precision	Uncertainty/ Target Precision	Number of reported results	Robust Mean of results	Robust SD of results	Median of results	Status of consensus value	Type of consensus value
	x_{pt}	$u(x_{pt})$	σ_{pt}	$u(x_{pt}) / \sigma_{pt}$	n					
	g 100g^{-1}	g 100g^{-1}	g 100g^{-1}			g 100g^{-1}	g 100g^{-1}	g 100g^{-1}		
SiO2	74.01	0.112	0.7745	0.1446	99	73.62	1.079	73.92	Assigned	Mode
TiO2	0.4995	0.001822	0.01109	0.1643	104	0.4965	0.01786	0.4995	Assigned	Median
Al2O3	9.668	0.01945	0.1374	0.1415	103	9.668	0.1974	9.67	Assigned	Robust Mean
Fe2O3T	6.101	0.01431	0.09294	0.1539	103	6.101	0.1452	6.099	Assigned	Robust Mean
Fe(II)O	3.03	0.06893	0.05129	1.344	12	3.066	0.195	3.03	Provisional	Median
MnO	0.06439	0.0005353	0.001946	0.2751	102	0.06439	0.005406	0.064	Assigned	Robust Mean
MgO	2.393	0.009421	0.04197	0.2245	102	2.393	0.09515	2.39	Assigned	Robust Mean
CaO	0.4331	0.002849	0.009825	0.29	104	0.4331	0.02905	0.4325	Assigned	Robust Mean
Na2O	0.18	0.005847	0.00466	1.255	90	0.1849	0.0462	0.18	Provisional	Median
K2O	4.422	0.01069	0.07072	0.1512	104	4.422	0.109	4.425	Assigned	Robust Mean
P2O5	0.1584	0.0009826	0.00418	0.2351	100	0.1584	0.009826	0.16	Assigned	Robust Mean
LOI	1.639	0.01146	0.03043	0.3766	78	1.639	0.1012	1.64	Provisional	Robust Mean
	mg kg^{-1}	mg kg^{-1}	mg kg^{-1}			mg kg^{-1}	mg kg^{-1}	mg kg^{-1}		
Ag	0.0295	0.00125	0.00401	0.3117	18	0.07982	0.08546	0.03225	Provisional	Mode
As	8.222	0.1998	0.4789	0.4172	51	8.242	1.524	8.222	Assigned	Median
Ba	883.5	4.845	25.46	0.1903	96	878.6	48.28	883.5	Assigned	Median
Be	1.31	0.052	0.1006	0.5169	43	1.234	0.1886	1.27	Assigned	Mode
Bi	0.1467	0.00128	0.01566	0.08172	30	0.1523	0.02673	0.15	Assigned	Mode
Ce	56.38	0.4361	2.458	0.1774	78	56.38	3.852	56.27	Assigned	Robust Mean
Co	33.77	0.42	1.59	0.2641	82	33.31	2.326	33.6	Assigned	Mode
Cr	1252	12.98	34.23	0.379	96	1252	127.1	1252	Assigned	Robust Mean
Cs	6.075	0.05016	0.3704	0.1354	53	6.075	0.3652	6.1	Assigned	Robust Mean
Cu	51.23	0.4707	2.266	0.2077	90	51.23	4.465	51.17	Assigned	Robust Mean
Dy	2.664	0.02956	0.1839	0.1608	57	2.613	0.2727	2.664	Assigned	Median
Er	1.384	0.0239	0.1054	0.2267	56	1.339	0.1809	1.372	Assigned	Mode
Eu	1.1	0.01242	0.08673	0.1432	56	1.112	0.0856	1.1	Assigned	Median
Ga	11.73	0.1426	0.6479	0.2201	70	11.58	1.072	11.73	Assigned	Median
Gd	3.791	0.03634	0.2481	0.1465	56	3.791	0.2719	3.79	Assigned	Robust Mean
Ge	0.98	0.03	0.07862	0.3816	23	1.004	0.516	1	Assigned	Mode
Hf	3.63	0.113	0.2391	0.4725	58	3.464	0.5336	3.591	Assigned	Mode
Ho	0.5	0.015	0.04439	0.3379	53	0.4833	0.05945	0.494	Assigned	Mode
In	0.0229	0.0006813	0.003234	0.2107	9	0.02349	0.00481	0.0229	Provisional	Median
La	27.11	0.2055	1.319	0.1557	78	27.11	1.815	27.05	Assigned	Robust Mean
Li	27.3	0.3614	1.327	0.2722	44	27.24	2.309	27.3	Assigned	Median
Lu	0.19	0.002552	0.01951	0.1308	53	0.1897	0.01556	0.19	Assigned	Median
Mo	2.071	0.0405	0.1485	0.2728	49	2.161	0.3961	2.1	Assigned	Mode
Nb	6.29	0.07075	0.3815	0.1855	68	6.38	0.6368	6.29	Assigned	Median
Nd	23.3	0.316	1.16	0.2723	71	23.46	1.759	23.32	Assigned	Mode
Ni	206	2.135	7.39	0.2889	95	204.1	18.5	206	Assigned	Median
Pb	4.9	0.12	0.3085	0.3889	68	5.307	1.57	5.03	Assigned	Mode
Pr	6.27	0.04103	0.3804	0.1079	55	6.27	0.3043	6.256	Assigned	Robust Mean
Rb	112.2	0.6331	4.41	0.1436	86	112.2	5.872	112	Assigned	Robust Mean
Sb	1.012	0.02413	0.0808	0.2987	37	1.038	0.1816	1.012	Assigned	Median
Sc	12.2	0.1844	0.6697	0.2753	65	12.28	1.237	12.2	Assigned	Median
Sm	4.51	0.0452	0.2876	0.1572	61	4.535	0.3189	4.51	Assigned	Median
Sn	1.36	0.04761	0.1039	0.4584	39	1.37	0.3013	1.36	Assigned	Median
Sr	46.62	0.75	2.092	0.3586	92	47.05	4.257	46.93	Assigned	Mode
Ta	0.51	0.0152	0.04514	0.3367	45	0.531	0.09993	0.5139	Assigned	Mode
Tb	0.51	0.00631	0.04514	0.1398	53	0.501	0.04666	0.5035	Assigned	Mode
Th	8.768	0.09869	0.5058	0.1951	70	8.768	0.8257	8.774	Assigned	Robust Mean
Tl	0.476	0.01131	0.04257	0.2656	35	0.4644	0.0652	0.476	Assigned	Median
Tm	0.1955	0.003513	0.01999	0.1757	51	0.1928	0.02052	0.1955	Assigned	Median
U	2.439	0.0277	0.1706	0.1623	61	2.439	0.2163	2.45	Assigned	Robust Mean
V	110.4	0.9325	4.349	0.2144	89	110.4	8.797	110.1	Assigned	Robust Mean
W	3.599	0.1024	0.2374	0.4315	40	3.599	0.6478	3.6	Assigned	Robust Mean
Y	14	0.149	0.7527	0.1979	84	13.63	1.958	13.9	Assigned	Mode
Yb	1.281	0.01639	0.09871	0.166	56	1.252	0.1508	1.281	Assigned	Median
Zn	22.2	0.3586	1.114	0.322	87	22.51	3.055	22.2	Assigned	Median
Zr	138.8	1.774	5.284	0.3357	85	137.5	13.25	138.8	Assigned	Median

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V1	V2	V4	V5	V6	V7	V9	V11	V12	V13	V15	V17	V18
SiO2	**0.16**	1.97	0.74	**-1.55**	-0.30	**0.02**	0.02	-0.14	**0.14**	0.09	**-0.28**	-2.79	-0.05
TiO2	**0.95**	3.63	-0.16	**-0.95**	-0.92	**0.32**	-0.83	-0.74	**-0.32**	0.34	**-0.23**	1.38	-0.02
Al2O3	**0.81**	1.64	0.24	**-3.36**	2.23	**0.22**	0.01	0.08	**-0.58**	-0.04	**0.08**	8.34	0.01
Fe2O3T	**0.64**	7.69	-0.92	**2.35**	-1.78	**0.72**	-0.06	-0.00	**0.27**	-0.15	**-0.33**	3.87	0.48
Fe(II)O	*	*	*	*	*	*	*	*	*	*	*	*	*
MnO	**2.88**	4.01	-0.87	**1.44**	-1.49	**-0.31**	-1.39	-0.02	**1.85**	-0.61	**0.83**	-1.13	0.93
MgO	**-1.51**	4.37	-0.44	**-4.75**	-0.22	**-0.72**	-0.04	-0.40	**-1.01**	0.02	**1.83**	4.73	0.56
CaO	**5.79**	-4.74	13.60	**-4.49**	0.34	**3.65**	-1.69	0.66	**1.72**	-0.57	**1.72**	14.09	1.37
Na2O	***12.88***	*3.22*	*0.43*	***-0.86***	*37.86*	***10.30***	*	*6.55*	***-12.88***	*-5.36*	***11.80***	*8.58*	*2.15*
K2O	**0.39**	-2.77	-1.41	**0.74**	-1.12	**-0.47**	-1.01	0.69	**-0.33**	0.39	**1.38**	3.66	-0.88
P2O5	**5.17**	25.31	-0.17	**-0.33**	0.15	**1.20**	0.31	-0.28	**-0.81**	-0.28	**1.11**	0.19	1.63
LOI	***2.01***	*	*1.66*	***2.79***	***1.02***	***-1.41***	*	*4.78*	***0.36***	*-1.31*	***-1.94***	*1.17*	*-1.46*
Ag	*	*	*0.56*	*	*	***-0.40***	*	*	***1.37***	*	*	*	*
As	**-0.46**	-1.28	0.10	*	*	**-10.72**	0.81	*	*	5.61	*	-0.65	0.55
Ba	**0.65**	-3.13	-0.40	**1.48**	2.60	**0.50**	-0.58	*	**0.94**	*	**1.10**	0.37	0.09
Be	*	*	*	**1.04**	*	*	0.35	*	**-1.20**	*	*	*	*
Bi	*	*	0.10	*	*	**0.16**	*	*	**-0.11**	0.11	*	260.27	*
Ce	**-0.56**	*	-0.15	**0.53**	*	**-0.31**	-0.23	*	**-1.39**	-0.49	*	*	0.45
Co	**0.77**	-4.64	-0.01	**0.27**	*	*	-0.43	*	**-0.05**	0.14	**0.21**	-0.21	-0.30
Cr	**5.28**	-0.57	-0.40	**-0.04**	-0.59	**-0.55**	-2.46	-16.59	**1.08**	-0.72	**2.32**	-5.31	0.76
Cs	*	*	-0.68	**0.13**	*	**-0.15**	0.20	*	**-0.39**	0.57	*	*	0.17
Cu	0.39	0.17	1.31	**1.12**	-0.27	**-4.16**	0.17	*	**0.28**	0.17	**-3.54**	-0.21	2.33
Dy	*	*	-0.05	**-0.96**	*	**0.30**	-1.72	*	**-0.38**	0.10	*	*	0.67
Er	*	*	-0.09	**-0.93**	*	**0.06**	-2.11	*	**-0.16**	0.55	*	*	0.98
Eu	*	*	-0.37	**-0.28**	*	**0.09**	4.73	*	**-0.65**	0.00	*	*	0.69
Ga	*	-1.34	-0.30	**0.44**	*	**0.19**	0.12	*	*	0.36	*	*	-0.34
Gd	*	*	-0.03	**0.44**	*	**0.07**	1.11	*	**-0.88**	0.22	*	*	0.04
Ge	*	*	*	*	*	**-1.13**	0.83	*	*	*	*	*	0.19
Hf	*	*	0.59	**-1.55**	*	**-0.16**	*	*	**0.00**	0.36	*	*	17.08
Ho	*	*	-0.07	**-0.81**	*	**0.15**	-1.13	*	**-0.38**	-0.11	*	*	0.51
In	*	*	*	*	*	*	*	*	*	*	*	*	*
La	**-1.60**	*	-0.15	**0.55**	*	**-0.13**	-0.12	*	**-0.25**	0.64	*	-0.19	0.79
Li	*	*	*	**0.97**	*	*	0.14	*	**-0.05**	0.23	*	0.11	*
Lu	*	*	-0.10	**-0.62**	*	**0.53**	0.00	*	**0.10**	0.26	*	*	0.92
Mo	*	*	1.80	**2.10**	*	**0.73**	*	*	**1.15**	0.77	*	-1.92	*
Nb	**1.86**	-0.38	-0.37	**0.45**	*	**1.10**	2.80	*	**-0.46**	0.41	*	*	*
Nd	*	*	-0.09	**0.43**	*	**0.21**	-0.22	*	**-0.72**	0.95	*	*	0.69
Ni	**1.76**	-6.02	-1.19	**1.43**	0.41	**0.04**	0.07	*	**0.49**	0.00	**-0.68**	1.76	0.74
Pb	*	*	0.32	**-0.84**	*	**-3.44**	*	*	**-2.61**	*	*	*	*
Pr	*	*	-0.27	**0.42**	*	**-0.08**	-0.33	*	**-0.38**	0.04	*	*	0.41
Rb	**0.64**	1.00	-0.48	**1.50**	-0.02	**0.33**	-0.25	*	**2.47**	-0.02	*	*	-0.48
Sb	*	*	-0.49	*	*	**-0.40**	*	*	**0.00**	0.17	*	63.05	*
Sc	**1.19**	*	1.80	**0.61**	*	**0.90**	-0.34	*	**2.73**	0.00	*	-0.45	0.97
Sm	*	*	-0.02	**0.12**	*	**0.38**	1.91	*	**-0.37**	0.16	*	*	0.23
Sn	*	*	*	*	*	**10.18**	*	*	**-1.86**	0.10	*	*	-0.77
Sr	1.76	0.57	-0.41	**0.50**	0.57	**0.11**	1.05	*	**1.18**	0.09	**0.66**	0.09	2.24
Ta	*	*	-0.45	**-1.00**	*	**52.86**	*	*	**-3.10**	*	*	*	1.97
Tb	*	*	-0.09	**-0.38**	*	**0.31**	-1.00	*	**-0.78**	0.00	*	*	0.13
Th	*	1.22	0.01	**0.32**	*	**0.31**	0.20	*	**0.70**	-0.51	*	*	0.11
Tl	*	*	*	*	*	**-6.48**	*	*	*	0.16	*	*	*
Tm	*	*	-0.16	*	*	**0.31**	-0.39	*	**-0.23**	0.11	*	*	0.76
U	*	*	0.30	**0.06**	*	**-0.35**	-0.35	*	**-0.25**	0.88	*	*	1.03
V	*	5.70	-0.25	**0.33**	-0.04	**0.76**	-1.88	*	**2.40**	-0.16	**-1.70**	-0.65	-0.50
W	*	*	*	**1.19**	*	*	*	*	**-0.38**	2.11	*	*	*
Y	**1.33**	0.00	-0.33	**-1.71**	*	**1.45**	2.66	*	**-0.84**	0.40	*	-2.79	0.53
Yb	*	*	0.03	**-0.95**	*	**1.42**	-1.68	*	**-0.55**	0.45	*	*	1.57
Zn	**-1.08**	-1.44	0.18	**-1.72**	*	**0.45**	-0.09	*	**-0.84**	0.18	*	1.89	2.29
Zr	**1.74**	0.59	-0.98	**-1.97**	1.72	**2.84**	0.11	*	**-1.97**	-0.26	**0.72**	-2.63	0.11

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

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V19	V20	V21	V23	V24	V25	V26	V27	V32	V33	V34	V35	V36
SiO2	-0.65	*	0.14	**0.42**	0.41	*	*	-0.07	**-0.08**	0.74	-0.53	**0.83**	-3.83
TiO2	0.02	0.02	-1.33	**-0.12**	-0.43	-8.09	*	-1.51	**-0.14**	-0.97	0.02	**0.86**	-2.57
Al2O3	0.52	1.21	-0.47	**-0.62**	0.44	-23.80	*	0.66	**-0.28**	-0.05	-1.63	**0.81**	-1.59
Fe2O3T	4.35	1.07	-0.11	**0.09**	0.32	-7.32	*	-0.54	**-0.01**	2.85	0.80	**1.93**	-1.73
Fe(II)O	*	*	*	***-3.51***	*	*	*	*	*	*	*	*	*
MnO	-1.13	0.26	-1.13	**-0.25**	-1.13	-1.13	*	*	**-0.20**	-3.96	-1.13	**3600.01**	-1.74
MgO	-0.75	-2.30	0.32	**0.50**	0.32	-4.65	*	0.44	**1.59**	-0.23	-1.23	**2.07**	-1.03
CaO	-1.69	-2.70	1.88	**2.03**	5.44	-0.21	*	-2.14	**4.77**	0.10	-0.67	**-0.01**	-0.11
Na2O	*	*-2.15*	*2.15*	***2.02***	*4.29*	*-18.67*	*	*	***-4.29***	*0.11*	*	***8.58***	*-0.43*
K2O	-1.71	2.67	-0.37	**0.13**	-0.37	-19.21	*	-0.44	**0.11**	-0.05	0.05	**-1.87**	-0.17
P2O5	-3.39	*	0.19	**-0.59**	0.19	-0.88	*	-0.05	**1.11**	1.27	1.39	**0.39**	1.58
LOI	*0.67*	*	*1.17*	***1.19***	*1.17*	*	*	*0.67*	***0.03***	*	*-0.97*	***-8.18***	*
Ag	*	*	*	*	*	*-1.81*	*143.96*	*	*	*	*	*	*
As	0.08	*	*	*	*	-4.56	7.52	*	*	*	*	*	*
Ba	1.76	0.34	-0.22	**-0.69**	-0.28	-14.41	-7.15	*	**0.49**	*	*	**2.97**	-0.33
Be	0.10	*	0.20	**-0.20**	0.45	-5.02	*	*	*	*	*	*	*
Bi	5.85	*	*	**0.21**	*	-2.13	*	*	*	*	*	*	*
Ce	-0.12	-0.08	-0.28	**0.05**	0.27	0.54	0.73	*	**0.16**	*	*	**-6.67**	-0.54
Co	1.33	-0.56	0.04	**-1.30**	0.23	-1.39	0.43	*	*	*	*	**0.15**	-0.32
Cr	0.26	*	-0.37	**-1.35**	1.36	-6.49	-1.26	*	**-0.30**	*	*	**0.05**	-1.38
Cs	0.22	*	-0.10	**0.07**	0.03	-0.76	*	*	**0.01**	*	*	*	-0.88
Cu	0.17	-2.48	0.26	**-1.38**	-0.03	-3.49	-0.80	*	**-0.10**	*	*	**-2.31**	0.16
Dy	0.51	-1.26	0.02	**0.90**	0.10	-3.93	4.68	*	**0.63**	*	*	*	-0.62
Er	0.27	-1.44	0.03	**0.34**	0.08	-4.05	-1.63	*	**0.15**	*	*	*	-0.80
Eu	0.17	*	-0.12	**0.58**	0.00	-3.00	6.30	*	**0.12**	*	*	*	-0.92
Ga	0.20	*	-0.26	**0.41**	0.05	*	10.64	*	**0.41**	*	*	**-2.68**	-0.15
Gd	0.14	*	-0.02	**-0.45**	0.22	-1.07	20.25	*	**0.04**	*	*	*	-0.13
Ge	-1.72	*	0.13	*	*	-4.64	*	*	*	*	*	*	*
Hf	1.82	*	-0.44	**0.75**	0.56	*	*	*	**0.00**	*	*	*	-1.34
Ho	0.45	*	0.00	**0.68**	0.00	-3.38	*	*	**0.68**	*	*	*	-0.68
In	*	*	*	*	*	*	*	*	*	*	*	*	*
La	0.19	-0.04	-0.42	**0.45**	0.49	0.38	0.56	*	**0.48**	*	*	**1.44**	-0.46
Li	-0.80	-0.45	0.08	**-0.45**	*	-4.42	-2.29	*	*	*	*	*	-1.60
Lu	0.77	*	0.00	**0.51**	0.26	-3.33	*	*	**0.00**	*	*	*	0.46
Mo	-1.89	*	*	**-0.34**	1.11	-4.52	*	*	*	*	*	*	-1.49
Nb	3.55	*	0.88	**-0.03**	0.67	-8.21	*	*	**0.47**	*	*	**-0.50**	0.68
Nd	0.30	0.73	-0.34	**-0.09**	0.43	-0.37	-2.52	*	**0.54**	*	*	**1.47**	0.58
Ni	-1.01	1.22	-0.27	**0.95**	*	-1.41	-1.70	*	**-2.71**	*	*	**-1.35**	2.29
Pb	5.02	0.00	-0.52	**-1.30**	0.49	-3.13	-1.88	*	**-1.26**	*	*	*	0.06
Pr	0.17	0.30	-0.08	**0.39**	0.30	-0.56	*	*	**0.45**	*	*	*	0.68
Rb	0.04	-0.25	-0.02	**0.41**	0.47	-2.55	*	*	**0.41**	*	*	**-0.72**	-0.07
Sb	2.96	*	*	*	*	-6.14	*	*	*	*	*	*	*
Sc	-1.64	*	0.15	**-0.75**	-0.43	*	1.26	*	**-0.15**	*	*	**1.19**	-0.16
Sm	-0.02	0.68	-0.33	**0.52**	-0.19	-1.41	17.56	*	**0.14**	*	*	**9.35**	0.17
Sn	*	*	*	**0.67**	1.16	-6.02	*	*	*	*	*	*	*
Sr	1.29	*	-0.01	**-0.44**	1.07	-6.70	2.38	*	**-0.30**	*	*	**-1.73**	-0.00
Ta	0.44	*	-0.11	**0.22**	22.04	*	*	*	**0.89**	*	*	*	-1.37
Tb	0.66	*	0.00	**0.22**	-0.11	-2.44	*	*	**0.44**	*	*	*	0.29
Th	-0.36	*	-0.57	**0.00**	0.43	-1.09	35.11	*	**0.12**	*	*	**4.41**	0.42
Tl	-0.42	*	*	**1.03**	-0.89	-0.54	*	*	*	*	*	*	*
Tm	0.61	*	0.11	**0.23**	0.11	-3.39	*	*	**0.73**	*	*	*	-0.03
U	0.76	0.06	-0.14	**0.53**	0.18	-3.87	*	*	**-0.17**	*	*	*	0.24
V	-0.85	0.42	-0.50	**-1.01**	0.92	-7.14	-0.16	*	**-0.55**	*	*	**2.44**	-0.46
W	-2.86	*	*	**-0.46**	0.00	-7.12	*	*	*	*	*	*	*
Y	0.66	-3.25	0.66	**-0.27**	0.73	-6.22	3.70	*	**1.41**	*	*	**0.00**	0.17
Yb	0.50	*	-0.06	**0.29**	0.10	-4.56	13.56	*	**0.29**	*	*	*	0.40
Zn	0.36	0.36	0.13	**0.72**	1.62	1.32	1.20	*	**-1.08**	*	*	**-1.98**	-4.53
Zr	0.30	*	0.21	**1.36**	1.01	-12.72	*	*	**1.17**	*	*	**0.23**	-2.55

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

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V38	V40	V42	V43	V46	V47	V48	V49	V50	V51	V52	V53	V54
SiO2	-4.98	-0.23	0.29	*	**0.25**	0.13	0.02	0.04	-1.02	*	**0.63**	-0.98	**0.44**
TiO2	3.99	0.47	0.16	*	**-0.32**	-0.43	0.47	-0.92	-0.06	*	*	0.02	**-1.50**
Al2O3	*	-0.14	0.08	*	**-0.76**	0.33	-0.14	0.09	-0.25	*	*	0.73	**-1.23**
Fe2O3T	0.43	-0.43	0.05	*	**1.22**	-0.11	0.32	0.51	1.27	*	*	0.21	**-2.02**
Fe(II)O	*	*	*0.00*	*	***-3.12***	*	*0.78*	*	*	*	*	*	*
MnO	-0.61	1.44	-1.18	*	**-1.23**	1.44	-1.13	1.44	0.67	*	*	-0.87	**-0.92**
MgO	*	3.54	0.29	*	**-0.79**	0.20	0.20	0.34	-1.65	*	*	0.32	**0.66**
CaO	-0.82	-0.16	-0.20	*	**-1.23**	0.86	0.35	-3.01	-0.34	*	*	-0.67	**0.50**
Na2O	*	*9.66*	*0.97*	*	***-13.30***	*-4.29*	*9.66*	*1.07*	*	*	*	*2.15*	***8.58***
K2O	1.40	1.11	-0.68	*	**-0.64**	0.41	-0.51	0.17	-0.42	*	*	0.34	**-0.85**
P2O5	*	0.19	-0.99	*	**-3.92**	-2.20	0.19	0.31	0.68	*	*	1.03	**0.77**
LOI	*	*0.02*	*-1.74*	*	***-3.09***	*-1.30*	*	*-1.30*	*-1.46*	*	***2.33***	*-1.95*	***0.23***
Ag	*	*	*	***95.89***	*	*	*	*	*	*	*	*	*
As	*	*	*	**-0.27**	**0.81**	-1.28	*	*	*	*	*	-1.59	*
Ba	0.15	-0.66	-0.32	**-6.22**	**0.89**	-0.19	0.40	0.48	*	*	*	-1.39	**-0.18**
Be	*	*	-0.48	**-0.26**	**-0.59**	177.40	*	*	*	*	*	*	**0.29**
Bi	*	*	0.11	**-0.17**	*	*	*	*	*	*	*	*	**0.59**
Ce	0.27	0.33	-0.23	**-2.05**	**-1.10**	265.36	-0.49	*	*	2.22	*	-2.84	**-0.26**
Co	*	-0.56	-0.01	**-1.09**	**0.01**	*	-0.87	*	*	*	*	-0.30	**-0.24**
Cr	1.87	1.20	0.37	**0.39**	**2.27**	*	0.51	2.45	1.39	*	*	-2.34	**1.20**
Cs	*	*	0.00	**-1.64**	**-0.58**	*	*	*	*	*	*	-2.40	**-0.33**
Cu	1.14	1.27	0.00	**-0.39**	**1.57**	-0.49	-0.05	-0.27	11.86	*	*	-1.73	**-0.43**
Dy	*	*	0.00	**-0.68**	**-3.39**	*	-1.26	*	*	1.99	*	*	**-0.55**
Er	*	*	0.04	**-0.23**	**-4.02**	*	1.50	*	*	0.63	*	*	**-0.96**
Eu	*	*	-0.23	**1.27**	**-0.35**	*	-0.58	*	*	2.65	*	*	**-0.39**
Ga	*	2.52	-0.03	**1.44**	**0.38**	-2.11	*	*	*	*	*	-0.10	**-0.44**
Gd	*	*	-0.25	**1.68**	**-2.06**	*	2.44	*	*	3.66	*	*	**-0.11**
Ge	*	*	*	**28.88**	**-7.00**	*	*	*	*	*	*	*	*
Hf	*	*	0.22	**0.43**	**-4.73**	*	*	*	*	*	*	13.95	**0.29**
Ho	*	*	0.09	**-0.63**	**-2.93**	*	*	*	*	1.13	*	*	**-0.50**
In	*	*	*-0.06*	*	*	*	*	*	*	*	*	*	*
La	-0.84	*	0.04	**-2.32**	**-0.87**	-0.04	0.34	-1.18	*	1.32	*	-1.48	**-0.49**
Li	*	*	-0.40	**-3.84**	**-1.82**	*	-0.49	*	*	*	*	*	**1.76**
Lu	*	*	0.26	**-0.36**	**-2.05**	*	*	*	*	1.54	*	*	**-0.10**
Mo	*	*	-0.01	**0.23**	**-0.88**	*	*	*	*	*	*	3.80	*
Nb	*	*	-0.24	**-4.12**	**-0.81**	0.93	-0.38	*	*	*	*	0.01	**-0.94**
Nd	2.28	*	-0.03	**-1.35**	**-1.37**	*	-0.13	*	*	1.68	*	-3.49	**-0.27**
Ni	*	0.81	0.13	**0.07**	**0.19**	-0.41	0.34	0.34	-1.76	*	*	-2.00	**0.68**
Pb	20.26	*	0.58	**-3.00**	**5.09**	9.89	6.64	*	*	*	*	0.16	**0.58**
Pr	*	*	-0.02	**-1.53**	*	*	0.96	*	*	0.42	*	*	**-0.39**
Rb	0.77	0.32	-0.36	**-6.63**	**0.14**	0.21	0.55	0.43	30.70	*	*	-0.62	**0.10**
Sb	*	*	-0.14	**-4.08**	**0.35**	*	*	*	*	*	*	*	**0.46**
Sc	*	*	-0.77	**-2.63**	**-0.39**	0.60	-0.90	*	*	*	*	-0.37	**-0.36**
Sm	*	*	-0.37	**-1.21**	*	*	0.33	*	*	0.66	*	1.72	**-0.23**
Sn	*	*	-0.48	**-1.65**	**-0.48**	*	*	*	*	*	*	17.52	**0.10**
Sr	0.74	-1.10	-0.60	**-3.71**	**0.54**	0.81	-0.39	-0.15	*	*	*	-0.84	**-1.10**
Ta	*	*	0.09	**-2.97**	**1.77**	*	*	*	*	*	*	*	**0.82**
Tb	*	*	-0.13	**0.18**	**-1.99**	*	*	*	*	1.99	*	*	**-0.69**
Th	*	*	-0.10	*	**-1.38**	2.21	1.22	*	*	*	*	-1.06	**0.09**
Tl	*	*	0.00	**-0.26**	**-1.08**	*	*	*	*	*	*	*	*
Tm	*	*	0.08	**-0.58**	**-2.78**	*	*	*	*	1.23	*	*	**-0.58**
U	*	*	-0.03	*	**-0.82**	-1.29	-2.17	*	*	*	*	-0.70	**0.92**
V	*	*	0.20	**0.43**	**1.22**	0.88	-0.27	*	*	*	*	-0.94	**1.00**
W	*	*	-0.26	**-7.33**	**-0.84**	*	*	*	*	*	*	-2.31	*
Y	*	9.30	-0.03	**-2.44**	**-5.98**	0.00	-3.06	*	*	2.13	*	-0.86	**-2.66**
Yb	*	*	-0.12	**-0.75**	**-2.95**	*	*	*	*	1.21	*	*	**-0.34**
Zn	-1.66	5.75	0.67	**4.07**	**-1.01**	-0.54	1.26	0.81	*	*	*	-1.03	**0.03**
Zr	0.21	-1.21	0.85	**2.29**	**-6.12**	-0.64	-1.21	*	*	*	*	-0.76	**1.52**

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

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V55	V56	V57	V59	V60	V61	V62	V63	V64	V65	V66	V67	V69
SiO2	-0.39	-3.43	-0.54	-0.55	-0.07	-2.25	0.51	**-0.48**	0.67	-1.16	0.20	-1.56	*
TiO2	0.07	-5.39	-1.15	1.15	0.47	0.02	0.02	**0.05**	0.70	-0.43	-0.52	1.24	*
Al2O3	2.26	0.52	0.33	-0.19	0.15	4.23	-0.25	**0.52**	1.13	-0.69	0.02	1.06	*
Fe2O3T	0.53	4.30	-0.43	-1.29	-0.11	-0.70	-0.11	**-0.33**	1.50	-0.86	-0.01	8.66	*
Fe(II)O	*	*	*	*	*	*	*	*	*	*	*1.94*	*	*
MnO	-0.10	-1.13	0.41	0.41	-1.13	-1.13	1.44	**2.88**	-1.39	1.44	0.16	4.52	*
MgO	1.51	17.12	-0.28	0.02	-0.87	19.50	5.20	**-1.03**	-0.16	-0.87	-0.19	-0.40	*
CaO	-0.16	6.97	3.40	-1.89	1.37	-0.67	0.35	**3.75**	-2.19	-0.67	0.05	0.20	*
Na2O	*3.22*	*35.41*	*0.00*	*-2.04*	*4.29*	*-12.88*	*13.95*	***-4.29***	*0.00*	*-3.22*	*4.51*	*-7.08*	*
K2O	-1.22	-1.93	0.90	-0.02	0.27	-0.44	-0.09	**-0.60**	0.05	-0.87	-0.02	2.39	*
P2O5	0.79	-1.00	-0.52	-0.88	-8.18	-1.00	0.19	**-4.40**	0.43	-1.00	0.79	-1.60	*
LOI	*-0.64*	*-0.64*	*-2.28*	*-23.46*	*0.84*	*	*1.33*	***1.68***	*-0.64*	*	*0.56*	*3.14*	*
Ag	*	*	*	*3.18*	*	*	*	*	*8.79*	*	*	*	***32.55***
As	-0.23	11.15	0.14	-0.93	-0.44	*	*	**2.25**	-1.98	-8.10	-0.23	*	**1.60**
Ba	0.27	3.27	-0.78	-0.05	-0.17	0.46	-1.27	**-1.16**	-0.93	0.05	-0.42	-0.30	**-1.71**
Be	*	-1.69	0.75	-5.95	*	*	*	*	-0.05	-0.55	-0.60	*	**0.00**
Bi	*	*	0.42	-1.68	-0.53	*	*	*	6.49	*	1.70	*	**0.21**
Ce	1.22	2.31	0.26	-0.10	*	*	1.75	**1.15**	-0.69	-0.93	-0.28	*	**-1.07**
Co	*	-0.65	-0.21	-0.28	-1.18	-1.81	-2.13	**0.21**	0.17	-2.76	-0.27	-2.64	**0.16**
Cr	0.89	-0.41	-3.85	-0.22	-0.56	6.06	-1.96	**-1.09**	-2.37	-0.64	-1.64	6.00	**-9.67**
Cs	*	0.84	-1.18	0.05	*	*	*	*	0.17	*	-0.10	*	**-0.96**
Cu	*	1.45	0.54	-0.08	1.71	-1.15	-0.05	**-3.85**	0.90	-0.49	-0.45	16.94	**0.45**
Dy	-1.02	-0.53	-1.26	0.10	*	*	*	*	-0.99	-0.28	-0.17	*	**-0.62**
Er	-1.25	-1.44	-1.54	-0.05	*	*	*	*	-1.44	0.74	7.67	*	**-0.70**
Eu	0.46	1.44	0.35	-0.22	*	*	*	*	0.06	4.84	-2.31	*	**-0.12**
Ga	*	8.23	8.01	0.07	-0.80	-1.34	*	**-1.91**	-0.49	1.75	0.20	*	**3.39**
Gd	-0.08	2.19	-0.41	-0.02	*	*	*	*	-1.80	0.32	1.63	*	**0.08**
Ge	*	5.91	0.13	-0.27	*	*	*	*	*	0.13	*	*	**34.98**
Hf	*	-1.48	*	-0.85	*	*	*	**-3.47**	-1.11	-0.77	-1.32	*	**-0.54**
Ho	-1.01	-0.56	-1.13	-0.13	*	*	*	*	-1.35	-0.79	-1.13	*	**-0.68**
In	*	*	*	*	*	*	*	*	*	*	*	*	***2.20***
La	1.06	12.12	0.41	-0.33	*	*	-1.18	**13.11**	-0.42	-0.13	-0.80	*	**-0.47**
Li	*	*	-0.67	*	*	*	*	*	-0.11	*	0.00	*	**-0.02**
Lu	-0.77	-0.51	-0.26	-0.04	*	*	*	*	*	0.00	-0.77	*	**-0.51**
Mo	*	6.09	-0.10	-0.05	0.10	*	*	**-3.17**	0.74	*	0.77	*	**3.90**
Nb	*	-0.30	*	0.24	*	-0.38	0.93	**-1.28**	-0.25	2.24	0.93	*	**-0.45**
Nd	1.25	1.94	0.29	-0.25	*	*	*	**0.43**	-0.99	-0.11	0.73	*	**-0.33**
Ni	-0.95	0.74	-2.87	-0.25	2.50	-1.96	-3.52	**-4.02**	0.95	-1.69	-0.07	-0.68	**1.08**
Pb	-1.46	3.73	-2.97	1.30	-0.32	1.78	3.40	**22.36**	0.26	*	2.11	22.61	**-2.95**
Pr	0.96	*	0.07	-0.16	*	*	*	*	-0.88	-0.66	0.43	*	**-0.31**
Rb	-0.48	0.66	-0.61	-0.15	*	-1.50	0.09	**-0.84**	-0.25	0.43	-0.25	-1.12	**-0.95**
Sb	*	5.80	-0.14	-0.92	-0.07	*	*	*	*	*	-0.07	*	**2.95**
Sc	0.90	-0.90	-1.86	-1.47	*	1.34	*	**6.12**	-0.90	-0.15	*	1.47	**-1.42**
Sm	0.85	1.72	0.00	-0.26	*	*	*	**-1.08**	-1.23	-0.56	-0.71	*	**-0.45**
Sn	*	0.87	*	-0.36	*	*	*	*	-0.10	-2.79	*	*	**0.00**
Sr	2.96	0.16	-1.11	-0.67	0.33	-0.63	0.09	**-0.82**	0.57	-0.39	-0.51	6.06	**-1.78**
Ta	*	35.55	*	0.04	*	*	*	*	-1.00	0.22	-0.11	*	**13.29**
Tb	-0.22	0.00	-0.78	0.11	*	*	*	*	-1.33	1.00	-0.78	*	**-0.44**
Th	0.70	3.10	-0.27	-0.32	*	-0.76	-1.75	*	0.26	-2.33	-0.56	*	**-1.75**
Tl	*	1.46	*	-1.21	*	*	*	*	*	*	0.28	*	**-1.79**
Tm	-1.14	0.11	-0.64	0.13	*	*	*	*	*	-0.14	-0.39	*	**-0.78**
U	1.64	2.44	-1.20	0.18	*	*	-1.29	**1.53**	0.06	0.12	-1.87	*	**-0.41**
V	-1.54	0.76	-2.84	-0.15	-3.15	-0.04	-1.65	**2.19**	-12.57	-0.50	-0.27	-3.74	**-0.09**
W	*	1.14	*	-0.76	*	*	*	**66.14**	1.48	*	-1.26	*	**1.52**
Y	-2.79	-2.13	-3.07	-0.56	-1.99	1.33	0.66	**0.40**	-2.52	-0.66	-1.26	*	**-2.13**
Yb	-1.22	-0.31	-1.17	0.03	*	*	*	*	-1.52	0.40	-1.42	-2.47	**-0.72**
Zn	0.81	24.96	1.25	0.46	2.60	-0.54	0.36	**-0.18**	1.71	-0.99	-0.99	-1.57	*
Zr	-1.87	0.21	*	-0.72	*	-1.78	-0.17	**-0.45**	-1.50	-0.55	-0.17	1.79	**-0.72**

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

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V70	V71	V72	V73	V74	V75	V76	V77	V78	V79	V81	V82	V83
SiO2	-0.34	-0.13	-0.57	0.11	*	0.51	-29.28	-1.61	0.74	0.64	0.14	-0.64	0.06
TiO2	0.02	1.04	1.31	-0.86	0.02	0.05	0.05	0.02	-1.76	5.27	-0.43	-0.32	0.05
Al2O3	-0.43	-0.43	0.59	0.20	0.30	0.52	-1.88	-0.79	-0.42	0.30	-0.32	-0.13	0.89
Fe2O3T	-0.00	0.20	1.07	-0.03	-0.06	-0.44	-0.87	-3.02	0.10	-0.20	-0.16	-0.44	-0.87
Fe(II)O	*	*	*	*	*	*	*	*	2.73	*	*	*	*
MnO	1.44	-0.20	-2.62	-1.74	0.41	2.88	-0.20	-1.13	-0.72	2.57	2.47	-0.20	-2.26
MgO	-0.40	-0.82	-0.55	1.00	0.08	-3.89	3.50	7.82	-5.08	-3.48	0.20	-0.08	-2.46
CaO	-0.67	1.21	1.72	-0.62	0.35	-2.35	-4.39	-1.69	-3.37	0.19	-6.77	1.72	-1.33
Na2O	-8.58	-3.00	-15.02	-8.58	*	*	1.07	-5.36	47.21	0.64	0.00	-10.73	*
K2O	0.62	0.77	1.38	0.72	-0.79	-1.45	-0.32	0.12	0.53	0.19	-0.02	-0.32	-1.16
P2O5	-1.00	-0.57	0.39	-0.57	1.39	-2.00	*	-1.00	-2.00	3.50	0.19	0.39	0.39
LOI	-1.63	-3.91	-0.62	2.01	*	2.66	*	*	*	1.02	1.00	2.01	-0.29
Ag	0.06	*	*	*	*	*	*	*	*	*	*	*	*
As	0.19	*	*	-0.25	*	*	-0.25	*	-4.41	9.98	4.05	*	*
Ba	0.13	0.71	-1.12	-0.69	-0.32	*	0.26	-1.25	0.02	0.77	-8.82	1.12	0.26
Be	-0.69	*	*	*	0.50	*	*	*	*	*	*	*	*
Bi	-0.21	*	*	*	*	*	*	*	*	*	*	*	*
Ce	0.69	-0.81	-0.23	0.05	0.41	*	1.23	*	3.10	1.06	-1.50	1.35	*
Co	0.51	-0.23	1.34	0.27	0.20	*	0.08	-4.33	-5.51	2.66	*	0.15	*
Cr	-0.18	-4.30	1.14	0.15	-0.03	*	0.81	0.96	-0.27	5.93	-17.56	-0.70	1.40
Cs	0.33	*	-0.63	5.74	-0.02	*	0.07	*	-5.60	7.90	*	0.69	*
Cu	0.88	-1.96	*	-2.79	0.61	*	*	-0.93	0.78	-0.54	1.21	1.22	*
Dy	0.40	*	0.16	*	0.48	*	3.46	*	*	*	*	-0.18	*
Er	0.65	*	0.00	*	0.50	*	*	*	*	*	*	-0.61	*
Eu	0.00	*	0.18	*	0.75	*	-0.46	*	*	*	*	-0.23	*
Ga	0.90	-1.44	1.21	-1.29	0.44	*	-1.13	0.98	-1.13	0.41	-2.81	-0.57	*
Gd	0.56	-0.79	-0.60	*	-0.12	*	*	*	*	*	*	0.32	*
Ge	1.91	*	*	*	*	*	*	*	*	*	*	*	*
Hf	-0.08	*	0.46	-2.22	0.56	*	-0.54	*	1.55	*	-2.36	-2.05	*
Ho	0.45	*	0.12	*	0.68	*	*	*	*	*	*	-0.23	*
In	-0.14	*	*	*	*	*	*	*	*	*	*	*	*
La	0.79	0.76	-0.01	-0.61	0.60	*	0.45	*	1.44	-5.39	-1.56	0.83	*
Li	-0.11	*	*	*	0.53	*	*	*	*	*	*	2.03	*
Lu	0.00	*	0.01	*	0.00	*	-1.59	*	*	*	*	0.00	*
Mo	-0.24	*	*	0.20	*	*	*	*	-0.48	*	2.12	*	*
Nb	-0.51	0.03	-1.49	-0.76	-1.11	*	*	0.93	4.48	*	-0.77	-0.03	*
Nd	0.56	-0.86	0.02	6.12	0.34	*	-1.12	*	4.05	-1.12	-1.29	0.34	*
Ni	1.15	-1.91	0.35	-0.99	*	*	-4.87	-1.76	0.41	-0.68	-12.10	2.57	-7.58
Pb	0.49	3.40	*	2.59	*	*	*	8.26	26.25	*	73.25	0.71	*
Pr	0.16	1.22	-0.52	*	-0.13	*	*	*	*	*	*	0.74	*
Rb	0.43	-0.91	2.45	-0.27	0.21	*	-0.04	-0.59	-0.04	0.64	-7.61	1.54	*
Sb	1.10	*	*	*	-0.07	*	0.97	*	*	*	*	*	*
Sc	0.75	*	*	1.19	-0.37	*	0.48	-1.64	1.19	1.19	*	*	*
Sm	0.68	0.68	-0.08	*	0.35	*	-1.43	*	*	*	*	0.31	*
Sn	3.08	*	*	*	0.48	*	*	*	-3.47	*	17.04	*	*
Sr	3.17	1.33	2.09	-0.54	-1.63	*	*	-0.15	-1.25	1.62	41.26	-0.15	*
Ta	-0.11	*	-0.53	*	*	*	-0.89	*	55.16	*	*	0.22	*
Tb	0.44	*	0.41	*	0.44	*	-0.89	*	*	*	*	-0.22	*
Th	0.21	-1.52	-0.69	2.44	-0.31	*	0.06	*	2.44	0.46	-3.03	-0.43	*
Tl	0.28	*	*	19.36	*	*	*	*	*	*	*	*	*
Tm	0.61	*	0.00	*	0.61	*	*	*	*	*	*	-0.28	*
U	0.15	*	0.42	0.36	-0.67	*	-1.99	*	3.29	*	*	-0.17	*
V	0.99	0.28	1.34	-0.36	0.07	*	2.21	0.19	0.37	2.90	*	-0.32	-2.39
W	0.76	*	*	2.53	-0.27	*	0.01	*	26.97	*	*	*	*
Y	0.20	1.46	1.57	-0.53	0.20	*	*	0.66	0.00	0.00	0.60	-1.46	*
Yb	0.40	*	-0.19	*	-0.01	*	0.60	*	*	*	*	-0.42	*
Zn	-0.58	-0.27	22.72	-0.36	*	*	-6.47	-0.54	2.51	0.72	24.92	0.72	*
Zr	0.30	0.03	2.74	-0.59	*	*	7.80	-0.08	2.50	-0.34	0.97	-1.85	-1.67

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

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V84	V85	V86	V87	V88	V89	V90	V91	V92	V93	V94	V95	V96
SiO2	**-0.12**	**0.05**	0.04	**-0.60**	-0.26	-0.33	-0.76	**0.23**	*	-0.02	**20.37**	-1.83	-0.01
TiO2	**-1.76**	**0.95**	0.02	**-0.86**	1.01	-0.88	1.43	**0.05**	**-3.14**	0.20	**4.16**	-1.78	-0.43
Al2O3	**8.82**	**0.89**	-0.29	**-1.01**	-0.18	-2.21	-1.81	**0.59**	**-1.85**	-1.26	**2.00**	8.30	0.22
Fe2O3T	**-1.62**	**1.71**	0.10	**-2.48**	0.11	-0.97	-1.83	**-0.01**	**-1.25**	-0.11	**-0.80**	6.08	0.21
Fe(II)O	*	***-1.86***	*	*	*	*	*	*	*	*-1.14*	*	*	*0.00*
MnO	**2.88**	**0.31**	1.44	**-2.26**	0.93	-1.13	0.31	**-0.20**	**-1.84**	1.95	**9.22**	9.15	*
MgO	**8.74**	**-0.08**	-0.40	**-1.03**	0.03	*	-0.12	**-0.55**	**-2.20**	1.39	**-5.96**	11.04	-0.63
CaO	**3.75**	**0.70**	-0.16	**-0.32**	1.11	-1.69	-1.13	**-4.39**	**-1.80**	6.05	**11.15**	-2.19	-0.16
Na2O	*	***2.15***	*	***-4.29***	*-4.94*	*-1.07*	*0.32*	***-2.15***	***-3.00***	*8.26*	***-8.94***	*-10.73*	*0.00*
K2O	**4.92**	**1.66**	0.62	**-0.17**	-0.11	-3.06	-0.29	**-0.32**	**-1.28**	-1.24	**2.90**	0.27	0.27
P2O5	**19.53**	**-4.40**	0.19	**-0.09**	1.99	*	-0.43	**0.15**	**-2.20**	-1.00	**11.63**	-1.00	0.91
LOI	*	***3.98***	*0.35*	***26.32***	*0.02*	*	*	***-1.61***	*	*1.59*	***1.25***	*-10.50*	*-0.80*
Ag	*	*	*	*	*	*	*	***42.52***	*	*	*	*	*-1.18*
As	*	**-1.42**	*	*	*	*	0.81	**1.35**	*	*	*	*	0.32
Ba	**12.44**	**-2.49**	-0.11	**-0.53**	-0.21	0.52	-0.88	**2.97**	**-0.02**	-6.27	*	27.82	0.05
Be	*	**-0.99**	*	*	*	*	-0.30	**0.40**	**0.47**	*	*	*	-0.35
Bi	*	**-0.43**	*	*	*	*	-0.27	**-0.43**	**0.82**	*	*	*	*
Ce	*	**-1.25**	*	**-0.10**	0.08	*	-0.28	**-11.63**	**0.10**	-1.49	*	*	0.21
Co	**41.65**	**-1.05**	0.39	*	*	0.37	-0.37	**0.52**	**-0.50**	*	*	*	-0.05
Cr	**-1.52**	**1.92**	-0.28	**-0.53**	0.96	2.79	0.26	**2.92**	**-0.70**	*	*	5.08	1.65
Cs	*	**-1.28**	*	**-0.04**	*	*	0.13	**0.74**	**0.46**	*	*	*	-0.47
Cu	**21.52**	**1.53**	*	**1.00**	-0.43	-1.15	-0.25	**1.40**	**0.68**	*	*	*	-0.51
Dy	*	**-0.08**	*	**1.17**	*	*	-0.33	**-2.52**	**0.73**	-0.15	*	*	0.13
Er	*	**-0.42**	*	**0.82**	*	*	-0.23	**-2.69**	**0.74**	-0.09	*	*	-0.02
Eu	*	**-0.92**	*	**-0.12**	*	*	0.01	**1.61**	**0.05**	1.23	*	*	0.29
Ga	*	**0.10**	*	**0.05**	0.13	*	-0.64	**-0.21**	*	*	*	*	-0.18
Gd	*	**-1.33**	*	**0.48**	*	*	-0.21	**0.96**	**0.31**	0.16	*	*	-0.41
Ge	*	**-0.13**	*	*	*	*	-0.55	**-9.96**	*	*	*	*	*
Hf	*	**-1.63**	*	**0.42**	*	*	0.29	**0.13**	**0.49**	*	*	*	-1.76
Ho	*	**0.36**	*	**1.13**	*	*	0.00	**-2.48**	**0.62**	-0.16	*	*	0.11
In	*	***-0.90***	*	*	*	*	*-2.75*	*	***0.04***	*	*	*	*
La	*	**-1.22**	*	**0.25**	*	*	0.72	**0.53**	**0.20**	-1.22	*	*	0.11
Li	*	**1.08**	*	*	*	*	*	**0.60**	**0.97**	-1.53	*	*	-0.23
Lu	*	**-0.41**	*	**1.03**	*	*	0.20	**-1.59**	**0.44**	-0.04	*	*	0.00
Mo	*	**-1.15**	*	**-1.08**	*	*	0.47	**-1.08**	**0.25**	*	*	*	-0.14
Nb	*	**-2.65**	*	**0.87**	0.28	*	-0.34	**-2.46**	**-0.28**	*	*	*	0.29
Nd	*	**-1.21**	*	**0.32**	*	*	-0.50	**1.29**	**0.24**	-1.05	*	*	0.65
Ni	**-0.81**	**-1.35**	-0.68	**0.55**	-0.49	0.26	-0.09	**1.62**	**0.49**	*	*	6.36	-0.20
Pb	*	**0.06**	5.02	**0.23**	*	-5.59	0.97	**-1.59**	*	*	*	*	-0.05
Pr	*	**-1.08**	*	**0.11**	*	*	-0.08	**0.42**	**0.22**	-0.98	*	*	-0.09
Rb	**-2.76**	**-0.27**	-0.82	**0.07**	0.09	-0.93	-0.30	**0.75**	**0.46**	*	*	*	-0.02
Sb	*	**-0.15**	*	*	*	*	-2.53	**-0.15**	*	*	*	*	0.05
Sc	*	**0.43**	*	**3.43**	*	*	-1.27	**0.00**	**0.00**	*	*	*	0.00
Sm	*	**-1.01**	*	**0.14**	*	*	-0.56	**0.49**	**0.01**	-1.04	*	*	-0.03
Sn	**949.76**	**-1.06**	*	*	*	*	*	**0.48**	**0.09**	*	*	*	-0.10
Sr	**25.52**	**-1.73**	-0.39	**-2.40**	0.21	-0.87	-0.48	**0.32**	**-0.55**	-1.03	*	*	0.26
Ta	*	**0.89**	*	**0.89**	*	*	-0.11	**-3.68**	**0.07**	*	*	*	-0.55
Tb	*	**-0.60**	*	**0.66**	*	*	-0.07	**-1.57**	**0.35**	0.05	*	*	-1.00
Th	*	**-1.02**	11.10	**0.26**	*	*	-0.56	**-7.09**	**0.17**	*	*	*	-0.13
Tl	*	*	*	*	*	*	-0.99	**0.47**	**0.73**	*	*	*	-0.21
Tm	*	**0.03**	*	**0.73**	*	*	-0.12	**-2.48**	**0.68**	-0.24	*	*	-0.14
U	*	**-1.11**	*	**0.18**	*	*	-0.70	**-1.11**	**0.51**	*	*	*	-0.03
V	**-2.39**	**-1.47**	0.07	**0.58**	-0.03	1.44	-0.06	**0.37**	**-1.42**	*	*	*	0.99
W	*	**0.64**	*	*	*	*	-1.07	**0.13**	**-1.48**	*	*	*	0.02
Y	*	**-1.33**	-0.66	**1.59**	-0.07	*	-0.82	**-6.28**	**0.74**	-0.64	*	*	-0.66
Yb	*	**-0.31**	*	**0.29**	*	*	0.01	**-2.24**	**0.60**	-0.22	*	*	0.15
Zn	*	**1.98**	-4.13	**-2.60**	0.09	-1.66	0.29	**5.84**	*	*	*	*	0.00
Zr	*	**-1.85**	-0.45	**0.59**	0.19	*	-0.26	**0.79**	**2.50**	*	*	*	-2.96

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

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V98	V99	V101	V103	V104	V105	V106	V107	V108	V110	V111	V113	V115
SiO2	0.33	**9.96**	**-0.50**	*	-0.89	-1.55	**-1.15**	-0.09	**0.21**	-16.15	**0.76**	**-0.41**	0.29
TiO2	1.28	**4.31**	**0.05**	*	0.92	0.02	**0.95**	0.25	**-0.86**	-0.88	**-0.86**	**-0.50**	0.02
Al2O3	-0.60	**5.40**	**-0.13**	*	-0.98	0.12	**-1.23**	0.04	**0.01**	-17.35	**0.16**	**-0.27**	-0.14
Fe2O3T	-0.17	*	**-0.33**	*	0.96	0.53	**1.28**	0.27	**-1.41**	-0.00	**-0.65**	**0.56**	-0.06
Fe(II)O	*	***31.78***	*	*	*	*	*	*-0.88*	*	*	*	*	*
MnO	-2.67	**3.45**	**-2.26**	*	-1.13	0.16	**-2.26**	-0.87	**5.60**	-2.16	1.44	**0.72**	-1.13
MgO	0.35	**3.43**	**2.78**	*	1.51	0.44	**-0.08**	0.20	**-0.31**	-14.21	**3.26**	**1.59**	-0.16
CaO	-0.41	**4.87**	**-2.35**	*	-1.69	-0.26	**1.72**	0.35	**-0.32**	4.42	**-0.32**	**-1.64**	-0.16
Na2O	*5.69*	***11.65***	***0.00***	*	*1.07*	*-1.07*	***30.04***	*12.66*	***-10.73***	*	***-2.15***	***2.15***	*0.00*
K2O	0.23	**1.81**	**-0.03**	*	2.39	-0.58	**-0.32**	-0.44	**0.53**	-0.87	**0.53**	**-0.52**	0.05
P2O5	0.55	**2.16**	**9.96**	*	1.39	-0.28	**48.23**	0.91	**-2.00**	112.63	**-6.79**	**-0.57**	0.19
LOI	*-0.31*	*	***8.58***	*	*2.32*	*	***-3.91***	*-1.30*	***-2.27***	*	***2.01***	***8.74***	*-2.12*
Ag	*	*	*	*	*	*	*	*	*	*	*	*	*-0.06*
As	*	**-1.53**	**-3.41**	*	-0.23	*	**-8.61**	*	*	*	*	*	0.29
Ba	0.06	**1.91**	**-1.67**	**6.09**	*	0.40	**3.13**	0.68	**-13.10**	-2.82	*	**0.35**	0.82
Be	*	**0.88**	**-3.58**	**2.23**	-1.94	*	**0.90**	*	*	*	*	**0.77**	-0.50
Bi	*	*	**7.23**	*	*	*	**-3.62**	*	*	*	*	*	-0.47
Ce	2.16	**1.02**	**-2.84**	**0.80**	*	0.33	**2.08**	-0.24	*	*	*	*	-0.10
Co	-1.12	**2.28**	**0.77**	0.42	0.07	1.65	**4.30**	-0.81	*	17.68	*	*	0.48
Cr	0.96	**6.25**	**-5.50**	2.54	-2.09	1.30	**6.19**	-0.18	**-2.40**	-8.21	*	*	1.94
Cs	*	*	**-0.20**	**1.04**	*	*	**1.09**	*	*	*	*	*	0.60
Cu	1.58	*	**-2.13**	0.59	-0.93	-0.71	**4.40**	0.63	*	-0.27	**2.55**	**0.68**	0.28
Dy	*	**1.53**	**-3.39**	**1.00**	*	*	**0.58**	-0.28	*	*	*	*	0.80
Er	*	**1.05**	**-3.83**	**-0.12**	*	*	**-0.32**	-0.97	*	*	*	*	1.21
Eu	*	**-0.08**	**-0.69**	**0.58**	*	*	**1.38**	0.35	*	*	*	*	-0.40
Ga	*	**1.01**	**-2.68**	0.49	*	*	**1.18**	-0.95	*	*	*	**0.73**	-0.03
Gd	*	**0.49**	**-1.25**	**0.21**	*	*	**1.00**	-0.18	*	*	*	*	0.66
Ge	*	**2.35**	*	*	*	*	**18.44**	*	*	*	*	*	-5.53
Hf	*	**1.67**	**-6.06**	**-1.14**	*	*	**-0.08**	4.96	*	*	*	**-0.10**	0.54
Ho	*	**1.15**	**-3.15**	**0.44**	*	*	**-0.90**	-1.46	*	*	*	*	0.79
In	*	*	***14.57***	*	*	*	*	*	*	*	*	*	*0.17*
La	2.61	**-0.71**	**-0.91**	**0.55**	*	-0.42	**1.66**	0.34	*	*	*	*	0.41
Li	*	**10.32**	**0.00**	**1.89**	*	*	**3.92**	-2.03	*	*	*	**2.04**	0.34
Lu	*	**1.09**	**-0.51**	**0.19**	*	*	**1.03**	-1.03	*	*	*	*	0.00
Mo	*	*	**-8.70**	**2.51**	*	*	**25.05**	*	*	*	*	*	0.37
Nb	4.34	**2.14**	**8.94**	**1.67**	*	*	**2.44**	*	*	*	*	*	0.17
Nd	*	**-0.02**	**-2.93**	**2.20**	*	*	**3.19**	-0.65	*	*	*	*	0.86
Ni	0.75	**2.68**	**-3.79**	0.76	-0.95	0.95	**6.09**	-0.55	**0.54**	-2.44	**0.54**	*	0.81
Pb	-4.70	**-1.28**	**-6.48**	**-1.07**	0.32	*	**-1.26**	-0.16	*	*	**19.77**	**-1.53**	0.78
Pr	*	**-0.29**	**0.58**	**1.14**	*	*	**3.34**	-0.41	*	*	*	*	0.16
Rb	-0.49	*	**-1.40**	**2.00**	*	*	**2.68**	0.18	*	-0.25	*	*	1.06
Sb	*	*	**2.57**	0.25	69.85	*	**-1.88**	*	*	*	*	*	0.24
Sc	*	**3.60**	**-1.34**	**1.19**	*	*	**-1.49**	-0.22	*	*	*	**0.36**	0.52
Sm	*	**-0.11**	**0.45**	**0.81**	*	*	**1.60**	-0.63	*	*	*	*	0.45
Sn	*	*	**2.12**	**-2.37**	-4.91	*	**2.70**	*	*	*	*	*	0.29
Sr	1.93	**0.39**	**-2.40**	**1.06**	9.17	*	**2.57**	-0.20	*	-0.39	**-3.64**	**0.28**	1.12
Ta	*	**1.99**	**3.54**	**0.54**	*	*	**2.88**	*	*	*	*	*	-0.22
Tb	*	**0.75**	*	**0.87**	*	*	**2.22**	-1.00	*	*	*	*	-0.22
Th	-0.36	**2.24**	**0.66**	**-0.68**	*	*	**-0.94**	-0.36	*	1.12	*	**0.20**	-0.24
Tl	*	**-0.31**	**0.56**	**1.70**	-2.65	*	**1.27**	-0.42	*	*	*	*	0.02
Tm	*	**1.09**	**-3.28**	**0.57**	*	*	**-0.78**	-1.39	*	*	*	*	0.61
U	*	**2.12**	**-0.23**	**-0.17**	*	*	**0.12**	*	*	*	*	**0.35**	-0.17
V	-0.58	**3.04**	**-0.55**	**0.97**	-1.54	-1.08	**5.52**	0.72	**-2.39**	1.11	**2.44**	**-0.07**	1.45
W	*	*	**7.59**	-0.35	*	*	**-3.03**	*	*	*	*	*	0.74
Y	8.30	**1.90**	**-7.71**	**1.47**	*	0.00	**3.85**	0.00	*	*	*	**0.08**	1.00
Yb	*	**1.12**	**-3.05**	**0.12**	*	*	**-0.31**	-1.52	*	*	*	*	0.86
Zn	-1.44	**0.68**	**-4.67**	**-0.03**	3.50	-0.09	**1.71**	-0.76	*	-0.09	**11.49**	**2.12**	1.44
Zr	-1.18	**3.82**	**-12.64**	0.55	*	-1.50	**2.69**	0.11	*	-0.83	*	**1.41**	1.82

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

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024

Lab Code	V116	V118	V119	V120	V122	V123	V124	V126	V127	V128	V129	V130	V131
SiO2	**0.89**	**-1.59**	-0.01	0.15	-3.22	*	**0.41**	-0.36	-2.95	-1.90	0.09	*	**-2.39**
TiO2	**-0.95**	**-2.66**	0.02	-0.07	1.12	-1.28	**-0.59**	0.16	-1.92	-2.68	-0.07	**0.05**	**0.05**
Al2O3	**-0.79**	**0.01**	0.37	-0.08	-1.01	1.21	**0.38**	-0.39	-3.15	-3.09	-0.03	**0.30**	**6.05**
Fe2O3T	**-0.98**	**-8.61**	-0.92	-0.09	-1.59	-0.20	**0.32**	-0.06	-1.20	-2.53	0.27	**1.50**	**0.10**
Fe(II)O	*	*	*	*	*	*	*	*	*	*	*	*	*
MnO	**-0.20**	**2.88**	-1.13	0.16	-0.61	-0.61	**-0.20**	0.16	-2.67	-2.41	0.41	**-2.26**	**8.02**
MgO	**0.16**	**-6.03**	0.68	-0.24	-0.73	-1.35	**0.64**	-0.40	0.89	-2.42	-0.04	**0.88**	**-4.13**
CaO	**0.60**	**-1.33**	0.35	0.35	0.56	-0.57	**0.80**	0.86	-2.55	-0.67	1.37	**1.72**	**0.70**
Na2O	***9.66***	*	*2.15*	*3.65*	*-0.53*	*-0.75*	***1.72***	*0.00*	*	*-1.07*	*5.36*	***0.00***	***4.29***
K2O	**-1.87**	**2.51**	0.27	0.33	-0.34	1.80	**0.39**	-0.44	0.18	-2.99	0.05	**-1.16**	**3.36**
P2O5	**4.93**	**2.78**	-1.00	0.67	0.76	-0.52	**0.39**	0.19	-2.44	-1.00	0.31	**0.39**	**-6.79**
LOI	***-12.45***	***10.22***	*-0.64*	*-0.89*	*	*	***0.69***	*-2.28*	*	*0.51*	*-1.95*	*	***6.94***
Ag	*	*	*	*	*0.12*	*-0.15*	*	*	*	*	*	***-2.87***	***0.12***
As	*	*	*	3.52	0.12	0.00	**0.39**	-1.28	3.86	-0.98	*	*	**24.28**
Ba	**0.41**	*	*	-0.56	0.05	0.01	**-2.06**	0.82	1.96	-0.46	0.33	**-1.67**	**3.47**
Be	**-0.40**	*	*	*	0.05	-1.61	**-2.48**	-1.54	*	-1.34	*	**-0.30**	**-12.52**
Bi	*	*	*	*	-0.35	0.05	*	*	*	*	*	**0.21**	**58.31**
Ce	**0.01**	*	*	-3.42	0.17	-0.41	**-0.52**	0.17	-4.04	1.11	4.60	**0.21**	**7.94**
Co	**-0.11**	*	*	-0.40	-0.34	0.26	**-0.73**	-0.56	-0.80	-0.87	1.02	**-0.17**	**1.17**
Cr	**1.81**	*	*	1.14	0.07	2.34	**-0.53**	-1.35	0.19	-0.55	0.38	**2.42**	**5.87**
Cs	**0.23**	*	*	*	-0.16	0.27	*	0.30	-1.05	-0.28	*	**-0.42**	**27.15**
Cu	**-1.07**	*	*	0.48	1.22	0.08	**-1.29**	-0.27	-1.29	-1.73	-0.49	**-0.59**	**0.34**
Dy	**0.36**	*	*	*	0.03	-2.03	**0.36**	0.10	*	0.18	*	**0.47**	**-11.93**
Er	**0.38**	*	*	*	0.32	-1.85	**0.53**	-0.40	*	-0.26	*	**0.34**	**0.63**
Eu	**-0.48**	*	*	*	-0.05	-0.24	**0.23**	-0.52	*	-0.58	*	**0.12**	**-0.58**
Ga	**-0.53**	*	*	0.08	-0.57	-1.62	-1.11	0.20	-1.33	-0.50	0.20	**0.10**	**-13.30**
Gd	**-0.25**	*	*	*	-0.49	-1.10	**0.64**	-0.39	*	-0.59	*	**-0.49**	**-5.45**
Ge	*	*	*	*	-0.35	*	*	*	*	*	*	*	**-1.65**
Hf	**0.25**	*	*	*	-0.72	-3.09	**0.21**	-0.90	*	-1.15	-3.41	**-1.00**	**12.71**
Ho	**0.77**	*	*	*	-0.13	-1.40	**0.23**	0.00	*	-0.34	*	**0.23**	**1.13**
In	*	*	*	*	*0.00*	*	*	*	*	*	*	*	*
La	**-0.31**	*	*	-3.33	0.21	-0.14	**0.38**	-0.08	-2.63	-0.49	6.78	**-0.53**	**0.52**
Li	**0.30**	*	*	*	0.02	-1.77	**10.25**	*	*	*	*	**-0.38**	**0.84**
Lu	**0.26**	*	*	*	0.24	-0.90	**0.00**	0.26	*	-0.26	*	**0.00**	**16.40**
Mo	**-0.07**	*	*	*	0.03	0.13	**-1.29**	-0.24	*	-1.72	*	**0.13**	**7.20**
Nb	**0.50**	*	*	-0.69	0.58	-0.42	**-0.37**	-0.38	-0.09	-2.15	*	**0.47**	**5.45**
Nd	**-0.09**	*	*	-0.23	-0.06	0.01	**0.43**	0.13	-4.72	-0.47	0.73	**0.00**	**1.47**
Ni	**-0.27**	*	*	-0.45	-0.12	0.85	**-0.95**	-0.41	1.79	-0.91	-0.07	**2.98**	**4.94**
Pb	**-0.26**	*	*	*	-0.40	0.43	**0.88**	3.40	*	-1.00	*	**-0.97**	**-11.34**
Pr	**0.11**	*	*	*	-0.11	-0.36	**-0.81**	0.24	*	-0.38	3.59	**-0.24**	**-14.01**
Rb	**0.48**	*	*	0.75	-0.25	0.26	-1.16	0.32	-0.71	-0.39	-0.70	**-0.27**	**3.09**
Sb	**1.63**	*	*	*	-0.13	0.82	**-0.27**	-1.31	*	-6.01	*	*	**8.52**
Sc	**0.91**	*	*	-0.07	0.71	*	**-4.46**	-0.15	*	-0.84	*	**0.75**	**-0.34**
Sm	**-0.24**	*	*	*	-0.23	-0.10	**0.56**	0.50	*	-0.14	0.85	**-0.17**	**-5.46**
Sn	**0.77**	*	*	*	-0.03	-0.09	*	-1.73	*	*	*	**-0.77**	**-11.84**
Sr	**-0.15**	*	*	0.16	-0.17	-1.33	**-3.60**	0.57	-0.32	0.83	0.09	**0.66**	**9.47**
Ta	**-0.16**	*	*	*	*	-0.38	**-3.54**	-0.11	*	-0.78	*	**-0.22**	**105.45**
Tb	**0.11**	*	*	*	-0.15	-0.90	**0.00**	-0.11	*	-0.44	*	**0.00**	**6.87**
Th	**-1.28**	*	*	*	-0.18	-0.16	**-1.02**	0.13	*	0.31	*	**-1.12**	**4.73**
Tl	**0.31**	*	*	*	-0.29	0.30	**0.09**	-0.89	*	-0.78	*	**-4.84**	**4.32**
Tm	**0.73**	*	*	*	-0.21	-1.19	**0.73**	0.11	*	-0.39	*	**0.23**	**-2.28**
U	**-0.17**	*	*	*	-0.06	0.04	**-1.23**	0.47	*	0.62	*	**-0.76**	**71.40**
V	**-2.62**	*	*	0.42	-0.09	1.29	**0.60**	0.42	-0.19	-0.56	0.42	**0.14**	**3.98**
W	**-1.01**	*	*	*	-0.37	0.07	*	2.95	*	-1.22	*	**0.47**	**-9.39**
Y	**-0.16**	*	*	-0.48	-0.35	-3.29	**-0.13**	-0.66	-0.64	-1.09	-0.66	**0.66**	**-6.93**
Yb	**0.37**	*	*	*	-0.05	-1.81	**0.80**	0.10	*	-0.31	*	**0.09**	**6.07**
Zn	**-8.92**	*	*	-0.21	-0.13	-0.56	**-1.35**	*	-0.73	0.00	-0.09	**-1.26**	**-1.93**
Zr	**2.57**	*	*	0.00	1.66	-5.51	**3.63**	-0.26	-0.02	-2.11	0.02	**0.23**	**-7.45**

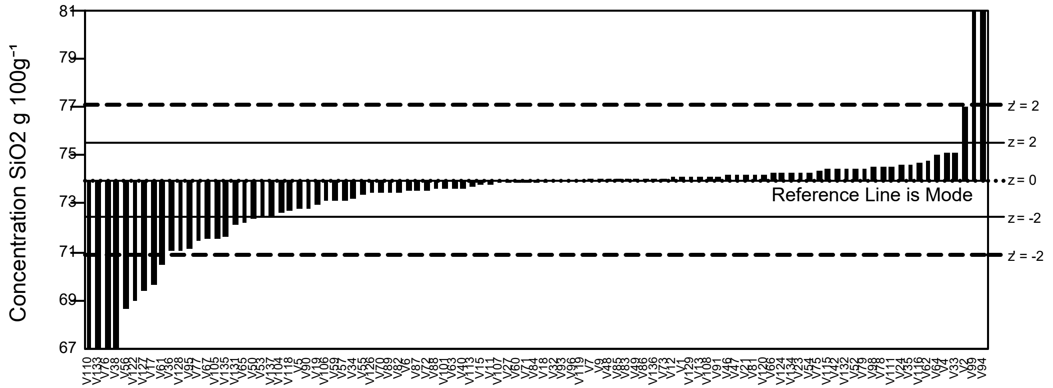
Bold entries are Data Quality 1 - Underlined entries are Data Quality 2 - *Entries in italics* are derived from Provisional Values.

Table 3 - GeoPT55 Z-scores for Slate, SMB-1. 26/06/2024 9

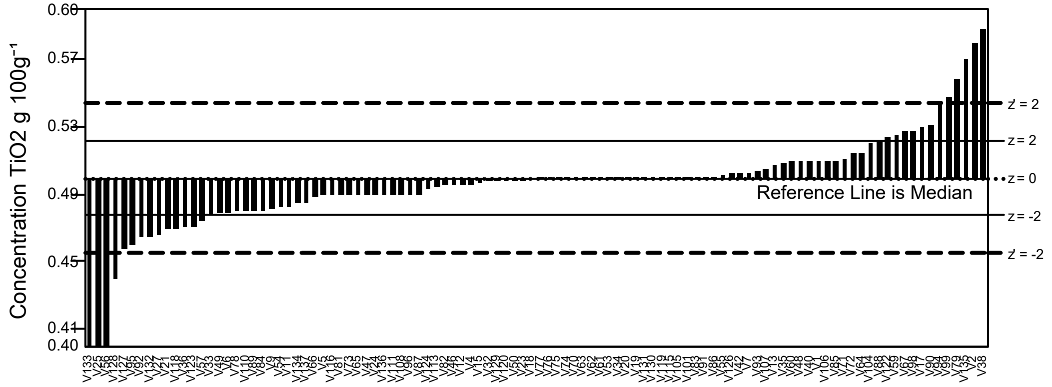
Lab Code	V132	V133	V134	V135	V136	V137
SiO2	**0.61**	-15.02	0.21	-1.50	0.05	**-1.95**
TiO2	**-3.11**	-13.05	-0.66	3.18	-0.43	**-1.31**
Al2O3	**-0.89**	-19.02	-0.25	4.55	-0.03	**1.17**
Fe2O3T	**0.12**	-4.25	0.29	2.85	-0.06	**4.24**
Fe(II)O	*	*17.94*	*	*	*	*
MnO	**0.31**	-3.70	0.62	4.01	-1.13	**6.48**
MgO	**1.95**	-20.53	0.07	2.70	-0.16	**-0.77**
CaO	**0.29**	-1.18	0.36	4.93	-0.67	**0.40**
Na2O	***-2.15***	*-18.24*	*-3.19*	*3.22*	*-2.15*	***-2.15***
K2O	**0.62**	3.02	0.57	2.03	0.05	**1.32**
P2O5	**-0.33**	-2.20	-0.76	0.19	0.07	**-6.55**
LOI	*-0.31*	*	*-0.25*	*4.29*	*-0.97*	*
Ag	*	*995.14*	*	*	*	*
As	**3.71**	*	*	-0.23	0.29	*
Ba	**-0.17**	-17.35	-1.23	-2.17	0.70	**-28.21**
Be	*	*	*	*	-1.29	*
Bi	*	*	*	*	0.42	*
Ce	**0.25**	*	*	-6.38	-0.38	*
Co	**-8.66**	-0.75	*	-2.76	-0.02	**2.86**
Cr	**-29.83**	-8.03	1.50	-5.41	0.28	**-10.76**
Cs	*	*	*	5.30	0.17	*
Cu	**-1.43**	-7.80	*	-0.49	0.70	**0.56**
Dy	*	*	*	*	-0.17	*
Er	*	*	*	*	0.08	*
Eu	*	*	*	*	0.58	*
Ga	**1.95**	*	*	-1.34	-0.18	*
Gd	*	*	*	*	0.24	*
Ge	*	*	*	*	0.76	*
Hf	**1.55**	-4.45	*	-3.41	-1.32	*
Ho	*	*	*	*	0.00	*
In	*	*	*	*	*	*
La	**5.23**	*	*	-2.69	-0.31	*
Li	*	13.85	*	*	-0.41	*
Lu	*	*	*	*	0.26	*
Mo	*	230.47	*	1.78	0.10	**4.91**
Nb	**-0.76**	109.72	*	-0.38	0.28	*
Nd	**10.95**	*	*	-6.16	-0.13	*
Ni	**2.17**	-2.79	0.95	-1.08	0.51	**3.31**
Pb	**3.57**	*	*	0.16	0.81	*
Pr	*	*	*	*	-0.09	*
Rb	**2.45**	-9.64	0.55	1.11	0.10	*
Sb	*	*	*	*	0.54	*
Sc	**1.19**	*	*	8.81	-0.60	*
Sm	*	*	*	*	-0.19	*
Sn	*	358.28	*	*	0.19	*
Sr	**-0.78**	-3.94	1.29	3.68	-0.01	*
Ta	*	*	*	*	0.78	*
Tb	*	*	*	*	-0.11	*
Th	**-3.49**	*	*	1.22	0.03	*
Tl	*	*	*	*	0.28	*
Tm	*	*	*	*	0.11	*
U	*	*	*	1.64	0.32	**-0.87**
V	**2.90**	*	*	-2.34	0.19	*
W	*	*	*	0.85	0.85	*
Y	**5.31**	-0.50	*	1.99	-0.73	*
Yb	*	*	*	*	0.55	*
Zn	**33.94**	-6.19	*	-0.54	-0.54	**5.85**
Zr	**-2.04**	-2.73	0.78	-1.31	0.59	*

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

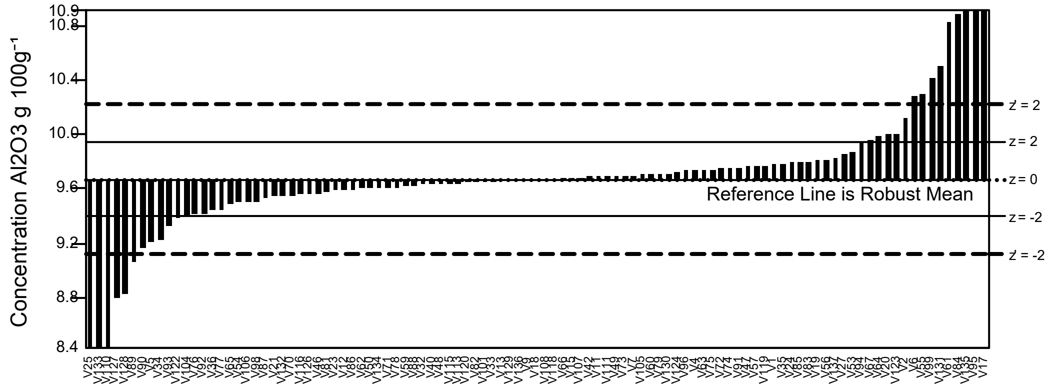
GeoPT55 - Barchart for SiO2



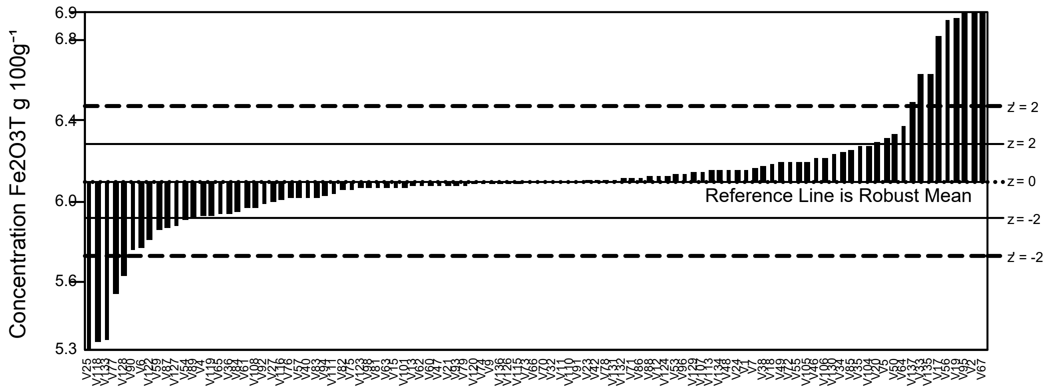
GeoPT55 - Barchart for TiO2



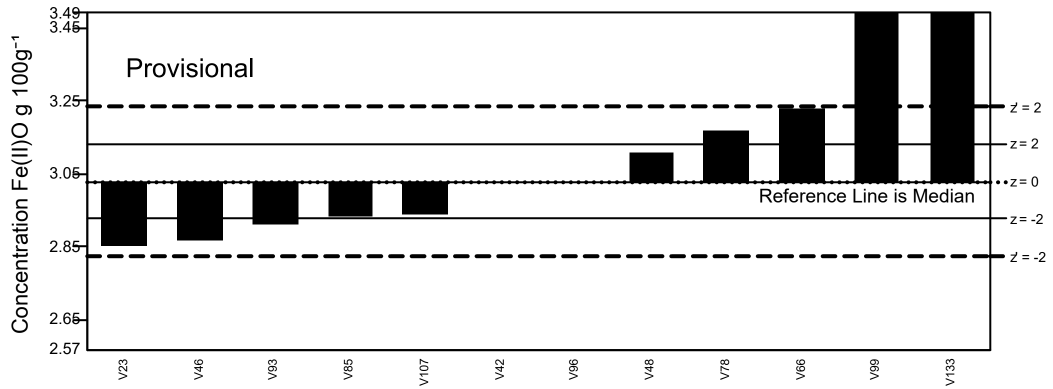
GeoPT55 - Barchart for Al2O3



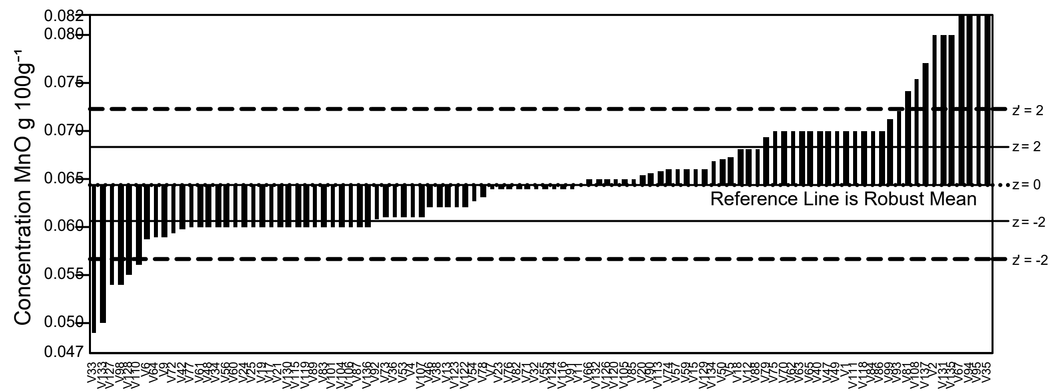
GeoPT55 - Barchart for Fe2O3T



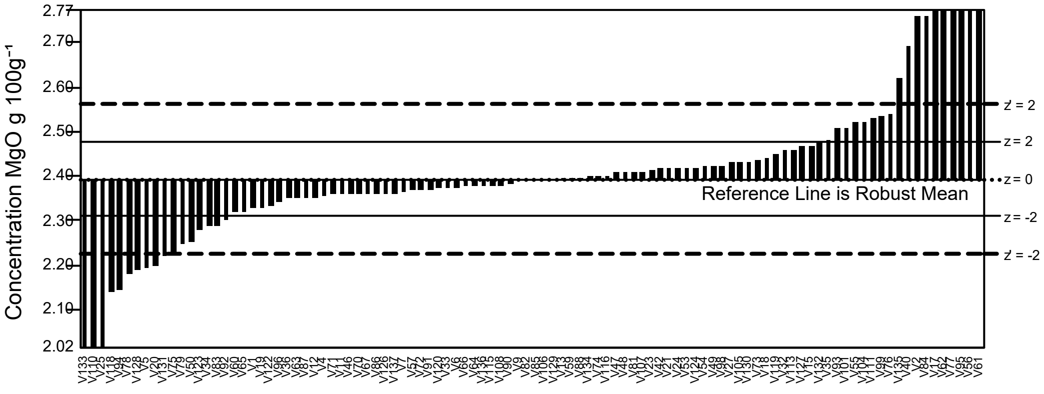
GeoPT55 - Barchart for Fe(II)O



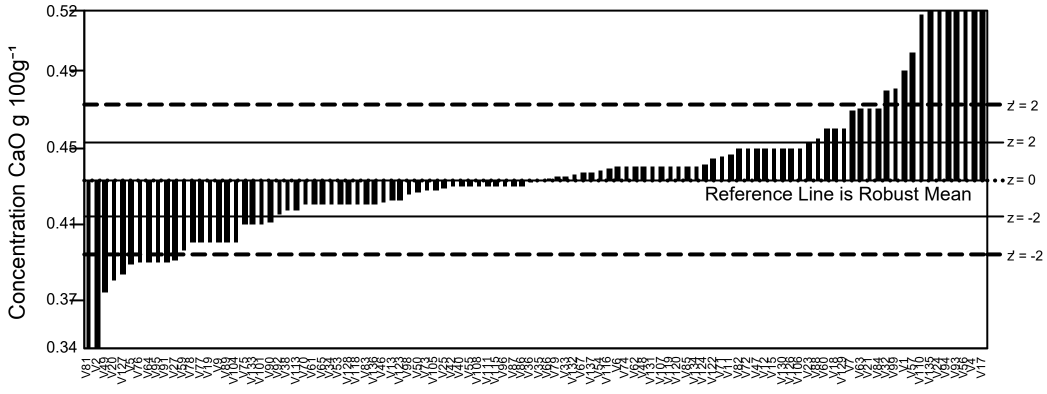
GeoPT55 - Barchart for MnO



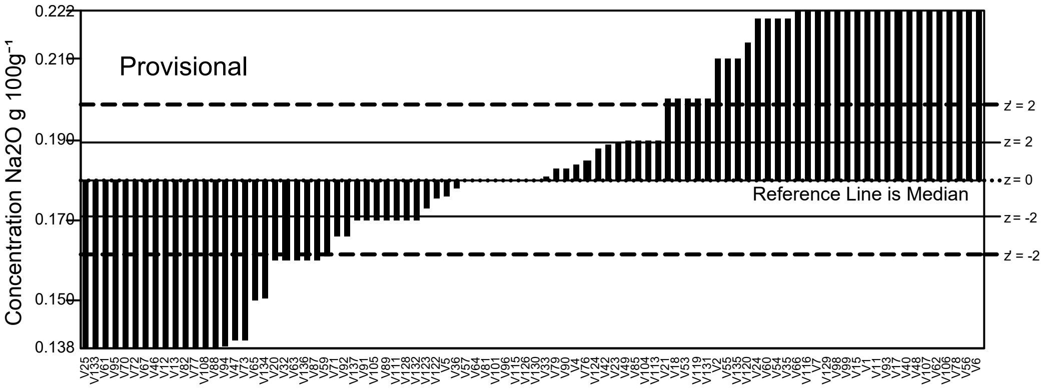
GeoPT55 - Barchart for MgO



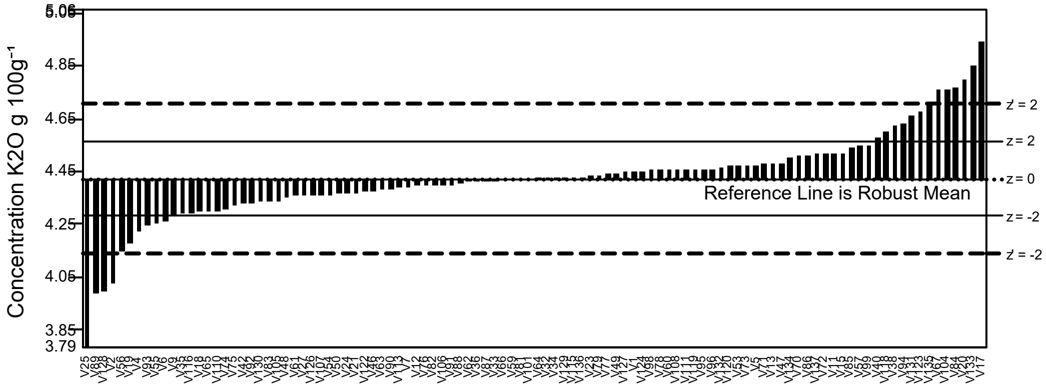
GeoPT55 - Barchart for CaO



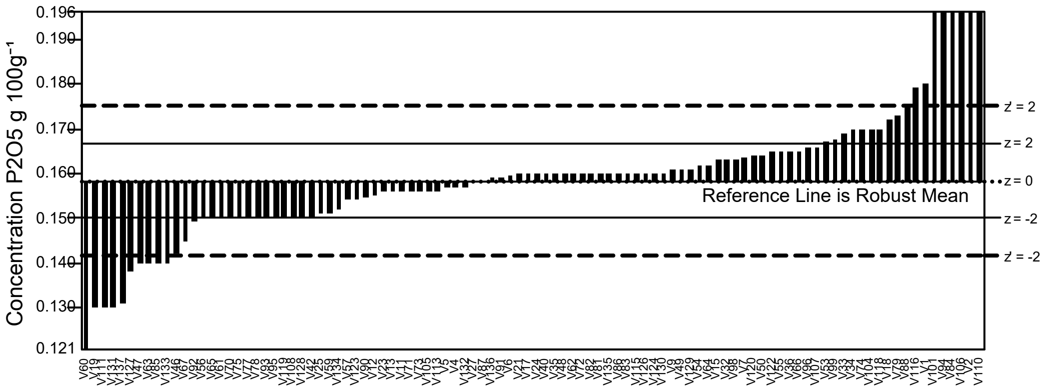
GeoPT55 - Barchart for Na2O



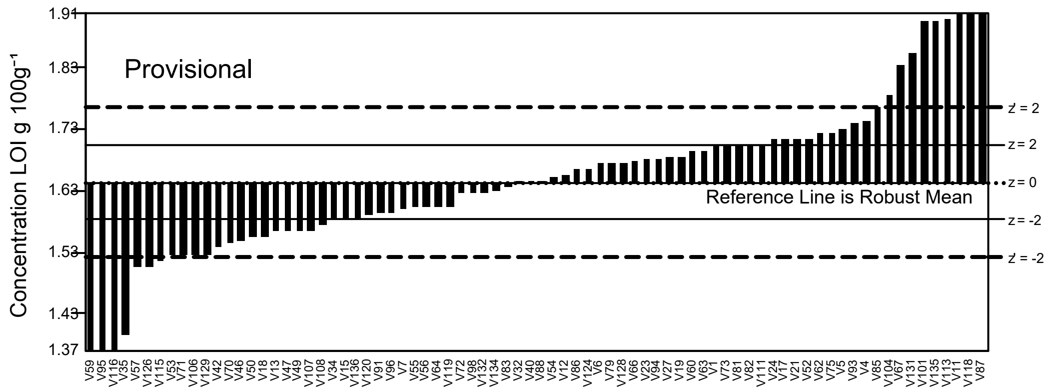
GeoPT55 - Barchart for K2O



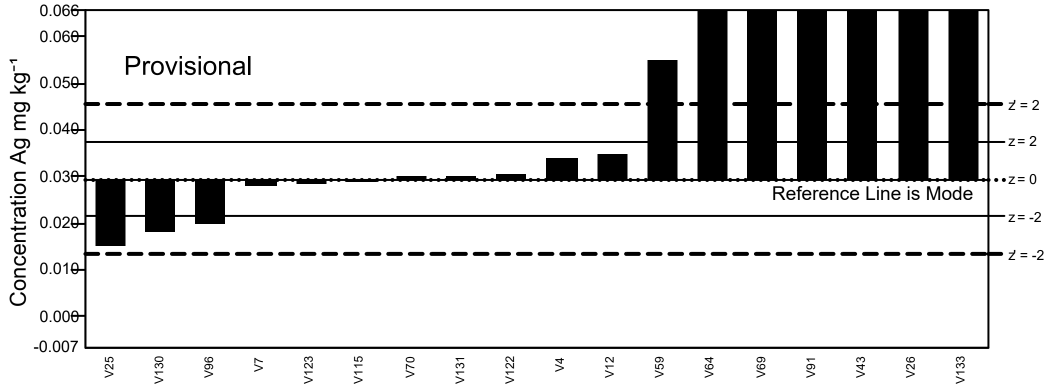
GeoPT55 - Barchart for P2O5



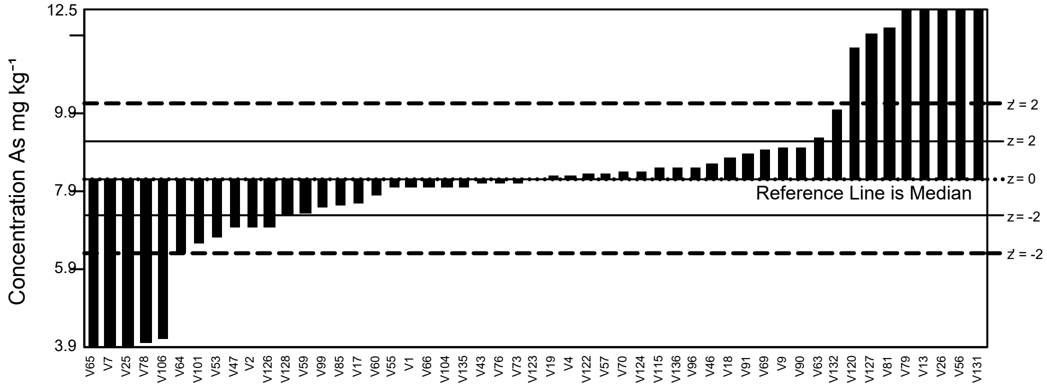
GeoPT55 - Barchart for LOI



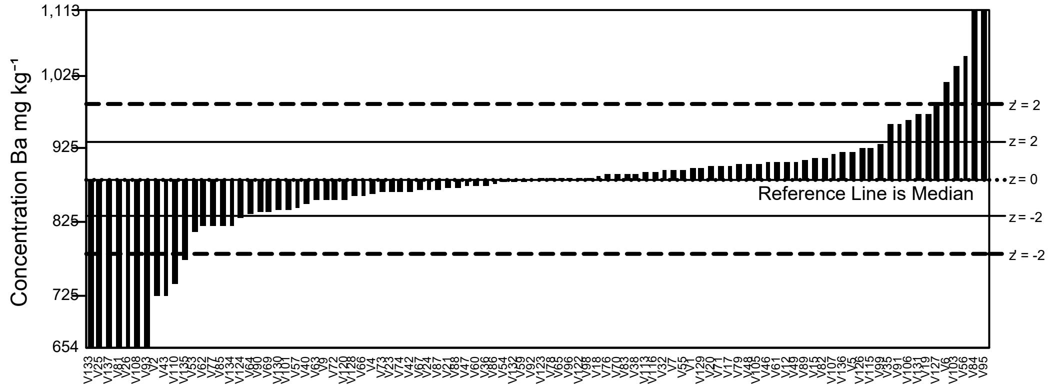
GeoPT55 - Barchart for Ag



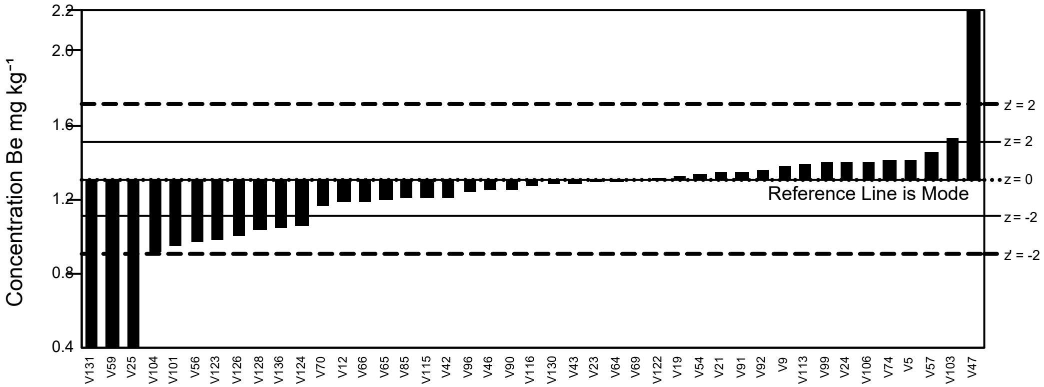
GeoPT55 - Barchart for As



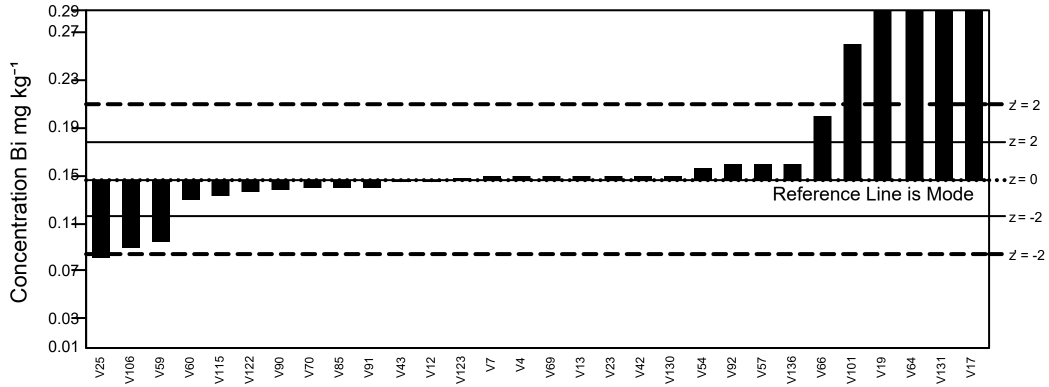
GeoPT55 - Barchart for Ba



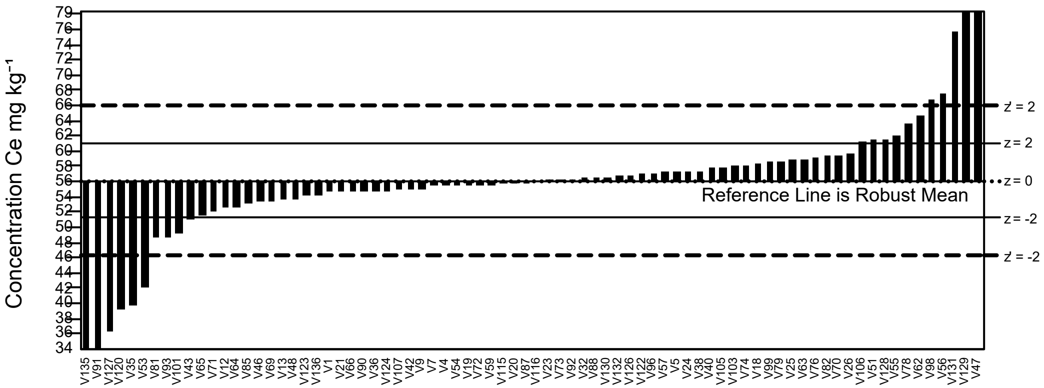
GeoPT55 - Barchart for Be



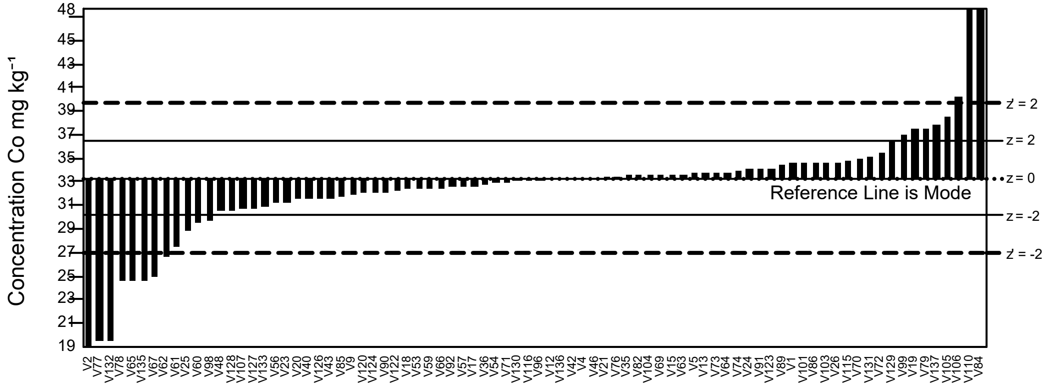
GeoPT55 - Barchart for Bi



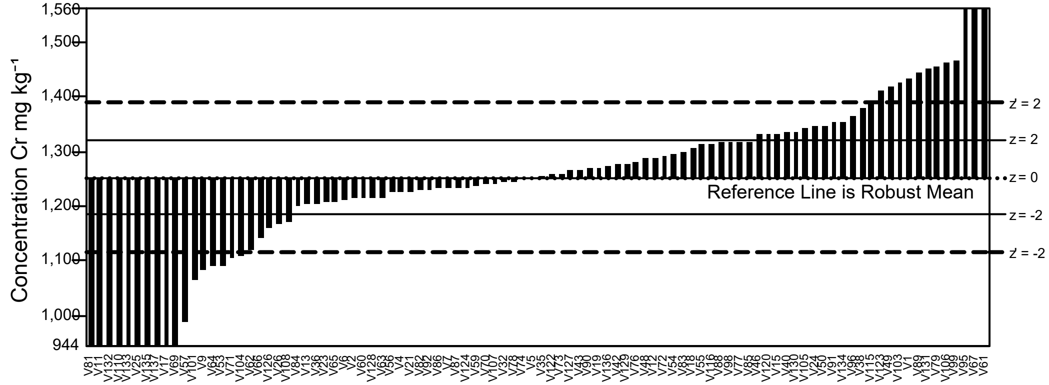
GeoPT55 - Barchart for Ce



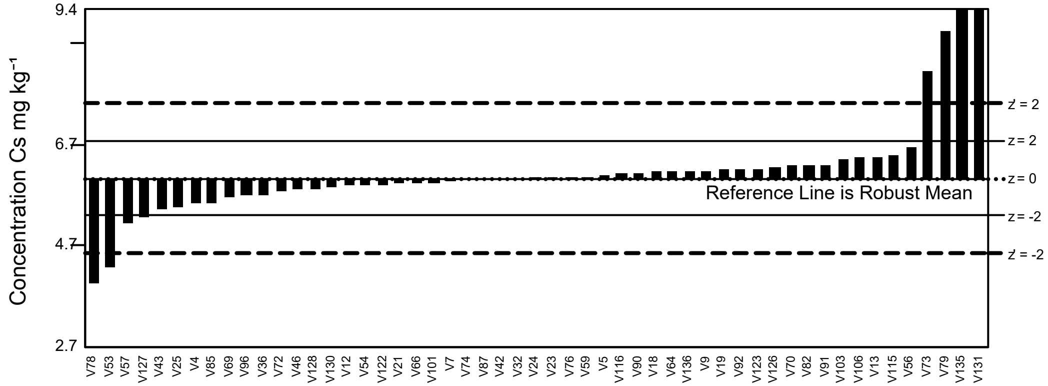
GeoPT55 - Barchart for Co



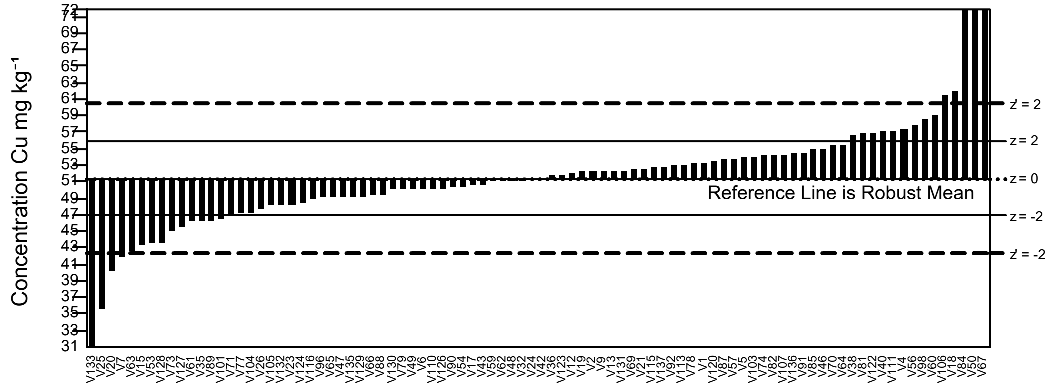
GeoPT55 - Barchart for Cr



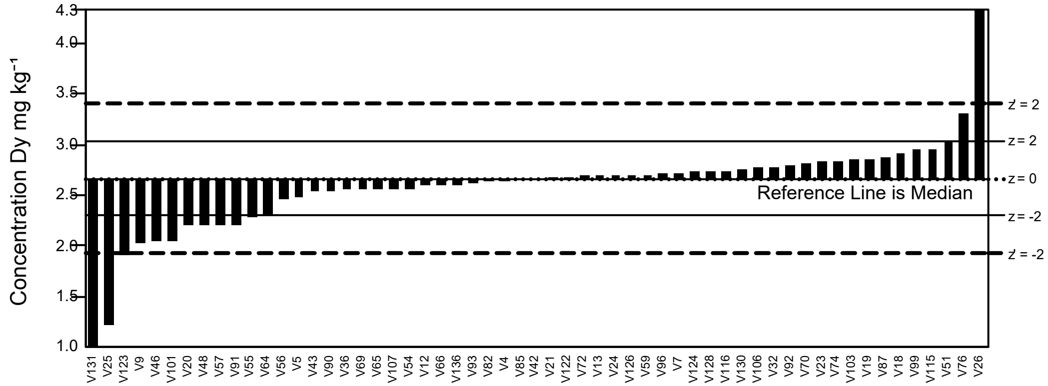
GeoPT55 - Barchart for Cs



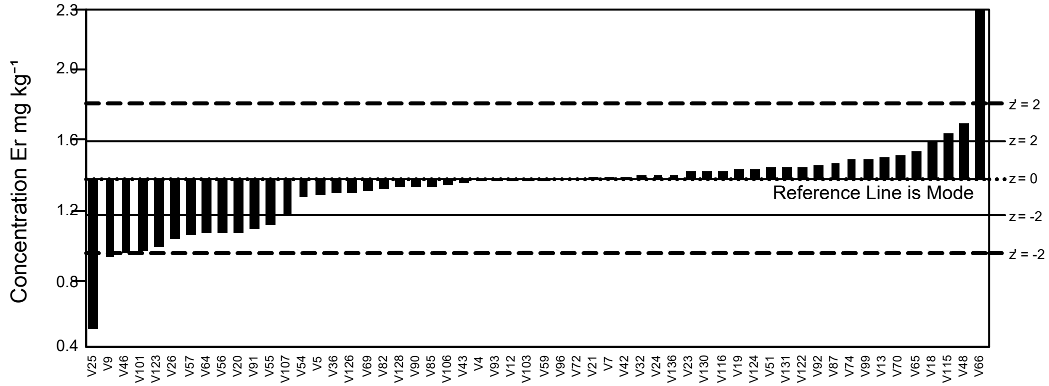
GeoPT55 - Barchart for Cu

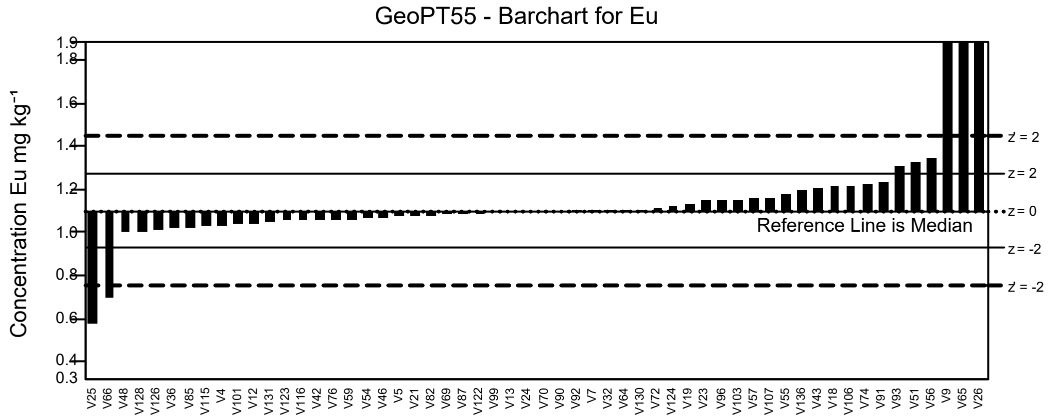


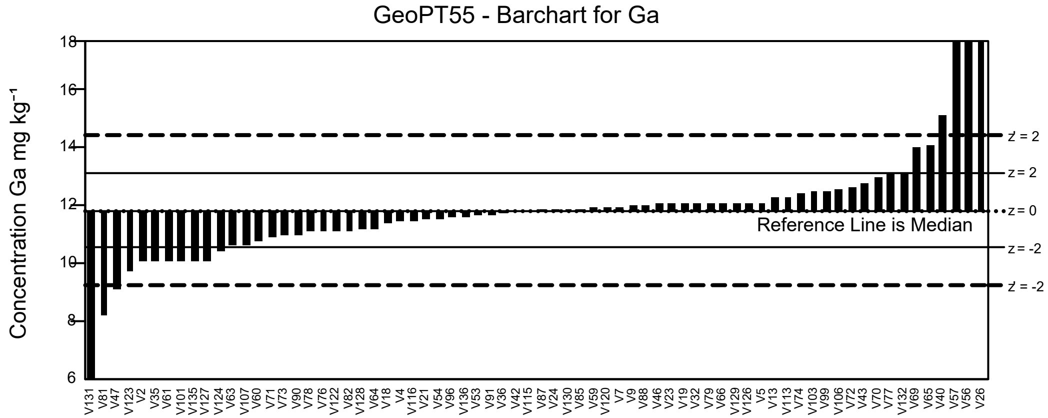
GeoPT55 - Barchart for Dy

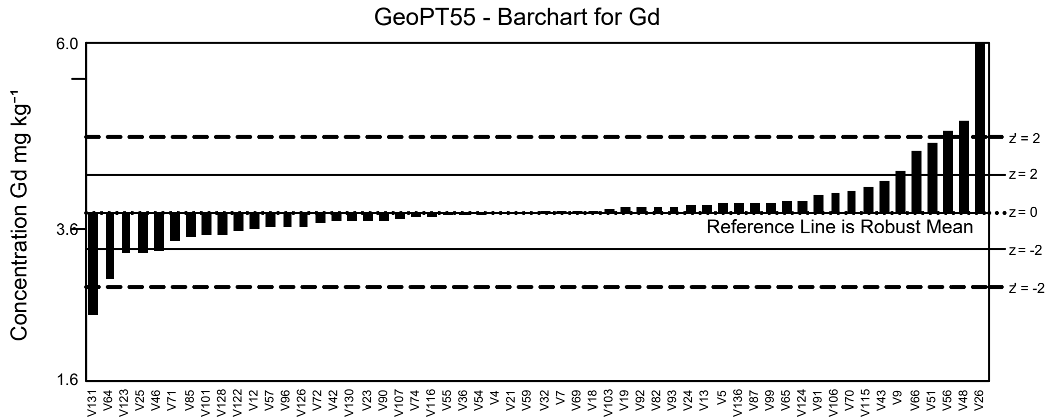


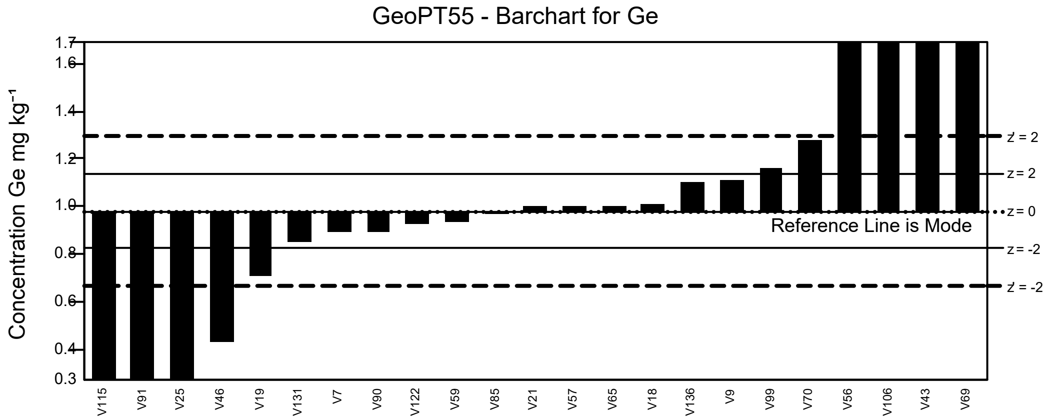
GeoPT55 - Barchart for Er

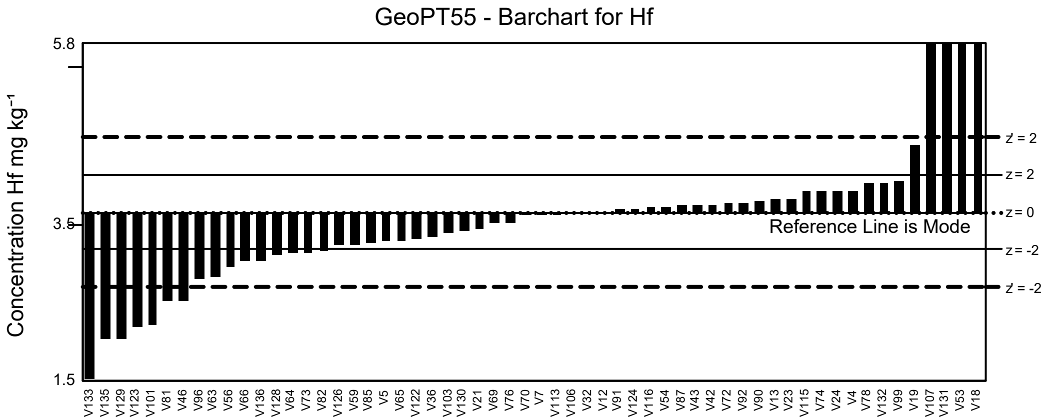


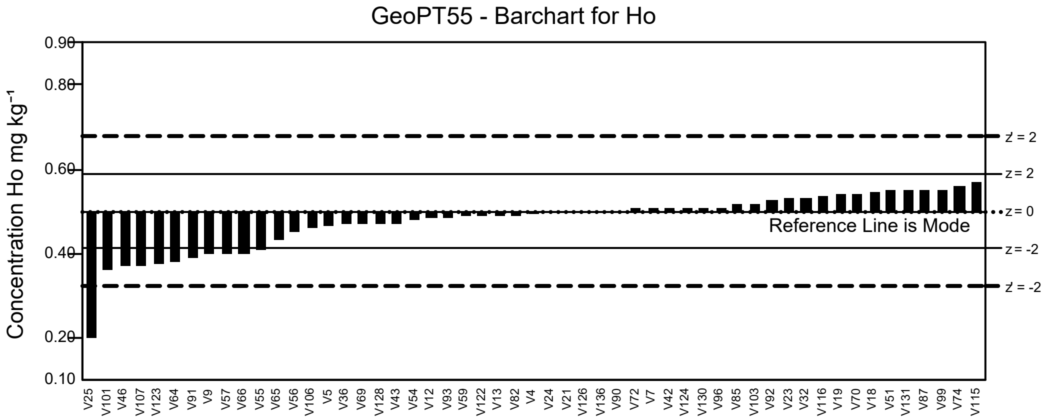

GeoPT55 - Barchart for Eu
Concentration Eu mg kg⁻¹
1.9
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.3
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Median
V25 V66 V48 V128 V126 V36 V85 V115 V4 V101 V12 V131 V123 V116 V42 V76 V59 V54 V46 V5 V21 V82 V69 V87 V122 V99 V13 V24 V70 V90 V92 V7 V32 V64 V130 V72 V124 V19 V23 V96 V103 V57 V107 V55 V136 V43 V18 V106 V74 V91 V93 V51 V56 V9 V65 V26

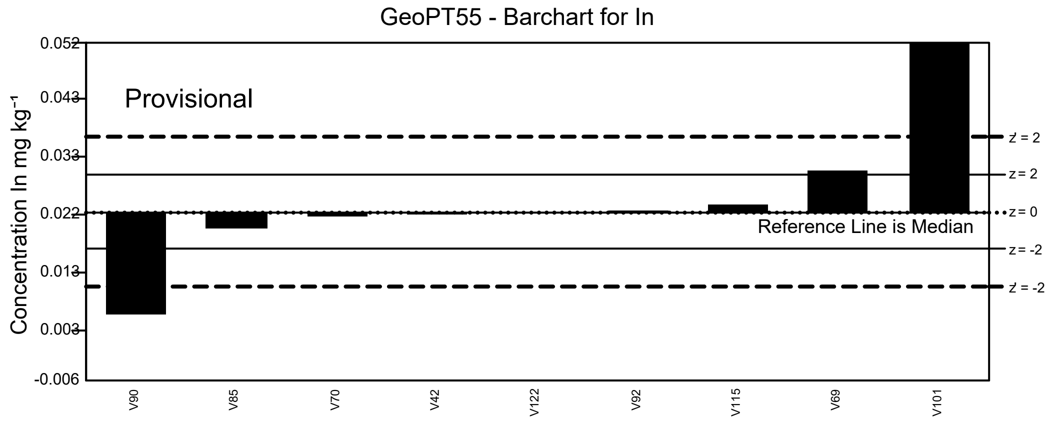

GeoPT55 - Barchart for Ga
Concentration Ga mg kg⁻¹
18
16
14
12
10
8
6
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Median

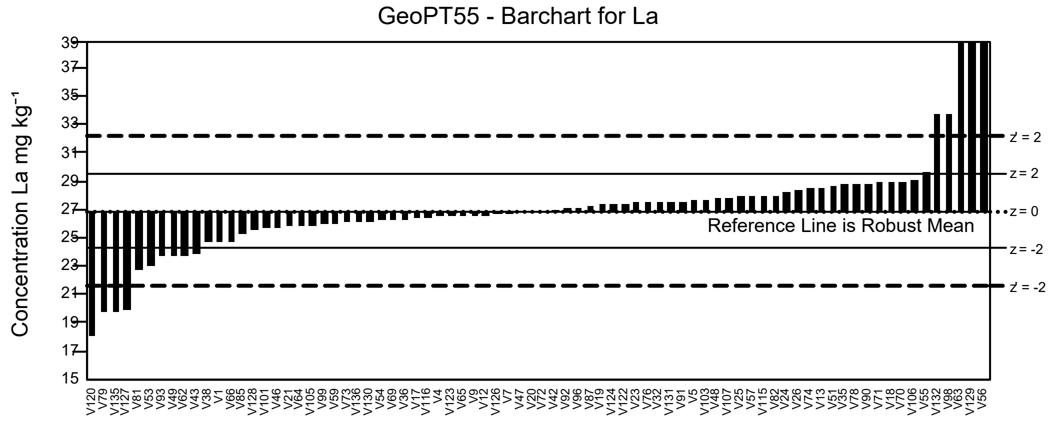

GeoPT55 - Barchart for Gd
Concentration Gd mg kg⁻¹
6.0
3.6
1.6
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Robust Mean
V131 V64 V123 V25 V46 V71 V85 V101 V128 V122 V12 V57 V96 V126 V72 V42 V130 V23 V90 V107 V74 V116 V55 V36 V54 V4 V21 V59 V32 V7 V69 V18 V103 V19 V92 V82 V93 V24 V13 V5 V136 V87 V99 V65 V124 V91 V106 V70 V115 V43 V9 V66 V51 V56 V48 V26

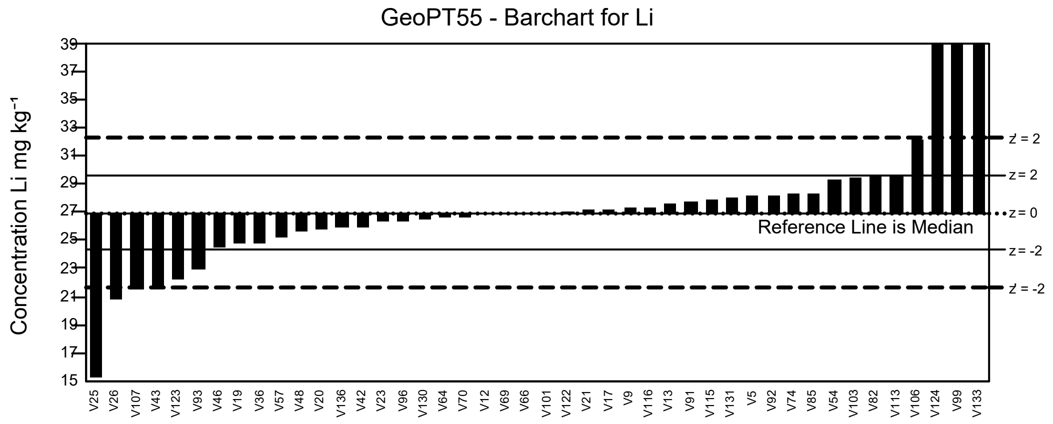

GeoPT55 - Barchart for Ge
Concentration Ge mg kg⁻¹
1.7
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.3
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Mode
V115 V91 V25 V46 V19 V131 V7 V90 V122 V59 V85 V21 V57 V65 V18 V136 V9 V99 V70 V56 V106 V43 V69

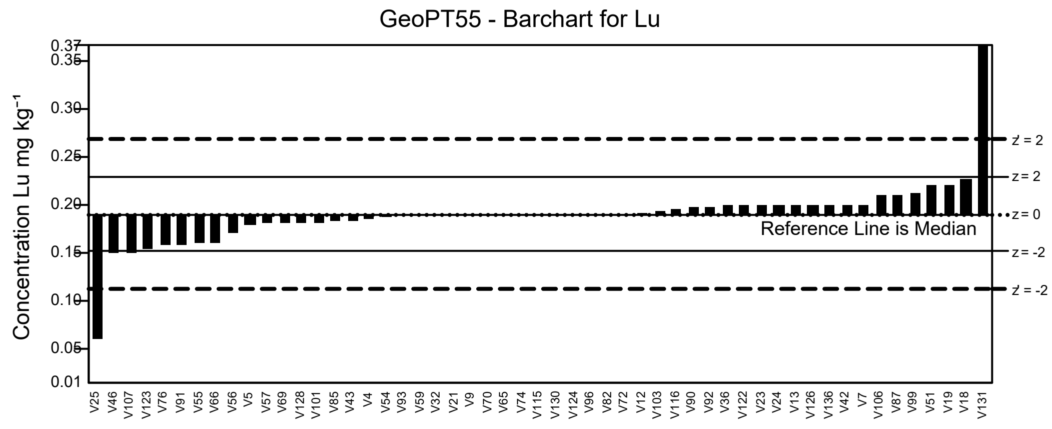

GeoPT55 - Barchart for Hf
Concentration Hf mg kg⁻¹
5.8
3.5
1.5
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Mode

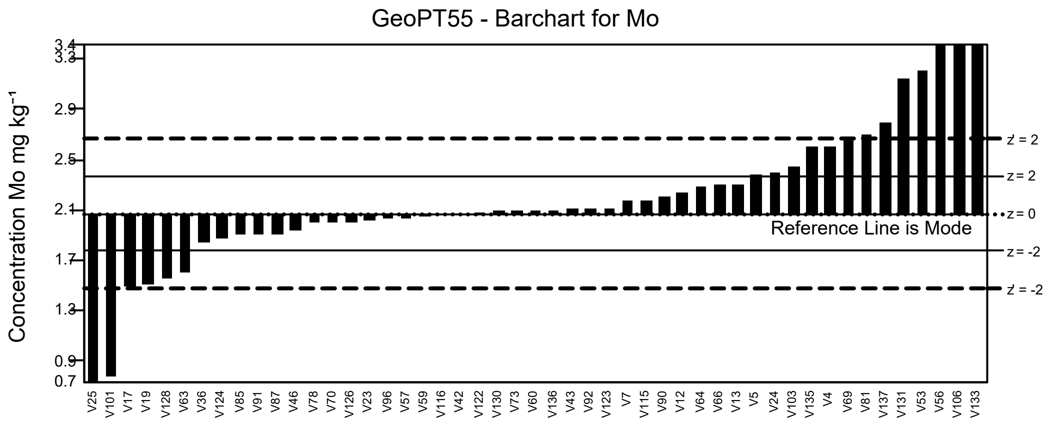

GeoPT55 - Barchart for Ho
Concentration Ho mg kg⁻¹
0.90
0.80
0.60
0.40
0.20
0.10
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Mode

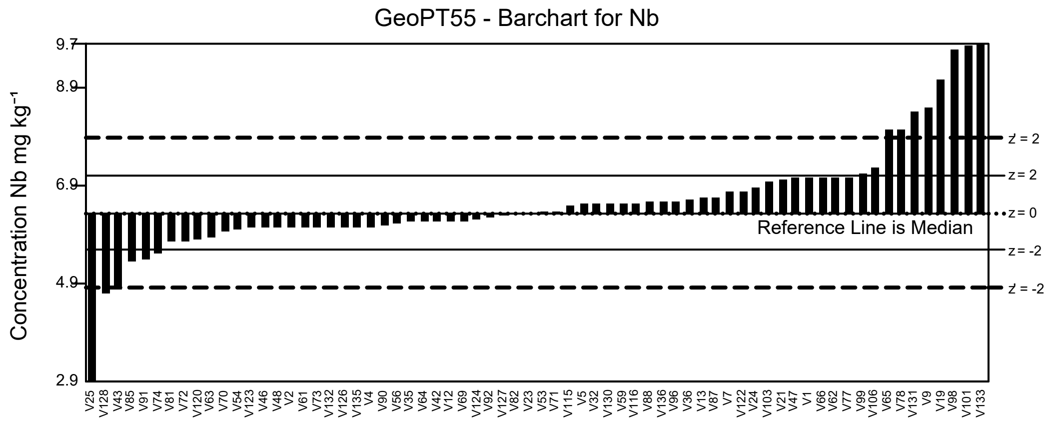

GeoPT55 - Barchart for In
Provisional
Reference Line is Median
Concentration In mg kg⁻¹

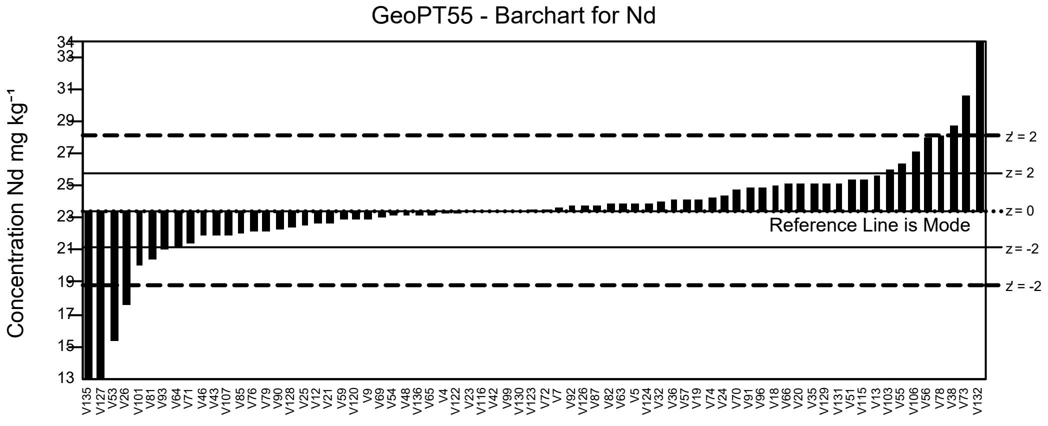

GeoPT55 - Barchart for La
Reference Line is Robust Mean
Concentration La mg kg⁻¹

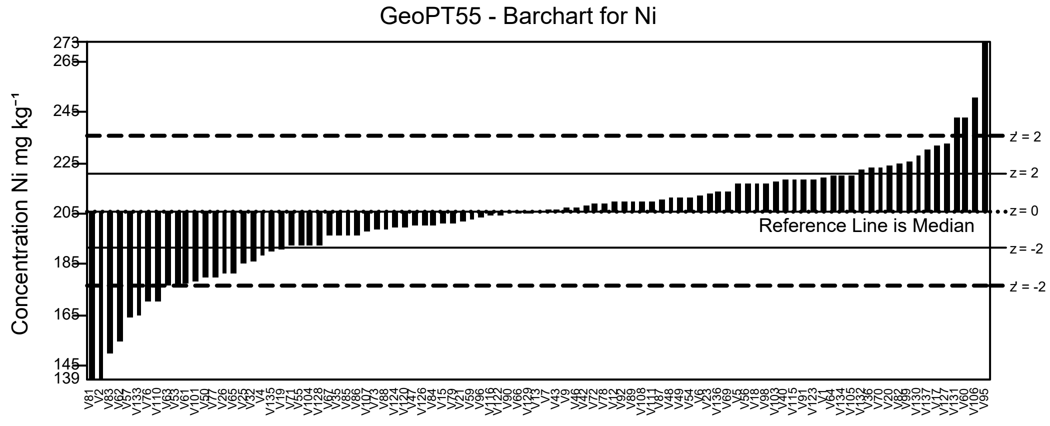

GeoPT55 - Barchart for Li
Reference Line is Median
Concentration Li mg kg⁻¹

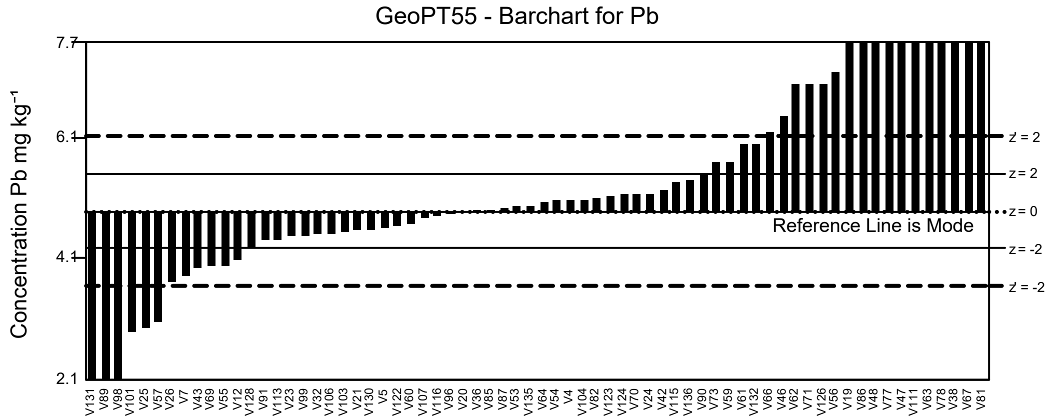

GeoPT55 - Barchart for Lu
Reference Line is Median
Concentration Lu mg kg⁻¹

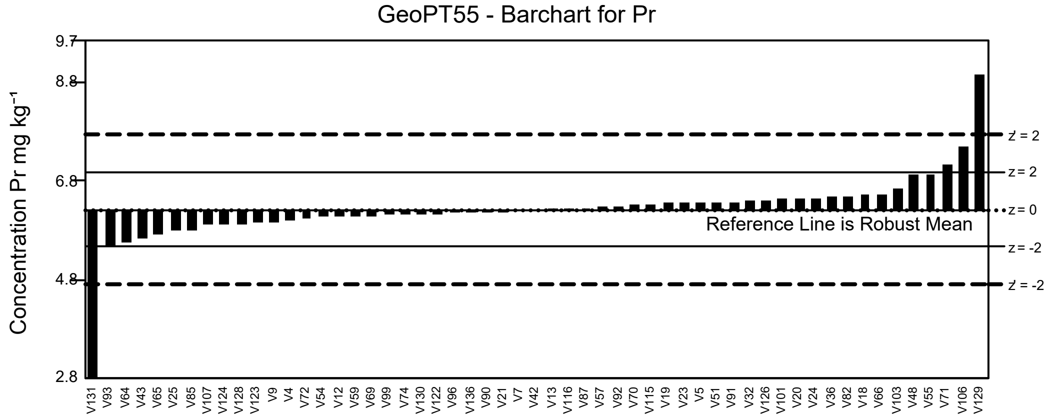

GeoPT55 - Barchart for Mo
Reference Line is Mode
Concentration Mo mg kg⁻¹

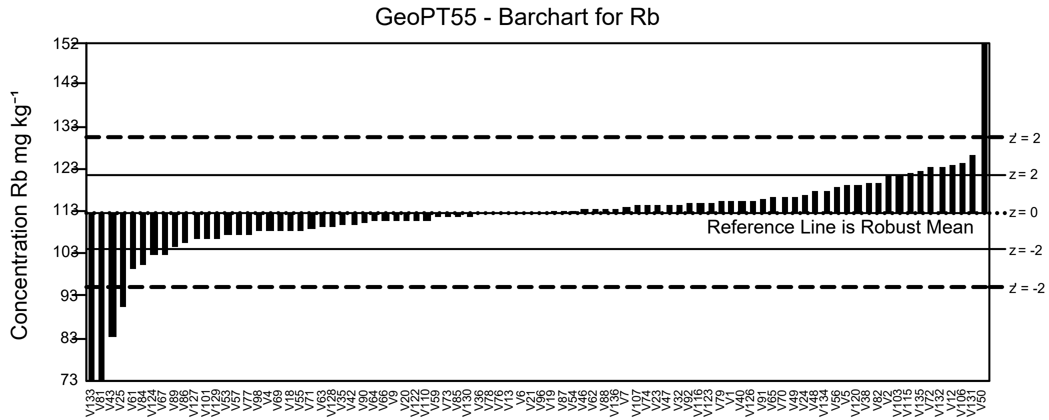

GeoPT55 - Barchart for Nb
Reference Line is Median
Concentration Nb mg kg⁻¹

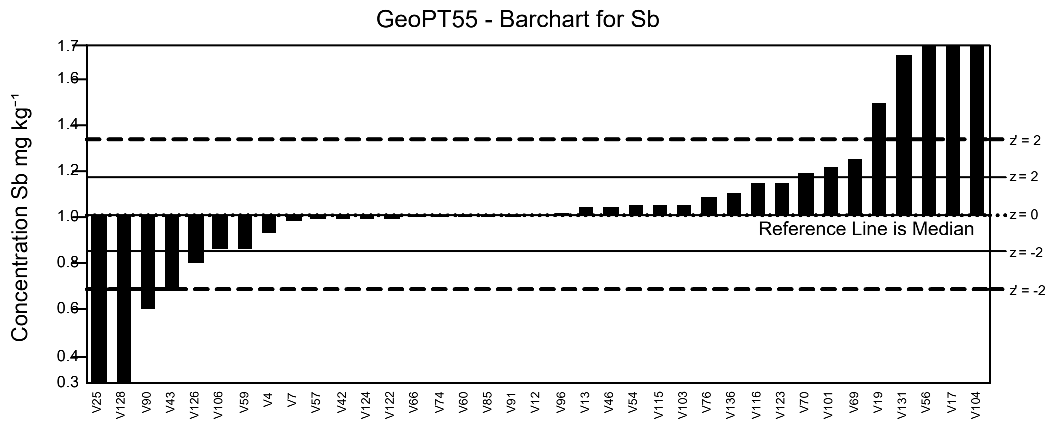

GeoPT55 - Barchart for Nd
Concentration Nd mg kg⁻¹
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Mode


GeoPT55 - Barchart for Ni
Concentration Ni mg kg⁻¹
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Median

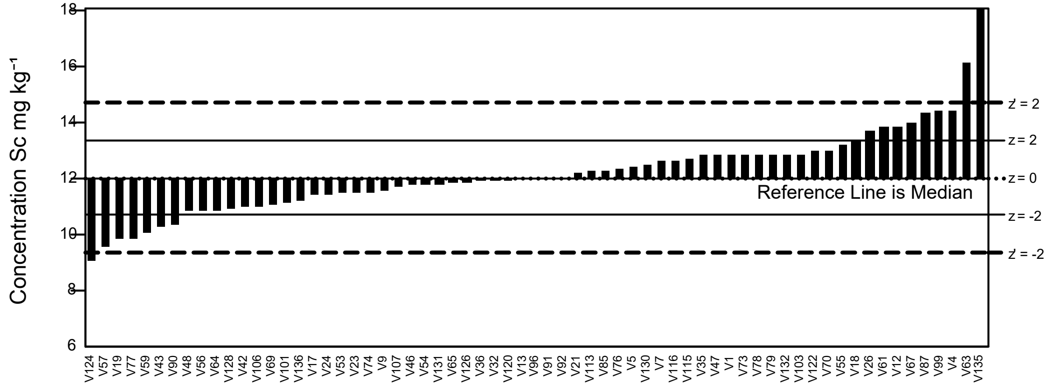

GeoPT55 - Barchart for Pb
Concentration Pb mg kg⁻¹
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Mode


GeoPT55 - Barchart for Pr
Concentration Pr mg kg⁻¹
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Robust Mean

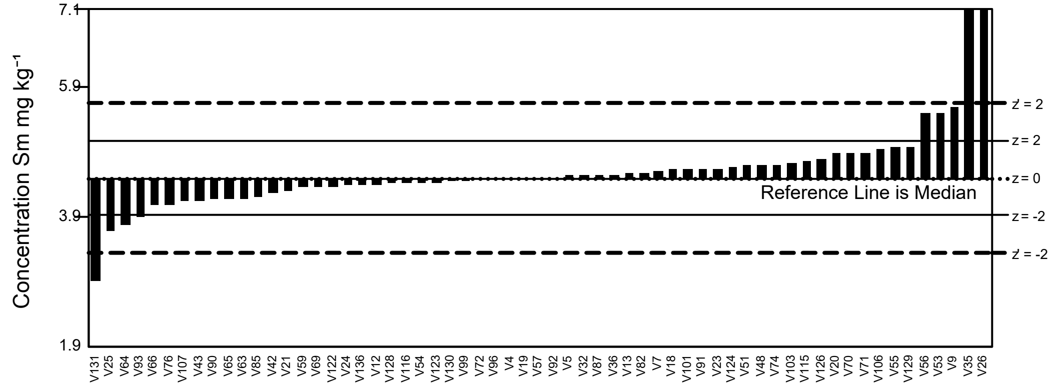

GeoPT55 - Barchart for Rb
Concentration Rb mg kg⁻¹
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Robust Mean


GeoPT55 - Barchart for Sb
Concentration Sb mg kg⁻¹
z' = 2
z = 2
z = 0
z = -2
z' = -2
Reference Line is Median

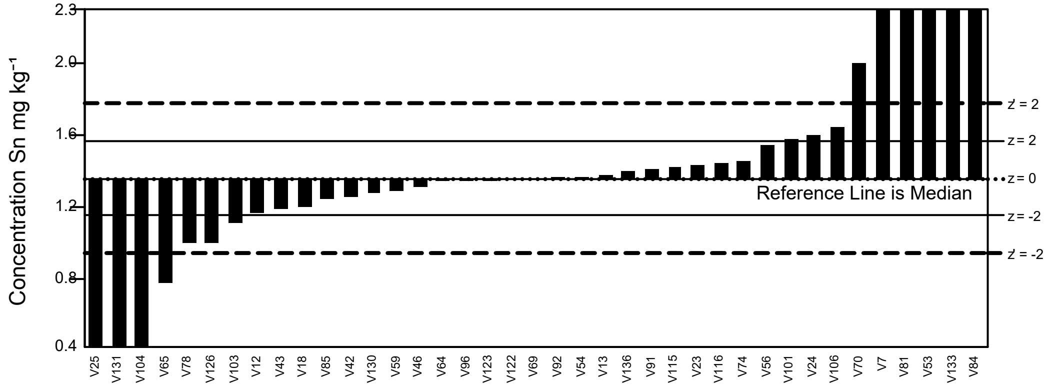
GeoPT55 - Barchart for Sc



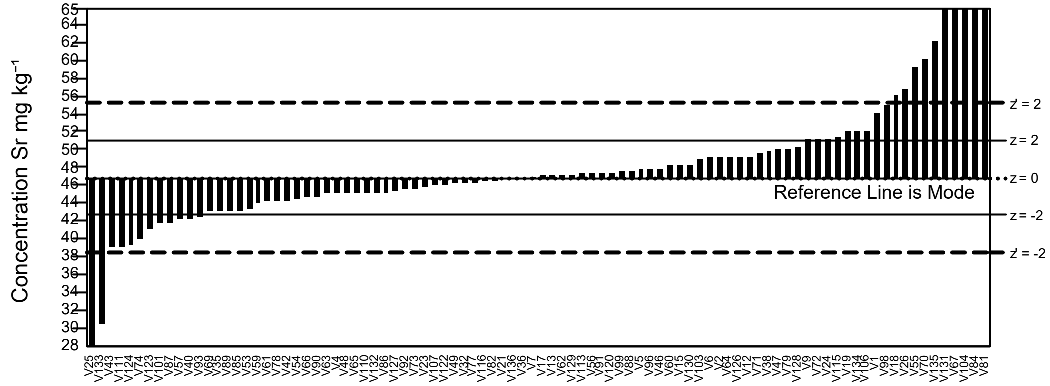
GeoPT55 - Barchart for Sm



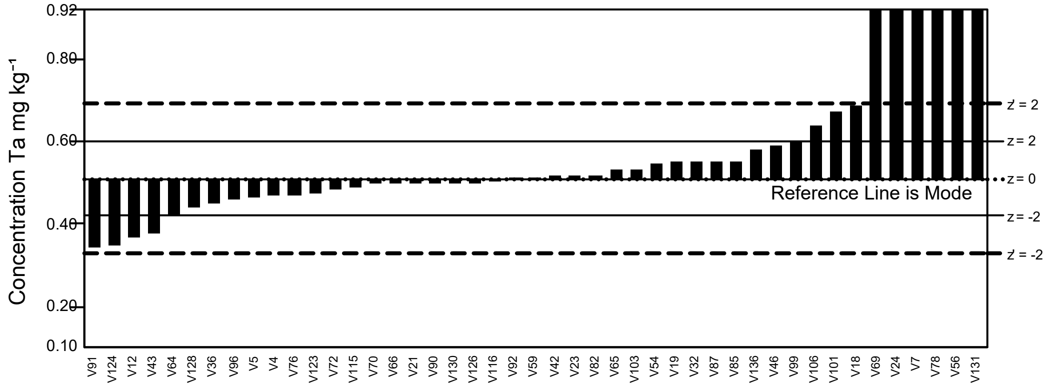
GeoPT55 - Barchart for Sn



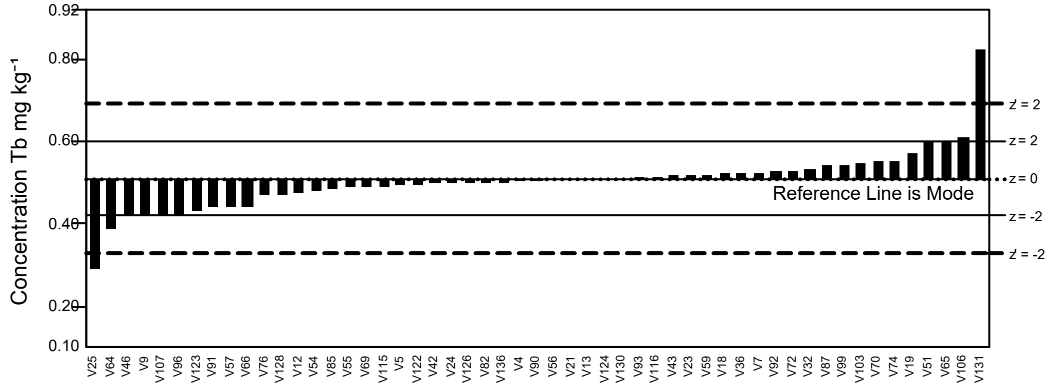
GeoPT55 - Barchart for Sr



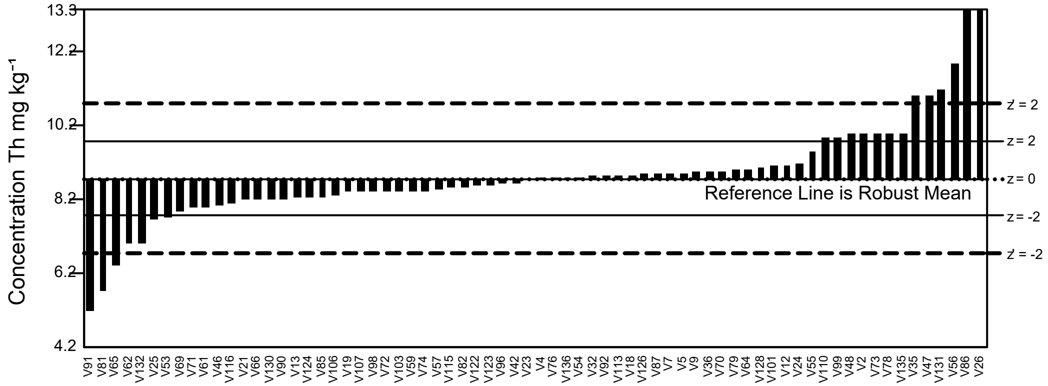
GeoPT55 - Barchart for Ta



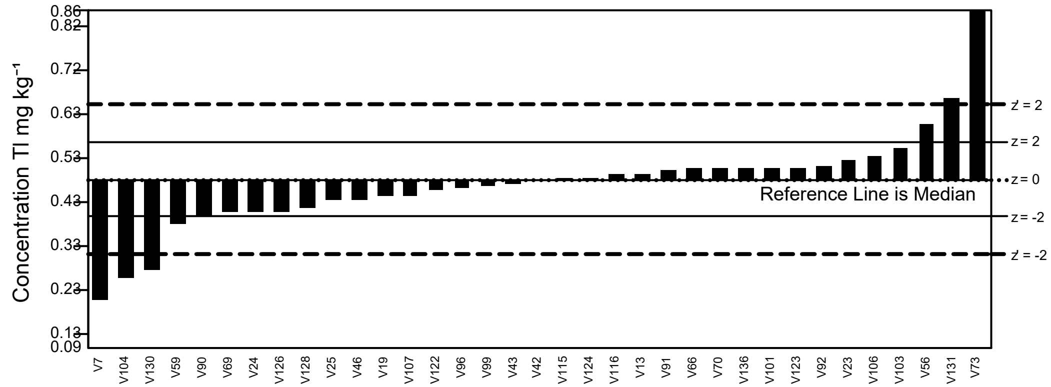
GeoPT55 - Barchart for Tb



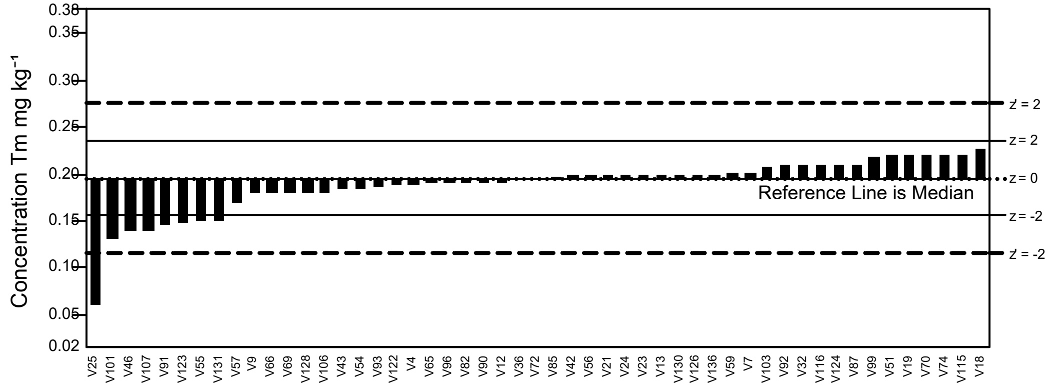
GeoPT55 - Barchart for Th



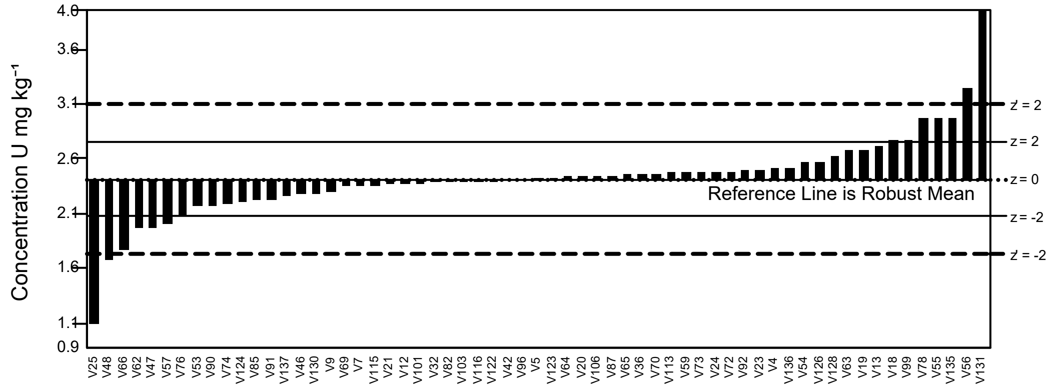
GeoPT55 - Barchart for Tl



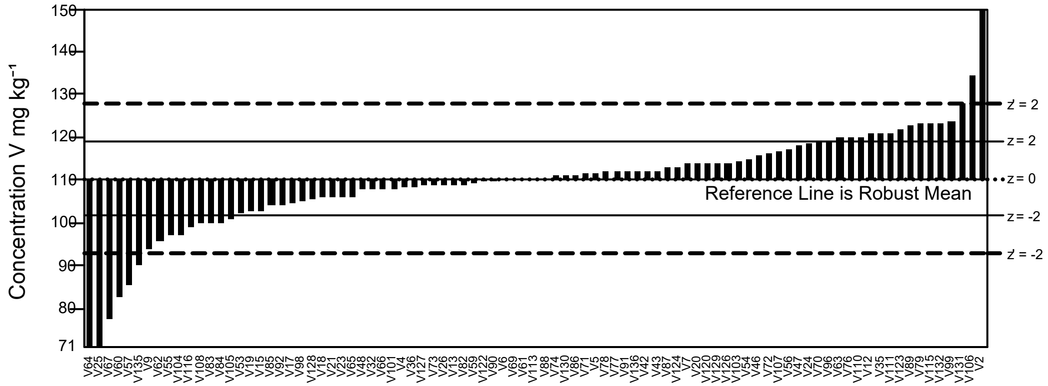
GeoPT55 - Barchart for Tm



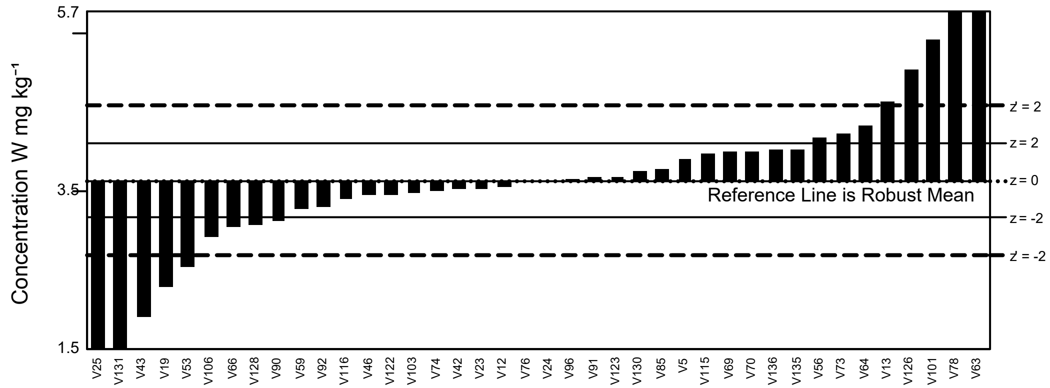
GeoPT55 - Barchart for U

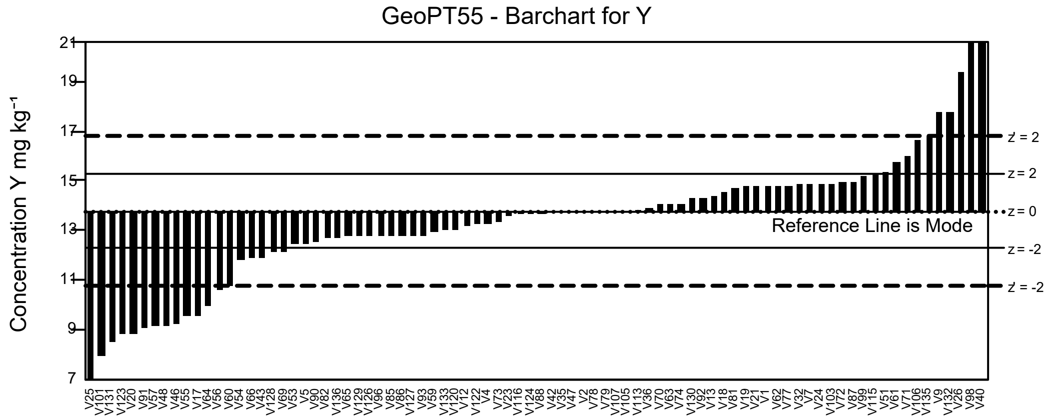


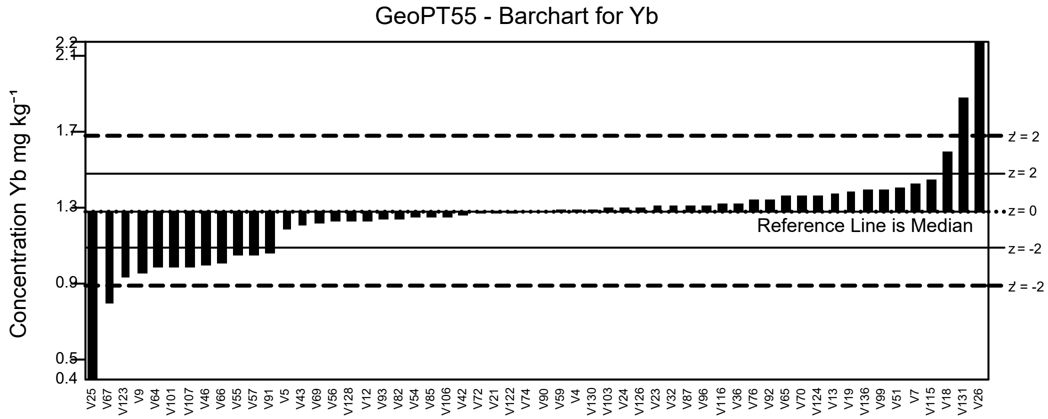
GeoPT55 - Barchart for V

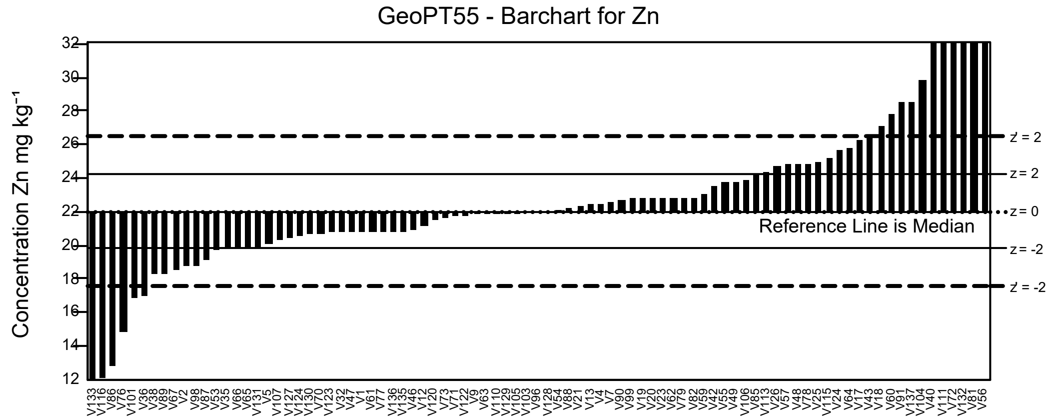


GeoPT55 - Barchart for W









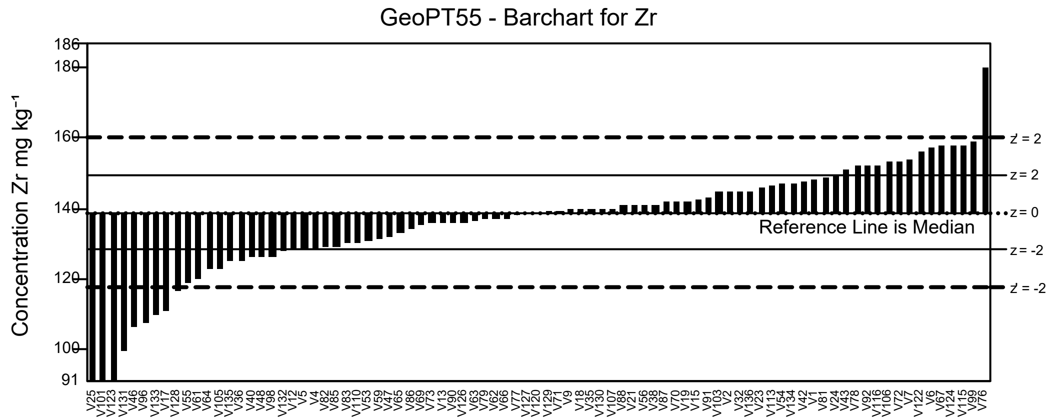
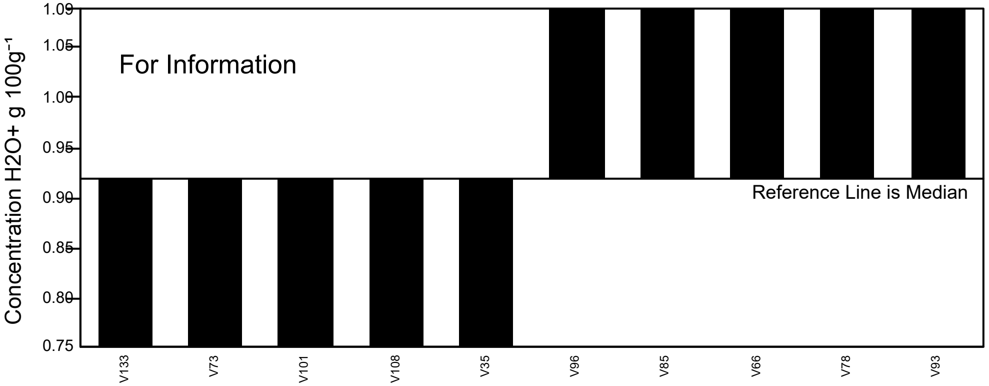
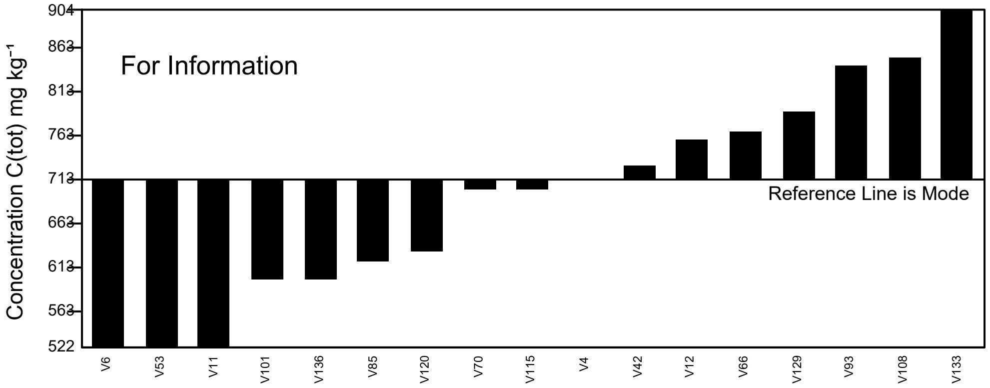


Figure 1: GeoPT55 - Slate, SMB-1. Data distribution charts for elements for which values were assigned or provisional values given for guidance. Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).

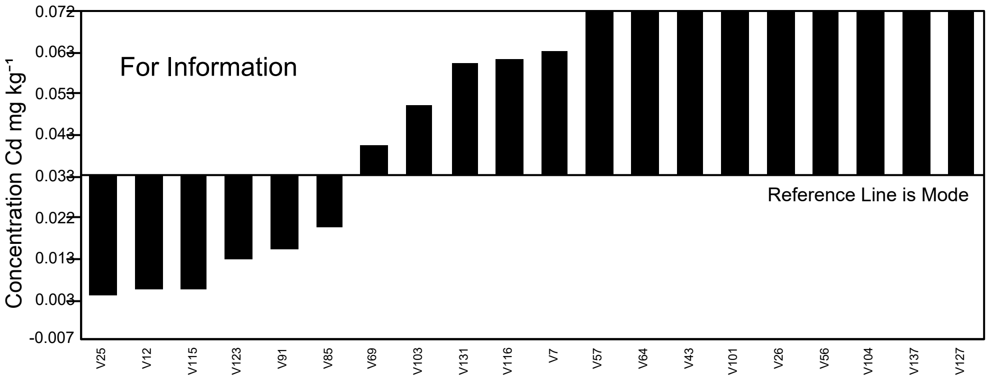
GeoPT55 - Barchart for H2O+



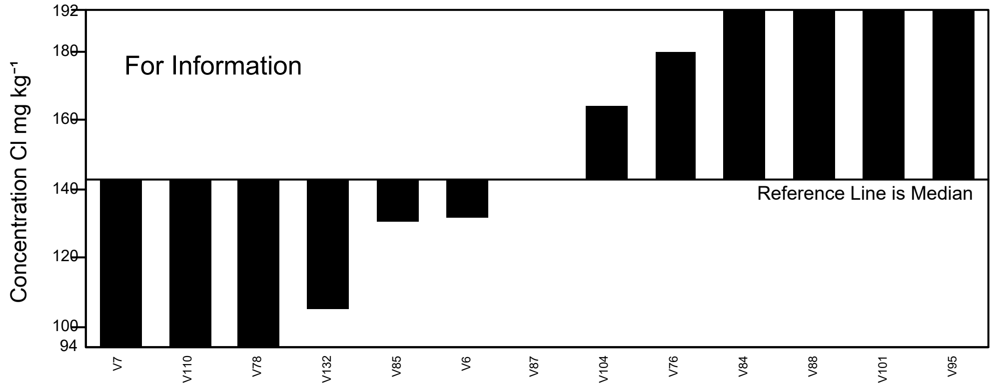
GeoPT55 - Barchart for C(tot)



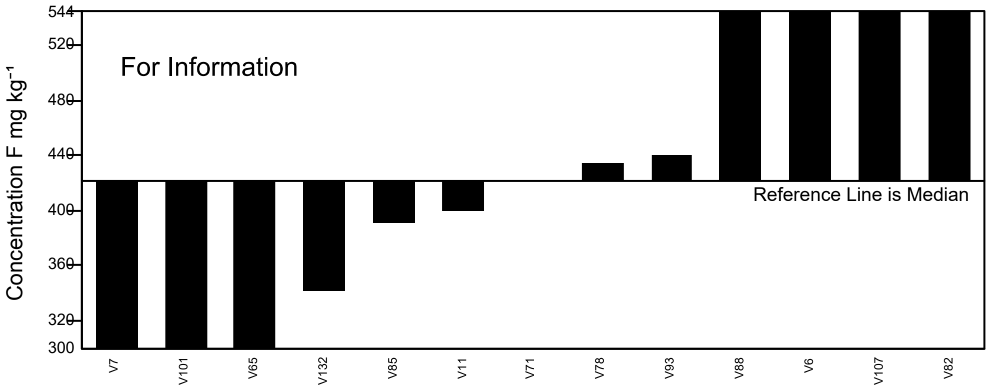
GeoPT55 - Barchart for Cd



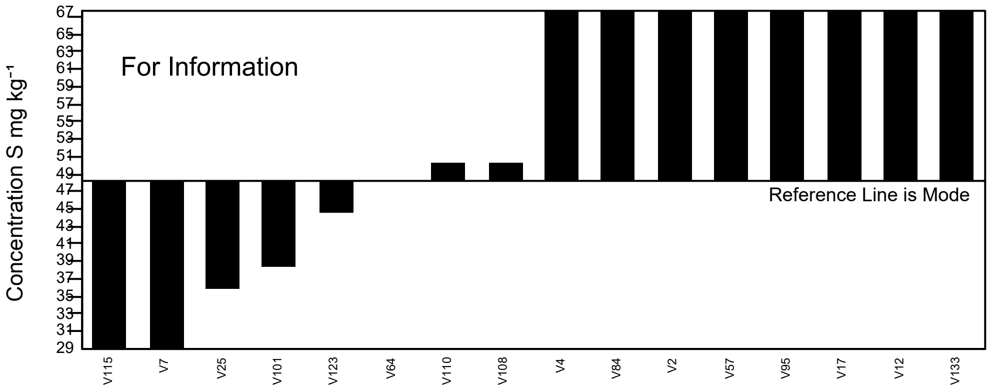
GeoPT55 - Barchart for Cl

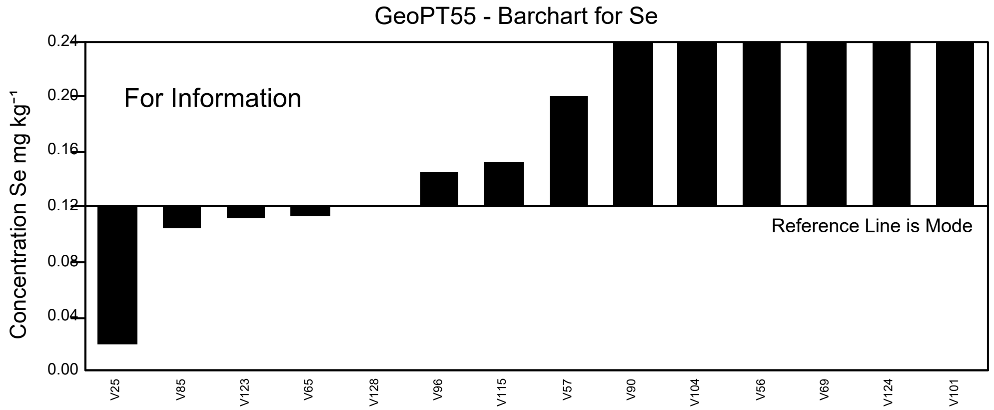


GeoPT55 - Barchart for F



GeoPT55 - Barchart for S





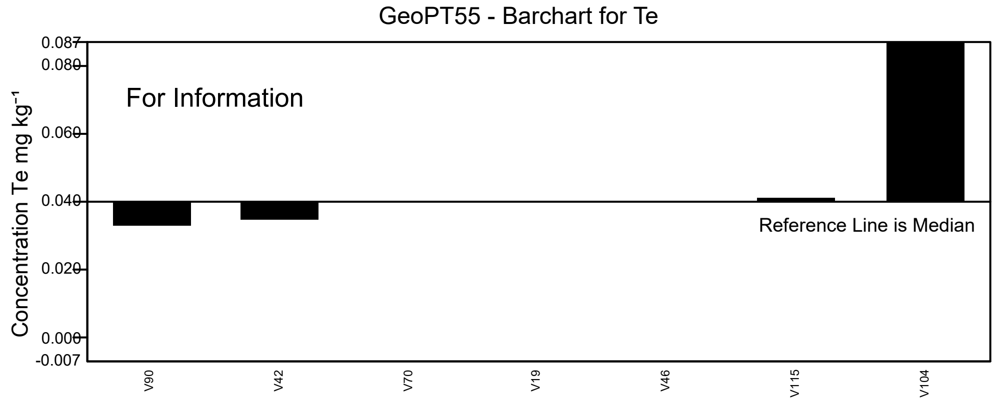
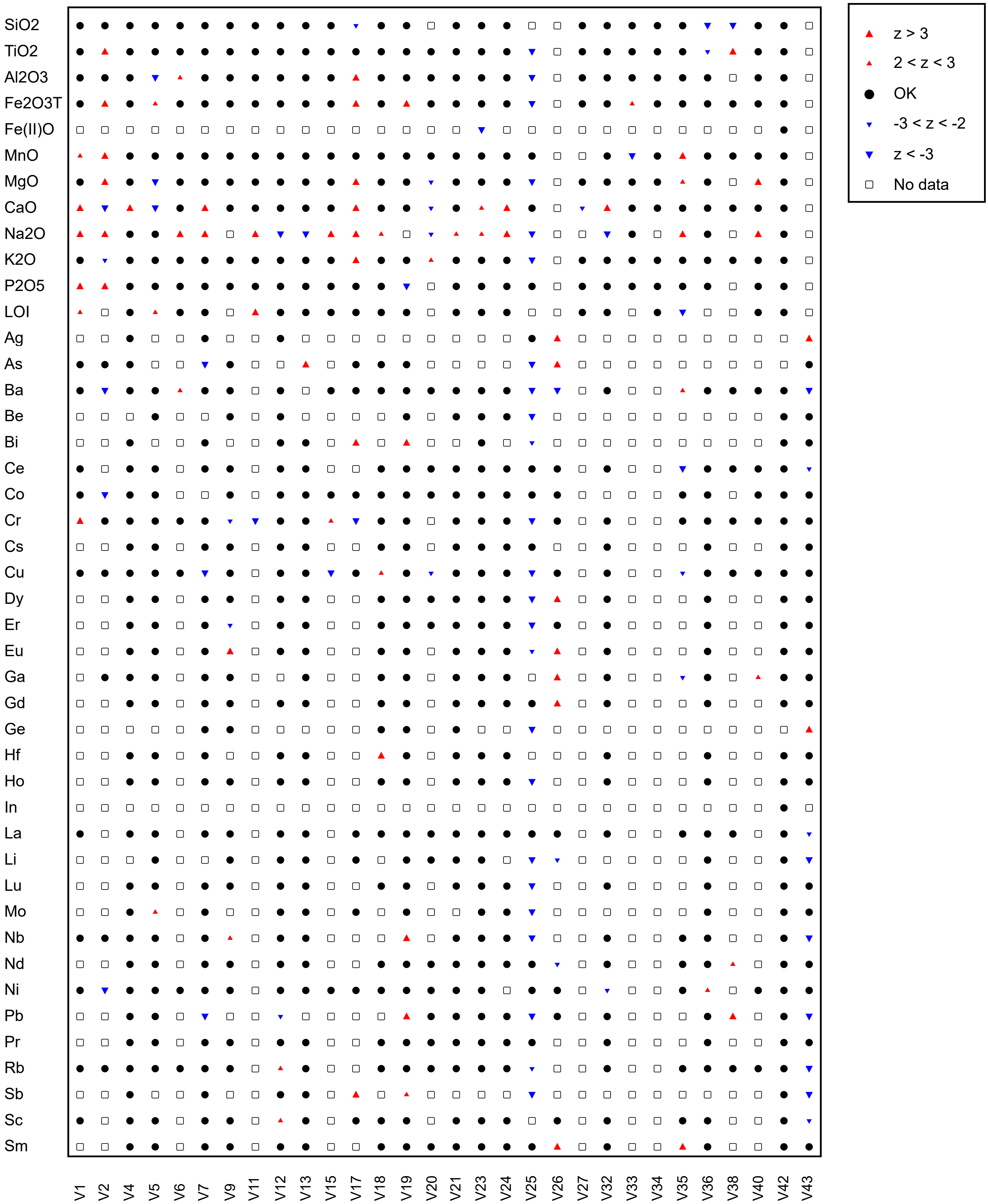


Figure 2: GeoPT55 - Slate, SMB-1. Data distribution charts provided for information only for elements for which values could not be assigned.

Multiple Z-Score Chart for GeoPT55



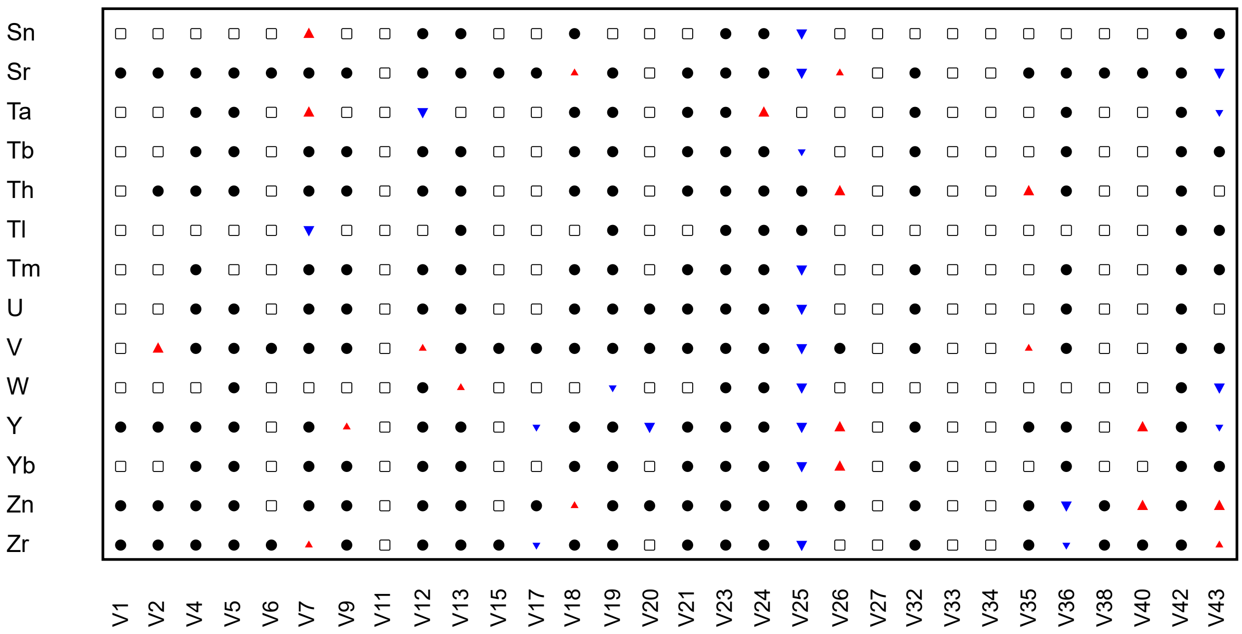
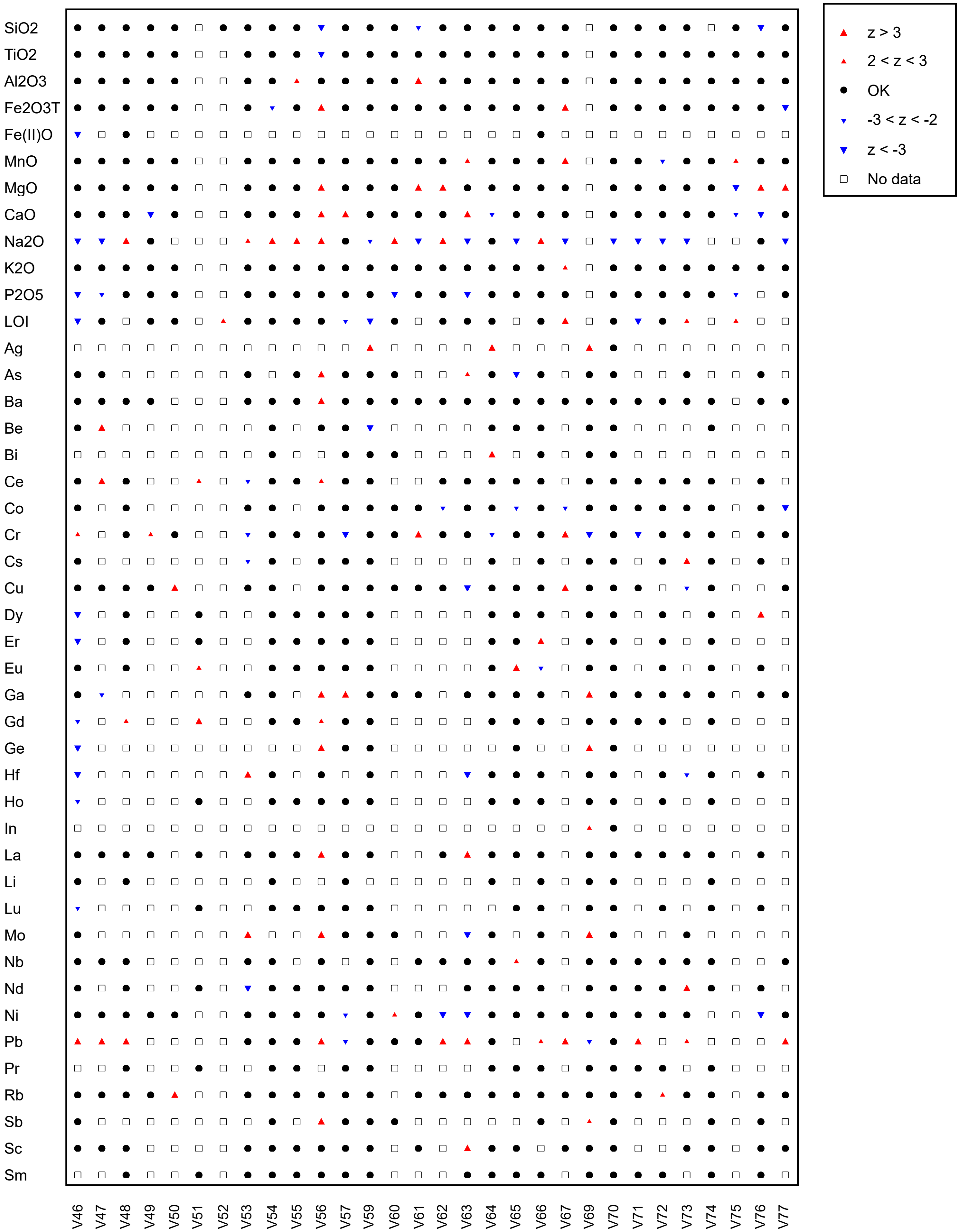


Figure 3: GeoPT55 - Slate, SMB-1. Multiple z-score charts for laboratories participating in the GeoPT55 round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria (see key).

Multiple Z-Score Chart for GeoPT55



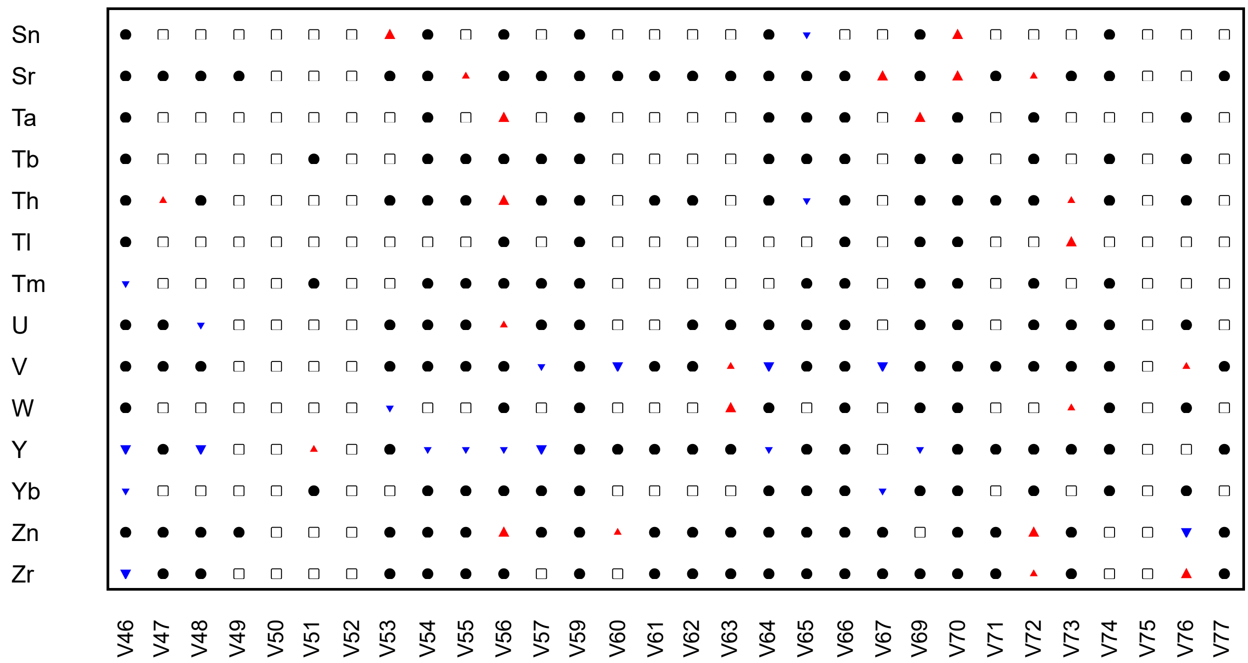
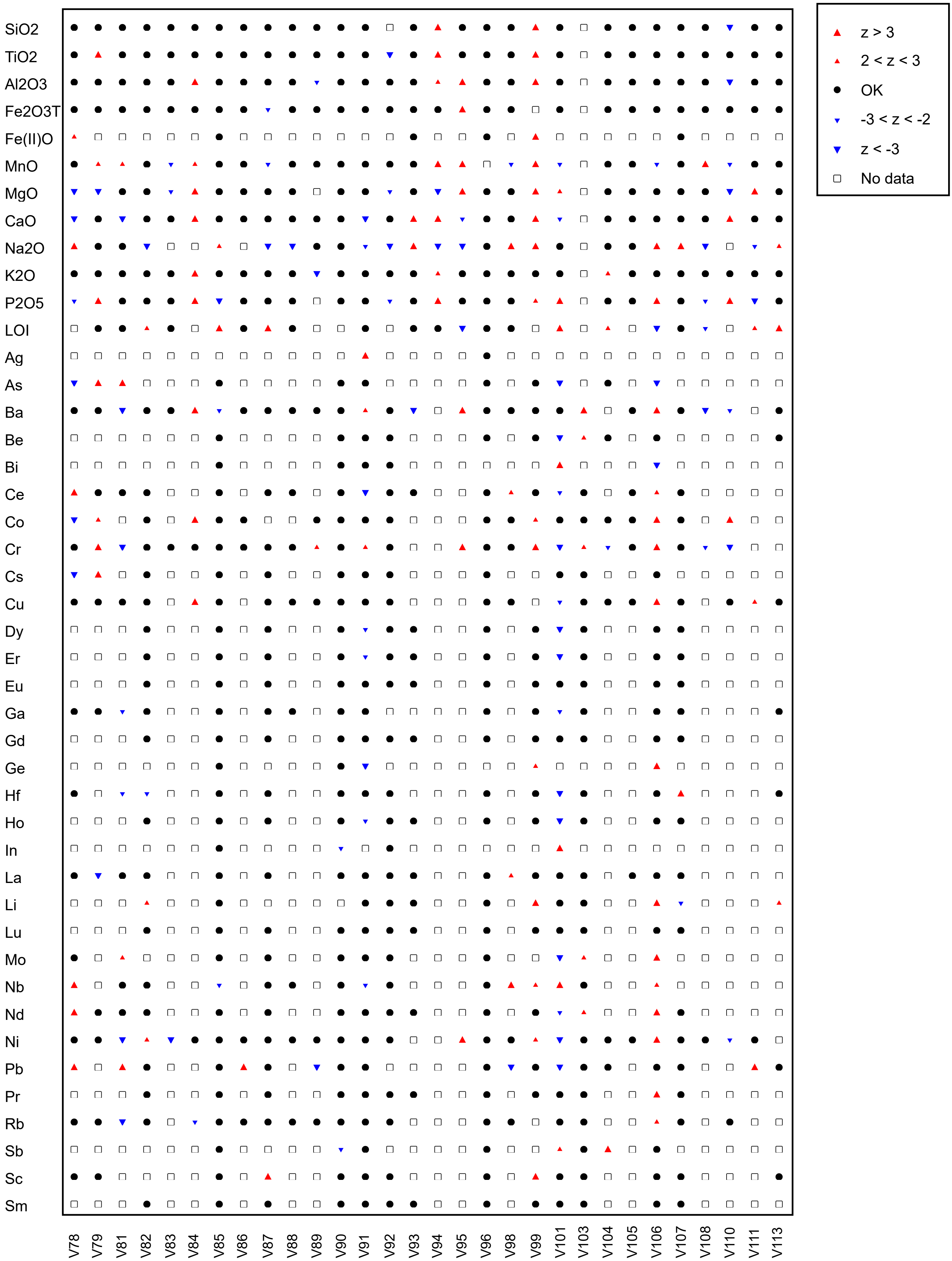


Figure 3: GeoPT55 - Slate, SMB-1. Multiple z-score charts for laboratories participating in the GeoPT55 round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria (see key).

Multiple Z-Score Chart for GeoPT55



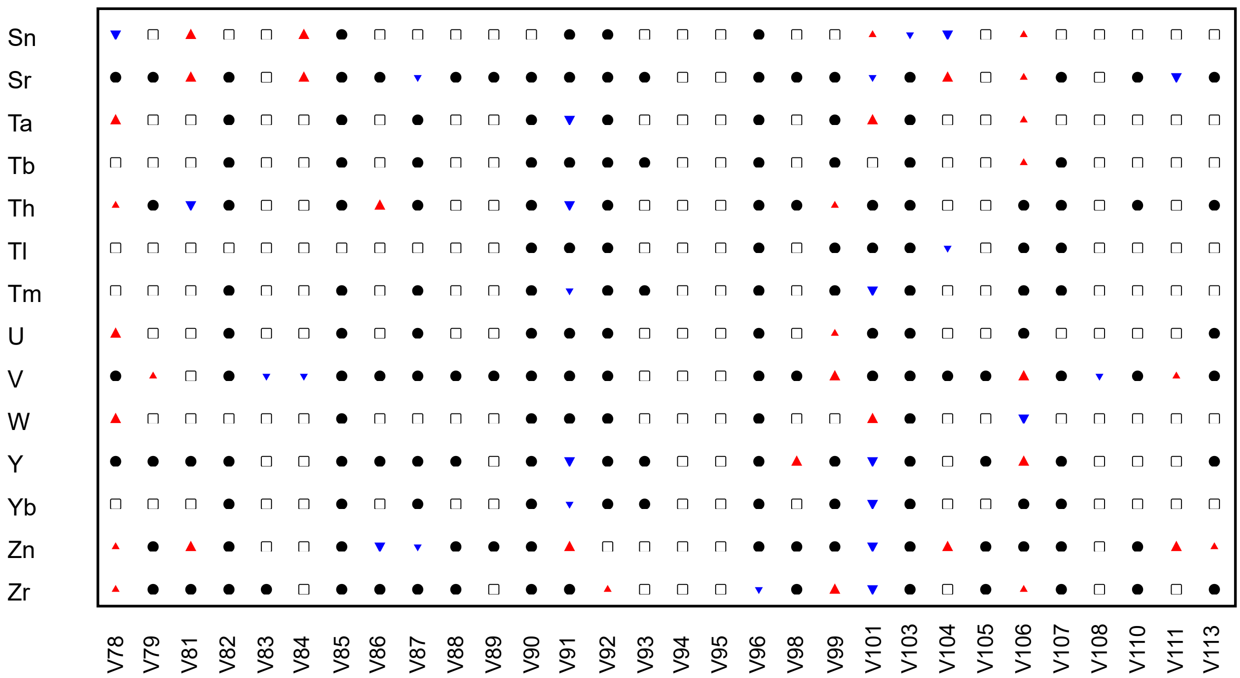
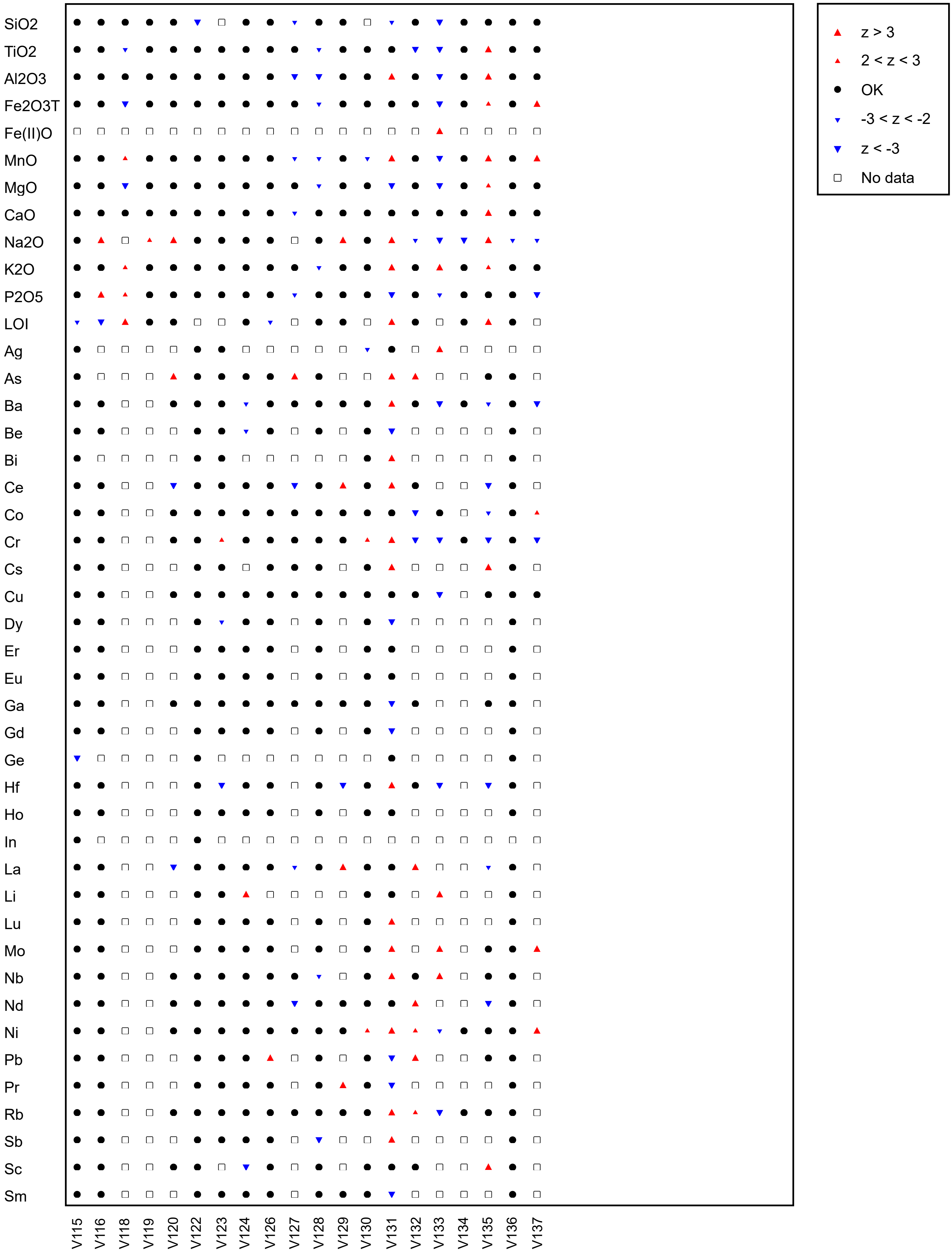


Figure 3: GeoPT55 - Slate, SMB-1. Multiple z-score charts for laboratories participating in the GeoPT55 round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria (see key).

Multiple Z-Score Chart for GeoPT55



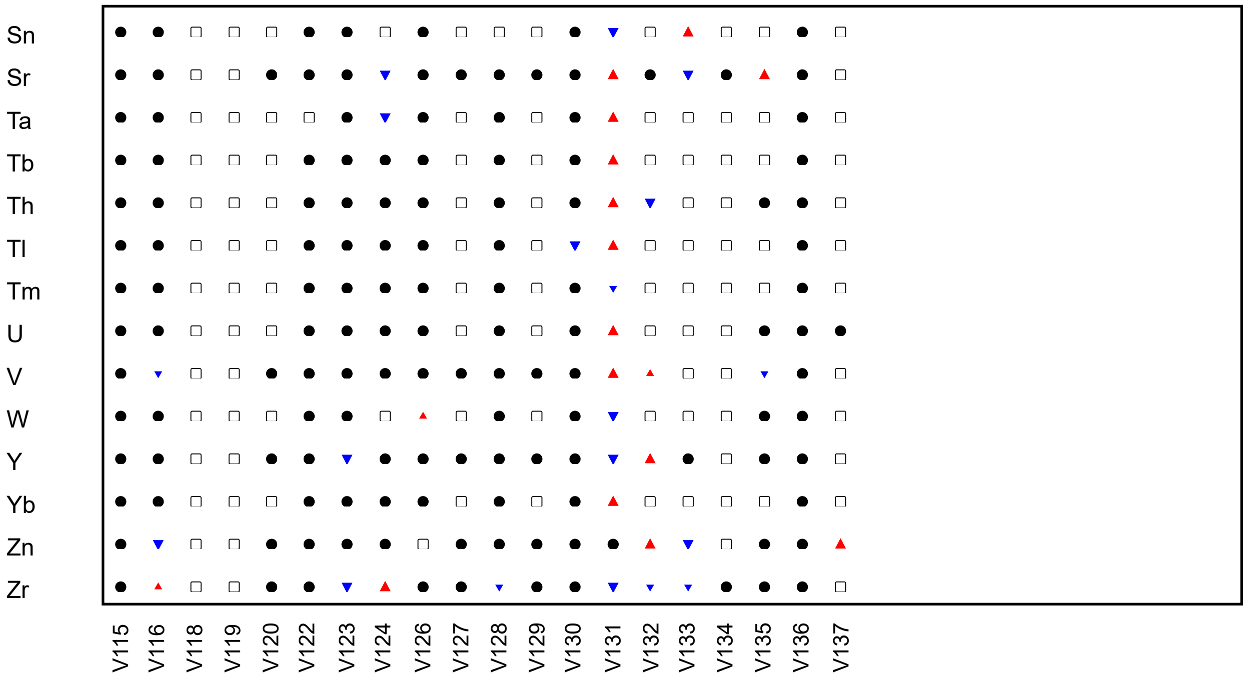


Figure 3: GeoPT55 - Slate, SMB-1. Multiple z-score charts for laboratories participating in the GeoPT55 round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria (see key).