GEOPT18 - AN INTERNATIONAL PROFICIENCY TEST FOR ANALYTICAL GEOCHEMISTRY LABORATORIES - REPORT ON ROUND 18 / Jan 2006 (Quartz diorite, KPT-1)

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Abstract

Results are presented for GeoPT18, round eighteen of the GeoPT international proficiency testing programme for analytical geochemistry laboratories. The sample distributed for this round was KTP-1, a quartz diorite, supplied by Dr Paul Bedard, Quebec. In this report, contributed data are listed, together with an assessment of assigned values, z-scores and charts showing both the distribution of contributed results and the overall performance of participating laboratories.

Introduction

This eighteenth round of the international proficiency testing programme, GeoPT18, was conducted in a similar manner to earlier rounds. The programme is designed to be part of the routine quality assurance scheme of analytical geochemistry laboratories and the aims of the programme can be reviewed at http://www.geoanalyst.org/geopt.html. The programme is organised by the International Association of Geoanalysts and is conducted in accordance with a published protocol (http://www.geoanalyst.org/GeoPt-protocol.pdf). The overall aim of the programme is to provide participating laboratories with z-score information for each reported elemental determination, from which the laboratories can decide whether the quality of their data is satisfactory in relation to both their chosen fitness-for-purpose criterion and results submitted by all the other laboratories contributing to the round and, therefore, choose to take corrective action if this appears justified.

Full details of the programme have been included in reports of previous rounds, the current publication status of which is listed in Appendix 1.

Steering Committee for Round 18: M. Thompson (Chair), P.J. Potts (Secretary) and P.C. Webb.

Sample: KTP-1, a quartz diorite, was supplied ready packaged by Dr L. Paul Bedard (Quebec).

The sample was tested for homogeneity in accordance with published protocol and based on WDXRF determinations of 10 packets selected at random, each of which was analysed in duplicate. A test for lack of sufficient homogeneity has been carried out in respect of the elements (SiO_2, TiO_2, Al_2O_3, Fe_2O, MnO, MgO, CaO, Na_2O, K_2O, LOI, Rb, Sr, Y, Zr, Nb, Ba, Pb, Th, U, Sc, V, Cr, Co, Ni, Cu, Zn, Ga, Mo, As, S),

according to the modified procedure mentioned in the GeoPT Protocol. Lack of sufficient homogeneity was detected in one analyte, namely cobalt. It was therefore considered that this material was suitable for use in the GeoPT proficiency testing programme.

Timetable for GeoPT18:
Distribution of sample: October 2006.
Deadline for submission of analytical results: 15th December 2005.
Distribution of draft report: February 2006

Submission of results
Results submitted by the seventy-six laboratories that participated in this round are listed in Table 1. All of these data were used for the assessment of assigned values.

Assigned values
Following procedures described in earlier rounds, a robust statistical procedure was used to derive assigned concentration values [X_a], these being judged to be the best estimates of the true composition of this sample. Data in Table 2 lists assigned values for 10 major components and 39 trace elements. Values were assigned on the basis that: (i) sufficient laboratories had contributed data for an element, (ii) the statistical assessment gave confidence that the results showed a central portion approximating to a normal distribution. Part of this assessment involved examining a bar chart for each element to judge the distribution of results. Bar charts for elements/species shown in Figure 1 were judged to have satisfactory distributions, namely:
SiO_2, TiO_2, Al_2O_3, Fe_2O_3T, MnO, MgO, CaO, Na_2O, K_2O, P_2O_5, Ba, Be, Bi, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Li, Lu, Mo, Nb, Nd, Pb, Pr, Rb, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, Y, Yb, Zn, and Zr.

Charts in Figure 2 show distribution data for elements for which z-scores are plotted for guidance only, the statistical analysis was sufficiently unsatisfactory to be able to assign values. Consequently, values were not assigned to the following elements/species: CO_2, Fe(II)O, LOI, Ag, As, Au, Cd, Co, Cu, Ge, Pd and W.

For the following elements either insufficient data were reported (H_2O^+, Cl, F, Pt, S and Te) or the distribution was sufficiently unsatisfactory (S) to allow any assessment to be made.

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

$$H_a = k.X_a^{0.8495}$$

Where X_a is the concentration of the element expressed as a *fraction*, and the factor k = 0.01 for pure geochemistry labs and k=0.02 for applied geochemistry labs.
Z-scores were calculated for each elemental result submitted by each laboratory from:

$$z = [X - X_a] / H_a$$

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

Z-score results are listed in Table 3 and participating laboratories are invited to assess their performance using the following criterion:–
Z-score results in the range -2<z<2 are considered to be 'satisfactory' (in the sense that no action is called for by the participant). If the z-score for any element falls outside this range, contributing laboratories are advised to examine their procedures to ensure that determinations are not subject to unsuspected analytical bias.

Overall performance

A summary of the overall performance of individual laboratories in this round is plotted in Figure 3 as a multiple z-score chart. In this chart, the z-score performance for each element is distinguished by symbols that make it simple to identify whether the results were satisfactory or gave z-scores that exceeded the action limits. This chart is designed to help individual laboratories to judge their overall performance in this proficiency testing round.

For this sample there were a larger range of elements than usual for which no assigned value could be given. There also appear to be many higher z-scores than is usual. Initial indications are that the high Ca content of this sample may pose problems that are not usually encountered, and possibly that more elements than usual were close to detection limits for some techniques.

Participation in future rounds

The benefit from proficiency testing arises from regular participation and laboratories are invited to contribute to the GeoPT19 round, the sample for which will be distributed during March 2006.

Acknowledgments

The authors thank John Watson and Liz Lomas (OU) for valued assistance with the production of this report. The GeoPT programme is organised on behalf of the International Association of Geoanalysts.

Appendix 1

Publication status of proficiency testing reports

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

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

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

GeoPT4
Thompson M., Potts P.J., Kane J.S., Webb P.C. and Watson J.S. (1999b)
GeoPT4. International proficiency test for analytical geochemistry laboratories - Report on round 4. Published in the electronic version of Geostandards Newsletter: The Journal of Geostandards and Geoanalysis (Summer 2000).

GeoPT5
Thompson M., Potts P.J., Kane J.S., and Wilson S. (1999c)
GeoPT5. International proficiency test for analytical geochemistry laboratories - Report on round 5. Published in the electronic version of Geostandards Newsletter: The Journal of Geostandards and Geoanalysis (Summer 2000).

GeoPT6
Potts P.J., Thompson M., Kane J.S., Webb P.C. and Carignan J. (2000)
GEOPT6 - an international proficiency test for analytical geochemistry laboratories - report on round 6 (OU-3: Nanhoron microgranite) and 6A (CAL-S: CRPG limestone). International Association of Geoanalysts: Unpublished report.

GeoPT7
Potts P.J., Thompson M., Kane J.S., and Petrov L.L. (2000)
GEOPT7 - an international proficiency test for analytical geochemistry laboratories - report on round 7 (GBPG-1 Garnet-biotite plagiogneiss). International Association of Geoanalysts: Unpublished report.

GeoPT8
Potts P.J., Thompson M., Kane J.S., Webb, P.C. and Watson J.S. (2000)
GEOPT8 - an international proficiency test for analytical geochemistry laboratories - report on round 8 / February 2001 (OU-4 Penmaenmawr microdiorite). International Association of Geoanalysts: Unpublished report.

GeoPT9
Potts P.J., Thompson M., Webb, P.C. and Watson J.S. (2001)
GEOPT9 - an international proficiency test for analytical geochemistry laboratories - report on round 9 / July 2001 (OU-6 Penrhyn slate). International Association of Geoanalysts: Unpublished report.

GeoPT10
Potts P.J., Thompson M., Webb, P.C., Watson J.S. and Wang Yimin (2001)
GEOPT10 - an international proficiency test for analytical geochemistry laboratories - report on round 10 / December 2001 (CH-1 Marine sediment). International Association of Geoanalysts: Unpublished report.

GeoPT11
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and Watson J.S. (2002)
GEOPT11 - an international proficiency test for analytical geochemistry laboratories - report on round 11 / July 2002 (OU-5 Leaton dolerite). International Association of Geoanalysts: Unpublished report.

GeoPT12
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and Batjargal B. (2003)
GEOPT12 - an international proficiency test for analytical geochemistry laboratories - report on round 12 / January 2003 (GAS Serpentinite). International Association of Geoanalysts: Unpublished report.

GeoPT13
Potts P.J., Thompson M., Chenery S.R., Webb, P.C. and Kaspar H.U. (2003)
GEOPT13 - an international proficiency test for analytical geochemistry laboratories - report on round 13 / July 2003 (Köln Loess). International Association of Geoanalysts: Unpublished report.

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

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

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

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

Table 1		GeoPT18 Analytical results submitted (Dec. 2005)												
		Quartz diorite KPT-1					Note: There is no S5							
Round identifier		S1	S2	S3	S4	S4	S6	S7	S8	S9	S10	S10	S11	S12
Sample		KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Data quality		2	2	2	1	2	2	2	1	2	1	2	1	2
SiO2	% m/m	54.43	54.6	51.1	54.56		54.43	54.392			54.368		55.55	54.84
TiO2	% m/m	0.91	0.93	0.86	0.89		0.91	0.902			0.908		0.78	0.865
Al2O3	% m/m	14.48	14.8	13.2	14.6		14.44	14.463			14.619		13.67	13.93
Fe2O3	% m/m	12.39	12.5	10.8	12.71		12.45	12.208		12.19	12.136		10.75	12.05
Fe(II)O	% m/m	8.01											7.74	
MnO	% m/m	0.146	0.15	0.13	0.17		0.15	0.147			0.147		0.14	0.148
MgO	% m/m	4.35	4.33	3.97	3.88		4.29	4.322			4.33		4.41	4.05
CaO	% m/m	7	6.96	6.77	7.17		6.82	6.906			6.866		6.32	6.96
Na2O	% m/m	2.64	2.52	2.74	2.14		2.66	2.61		2.55	2.577		2.81	2.8
K2O	% m/m	1.65	1.64	1.82	1.46		1.67	1.655			1.658		1.64	1.68
P2O5	% m/m	0.17		0.19	0.13		0.16	0.167			0.169		0.16	0.176
H2O+	% m/m	0.12												
CO2	% m/m	0.76												
LOI	% m/m	1.59	1.62		1.45		1.39	1.87			1.54		1.38	1.48
Ag	mg kg-1													0.85
As	mg kg-1							2.3		1.39				1.3
Au	mg kg-1													
B	mg kg-1													
Ba	mg kg-1	468				366	520	455.3	466	468		489.7		462
Be	mg kg-1								1.35					
Bi	mg kg-1													1.1
Br	mg kg-1													
Cd	mg kg-1								1.19					0.397
Ce	mg kg-1	65.9				30		74	51.8	56.7				55
Cl	mg kg-1					329								405
Co	mg kg-1	80.2					70		81.3	84.8		65.1		81.4
Cr	mg kg-1	146				31	120	138.3	142	134		164.5		158
Cs	mg kg-1					9			4.48	4.9				4.49
Cu	mg kg-1	1233		600	748		960	1200.7	1106		872.8			1338
Dy	mg kg-1								4.27					4.94
Er	mg kg-1								2.82					3
Eu	mg kg-1								1.24	1.17				1.33
F	mg kg-1													845
Ga	mg kg-1	18.9			19			17.7	17.6			18.8		19.2
Gd	mg kg-1								4.39					
Ge	mg kg-1								1.96					
Hf	mg kg-1								4.65	5.24				
Hg	mg kg-1													
Ho	mg kg-1								0.89					1.07
I	mg kg-1													
In	mg kg-1								0.19					
Ir	mg kg-1													
La	mg kg-1	25.1				18		50.7	25.1	26.8				26.8
Li	mg kg-1								34.9					
Lu	mg kg-1								0.43	0.434				0.46
Mo	mg kg-1				4				1.58					2
N	mg kg-1													
Nb	mg kg-1	10.3			12			9	7.91		8.5			8.1
Nd	mg kg-1	24.5							23.9	25.1				25
Ni	mg kg-1	1266			877		1180	1129.3	777		839.8			1270
Os	mg kg-1													
Pb	mg kg-1	79.4			88		89	87	66.7		83.5			88.7
Pd	mg kg-1													
Pr	mg kg-1								6.25					6.57
Pt	mg kg-1													
Rb	mg kg-1	62.6		40	67			69.3	73.2	62.7	62.9			61.5
Re	mg kg-1													
Rh	mg kg-1													
Ru	mg kg-1													
S	mg kg-1					1132	8030							6558
Sb	mg kg-1								11.5	8.6				10.3
Sc	mg kg-1					19		16	23.7	24.9		24.7		24
Se	mg kg-1						2							3.8
Sm	mg kg-1								4.82	5.08				4.92
Sn	mg kg-1													20
Sr	mg kg-1	265		185	272		287	266.3	262		268.8			267
Ta	mg kg-1								0.59	0.57				0.6
Tb	mg kg-1								0.76	0.665				0.82
Te	mg kg-1													0.32
Th	mg kg-1				11		6	7.7	7.17	7.4				
Tl	mg kg-1								0.51					0.577
Tm	mg kg-1								0.4					0.46
U	mg kg-1				6			0	1.71	1.8				2.29
V	mg kg-1	194				181		182	191			211.3		201
W	mg kg-1													1.2
Y	mg kg-1	26.6			30			30.3	24.2		26.2			24
Yb	mg kg-1								2.66	2.8				2.94
Zn	mg kg-1	119		90	115		118	89.7	131		124.4			131
Zr	mg kg-1	165		120	163			591.3	178		148.4			168

Table 1		**GeoPT18 Analytical results submitted (Dec. 2005)**												
		Quartz diorite KPT-1												
Round identifier		S13	S14	S15	S16	S17	S18	S19	S19	S20	S21	S22	S22	S23
Sample		KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Data quality		2	2	1	1	2	1	1	2	2	2	1	2	1
SiO2	% m/m		54.06	54.407		47.8		55.22		55.31	54.39	54.18		
TiO2	% m/m	0.86	0.911	0.921	1.096	0.84		1		0.9	0.89	0.89		
Al2O3	% m/m	13.97	14.41	14.505	18.29	21.7		14.38		14.61	14.68	14.44		
Fe2O3	% m/m	11.59	12.5	12.215	13.81	11.9		12.260		12.15	12.29	12.35		
Fe(II)O	% m/m			7.99										
MnO	% m/m	0.145	0.155	0.136	0.1666	0.155		0.141		0.1372	0.14	0.13		
MgO	% m/m	4.34	4.24	4.336	4.692			4.291		4.35	4.47	4.60		
CaO	% m/m	6.9	7	6.826	7.636	7.35		7.049		6.87	6.93	6.89		
Na2O	% m/m	2.58	2.45	2.65	2.829			2.426		2.51	2.55	2.74		
K2O	% m/m	1.74	1.64	1.637	4.024	1.93		1.672		1.66	1.66	1.52		
P2O5	% m/m	0.165	0.164	0.176	0.2456			0.138		0.171	0.15	0.13		
H2O+	% m/m													
CO2	% m/m													
LOI	% m/m		1.43	1.2				1.52		1.49		1.50		
Ag	mg kg-1	0.671						0.4			0.73			
As	mg kg-1	1.745			4.614				1.6		2.6			
Au	mg kg-1				6.033									
B	mg kg-1													
Ba	mg kg-1	465.144	439	456.3	608	474	458		453	440	479	470		456
Be	mg kg-1							1.1			1.37			
Bi	mg kg-1	0.640							1.7					0.81
Br	mg kg-1													
Cd	mg kg-1	0.359			8.57			0.7			0.44			
Ce	mg kg-1	53.647	39	52.78		54	53.7		60.3		56.5	66		53
Cl	mg kg-1	75.204				16000								
Co	mg kg-1		62	77.02	66.92		80.6		86.4		85.7		51	72
Cr	mg kg-1	139.187	123	148.97	480	233	152		167		170	163		139
Cs	mg kg-1	4.312	3.5	4.256	21.94		4.03				5.19			4.2
Cu	mg kg-1	1204.353	1040	1165	2051	1050	906		1105		1310		780	
Dy	mg kg-1	4.371		4.46			4.47	3.06						4.4
Er	mg kg-1	2.626		2.691			2.75	1.64						2.7
Eu	mg kg-1	1.213		1.203			1.17	1.07						1.2
F	mg kg-1													
Ga	mg kg-1	17.874	17	18.55		17	19		18		21.7	16		19
Gd	mg kg-1	4.386		4.622			4.89	3.72						4.6
Ge	mg kg-1										4			1.4
Hf	mg kg-1			4.342			4.02		3.1			4.7		3.7
Hg	mg kg-1													
Ho	mg kg-1			0.958			0.947	0.57						0.91
I	mg kg-1													
In	mg kg-1													
Ir	mg kg-1													
La	mg kg-1	26.039	29	26.19	40.95	24	24.8		29		28.7			26
Li	mg kg-1				102			28.6						
Lu	mg kg-1	0.380		0.437	0.8222		0.4	0.2						0.41
Mo	mg kg-1	0.288	1.6		3.852				1.8		2.17			0.3
N	mg kg-1													
Nb	mg kg-1		6.9	9.41		5	7.87		7.9			9		7.7
Nd	mg kg-1	24.148	22	24.36		23	24.1		23.1			22		24
Ni	mg kg-1	1079.563	760	1214.7	1293	850	1016		901		1185	1210		
Os	mg kg-1													
Pb	mg kg-1	81.830	52	79.35	92.34	90			82.2				59	77
Pd	mg kg-1													
Pr	mg kg-1	6.181		6.39			6.11	7.01				6.4		6.2
Pt	mg kg-1													
Rb	mg kg-1	53.235	70	65.07		60	59.9		60.2		64.4	63		58
Re	mg kg-1	13.710												
Rh	mg kg-1													
Ru	mg kg-1													
S	mg kg-1				10370	8300				9990			3680	
Sb	mg kg-1	9.965	2.8		14.23			4.3			11.65			10
Sc	mg kg-1	23.258	27	25.16	24.93				31			23		25
Se	mg kg-1	2.700			2.5			5.3						
Sm	mg kg-1	4.808	3	4.929			4.76	4.52						4.3
Sn	mg kg-1	18.832	18		29.08				18.2		19.8			19
Sr	mg kg-1	169.053	244	263.19	265.8	260	259		258	310	271	240		226
Ta	mg kg-1			0.555			0.606							0.61
Tb	mg kg-1	0.691		0.762			0.725	0.53						0.71
Te	mg kg-1													
Th	mg kg-1	6.937	8	6.45	13.69		6.71		8.4		7.6			6.8
Tl	mg kg-1	0.485									0.51			0.51
Tm	mg kg-1			0.418			0.395	0.24						0.39
U	mg kg-1	1.690	4	1.707	4.071		1.68		4.4		1.8			1.6
V	mg kg-1	191.026	181	191.86	240	210	200		200		217	203		189
W	mg kg-1				1.583				4.5					1.1
Y	mg kg-1		24	27.98	44.29	23	23.7		26.6		26.8	26		24
Yb	mg kg-1	2.552		2.715			2.73	0.84						2.7
Zn	mg kg-1	117.870	115	116.57	164.2	1120			113		120	125		148
Zr	mg kg-1	119.027	138	175.26	345.6	145	153		158		152	175		130

Table 1		GeoPT18 Analytical results submitted (Dec. 2005)												
		Quartz diorite KPT-1												
Round identifier		S23	S24	S25	S25	S26	S27	S28	S28	S29	S30	S31	S32	S33
Sample		KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Data quality		2	2	1	2	1	2	1	2	2	1	1	2	1
SiO2	% m/m		54.6	55.24		54.46	53.01	54.16		53.3	54.50	51.04	53.678	54.0772
TiO2	% m/m	0.84	0.83	0.896		0.89	0.924	0.93		0.8	0.86	0.8722	0.906	0.8742
Al2O3	% m/m		13.9	14.484		14.34	14.05	14.74		14.51	14.48	12.18	14.451	14.4857
Fe2O3	% m/m		12.7	12.346		12.05	11.59	12.53		12	12.14	12.06	12.329	12.2663
Fe(II)O	% m/m			8.85		8.16							7.99	7.9187
MnO	% m/m	0.13	0.15	0.146		0.152	0.139		0.144	0.13	0.144	0.1379	0.136	0.1473
MgO	% m/m		4.43	4.399		4.52	4.23		4.21	5.4	4.24	4.292	4.393	4.3428
CaO	% m/m		6.97	6.888		7.15	6.59	6.92		6.85	6.81	6.687	6.876	6.8253
Na2O	% m/m		2.56	2.63		2.54	2.49			2.77	2.61	1.838	2.582	2.6572
K2O	% m/m		1.61	1.632		1.66	1.57			1.7	1.62	1.578	1.65	1.6563
P2O5	% m/m		0.18	0.167		0.147	0.164		0.163	0.194	0.156	0.1602	0.171	0.1643
H2O+	% m/m					1.51				0.27				
CO2	% m/m					0.67								
LOI	% m/m		1.52	1.28		1.55	1.91		1.64	1.88	2.05		1.5	
Ag	mg kg-1								1.100					0.564
As	mg kg-1					1.61	1.51		4.4			4.2		3.783
Au	mg kg-1								0.013					
B	mg kg-1								33					
Ba	mg kg-1		422	471		417	518.5		457.0	430		474.3	455	460
Be	mg kg-1					2.15			1.67					1.33
Bi	mg kg-1					0.97	2.6					1.6		
Br	mg kg-1													
Cd	mg kg-1	0.45					0.21		0.50	0.37		2		
Ce	mg kg-1		53		52	58.9		62.5				55.7	73	52.215
Cl	mg kg-1						392.1							
Co	mg kg-1		58.6			79	68.1		80	80.8			61	
Cr	mg kg-1		171	171.5		169	131.6		145	164		130.4	170	161.8
Cs	mg kg-1		3.73				7.2		3			5	5.31	5.068
Cu	mg kg-1	1030	1460	915		1263	866.4	1106		1251		1242	955	890
Dy	mg kg-1		4.34			5.04		4.57					5.78	4.65
Er	mg kg-1		2.52			2.78		2.84					4	2.885
Eu	mg kg-1		1.28			1.22		1.32					1.38	1.22
F	mg kg-1					720			400	460				556.6
Ga	mg kg-1						18.9	17.7		16.4		16.4		19.116
Gd	mg kg-1		4.33			5.80			4.63				6.44	4.646
Ge	mg kg-1							1.41						1.4
Hf	mg kg-1		4.33				4.41		4.52				3.93	4.916
Hg	mg kg-1					0.00			0.007					
Ho	mg kg-1		1.0			1.38		0.94					1.23	0.986
I	mg kg-1													
In	mg kg-1													
Ir	mg kg-1													
La	mg kg-1		26.5		25	28.3	35.1	29.4				23.6	32	25.256
Li	mg kg-1					32.5		34						
Lu	mg kg-1		0.42			0.56		0.42					0.67	0.47
Mo	mg kg-1		1.1				1.82		1.50				1.15	1.8
N	mg kg-1													
Nb	mg kg-1		7.30	8.3		9.0	9.38		7	9.4		8.4	9	8
Nd	mg kg-1		24.0			26.4		25.8					31.3	25.068
Ni	mg kg-1	1050	1381	895.1		1203	1021	1226		724		1130	772	861.6
Os	mg kg-1													
Pb	mg kg-1		126	83.1		83	7661		64	67.5		78.5	76	83.73
Pd	mg kg-1								0.062					
Pr	mg kg-1		6.26			6.7		6.8					8.06	6.173
Pt	mg kg-1													
Rb	mg kg-1		56.7	61.2		58	63.15	55		54.5		55.6	83	60.3
Re	mg kg-1													
Rh	mg kg-1													
Ru	mg kg-1													
S	mg kg-1					10890	8273.1					8337		9536.85
Sb	mg kg-1		10.0			7.38	6.1	12.5				13.5		9.983
Sc	mg kg-1		23.8				21.1	27.9						25
Se	mg kg-1											0.6		
Sm	mg kg-1		5.0			4.68		4.86				6.7	6.5	5.026
Sn	mg kg-1		17.5			9	17		17.30			21.5	27.51	20.116
Sr	mg kg-1		239	262.2		254	273.2		278	241		235.9	306	264.24
Ta	mg kg-1		0.64				0.61						1.72	0.483
Tb	mg kg-1		0.76					0.81					1.11	0.688
Te	mg kg-1													
Th	mg kg-1		7.2		10		8.69	7.46		8.2		7.8	5	6.283
Tl	mg kg-1								0.60			1.5		
Tm	mg kg-1		0.46			0.40		0.43					0.44	
U	mg kg-1		1.89		1		1.19	1.98				3.1	2.35	1.766
V	mg kg-1		201	205.8		187	208.9		201	202		191.9	187	209.4
W	mg kg-1		1.46						1.06					
Y	mg kg-1		27.5	27.7		28.0	28.08	28.6		23.4		25	50	21.35
Yb	mg kg-1		2.63			3.64		2.79				19.4	3.8	2.808
Zn	mg kg-1		138	119.9		134	161.8		134	108		115.4	199	122.6
Zr	mg kg-1		166	156.1		151	165.1	195		147		153.3	122	156.8

Table 1		GeoPT18 Analytical results submitted (Dec. 2005)												
		Quartz diorite KPT-1												
Round identifier		S34	S35	S36	S37	S38	S39	S39	S40	S41	S42	S43	S44	S44
Sample		KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Data quality		1	1	2	2	2	1	2	1	2	1	2	1	2
SiO2	% m/m	54.48	54.8	52.04	54.33	53.24		54.58	53.44	54.8		54.47		
TiO2	% m/m	0.89	0.951	0.9	0.9	0.852		0.91	0.86	0.925	0.94	0.93	0.87	
Al2O3	% m/m	14.61	13.4	16.26	14.57	14.13		14.46	14.08	14.45		14.31	14.13	
Fe2O3	% m/m	12.26	13.17	4.31	12.33	11.66		12.48	11.92	12.58		12.48	12.52	
Fe(II)O	% m/m		10.5									8		
MnO	% m/m	0.141	0.154	0.14	0.15	0.139		0.15	0.14	0.141	0.153	0.13	0.14	
MgO	% m/m	4.38	4.09	12.34	4.42	4.048		4.45	4.16	4.31		4.11	4	
CaO	% m/m	6.99	6.93	6.93	6.84	6.807		7.07	6.63	6.82		6.71	6	
Na2O	% m/m	2.64	3	2.64	2.64	2.790		2.64	2.51	2.76	2.59	2.57	2.68	
K2O	% m/m	1.66	1.77	1.72	1.69	1.635		1.65	1.57	1.65		1.59	1.79	
P2O5	% m/m	0.18	0.17	0.16	0.16	0.171		0.18	0.19	0.174		0.15		
H2O+	% m/m													
CO2	% m/m					1.100				0.66	0.698	0.64		
LOI	% m/m	1.63	2.5			1.420		1.77	1.68	1.48		1.53		
Ag	mg kg-1	0.698	0.8688							1.41				
As	mg kg-1							1.58		2.48	2.21	3		1.8
Au	mg kg-1	0.042	0.2646							0.0317	0.0415			
B	mg kg-1		5.5056									17		
Ba	mg kg-1	499	461.751					474	430	454	422	463	450	
Be	mg kg-1	1.262	1.11345					1.21				1.6		
Bi	mg kg-1	0.879	0.6893					1.14		0.91				
Br	mg kg-1													
Cd	mg kg-1	0.38	0.43655					0.48		0.42				
Ce	mg kg-1	55.04	63.4571					57.3		54.1	69	50	60.3	
Cl	mg kg-1									496	399		490	
Co	mg kg-1	83.4	78.5597					77.4	63	80.6	74	78	82.9	
Cr	mg kg-1	166	145.214	41				154	147	158	152	153	162	
Cs	mg kg-1	4.462	4.6946					4.06		4.46	3.9		4.2	
Cu	mg kg-1	962	1285.21	876				1070	848	1341			1280	
Dy	mg kg-1	4.71	4.5903					4.47		4.37	4.32	2.3	4.5	
Er	mg kg-1	2.79	2.72465					2.63		2.69		1.3		
Eu	mg kg-1	1.271	1.22135					1.29		1.25	1.34	0.75	1.4	
F	mg kg-1													
Ga	mg kg-1	18.13	19.2268					19.5	14	18.9		20		19
Gd	mg kg-1	4.831	4.76345					4.63		4.66		2.8		
Ge	mg kg-1		1.40295					1.26						
Hf	mg kg-1	4.383	4.3266					4.38		4.45	4.34	5.6	4.88	
Hg	mg kg-1													
Ho	mg kg-1	0.972	0.97385					0.904		0.88	1	0.4		
I	mg kg-1													
In	mg kg-1							0.12			0.1			
Ir	mg kg-1		0.03535							0.00661	0.006			
La	mg kg-1	27.57	24.1925					27.9		26.6	26.3	28	28.2	
Li	mg kg-1	35.84	31.0415									35		
Lu	mg kg-1	0.436	0.43005					0.438		0.43	0.4	0.14	0.46	
Mo	mg kg-1	1.753	1.42545					1.69		3.26				
N	mg kg-1													
Nb	mg kg-1	8.85	8.6278	8				7.55	9	8.17		8.8		
Nd	mg kg-1	25.91	24.7057					24.7		24.7	23.4	16.8	32	
Ni	mg kg-1	876	1244.09	908				1175	743	1242	1186		1120	
Os	mg kg-1									0.00631	0.0035			
Pb	mg kg-1	82.8	92.2004					85.6	72	77.9		77		
Pd	mg kg-1	0.133	6.2362							0.104	0.1839			
Pr	mg kg-1	6.557	6.31615					6.66		6.19		5		
Pt	mg kg-1	0.083	0.05235							0.0728	0.1505			
Rb	mg kg-1	61.3	62.2473	62				60.4	56	61.6	63.2	59	66	
Re	mg kg-1		0.0077								0.0047			
Rh	mg kg-1		0.0395							0.017	0.0166			
Ru	mg kg-1		0.01865							0.0165	0.0108			
S	mg kg-1	10800				11000	10600		10900	10338	11017			
Sb	mg kg-1	10.6	11.3291					10.4		9.06	10.1	8	9.7	
Sc	mg kg-1	22.8	19.9795						23	25.3	24.2	24	25.6	
Se	mg kg-1										3.36			3.5
Sm	mg kg-1	5.105	4.84675					5.11		4.53	4.7		5.1	
Sn	mg kg-1	18.6	21.0695					19.4		20.4		17		
Sr	mg kg-1	270	267.883	252				253	233	272	235	258		320
Ta	mg kg-1	0.564	1.6943					0.69		0.6	0.51			0.51
Tb	mg kg-1	0.777	0.72145					0.723		0.82	0.7	0.34	0.77	
Te	mg kg-1	0.38	0.28775											
Th	mg kg-1	7.19	7.14725	6				7.33	8	7.4	7.2		7	
Tl	mg kg-1	0.51	0.57875							0.51				
Tm	mg kg-1	0.428	0.421					0.403		0.39				
U	mg kg-1	1.687	2.1265	3				1.87		1.6	1.6			1.7
V	mg kg-1	203.6	203.861					187	179	190	223	198	208	
W	mg kg-1	1.16	1.0245					1.07		1.19				
Y	mg kg-1	25.5	24.43	26				25.7	24	25.9		26		
Yb	mg kg-1	2.78	2.74					2.78		2.34	2.6	0.96	2.86	
Zn	mg kg-1	122	115.18	120				129	109	136	83	119		70
Zr	mg kg-1	163.4	163.91	150				168	148	170	43	146		210

Table 1		GeoPT18 Analytical results submitted (Dec. 2005)												
		Quartz diorite KPT-1												
Round identifier		S45	S46	S47	S48	S49	S50	S51	S52	S53	S54	S55	S55	S56
Sample		KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Data quality		1	2	2	1	2	2	2	2	1	2	1	2	2
SiO2	% m/m	53.811	54.6	53.16	52.55	53.56	54.9	53.712	54.75		56.5	54.15		
TiO2	% m/m	0.8962	0.93	0.9	0.95	0.9	0.89	0.941	0.907	0.97	0.86	0.908		0.95
Al2O3	% m/m	14.365	14.80	14.14	13.61	14.28	14.7	14.2	14.69	14.9	13.1	14.37		15.07
Fe2O3	% m/m	12.324	12.40	12.26	11.47	12.1	12.2	12.364	12.27	12.2	11.2	12.31		12.09
Fe(II)O	% m/m		8.54	7.47	7.51			8.249						
MnO	% m/m	0.1449	0.148	0.13	0.14	0.14	0.14	0.149	0.147	0.14	0.11	0.15		0.16
MgO	% m/m	4.326	4.45	4.43	4.19	4.14	4.38	4.697	4.13	4.3	3.55	4.21		
CaO	% m/m	6.864	6.8	7.3	6.88	6.82	6.89	7.358	6.91	6.6	6.02	6.9		
Na2O	% m/m	2.631	2.60	2.41	2.87	2.55	2.67	2.59	2.63	2.8	4.04	2.56		14.07
K2O	% m/m	1.650	1.65	1.68	1.6	1.63	1.65	1.64	1.65	1.8	1.85	1.61		19.83
P2O5	% m/m	0.1632	0.17	0.13	0.16	0.16	0.16	0.158	0.172	0.16	0.1	0.167		
H2O+	% m/m	0.053			1.64									
CO2	% m/m		0.75		0.69					0.37				
LOI	% m/m	1.256	1.50	1.57	1.63	1.74	1.47	2.075	1.54		1.4	1.32		
Ag	mg kg-1		0.6							0.7				1
As	mg kg-1		2		5					2.8	7			
Au	mg kg-1		0.031	0.04										1
B	mg kg-1													
Ba	mg kg-1	458.6	465		468	459.2	435	510.12		500			643	
Be	mg kg-1		1.3							1.4				
Bi	mg kg-1		0.92		0									
Br	mg kg-1													
Cd	mg kg-1		0.45		5		0.5			0.1				
Ce	mg kg-1	51.778	56.5		83	55.7	54.4	59.39						
Cl	mg kg-1				272			310						
Co	mg kg-1		82	50.46	80		101	63		81	60			
Cr	mg kg-1	151.3	165	140	220		145	140		150	162	165.3		
Cs	mg kg-1	4.329	4.45		1	4.5	4.3	4						
Cu	mg kg-1		1330	1170	1065		1142	1200		1300	867	865.3		1560
Dy	mg kg-1	4.957	4.8		2	4.389	4.5	4.08						
Er	mg kg-1	2.767	2.7		2	2.675	2.8	2.44						
Eu	mg kg-1	1.304	1.25		1	1.195	1.5	1.18						
F	mg kg-1		535		754									
Ga	mg kg-1	17.6	19		16			28.82		25		28.2		
Gd	mg kg-1	4.796	4.65		6	4.491	4.6	4.38						
Ge	mg kg-1		1.4					1.84						
Hf	mg kg-1	4.597	4.4		11	4.62		3.39						
Hg	mg kg-1									0.02				
Ho	mg kg-1	1.017	0.93		1	0.938	1.01	0.98						
I	mg kg-1													
In	mg kg-1		0.11											
Ir	mg kg-1		0.008											
La	mg kg-1	27.058	27.5		33	26.38	26.1	31		28				
Li	mg kg-1		35				43	30.9		37				
Lu	mg kg-1	0.424	0.41			0.409	0.42	0.4						
Mo	mg kg-1		1.5		1					2				
N	mg kg-1													
Nb	mg kg-1	8.382	8.5		8	8.58		12.79				9.5		
Nd	mg kg-1	23.051	25		36	25.29	24.8	27						
Ni	mg kg-1	1198.6	1250	1082.21	1002		1152	620		1100	729		540	1100
Os	mg kg-1		0.002											
Pb	mg kg-1	81.331	80		75	83.1	76.1	59		83	74	52.2		44
Pd	mg kg-1		0.155	0.18										
Pr	mg kg-1	5.796	6.5		10	6.467	6.5	7						
Pt	mg kg-1		0.09	0.06										
Rb	mg kg-1	61.10	64.5		60	66.8	65.8	54.5				60.3		
Re	mg kg-1													
Rh	mg kg-1		0.018											
Ru	mg kg-1		0.018											
S	mg kg-1		11500	10440	3880			5500	810	10600				
Sb	mg kg-1		11.1		3		10.8			11				
Sc	mg kg-1	25.7	25		37	27.5	27.2	25						
Se	mg kg-1		4							3.1				
Sm	mg kg-1	5.146	4.8		10	4.86	5.1	5.94						
Sn	mg kg-1		20		6			30.8		17				
Sr	mg kg-1	254.2	265		259	270.1	324	271.2		280		274.1		
Ta	mg kg-1	0.631	0.7		0	0.6		0.81						
Tb	mg kg-1	0.804	0.7		3	0.731	0.71	0.78						
Te	mg kg-1		0.4											
Th	mg kg-1	7.363	6.9		6	6.793	11.7	7.01				4.6		
Tl	mg kg-1		0.55											
Tm	mg kg-1	0.411	0.41			0.406	0.4	0.39						
U	mg kg-1	1.676	1.75		2	1.684	1.8	1.71						
V	mg kg-1	195.7	205	400	195		175	200		190		246		
W	mg kg-1		1.4		2									
Y	mg kg-1	27.378	26		26	24.6	25	28.6				35.2		
Yb	mg kg-1	2.677	2.7		2	2.673	2.7	2.2						
Zn	mg kg-1	115.7	122	84.6	125		126	93		140	119	100.6		87
Zr	mg kg-1	170.8	165		157	180.7	182	127.5			156	140.7		

Table 1		GeoPT18 Analytical results submitted (Dec. 2005)												
		Quartz diorite KPT-1												
Round identifier		S57	S58	S59	S60	S61	S62	S63	S64	S65	S66	S67	S68	S68
Sample		KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Data quality		2	2	1	1	1	1	1	1	1	2	2	1	2
SiO2	% m/m	54.36	54.52	54.40	54.208	54.16		49.5			54	53.68	53.38	
TiO2	% m/m	0.926	0.91	0.91	0.897	0.94	0.89	0.852			0.966	0.88	0.909	
Al2O3	% m/m	14.67	14.46	14.53	14.425	15.14		12.61			14.6	14.36	14.24	
Fe2O3	% m/m	12.33	12.3	12.38	12.2	12.36		12.83		12.22	12.9	12.020	12.23	
Fe(II)O	% m/m													
MnO	% m/m	0.149	0.15	0.14	0.146	0.16	0.13	0.141			0.14	0.149	0.149	
MgO	% m/m	4.361	4.3	4.27	4.348			3.97			4.41	4.26	4.36	
CaO	% m/m	7.067	6.66	7.03	6.889	6.85		6.23			7.05	6.820	6.98	
Na2O	% m/m	2.581	2.55	2.44	2.575	2.43	2.68				2.56	2.62	2.57	
K2O	% m/m	1.615	1.66	1.65	1.646	1.94	1.74	1.6			1.71	1.63	1.65	
P2O5	% m/m	0.169	0.17	0.17	0.193	0.18	0.17				0.138	0.16	0.168	
H2O+	% m/m												2.05	
CO2	% m/m				0.666			0.696					0.62	
LOI	% m/m		1.62	1.28	1.403	1.73	1.63	1.67			1.3	2.11	1.49	
Ag	mg kg-1											0.93		
As	mg kg-1			3.3	2.007							1.7		
Au	mg kg-1		0.059								0.031			
B	mg kg-1													
Ba	mg kg-1	465.4	523	468	471.33	488	509		457.3	434	577	523.1	466	
Be	mg kg-1	1.6			1.447						1.73	1.34		
Bi	mg kg-1				0.847							2.3		
Br	mg kg-1													
Cd	mg kg-1				0.398						0.35	0.353		
Ce	mg kg-1	56.04	43	51.23	55.733	62	53		52.75	54.5	55.87	54.37	55.7	
Cl	mg kg-1													492
Co	mg kg-1	82.84		81.3	82.6	60	57			78.4	76.1	79.3	73	
Cr	mg kg-1	151.3	161	159.2	179	166	137				172	155	154	
Cs	mg kg-1	4.6			4.54				4.42	4.0	4.57	4.383	4.36	
Cu	mg kg-1	1054	936	1431	1377	933	601				1158	1232	1064	
Dy	mg kg-1	4.61		4.07	5.157				4.25		4.45	4.55	4.40	
Er	mg kg-1	2.86		2.51	2.7				2.54		2.82	2.71	2.70	
Eu	mg kg-1	1.36		1.21	1.253				1.12	1.28	1.27	1.255	1.19	
F	mg kg-1						700							392
Ga	mg kg-1	18.38	17	19.4	18.333	15					18.03	18.2	18	
Gd	mg kg-1	4.59		4.43	4.77				4.25		4.58	4.53	4.26	
Ge	mg kg-1										1.34	1.8		
Hf	mg kg-1	4.56	10		4.353					4.6	4.35	3.7	4.06	
Hg	mg kg-1													
Ho	mg kg-1	1.04		0.83	1.013				0.872		0.917	0.966	0.97	
I	mg kg-1													
In	mg kg-1													
Ir	mg kg-1													
La	mg kg-1	27.58	32	24.05	28.633	24			25.1	26.9	26.83	26.08	23.9	
Li	mg kg-1				42.967							33.21		
Lu	mg kg-1	0.42		0.36	0.441				0.4	0.36	0.397	0.415	0.42	
Mo	mg kg-1										2.28	1.7		
N	mg kg-1													
Nb	mg kg-1	8.23	7		7.1	11			7.97		10.26	7.3	7.59	
Nd	mg kg-1	25.35	27	22.49	24.167				23.8	28	24.47	25.02	24.9	
Ni	mg kg-1	1089	870	1197	1335	872	773				1013	1188	988	
Os	mg kg-1													
Pb	mg kg-1		80	101.0	81.133	81	68		76.5		76.8	82.9	81.9	
Pd	mg kg-1										0.145			
Pr	mg kg-1	6.55		6.08	5.98				5.87		6.497	6.37	6.50	
Pt	mg kg-1										0.06			
Rb	mg kg-1	65.24	60	65.5	61.233	69	48		59	55.5	62.1	59.9	57.7	
Re	mg kg-1													
Rh	mg kg-1													
Ru	mg kg-1													
S	mg kg-1		10300				12300	10500			8400		929	
Sb	mg kg-1				10.767						9.41	9.8		
Sc	mg kg-1	24.4		27.2	25.533	24	26			24.7		24.9	23.8	
Se	mg kg-1				2.527						2.92	2.5		
Sm	mg kg-1	5.18		4.54	5.317				4.52	4.9	4.96	4.64	4.97	
Sn	mg kg-1		17		20.6						18.9	18.9		
Sr	mg kg-1	303.5	256	258.6	274.6	264	243		253.8		277	256.3	259	
Ta	mg kg-1	0.64			0.64				0.52	0.47	0.567		0.25	
Tb	mg kg-1	0.76		0.69	0.78				0.668	0.85	0.74	0.737	0.67	
Te	mg kg-1													
Th	mg kg-1	7.25	8	6.04	7.37		3		7.5	7.3	11.57	7.373	6.89	
Tl	mg kg-1				0.544							0.223		
Tm	mg kg-1	0.43		0.37	0.441				0.382		0.4	0.418	0.42	
U	mg kg-1	1.83		1.88	1.717				1.76	1.68		1.775	1.66	
V	mg kg-1	182.5	202	180.8	205.667	221	193				172	195.6	202	
W	mg kg-1	1.15										0.97		
Y	mg kg-1	27.9	25	25.0	26.4	35	8		25.9		23.6	25.7	25.8	
Yb	mg kg-1	2.73		2.43	2.89				2.31	2.9	2.64	2.64	2.62	
Zn	mg kg-1	130.7	113	118.3	125.333	106	108			118	134.6	122.9	120	
Zr	mg kg-1	169.1	167	166	156.067	157	120				159	162.7	164	

Table 1		GeoPT18 Analytical results submitted (Dec. 2005)										Data not received	
		Quartz diorite KPT-1											
Round identifier		S69	S70	S71	S72	S73	S74	S75	S76	S77		S78	S79
Sample		KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1		KPT-1	KPT-1
Data quality		2	2	2	1	2	2	2	1	1		1	1
SiO2	% m/m	55.35	54.45	52.9			53.2	53.99	53.8	54.56		54.40	54.20
TiO2	% m/m	0.86	0.88	0.9		0.86	0.89	0.905	0.85	0.92		0.90	0.967
Al2O3	% m/m	14.2	14.31	14.1			14	15.03	14.5	15.34		14.70	13.87
Fe2O3	% m/m	12.2	12.54	12		12.15	12.2	12.53	11.97	11.9		12.60	12.55
Fe(II)O	% m/m			9.4									
MnO	% m/m	0.15	0.14	0.14		0.15	0.13	0.145	0.135	0.18		0.15	0.128
MgO	% m/m	4.31	4.24	4.31			4.4	4.47	4.3	3.73		3.73	3.78
CaO	% m/m	6.77	6.9	7.06		6.78	6.8	6.95	6.79	7.15		7.15	6.87
Na2O	% m/m	2.64	2.64	2.6			2.4	2.78	2.57	2.27		2.76	2.68
K2O	% m/m	1.64	1.68	1.63		1.94	1.6	1.58	1.56	1.7		1.76	1.74
P2O5	% m/m	0.15	0.16	0.16			0.21	0.17	0.17	0.21		0.21	0.233
H2O+	% m/m	1.26		1.8									
CO2	% m/m	0.55					0.59						
LOI	% m/m	1.43	1.14	1.25	1.51		1.51			1.29		1.41	1.56
Ag	mg kg-1									20			
As	mg kg-1			2.2									0.0014
Au	mg kg-1	0.034											
B	mg kg-1									28			
Ba	mg kg-1	456.5	530	440	477		467	306		509			0.0443
Be	mg kg-1	1.39		1.6									
Bi	mg kg-1			1.07									
Br	mg kg-1												
Cd	mg kg-1	0.175		0.4						3			
Ce	mg kg-1	54.08		52.2	44		65	54.26		39			
Cl	mg kg-1			440			540						
Co	mg kg-1	77.87	95	77.4	77		76	51		70			0.0051
Cr	mg kg-1	149.91	145	135	161	110	126	107		165			0.0093
Cs	mg kg-1	4.298		4.2									
Cu	mg kg-1	1140	1490	1210	892	1075	1584	988		1191			0.113
Dy	mg kg-1	4.502		4.52				4.5		3			
Er	mg kg-1	2.74		3.05				2.67		12.9			
Eu	mg kg-1	1.19		1.2				1.27		0.6			
F	mg kg-1			460			250						
Ga	mg kg-1	18.23		18	19	13		16					
Gd	mg kg-1	4.51		4.67				4.5		14.9			
Ge	mg kg-1												
Hf	mg kg-1	4		4									
Hg	mg kg-1												
Ho	mg kg-1	0.93		0.89				0.93					
I	mg kg-1												
In	mg kg-1			0.11									
Ir	mg kg-1	0.0067											
La	mg kg-1	26.32		27.2	28		27	25.58		20			
Li	mg kg-1	37.35		30			40			27			
Lu	mg kg-1	0.403		0.44				0.41					
Mo	mg kg-1	1.97											
N	mg kg-1												
Nb	mg kg-1	8.30		9	9					76			0.0004
Nd	mg kg-1	24.48		24.5				25.28		20			
Ni	mg kg-1	1193	1270	1060	982	895	974	866		1187			0.073
Os	mg kg-1												
Pb	mg kg-1	80.9	85	88	72		89	76		373			0.0069
Pd	mg kg-1	0.103											
Pr	mg kg-1	6.32		6.28				6.34					
Pt	mg kg-1	0.151											
Rb	mg kg-1	60.88		64.3	63	64		64					
Re	mg kg-1												
Rh	mg kg-1	0.0167											
Ru	mg kg-1	0.0162											
S	mg kg-1	10400		1.03			10000			4800			0.32
Sb	mg kg-1	10.30		11.4									
Sc	mg kg-1	24.58		26.9	25			22.7		40			
Se	mg kg-1	2.26											
Sm	mg kg-1	4.87		4.9				4.82		1			
Sn	mg kg-1	19.48		20.5									
Sr	mg kg-1	252.80		272	271	270	230	253		224			0.033
Ta	mg kg-1	0.54								19			
Tb	mg kg-1	0.72		0.76				0.7					
Te	mg kg-1	0.244		0.48									
Th	mg kg-1	6.85		7.9	8			5.7					
Tl	mg kg-1	0.57		0.58									
Tm	mg kg-1	0.403		0.39				0.39					
U	mg kg-1	1.669		1.76	3								
V	mg kg-1	191.84		202	204		169	145					0.0191
W	mg kg-1	1.04					14						
Y	mg kg-1	24.47		26	26	23	23	22.7		23			0.0024
Yb	mg kg-1	2.68		2.8				2.66		2.7			
Zn	mg kg-1	107.43	130	121	122	121	139	124		94			0.0185
Zr	mg kg-1	156.2		158	154	150	154	154					0.0185

Table 2	GeoPT18 Assigned values and robust statistical analysis of contributed data (Quartz diorite, KPT-1)										
	X_a	H_a	sdm	sdm/H_a	status		X_a	H_a	sdm	sdm/H_a	status
	% m/m	% m/m	% m/m				mg/kg	mg/kg	mg/kg		
SiO_2	54.14	0.594	0.102	0.173	Assigned	Li	35.10	1.643	1.306	0.795	Assigned
TiO_2	0.90	0.018	0.004	0.236	Assigned	Lu	0.42	0.038	0.005	0.135	Assigned
Al_2O_3	14.41	0.193	0.048	0.246	Assigned	Mo	1.72	0.127	0.118	0.928	Assigned
Fe_2O_3T	12.24	0.168	0.034	0.201	Assigned	Nb	8.48	0.492	0.153	0.310	Assigned
MnO	0.14	0.004	0.001	0.264	Assigned	Nd	24.64	1.217	0.239	0.197	Assigned
MgO	4.30	0.069	0.020	0.290	Assigned	Pb	81.07	3.346	0.994	0.297	Assigned
CaO	6.89	0.103	0.019	0.188	Assigned	Pr	6.39	0.387	0.056	0.144	Assigned
Na_2O	2.61	0.045	0.016	0.357	Assigned	Rb	61.45	2.645	0.582	0.220	Assigned
K_2O	1.65	0.031	0.005	0.178	Assigned	Sb	10.01	0.566	0.330	0.583	Assigned
P_2O_5	0.17	0.004	0.002	0.379	Assigned	Sc	24.84	1.225	0.295	0.241	Assigned
	mg/kg	mg/kg	mg/kg			Se	2.93	0.199	0.235	1.179	Assigned
Ba	465.27	14.764	2.165	0.147	Assigned	Sm	4.90	0.309	0.049	0.160	Assigned
Be	1.42	0.108	0.053	0.494	Assigned	Sn	19.13	0.982	0.384	0.391	Assigned
Bi	0.95	0.076	0.065	0.851	Assigned	Sr	261.04	9.036	2.230	0.247	Assigned
Ce	55.71	2.433	0.781	0.321	Assigned	Ta	0.60	0.052	0.019	0.364	Assigned
Cr	152.24	5.716	2.243	0.392	Assigned	Tb	0.74	0.062	0.010	0.166	Assigned
Cs	4.42	0.283	0.082	0.291	Assigned	Th	7.27	0.431	0.138	0.319	Assigned
Dy	4.47	0.285	0.054	0.188	Assigned	Tl	0.54	0.047	0.013	0.277	Assigned
Er	2.72	0.187	0.030	0.162	Assigned	Tm	0.41	0.037	0.004	0.114	Assigned
Eu	1.24	0.096	0.015	0.157	Assigned	U	1.76	0.129	0.023	0.175	Assigned
Ga	18.21	0.941	0.218	0.231	Assigned	V	197.22	7.121	1.815	0.255	Assigned
Gd	4.60	0.292	0.045	0.154	Assigned	Y	25.82	1.266	0.310	0.245	Assigned
Hf	4.41	0.282	0.084	0.297	Assigned	Yb	2.69	0.185	0.032	0.170	Assigned
Ho	0.95	0.077	0.012	0.158	Assigned	Zn	120.24	4.677	1.831	0.391	Assigned
La	26.91	1.311	0.321	0.245	Assigned	Zr	158.12	5.902	2.062	0.349	Assigned

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)											
	Quartz diorite KPT-1					Note: There is no S5						
Identifier	S1	S2	S3	S4	S4	S6	S7	S8	S9	S10	S10	S11
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Quality	2	2	2	1	2	2	2	1	2	1	2	1
SiO2	0.2	0.4	-2.6	0.7	*	0.2	0.2	*	*	0.4	*	2.4
TiO2	0.3	0.9	-1.0	-0.4	*	0.3	0.1	*	*	0.5	*	-6.5
Al2O3	0.2	1.0	-3.1	1.0	*	0.1	0.1	*	*	1.1	*	-3.8
Fe2O3	0.5	0.8	-4.3	2.8	*	0.6	-0.1	*	-0.1	-0.6	*	-8.9
MnO	0.3	0.8	-1.8	6.8	*	0.8	0.4	*	*	0.8	*	-1.0
MgO	0.3	0.2	-2.4	-6.1	*	-0.1	0.1	*	*	0.4	*	1.5
CaO	0.5	0.4	-0.6	2.7	*	-0.3	0.1	*	*	-0.2	*	-5.5
Na2O	0.3	-1.0	1.4	-10.5	*	0.5	0.0	*	-0.7	-0.8	*	4.3
K2O	0.0	-0.2	2.8	-6.2	*	0.3	0.1	*	*	0.3	*	-0.3
P2O5	0.5	*	2.8	-8.3	*	-0.7	0.1	*	*	0.7	*	-1.4
Ba	0.1	*	*	*	-3.4	1.9	-0.3	0.0	0.1	*	0.8	*
Be	*	*	*	*	*	*	*	-0.7	*	*	*	*
Bi	*	*	*	*	*	*	*	*	*	*	*	*
Ce	2.1	*	*	*	-5.3	*	3.8	-1.6	0.2	*	*	*
Cr	-0.5	*	*	*	-10.6	-2.8	-1.2	-1.8	-1.6	*	1.1	*
Cs	*	*	*	*	8.1	*	*	0.2	0.8	*	*	*
Dy	*	*	*	*	*	*	*	-0.7	*	*	*	*
Er	*	*	*	*	*	*	*	0.6	*	*	*	*
Eu	*	*	*	*	*	*	*	0.0	-0.4	*	*	*
Ga	0.4	*	*	0.8	*	*	-0.3	-0.7	*	*	0.3	*
Gd	*	*	*	*	*	*	*	-0.7	*	*	*	*
Hf	*	*	*	*	*	*	*	0.9	1.5	*	*	*
Ho	*	*	*	*	*	*	*	-0.8	*	*	*	*
La	-0.7	*	*	*		*	9.1	-1.4	0.0	*	*	*
Li	*	*	*	*	*	*	*	-0.1	*	*	*	*
Lu	*	*	*	*	*	*	*	0.2	0.2	*	*	*
Mo	*	*	*	18.0	*	*	*	-1.1	*	*	*	*
Nb	1.8	*	*	7.1	*	*	0.5	-1.2	*	0.0	*	*
Nd	-0.1	*	*	*	*	*	*	-0.6	0.2	*	*	*
Pb	-0.3	*	*	2.1	*	1.2	0.9	-4.3	*	0.7	*	*
Pr	*	*	*	*	*	*	*	-0.4	*	*	*	*
Rb	0.2	*	-4.1	2.1	*	*	1.5	4.4	0.2	0.5	*	*
Sb	*	*	*	*	*	*	*	2.6	-1.2	*	*	*
Sc	*	*	*	*	-2.4	*	-3.6	-0.9	0.0	*	-0.1	*
Se	*	*	*	*	*	-2.3	*	*	*	*	*	*
Sm	*	*	*	*	*	*	*	-0.3	0.3	*	*	*
Sn	*	*	*	*	*	*	*	*	*	*	*	*
Sr	0.2	*	-4.2	1.2	*	1.4	0.3	0.1	*	0.9	*	*
Ta	*	*	*	*	*	*	*	-0.2	-0.3	*	*	*
Tb	*	*	*	*	*	*	*	0.3	-0.6	*	*	*
Th	*	*	*	8.6	*	-1.5	0.5	-0.2	0.2	*	*	*
Tl	*	*	*	*	*	*	*	-0.7	*	*	*	*
Tm	*	*	*	*	*	*	*	-0.2	*	*	*	*
U	*	*	*	32.8	*	*	-6.8	-0.4	0.2	*	*	*
V	-0.2	*	*	*	-1.1	*	-1.1	-0.9	*	*	1.0	*
Y	0.3	*	*	3.3	*	*	1.8	-1.3	*	0.3	*	*
Yb	*	*	*	*	*	*	*	-0.2	0.3	*	*	*
Zn	-0.1	*	-3.2	-1.1	*	-0.2	-3.3	2.3	*	0.9	*	*
Zr	0.6	*	-3.2	0.8	*	*	36.7	3.4	*	-1.6	*	*

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)											
	Quartz diorite KPT-1											
Identifier	S12	S13	S14	S15	S16	S17	S18	S19	S19	S20	S21	S22
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Quality	2	2	2	1	1	2	1	1	2	2	2	1
SiO2	0.6	*	-0.1	0.5	*	-5.3	*	1.8	*	1.0	0.2	0.1
TiO2	-0.9	-1.0	0.4	1.3	10.8	-1.6	*	5.6	*	0.1	-0.2	-0.4
Al2O3	-1.2	-1.1	0.0	0.5	20.1	18.9	*	-0.2	*	0.5	0.7	0.2
Fe2O3	-0.6	-1.9	0.8	-0.1	9.4	-1.0	*	0.1	*	-0.3	0.2	0.7
MnO	0.5	0.2	1.5	-2.0	5.9	1.5	*	-0.7	*	-0.9	-0.5	-3.6
MgO	-1.8	0.3	-0.5	0.5	5.6	*	*	-0.2	*	0.3	1.2	4.3
CaO	0.4	0.1	0.5	-0.6	7.3	2.2	*	1.6	*	-0.1	0.2	0.0
Na2O	2.1	-0.4	-1.8	0.8	4.8	*	*	-4.2	*	-1.1	-0.7	2.8
K2O	0.5	1.5	-0.2	-0.4	77.6	4.6	*	0.7	*	0.2	0.2	-4.2
P2O5	1.2	-0.1	-0.2	2.3	18.3	*	*	-6.4	*	0.6	-1.8	-8.3
Ba	-0.1	0.0	-0.9	-0.6	9.7	0.3	-0.5	*	-0.4	-0.9	0.5	0.3
Be	*	*	*	*	*	*	*	-3.0	*	*	-0.2	*
Bi	1.0	-2.0	*	*	*	*	*	*	5.0	*	*	*
Ce	-0.1	-0.4	-3.4	-1.2	*	-0.4	-0.8	*	0.9	*	0.2	4.2
Cr	0.5	-1.1	-2.6	-0.6	57.3	7.1	0.0	*	1.3	*	1.6	1.9
Cs	0.1	-0.2	-1.6	-0.6	61.9	*	-1.4	*	*	*	1.4	*
Dy	0.8	-0.2	*	0.0	*	*	0.0	-4.9	*	*	*	*
Er	0.8	-0.2	*	-0.1	*	*	0.2	-5.8	*	*	*	*
Eu	0.5	-0.2	*	-0.4	*	*	-0.7	-1.8	*	*	*	*
Ga	0.5	-0.2	-0.6	0.4	*	-0.6	0.8	*	-0.1	*	1.9	-2.4
Gd	*	-0.4	*	0.1	*	*	1.0	-3.0	*	*	*	*
Hf	*	*	*	-0.2	*	*	-1.4	*	-2.3	*	*	1.0
Ho	0.8	*	*	0.0	*	*	-0.1	-5.0	*	*	*	*
La	0.0	-0.3	0.8	-0.5	10.7	-1.1	-1.6	*	0.8	*	0.7	*
Li	*	*	*	*	40.7	*	*	-4.0	*	*	*	*
Lu	0.5	-0.5	*	0.4	10.5	*	-0.5	-5.8	*	*	*	*
Mo	1.1	-5.6	-0.5	*	16.8	*	*	*	0.3	*	1.8	*
Nb	-0.4	*	-1.6	1.9	*	-3.5	-1.2	*	-0.6	*	*	1.0
Nd	0.1	-0.2	-1.1	-0.2	*	-0.7	-0.4	*	-0.6	*	*	-2.2
Pb	1.1	0.1	-4.3	-0.5	3.4	1.3	*	*	0.2	*	*	*
Pr	0.2	-0.3	*	0.0	*	*	-0.7	1.6	*	*	*	0.0
Rb	0.0	-1.6	1.6	1.4	*	-0.3	-0.6	*	-0.2	*	0.6	0.6
Sb	0.3	0.0	-6.4	*	7.5	*	*	-10.1	*	*	1.5	*
Sc	-0.3	-0.6	0.9	0.3	0.1	*	*	*	2.5	*	*	-1.5
Se	2.2	-0.6	*	*	-2.2	*	*	11.9	*	*	*	*
Sm	0.0	-0.1	-3.1	0.1	*	*	-0.5	-1.2	*	*	*	*
Sn	0.4	-0.2	-0.6	*	10.1	*	*	*	-0.5	*	0.3	*
Sr	0.3	-5.1	-0.9	0.2	0.5	-0.1	-0.2	*	-0.2	2.7	0.6	-2.3
Ta	0.0	*	*	-0.8	*	*	0.2	*	*	*	*	*
Tb	0.6	-0.4	*	0.4	*	*	-0.2	-3.4	*	*	*	*
Th	*	-0.4	0.8	-1.9	14.9	*	-1.3	*	1.3	*	0.4	*
Tl	0.4	-0.6	*	*	*	*	*	*	*	*	-0.3	*
Tm	0.7	*	*	0.3	*	*	-0.4	-4.5	*	*	*	*
U	2.0	-0.3	8.7	-0.4	17.9	*	-0.6	*	10.2	*	0.2	*
V	0.3	-0.4	-1.1	-0.8	6.0	0.9	0.4	*	0.2	*	1.4	0.8
Y	-0.7	*	-0.7	1.7	14.6	-1.1	-1.7	*	0.3	*	0.4	0.1
Yb	0.7	-0.4	*	0.1	*	*	0.2	-10.0	*	*	*	*
Zn	1.2	-0.3	-0.6	-0.8	9.4	106.9	*	*	-0.8	*	0.0	1.0
Zr	0.8	-3.3	-1.7	2.9	31.8	-1.1	-0.9	*	0.0	*	-0.5	2.9

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)											
	Quartz diorite KPT-1											
Identifier	S22	S23	S23	S24	S25	S25	S26	S27	S28	S28	S29	S30
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Quality	2	1	2	2	1	2	1	2	1	2	2	1
SiO2	*	*	*	0.4	1.9	*	0.5	-0.9	0.0	*	-0.7	0.6
TiO2	*	*	-1.6	-1.9	-0.1	*	-0.4	0.7	1.7	*	-2.7	-2.1
Al2O3	*	*	*	-1.3	0.4	*	-0.4	-0.9	1.7	*	0.3	0.4
Fe2O3	*	*	*	1.4	0.6	*	-1.1	-1.9	1.7	*	-0.7	-0.6
MnO	*	*	-1.8	0.8	0.6	*	2.1	-0.6	*	0.0	-1.8	0.0
MgO	*	*	*	0.9	1.4	*	3.1	-0.5	*	-0.7	7.9	-0.9
CaO	*	*	*	0.4	0.0	*	2.6	-1.4	0.3	*	-0.2	-0.7
Na2O	*	*	*	-0.6	0.4	*	-1.6	-1.4	*	*	1.7	-0.1
K2O	*	*	*	-0.7	-0.6	*	0.3	-1.3	*	*	0.8	-1.0
P2O5	*	*	*	1.6	0.2	*	-4.4	-0.2	*	-0.3	3.2	-2.3
Ba	*	-0.6	*	-1.5	0.4	*	-3.3	1.8	*	-0.3	-1.2	*
Be	*	*	*	*	*	*	6.8	*	*	1.2	*	*
Bi	*	-1.8	*	*	*	*	0.3	10.9	*	*	*	*
Ce	*	-1.1	*	-0.6	*	-0.8	1.3	*	2.8	*	*	*
Cr	*	-2.3	*	1.6	3.4	*	2.9	-1.8	*	-0.6	1.0	*
Cs	*	-0.8	*	-1.2	*	*	*	4.9	*	-2.5	*	*
Dy	*	-0.2	*	-0.2	*	*	2.0	*	0.4	*	*	*
Er	*	-0.1	*	-0.5	*	*	0.3	*	0.7	*	*	*
Eu	*	-0.4	*	0.2	*	*	-0.2	*	0.8	*	*	*
Ga	*	0.8	*	*	*	*	*	0.4	-0.5	*	-1.0	*
Gd	*	0.0	*	-0.5	*	*	4.1	*	*	0.1	*	*
Hf	*	-2.5	*	-0.1	*	*	*	0.0	*	0.2	*	*
Ho	*	-0.6	*	0.3	*	*	5.5	*	-0.2	*	*	*
La	*	-0.7	*	-0.2	*	-0.7	1.1	3.1	1.9	*	*	*
Li	*	*	*	*	*	*	-1.6	*	-0.7	*	*	*
Lu	*	-0.3	*	0.0	*	*	3.6	*	0.0	*	*	*
Mo	*	-11.2	*	-2.4	*	*	*	0.4	*	-0.9	*	*
Nb	*	-1.6	*	-1.2	-0.4	*	1.0	0.9	*	-1.5	0.9	*
Nd	*	-0.5	*	-0.3	*	*	1.4	*	1.0	*	*	*
Pb	-3.3	-1.2	*	6.7	0.6	*	0.6	1132.6	*	-2.6	-2.0	*
Pr	*	-0.5	*	-0.2	*	*	0.8	*	1.1	*	*	*
Rb	*	-1.3	*	-0.9	-0.1	*	-1.3	0.3	-2.4	*	-1.3	*
Sb	*	0.0	*	0.0	*	*	-4.6	-3.5	4.4	*	*	*
Sc	*	0.1	*	-0.4	*	*	*	-1.5	2.5	*	*	*
Se	*	*	*	*	*	*	*	*	*	*	*	*
Sm	*	-1.9	*	0.2	*	*	-0.7	*	-0.1	*	*	*
Sn	*	-0.1	*	-0.8	*	*	-10.3	-1.1	*	-0.9	*	*
Sr	*	-3.9	*	-1.2	0.1	*	-0.8	0.7	*	0.9	-1.1	*
Ta	*	0.2	*	0.4	*	*	*	0.1	*	*	*	*
Tb	*	-0.5	*	0.2	*	*	*	*	1.1	*	*	*
Th	*	-1.1	*	-0.1	*	3.2	*	1.6	0.4	*	1.1	*
Tl	*	-0.7	*	*	*	*	*	*	*	0.6	*	*
Tm	*	-0.5	*	0.7	*	*	-0.2	*	0.6	*	*	*
U	*	-1.2	*	0.5	*	-2.9	*	-2.2	1.7	*	*	*
V	*	-1.2	*	0.3	1.2	*	-1.4	0.8	*	0.3	0.3	*
Y	*	-1.4	*	0.7	1.5	*	1.7	0.9	2.2	*	-1.0	*
Yb	*	0.1	*	-0.2	*	*	5.1	*	0.6	*	*	*
Zn	*	5.9	*	1.9	-0.1	*	2.9	4.4	*	1.5	-1.3	*
Zr	*	-4.8	*	0.7	-0.3	*	-1.2	0.6	6.2	*	-0.9	*

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)											
	Quartz diorite KPT-1											
Identifier	S31	S32	S33	S34	S35	S36	S37	S38	S39	S39	S40	S41
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Quality	1	2	1	1	1	2	2	2	1	2	1	2
SiO2	-5.2	-0.4	-0.1	0.6	1.1	-1.8	0.2	-0.8	*	0.4	-1.2	0.6
TiO2	-1.4	0.2	-1.3	-0.4	2.9	0.1	0.1	-1.3	*	0.3	-2.1	0.7
Al2O3	-11.6	0.1	0.4	1.0	-5.2	4.8	0.4	-0.7	*	0.1	-1.7	0.1
Fe2O3	-1.1	0.3	0.2	0.1	5.6	-23.6	0.3	-1.7	*	0.7	-1.9	1.0
MnO	-1.5	-1.0	0.9	-0.7	2.6	-0.5	0.8	-0.6	*	0.8	-1.0	-0.4
MgO	-0.2	0.6	0.6	1.1	-3.1	58.1	0.8	-1.9	*	1.1	-2.1	0.0
CaO	-1.9	-0.1	-0.6	1.0	0.4	0.2	-0.2	-0.4	*	0.9	-2.5	-0.3
Na2O	-17.2	-0.4	1.0	0.6	8.5	0.3	0.3	1.9	*	0.3	-2.3	1.6
K2O	-2.4	0.0	0.2	0.3	3.9	1.1	0.7	-0.2	*	0.0	-2.6	0.0
P2O5	-1.3	0.6	-0.4	3.2	0.9	-0.7	-0.7	0.6	*	1.6	5.5	0.9
Ba	0.6	-0.3	-0.4	2.3	-0.2	*	*	*	*	0.3	-2.4	-0.4
Be	*	*	-0.8	-1.5	-2.9	*	*	*	*	-1.0	*	*
Bi	8.6	*	*	-0.9	-3.4	*	*	*	*	1.3	*	-0.2
Ce	0.0	3.6	-1.4	-0.3	3.2	*	*	*	*	0.3	*	-0.3
Cr	-3.8	1.6	1.7	2.4	-1.2	-9.7	*	*	*	0.2	-0.9	0.5
Cs	2.0	1.6	2.3	0.1	1.0	*	*	*	*	-0.6	*	0.1
Dy	*	2.3	0.6	0.9	0.4	*	*	*	*	0.0	*	-0.2
Er	*	3.4	0.9	0.4	0.0	*	*	*	*	-0.2	*	-0.1
Eu	*	0.7	-0.2	0.3	-0.2	*	*	*	*	0.3	*	0.0
Ga	-1.9	*	1.0	-0.1	1.1	*	*	*	*	0.7	-4.5	0.4
Gd	*	3.1	0.2	0.8	0.6	*	*	*	*	0.1	*	0.1
Hf	*	-0.8	1.8	-0.1	-0.3	*	*	*	*	0.0	*	0.1
Ho	*	1.8	0.4	0.2	0.3	*	*	*	*	-0.3	*	-0.5
La	-2.5	1.9	-1.3	0.5	-2.1	*	*	*	*	0.4	*	-0.1
Li	*	*	*	0.5	-2.5	*	*	*	*	*	*	*
Lu	*	3.3	1.3	0.4	0.2	*	*	*	*	0.2	*	0.1
Mo	*	-2.3	0.6	0.3	-2.3	*	*	*	*	-0.1	*	6.1
Nb	-0.2	0.5	-1.0	0.7	0.3	-0.5	*	*	*	-1.0	1.0	-0.3
Nd	*	2.7	0.3	1.0	0.1	*	*	*	*	0.0	*	0.0
Pb	-0.8	-0.8	0.8	0.5	3.3	*	*	*	*	0.7	-2.7	-0.5
Pr	*	2.2	-0.6	0.4	-0.2	*	*	*	*	0.3	*	-0.3
Rb	-2.2	4.1	-0.4	-0.1	0.3	0.1	*	*	*	-0.2	-2.1	0.0
Sb	6.2	*	0.0	1.1	2.3	*	*	*	*	0.3	*	-0.8
Sc	*	*	0.1	-1.7	-4.0	*	*	*	*	*	-1.5	0.2
Se	-11.7	*	*	*	*	*	*	*	*	*	*	*
Sm	5.8	2.6	0.4	0.7	-0.2	*	*	*	*	0.3	*	-0.6
Sn	2.4	4.3	1.0	-0.5	2.0	*	*	*	*	0.1	*	0.6
Sr	-2.8	2.5	0.4	1.0	0.8	-0.5	*	*	*	-0.4	-3.1	0.6
Ta	*	10.9	-2.2	-0.7	21.2	*	*	*	*	0.9	*	0.0
Tb	*	3.0	-0.8	0.6	-0.3	*	*	*	*	-0.1	*	0.6
Th	1.2	-2.6	-2.3	-0.2	-0.3	-1.5	*	*	*	0.1	1.7	0.2
Tl	20.2	*	*	-0.7	0.8	*	*	*	*	*	*	-0.3
Tm	*	0.4	*	0.5	0.3	*	*	*	*	-0.1	*	-0.2
U	10.4	2.3	0.0	-0.6	2.8	4.8	*	*	*	0.4	*	-0.6
V	-0.7	-0.7	1.7	0.9	0.9	*	*	*	*	-0.7	-2.6	-0.5
Y	-0.7	9.5	-3.5	-0.3	-1.1	0.1	*	*	*	0.0	-1.4	0.0
Yb	90.2	3.0	0.6	0.5	0.3	*	*	*	*	0.2	*	-0.9
Zn	-1.0	8.4	0.5	0.4	-1.1	0.0	*	*	*	0.9	-2.4	1.7
Zr	-0.8	-3.1	-0.2	0.9	1.0	-0.7	*	*	*	0.8	-1.7	1.0

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)											
	Quartz diorite KPT-1											
Identifier	S42	S43	S44	S44	S45	S46	S47	S48	S49	S50	S51	S52
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Quality	1	2	1	2	1	2	2	1	2	2	2	2
SiO2	*	0.3	*	*	-0.5	0.4	-0.8	-2.7	-0.5	0.6	-0.4	0.5
TiO2	2.3	0.9	-1.5	*	-0.1	0.9	0.1	2.8	0.1	-0.2	1.2	0.2
Al2O3	*	-0.3	-1.5	*	-0.2	1.0	-0.7	-4.2	-0.3	0.8	-0.5	0.7
Fe2O3	*	0.7	1.7	*	0.5	0.5	0.1	-4.6	-0.4	-0.1	0.4	0.1
MnO	2.4	-1.8	-1.0	*	0.3	0.5	-1.8	-1.0	-0.5	-0.5	0.7	0.4
MgO	*	-1.4	-4.4	*	0.3	1.1	0.9	-1.7	-1.2	0.5	2.8	-1.3
CaO	*	-0.9	-8.6	*	-0.2	-0.4	2.0	-0.1	-0.3	0.0	2.3	0.1
Na2O	-0.5	-0.5	1.5	*	0.4	-0.2	-2.3	5.7	-0.7	0.6	-0.3	0.2
K2O	*	-1.0	4.6	*	0.0	0.0	0.5	-1.6	-0.3	0.0	-0.2	0.0
P2O5	*	-1.8	*	*	-0.6	0.5	-4.1	-1.4	-0.7	-0.7	-0.9	0.7
Ba	-2.9	-0.1	-1.0	*	-0.5	0.0	*	0.2	-0.2	-1.0	1.5	*
Be	*	0.8	*	*	*	-0.6	*	*	*	*	*	*
Bi	*	*	*	*	*	-0.2	*	-12.4	*	*	*	*
Ce	5.5	-1.2	1.9	*	-1.6	0.2	*	11.2	0.0	-0.3	0.8	*
Cr	0.0	0.1	1.7	*	-0.2	1.1	-1.1	11.9	*	-0.6	-1.1	*
Cs	-1.9	*	-0.8	*	-0.3	0.0	*	-12.1	0.1	-0.2	-0.7	*
Dy	-0.5	-3.8	0.1	*	1.7	0.6	*	-8.6	-0.1	0.1	-0.7	*
Er	*	-3.8	*	*	0.3	0.0	*	-3.8	-0.1	0.2	-0.7	*
Eu	1.0	-2.6	1.7	*	0.7	0.0	*	-2.5	-0.2	1.3	-0.3	*
Ga	*	0.9	*	0.4	-0.7	0.4	*	-2.4	*	*	5.6	*
Gd	*	-3.1	*	*	0.7	0.1	*	4.8	-0.2	0.0	-0.4	*
Hf	-0.2	2.1	1.7	*	0.7	0.0	*	23.4	0.4	*	-1.8	*
Ho	0.6	-3.6	*	*	0.8	-0.2	*	0.6	-0.1	0.4	0.2	*
La	-0.5	0.4	1.0	*	0.1	0.2	*	4.6	-0.2	-0.3	1.6	*
Li	*	0.0	*	*	*	0.0	*	*	*	2.4	-1.3	*
Lu	-0.5	-3.7	1.0	*	0.1	-0.1	*	*	-0.1	0.0	-0.3	*
Mo	*	*	*	*	*	-0.9	*	-5.7	*	*	*	*
Nb	*	0.3	*	*	-0.2	0.0	*	-1.0	0.1	*	4.4	*
Nd	-1.0	-3.2	6.0	*	-1.3	0.1	*	9.3	0.3	0.1	1.0	*
Pb	*	-0.6	*	*	0.1	-0.2	*	-1.8	0.3	-0.7	-3.3	*
Pr	*	-1.8	*	*	-1.5	0.1	*	9.3	0.1	0.1	0.8	*
Rb	0.7	-0.5	1.7	*	-0.1	0.6	*	-0.6	1.0	0.8	-1.3	*
Sb	0.2	-1.8	-0.5	*	*	1.0	*	-12.4	*	0.7	*	*
Sc	-0.5	-0.3	0.6	*	0.7	0.1	*	9.9	1.1	1.0	0.1	*
Se	2.2	*	*	1.4	*	2.7	*	*	*	*	*	*
Sm	-0.6	*	0.7	*	0.8	-0.2	*	16.5	-0.1	0.3	1.7	*
Sn	*	-1.1	*	*	*	0.4	*	-13.4	*	*	5.9	*
Sr	-2.9	-0.2	*	3.3	-0.8	0.2	*	-0.2	0.5	3.5	0.6	*
Ta	-1.7	*	*	-0.9	0.6	1.0	*	-11.6	0.0	*	2.1	*
Tb	-0.6	-3.2	0.5	*	1.0	-0.3	*	36.5	-0.1	-0.2	0.3	*
Th	-0.2	*	-0.6	*	0.2	-0.4	*	-2.9	-0.6	5.1	-0.3	*
Tl	*	*	*	*	*	0.1	*	*	*	*	*	*
Tm	*	*	*	*	0.1	0.0	*	*	0.0	-0.1	-0.2	*
U	-1.2	*	*	-0.2	-0.6	0.0	*	1.9	-0.3	0.2	-0.2	*
V	3.6	0.1	1.5	*	-0.2	0.5	14.2	-0.3	*	-1.6	0.2	*
Y	*	0.1	*	*	1.2	0.1	*	0.1	-0.5	-0.3	1.1	*
Yb	-0.5	-4.7	0.9	*	-0.1	0.0	*	-3.7	0.0	0.0	-1.3	*
Zn	-8.0	-0.1	*	-5.4	-1.0	0.2	-3.8	1.0	*	0.6	-2.9	*
Zr	-19.5	-1.0	*	4.4	2.1	0.6	*	-0.2	1.9	2.0	-2.6	*

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)											
	Quartz diorite KPT-1											
Identifier	S53	S54	S55	S55	S56	S57	S58	S59	S60	S61	S62	S63
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Quality	1	2	1	2	2	2	2	1	1	1	1	1
SiO2	*	2.0	0.0	*	*	0.2	0.3	0.4	0.1	0.0	*	-7.8
TiO2	3.9	-1.0	0.5	*	1.4	0.8	0.3	0.7	-0.1	2.3	-0.4	-2.5
Al2O3	2.5	-3.4	-0.2	*	1.7	0.7	0.1	0.6	0.1	3.8	*	-9.3
Fe2O3	-0.2	-3.1	0.4	*	-0.4	0.3	0.2	0.8	-0.2	0.7	*	3.5
MnO	-1.0	-4.4	1.6	*	2.1	0.7	0.8	-1.0	0.6	4.2	-3.6	-0.7
MgO	-0.1	-5.5	-1.4	*	*	0.4	0.0	-0.5	0.6	*	*	-4.8
CaO	-2.8	-4.2	0.1	*	*	0.9	-1.1	1.4	0.0	-0.4	*	-6.4
Na2O	4.1	15.8	-1.2	*	126.6	-0.4	-0.7	-3.8	-0.9	-4.1	1.5	*
K2O	4.9	3.3	-1.3	*	297.0	-0.6	0.2	0.0	-0.1	9.5	2.9	-1.6
P2O5	-1.4	-7.6	0.2	*	*	0.3	0.5	0.9	6.2	3.2	0.9	*
Ba	2.4	*	*	6.0	*	0.0	2.0	0.2	0.4	1.5	3.0	*
Be	-0.2	*	*	*	*	0.8	*	*	0.2	*	*	*
Bi	*	*	*	*	*	*	*	*	-1.3	*	*	*
Ce	*	*	*	*	*	0.1	-2.6	-1.8	0.0	2.6	-1.1	*
Cr	-0.4	0.9	2.3	*	*	-0.1	0.8	1.2	4.7	2.4	-2.7	*
Cs	*	*	*	*	*	0.3	*	*	0.4	*	*	*
Dy	*	*	*	*	*	0.3	*	-1.4	2.4	*	*	*
Er	*	*	*	*	*	0.4	*	-1.1	-0.1	*	*	*
Eu	*	*	*	*	*	0.6	*	-0.3	0.1	*	*	*
Ga	7.2	*	10.6	*	*	0.1	-0.6	1.3	0.1	-3.4	*	*
Gd	*	*	*	*	*	0.0	*	-0.6	0.6	*	*	*
Hf	*	*	*	*	*	0.3	9.9	*	-0.2	*	*	*
Ho	*	*	*	*	*	0.6	*	-1.6	0.8	*	*	*
La	0.8	*	*	*	*	0.3	1.9	-2.2	1.3	-2.2	*	*
Li	1.2	*	*	*	*	*	*	*	4.8	*	*	*
Lu	*	*	*	*	*	0.0	*	-1.6	0.5	*	*	*
Mo	2.2	*	*	*	*	*	*	*	*	*	*	*
Nb	*	*	2.1	*	*	-0.3	-1.5	*	-2.8	5.1	*	*
Nd	*	*	*	*	*	0.3	1.0	-1.8	-0.4	*	*	*
Pb	0.6	-1.1	-8.6	*	-5.5	*	-0.2	6.0	0.0	0.0	-3.9	*
Pr	*	*	*	*	*	0.2	*	-0.8	-1.1	*	*	*
Rb	*	*	-0.4	*	*	0.7	-0.3	1.5	-0.1	2.9	-5.1	*
Sb	1.8	*	*	*	*	*	*	*	1.3	*	*	*
Sc	*	*	*	*	*	-0.2	*	1.9	0.6	-0.7	0.9	*
Se	0.8	*	*	*	*	*	*	*	-2.0	*	*	*
Sm	*	*	*	*	*	0.5	*	-1.2	1.4	*	*	*
Sn	-2.2	*	*	*	*	*	-1.1	*	1.5	*	*	*
Sr	2.1	*	1.4	*	*	2.3	-0.3	-0.3	1.5	0.3	-2.0	*
Ta	*	*	*	*	*	0.4	*	*	0.8	*	*	*
Tb	*	*	*	*	*	0.2	*	-0.8	0.6	*	*	*
Th	*	*	-6.2	*	*	0.0	0.8	-2.9	0.2	*	-9.9	*
Tl	*	*	*	*	*	*	*	*	0.1	*	*	*
Tm	*	*	*	*	*	0.3	*	-1.0	0.9	*	*	*
U	*	*	*	*	*	0.3	*	0.9	-0.3	*	*	*
V	-1.0	*	6.9	*	*	-1.0	0.3	-2.3	1.2	3.3	-0.6	*
Y	*	*	7.4	*	*	0.8	-0.3	-0.7	0.5	7.2	-14.1	*
Yb	*	*	*	*	*	0.1	*	-1.4	1.1	*	*	*
Zn	4.2	-0.1	-4.2	*	-3.6	1.1	-0.8	-0.4	1.1	-3.0	-2.6	*
Zr	*	-0.2	-3.0	*	*	0.9	0.8	1.3	-0.3	-0.2	-6.5	*

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)											
	Quartz diorite KPT-1											
Identifier	S64	S65	S66	S67	S68	S68	S69	S70	S71	S72	S73	S74
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1
Quality	1	1	2	2	1	2	2	2	2	1	2	2
SiO2	*	*	-0.1	-0.4	-1.3	*	1.0	0.3	-1.0	*	*	-0.8
TiO2	*	*	1.9	-0.5	0.6	*	-1.0	-0.5	0.1	*	-1.0	-0.2
Al2O3	*	*	0.5	-0.1	-0.9	*	-0.5	-0.3	-0.8	*	*	-1.1
Fe2O3	*	-0.1	2.0	-0.6	0.0	*	-0.1	0.9	-0.7	*	-0.3	-0.1
MnO	*	*	-0.5	0.7	1.3	*	0.8	-0.5	-0.5	*	0.8	-1.8
MgO	*	*	0.8	-0.3	0.8	*	0.0	-0.5	0.0	*	*	0.7
CaO	*	*	0.8	-0.3	0.9	*	-0.6	0.1	0.8	*	-0.5	-0.4
Na2O	*	*	-0.6	0.1	-1.0	*	0.3	0.3	-0.2	*	*	-2.4
K2O	*	*	1.0	-0.3	0.0	*	-0.2	0.5	-0.3	*	4.7	-0.8
P2O5	*	*	-3.2	-0.7	0.5	*	-1.8	-0.7	-0.7	*	*	5.1
Ba	-0.5	-2.1	3.8	2.0	0.0	*	-0.3	2.2	-0.9	0.8	*	0.1
Be	*	*	1.4	-0.4	*	*	-0.1	*	0.8	*	*	*
Bi	*	*	*	8.9	*	*	*	*	0.8	*	*	*
Ce	-1.2	-0.5	0.0	-0.3	0.0	*	-0.3	*	-0.7	-4.8	*	1.9
Cr	*	*	1.7	0.2	0.3	*	-0.2	-0.6	-1.5	1.5	-3.7	-2.3
Cs	0.0	-1.5	0.3	-0.1	-0.2	*	-0.2	*	-0.4	*	*	*
Dy	-0.8	*	0.0	0.1	-0.2	*	0.1	*	0.1	*	*	*
Er	-0.9	*	0.3	0.0	-0.1	*	0.1	*	0.9	*	*	*
Eu	-1.3	0.4	0.2	0.1	-0.5	*	-0.3	*	-0.2	*	*	*
Ga	*	*	-0.1	0.0	-0.2	*	0.0	*	-0.1	0.8	-2.8	*
Gd	-1.2	*	0.0	-0.1	-1.2	*	-0.2	*	0.1	*	*	*
Hf	*	0.7	-0.1	-1.3	-1.2	*	-0.7	*	-0.7	*	*	*
Ho	-1.1	*	-0.2	0.1	0.2	*	-0.2	*	-0.4	*	*	*
La	-1.4	0.0	0.0	-0.3	-2.3	*	-0.2	*	0.1	0.8	*	0.0
Li	*	*	*	-0.6	*	*	0.7	*	-1.6	*	*	1.5
Lu	-0.5	-1.6	-0.3	-0.1	0.0	*	-0.2	*	0.3	*	*	*
Mo	*	*	2.2	-0.1	*	*	1.0	*	*	*	*	*
Nb	-1.0	*	1.8	-1.2	-1.8	*	-0.2	*	0.5	1.0	*	*
Nd	-0.7	2.8	-0.1	0.2	0.2	*	-0.1	*	-0.1	*	*	*
Pb	-1.4	*	-0.6	0.3	0.3	*	0.0	0.6	1.0	-2.7	*	1.2
Pr	-1.4	*	0.1	0.0	0.3	*	-0.1	*	-0.1	*	*	*
Rb	-0.9	-2.3	0.1	-0.3	-1.4	*	-0.1	*	0.5	0.6	0.5	*
Sb	*	*	-0.5	-0.2	*	*	0.3	*	1.2	*	*	*
Sc	*	-0.1	*	0.0	-0.9	*	-0.1	*	0.8	0.1	*	*
Se	*	*	0.0	-1.1	*	*	-1.7	*	*	*	*	*
Sm	-1.2	0.0	0.1	-0.4	0.2	*	0.0	*	0.0	*	*	*
Sn	*	*	-0.1	-0.1	*	*	0.2	*	0.7	*	*	*
Sr	-0.8	*	0.9	-0.3	-0.2	*	-0.5	*	0.6	1.1	0.5	-1.7
Ta	-1.5	-2.5	-0.3	*	-6.7	*	-0.6	*	*	*	*	*
Tb	-1.2	1.8	0.0	0.0	-1.1	*	-0.2	*	0.2	*	*	*
Th	0.5	0.1	5.0	0.1	-0.9	*	-0.5	*	0.7	1.7	*	*
Tl	*	*	*	-3.4	*	*	0.3	*	0.4	*	*	*
Tm	-0.7	*	-0.1	0.1	0.3	*	-0.1	*	-0.2	*	*	*
U	0.0	-0.6	*	0.1	-0.8	*	-0.4	*	0.0	9.6	*	*
V	*	*	-1.8	-0.1	0.7	*	-0.4	*	0.3	1.0	*	-2.0
Y	0.1	*	-0.9	0.0	0.0	*	-0.5	*	0.1	0.1	-1.1	-1.1
Yb	-2.0	1.1	-0.1	-0.1	-0.4	*	0.0	*	0.3	*	*	*
Zn	*	-0.5	1.5	0.3	-0.1	*	-1.4	1.0	0.1	0.4	0.1	2.0
Zr	*	*	0.1	0.4	1.0	*	-0.2	*	0.0	-0.7	-0.7	-0.3

Table 3	GeoPT18 Z-scores for results submitted (Dec. 2005)					
	Quartz diorite KPT-1					
Identifier	S75	S76	S77	S78	S79	
Sample	KPT-1	KPT-1	KPT-1	KPT-1	KPT-1	
Quality	2	1	1	1	1	
SiO2	-0.1	-0.6	0.7	0.45	0.11	
TiO2	0.2	-2.6	1.2	0.10	3.77	
Al2O3	1.6	0.5	4.8	1.50	-2.80	
Fe2O3	0.9	-1.6	-2.0	2.16	1.86	
MnO	0.2	-2.3	9.4	1.61	-4.11	
MgO	1.2	-0.1	-8.3	-8.31	-7.59	
CaO	0.3	-0.9	2.6	2.55	-0.17	
Na2O	1.8	-1.0	-7.6	3.23	1.46	
K2O	-1.1	-2.9	1.6	3.59	2.94	
P2O5	0.5	0.9	10.1	10.13	15.41	
Ba	-5.4	*	3.0		-31.5	
Be	*	*	*			
Bi	*	*	*			
Ce	-0.3	*	-6.9			
Cr	-4.0	*	2.2		-26.6	
Cs	*	*	*			
Dy	0.1	*	-5.1			
Er	-0.1	*	54.5			
Eu	0.2	*	-6.7			
Ga	-1.2	*	*			
Gd	-0.2	*	35.2			
Hf	*	*	*			
Ho	-0.2	*	*			
La	-0.5	*	-5.3			
Li	*	*	-4.9			
Lu	-0.1	*	*			
Mo	*	*	*			
Nb	*	*	137.3		-17.2	
Nd	0.3	*	-3.8			
Pb	-0.8	*	87.2		-24.2	
Pr	-0.1	*	*			
Rb	0.5	*	*			
Sb	*	*	*			
Sc	-0.9	*	12.4			
Se	*	*	*			
Sm	-0.1	*	-12.6			
Sn	*	*	*			
Sr	-0.4	*	-4.1		-28.9	
Ta	*	*	356.2			
Tb	-0.3	*	*			
Th	-1.8	*	*			
Tl	*	*	*			
Tm	-0.2	*	*			
U	*	*	*			
V	-3.7	*	*		-27.7	
Y	-1.2	*	-2.2		-20.4	
Yb	-0.1	*	0.1			
Zn	0.4	*	-5.6		-25.7	
Zr	-0.3	*	*		-26.8	

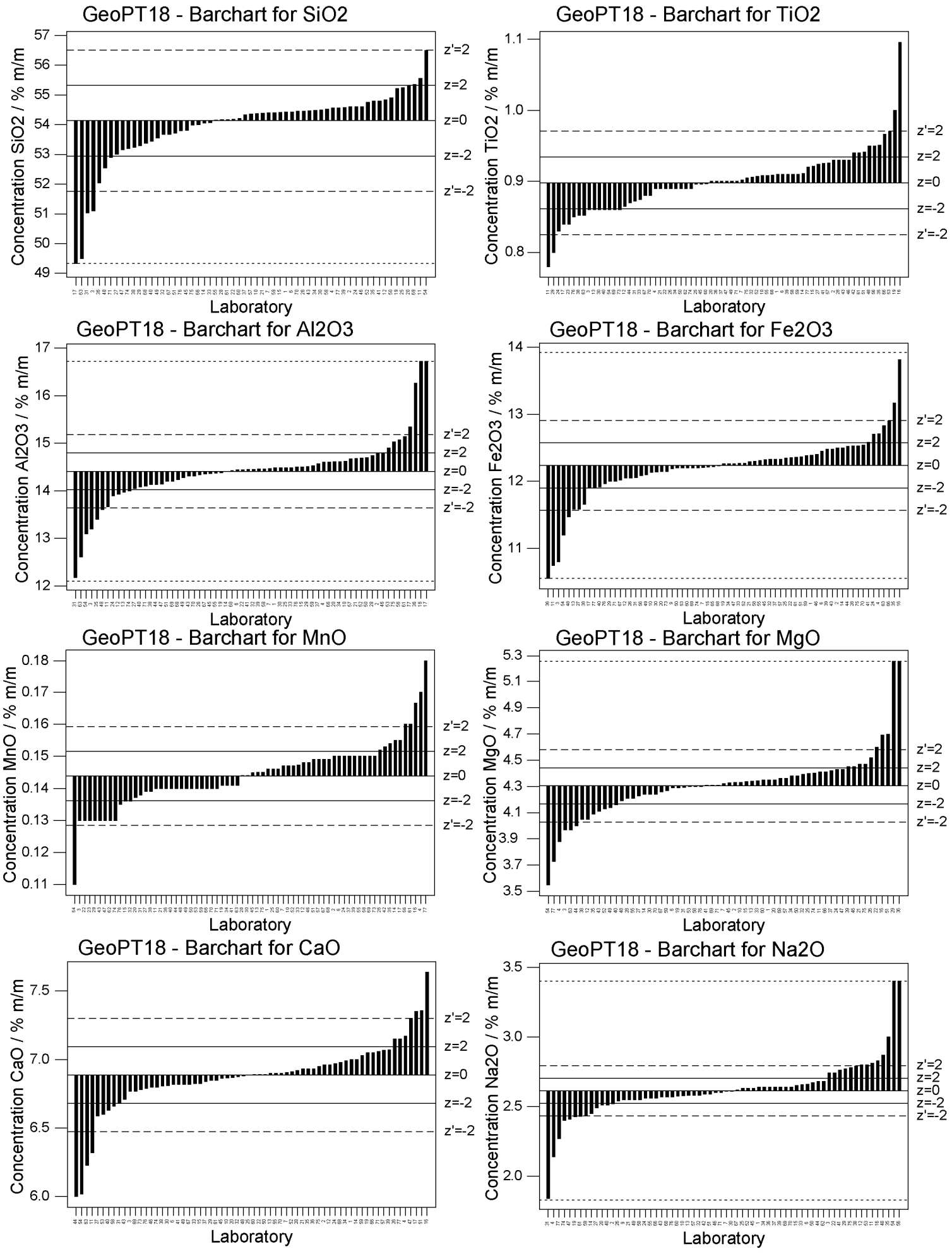
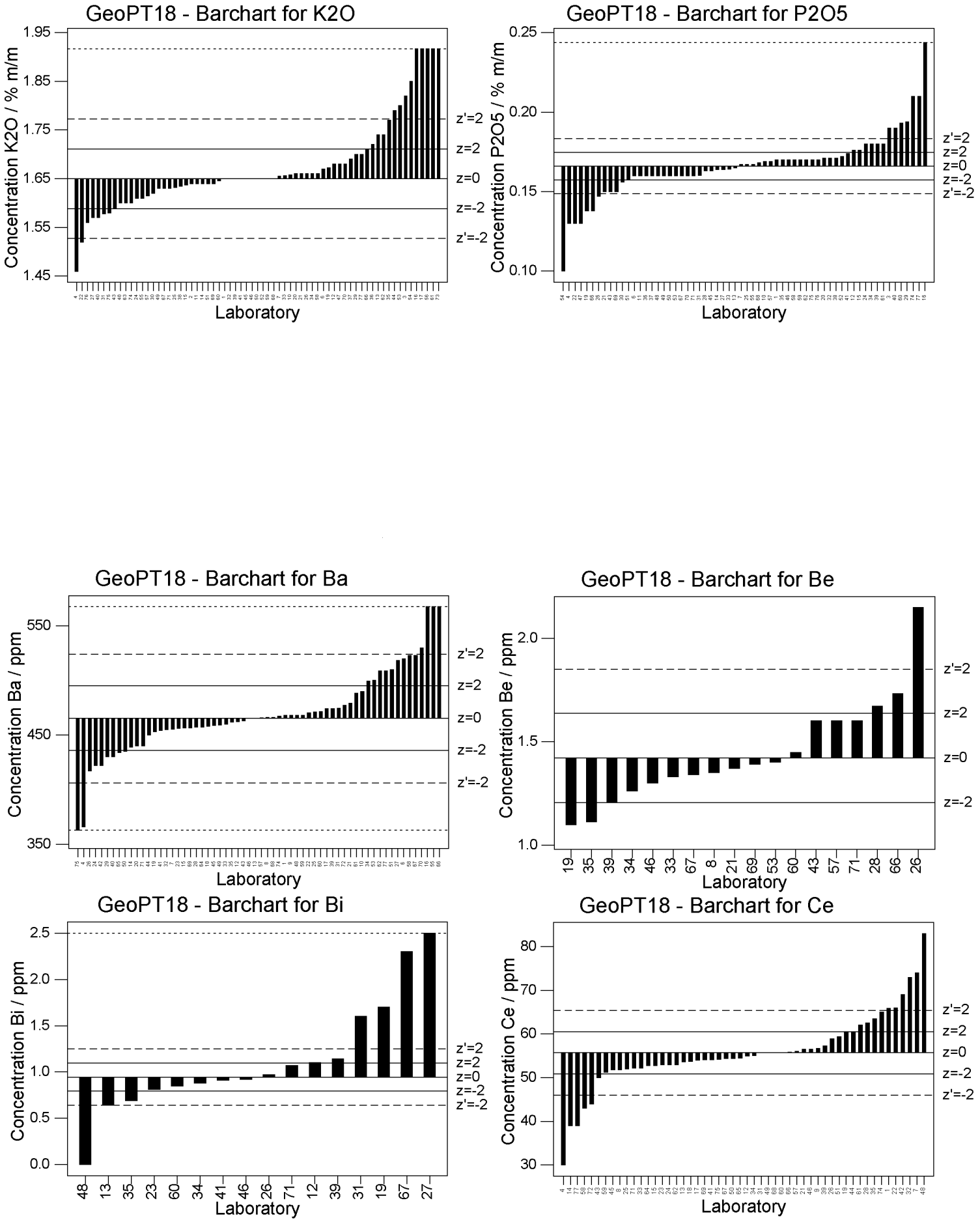


Figure 1: GeoPT18 Quartz diorite KPT-1. Data distribution charts for elements for which values were assigned. Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).



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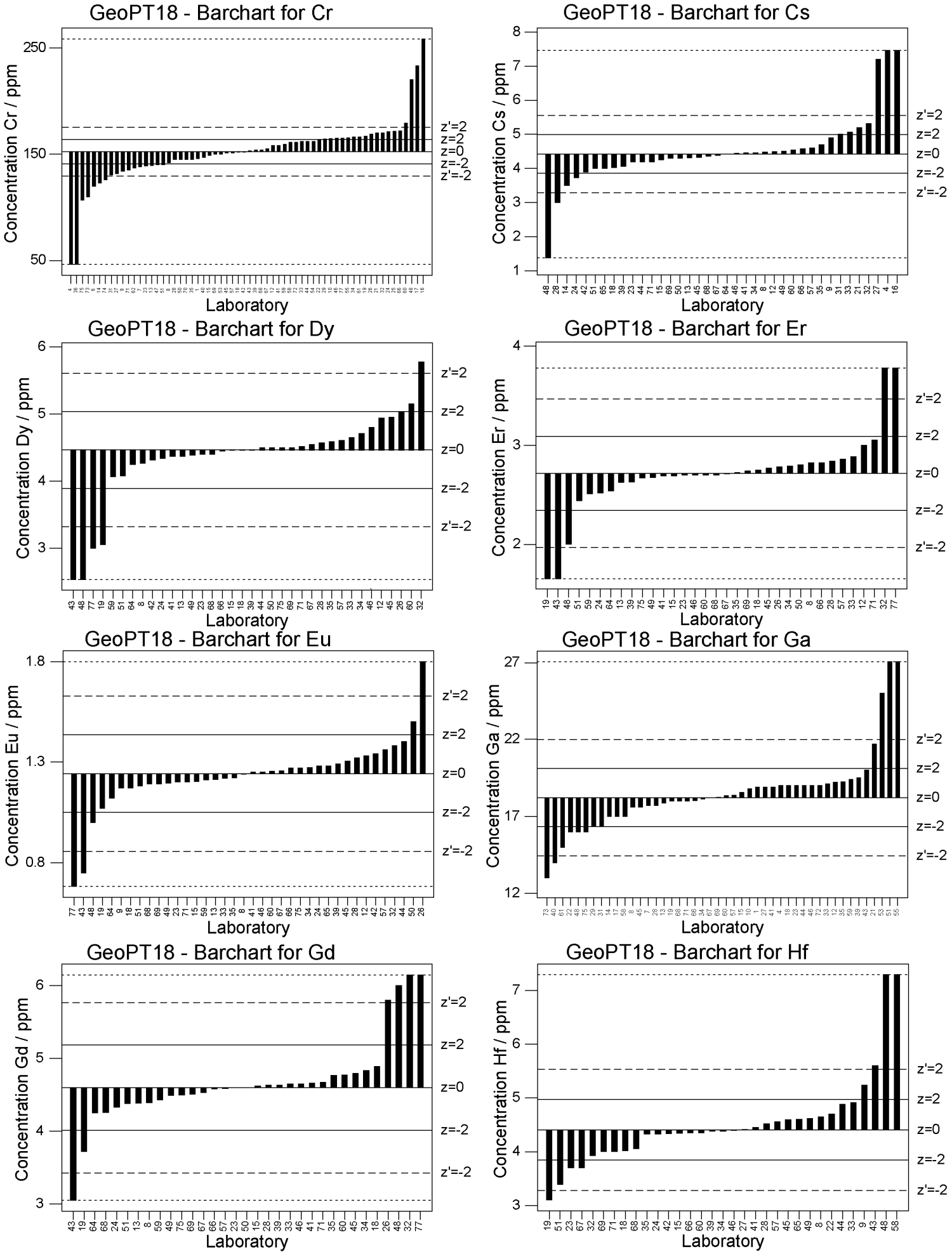

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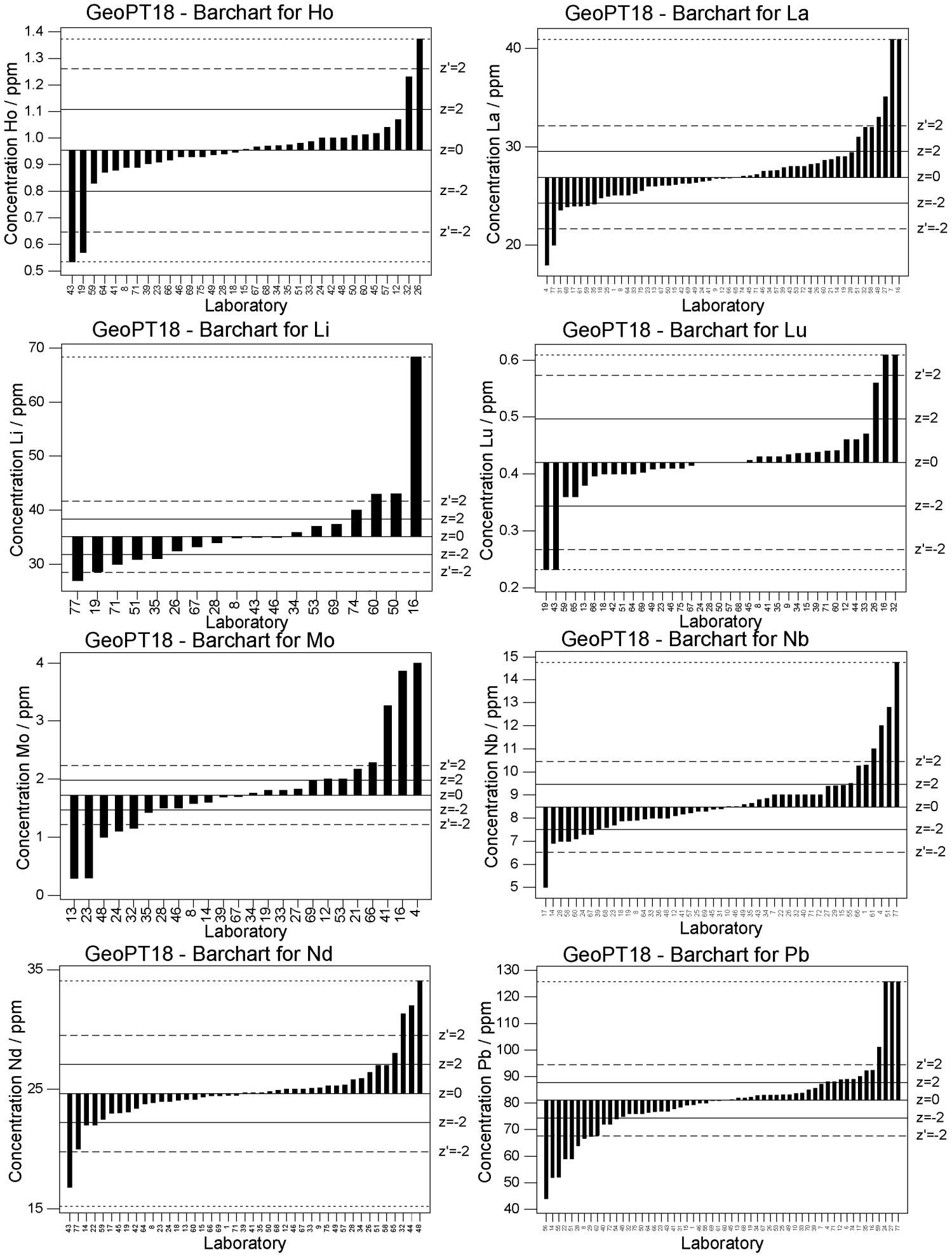

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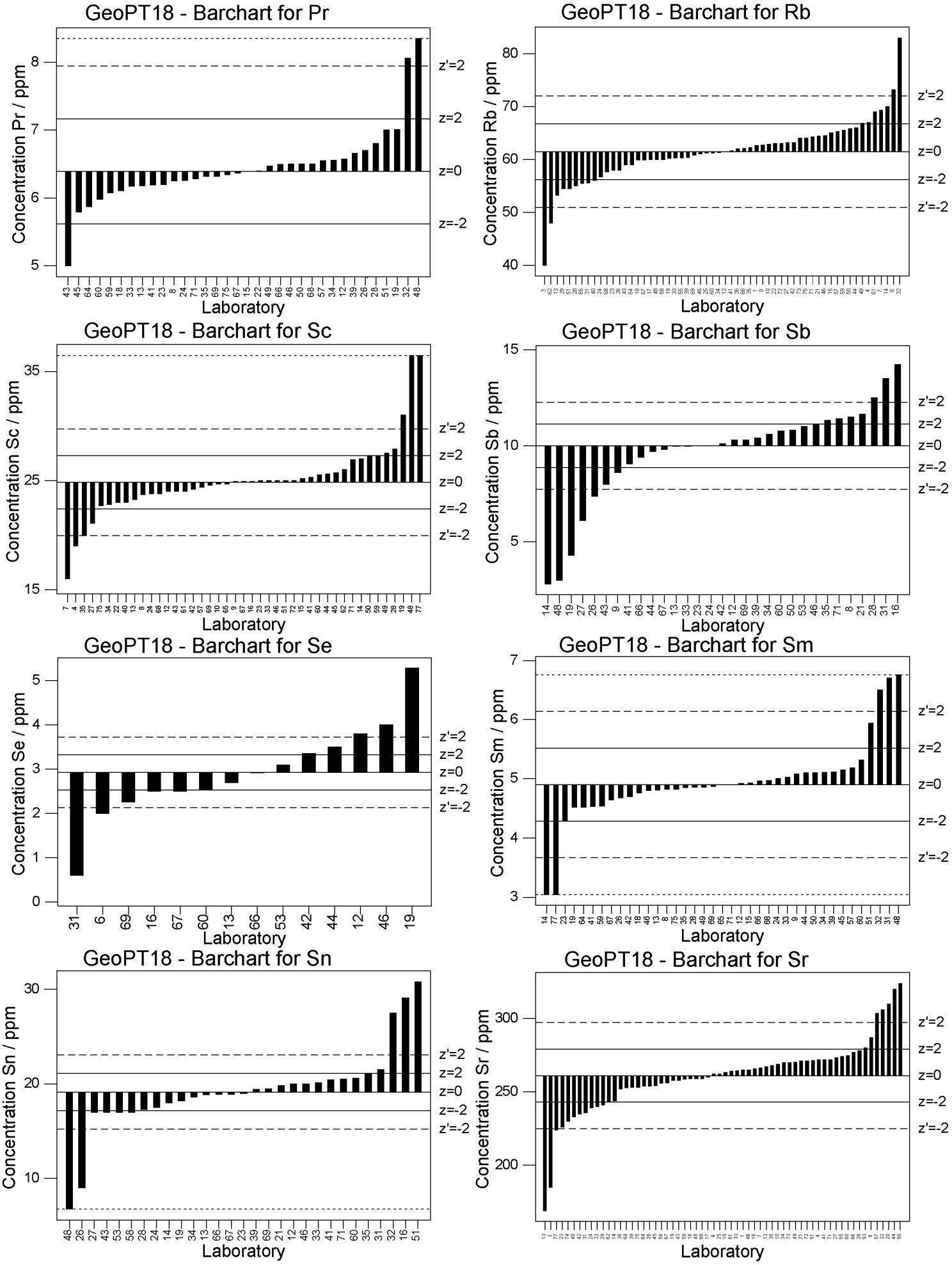

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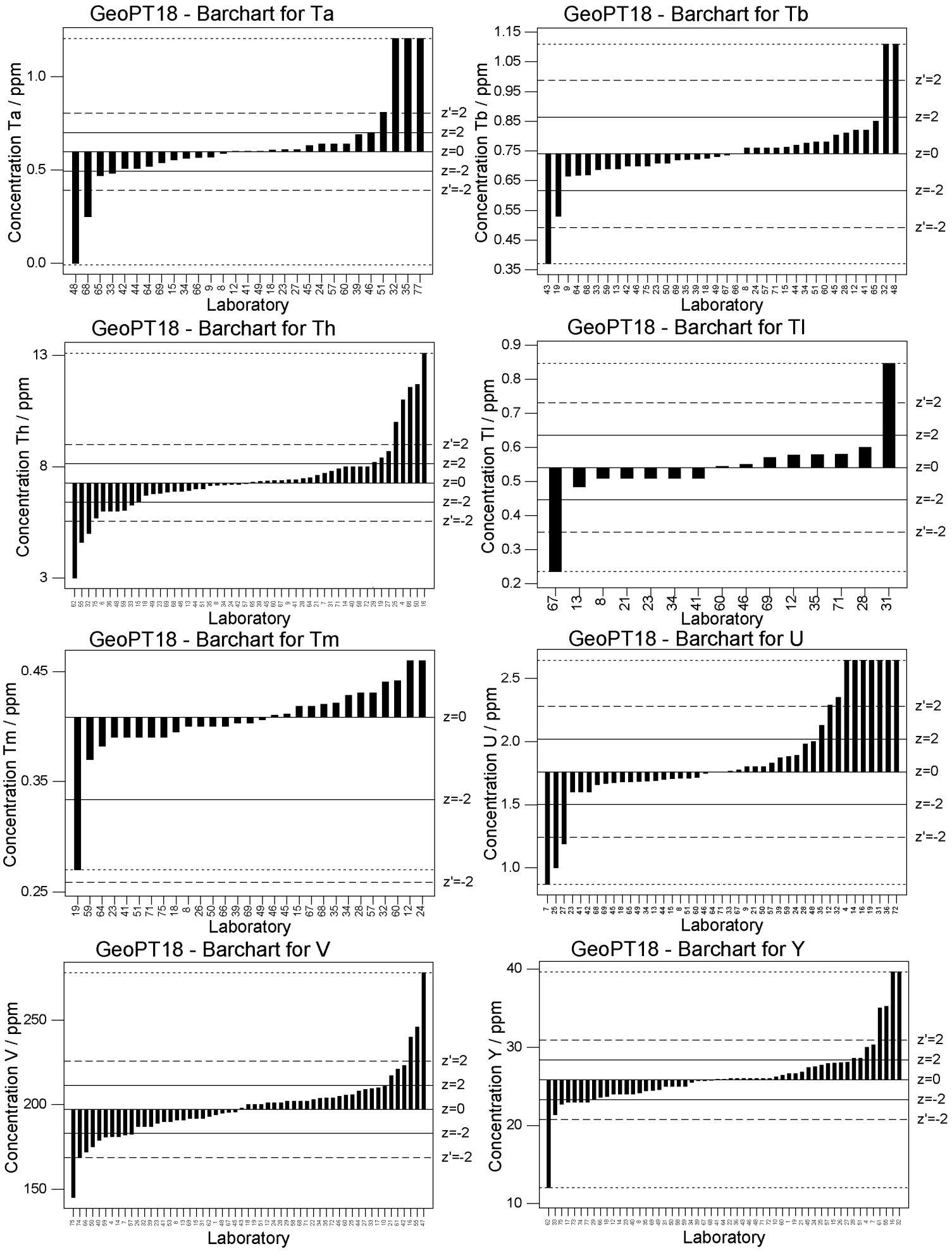
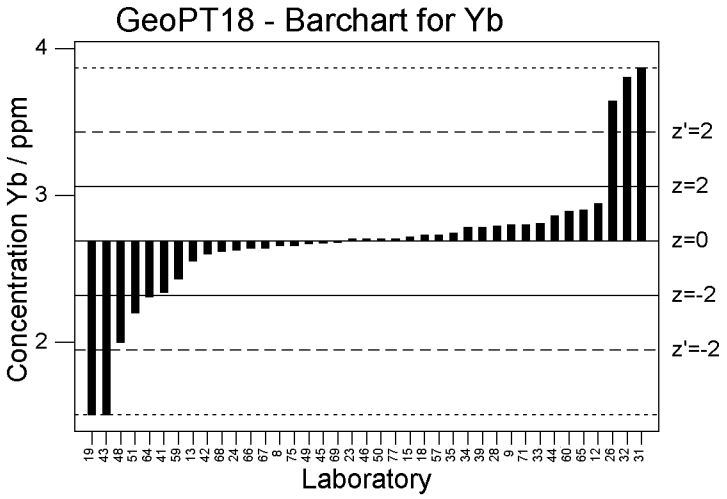
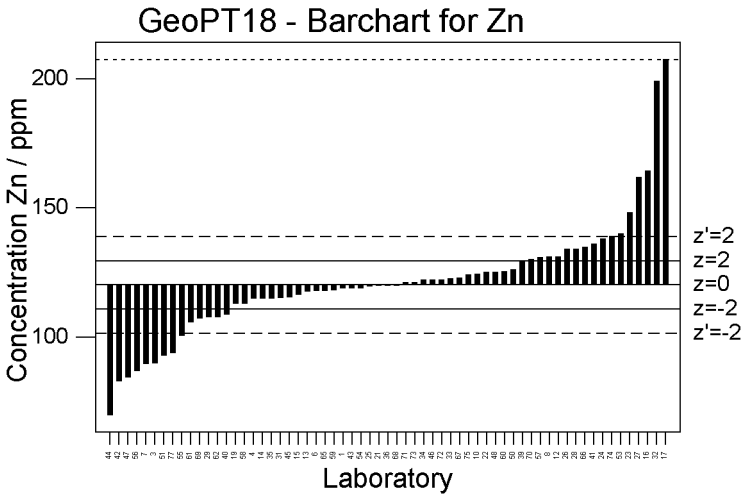


Figure 1: GeoPT18 Quartz diorite KPT-1. Data distribution charts for elements for which values were assigned. Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).





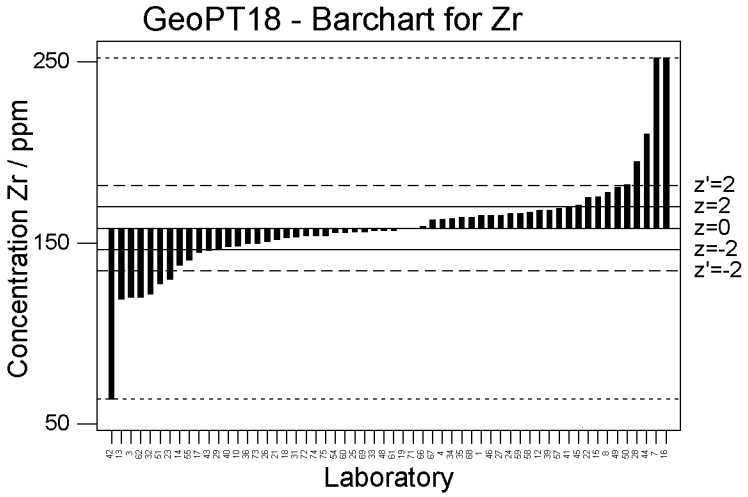
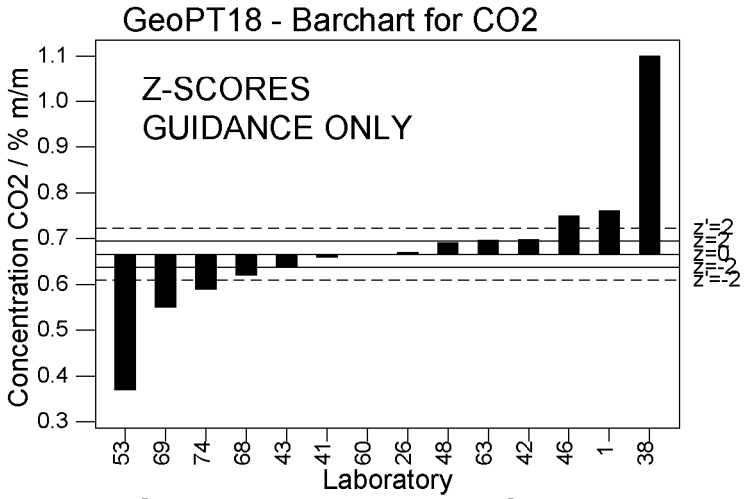
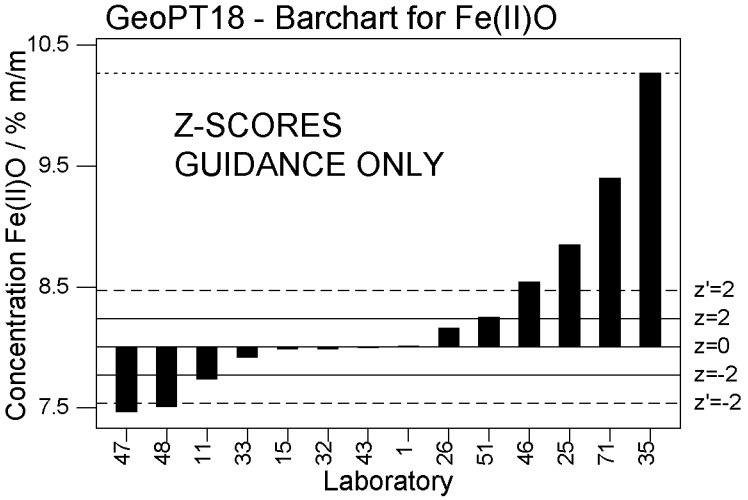


Figure 1: GeoPT18 Quartz diorite KPT-1. Data distribution charts for elements for which values were assigned. Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).





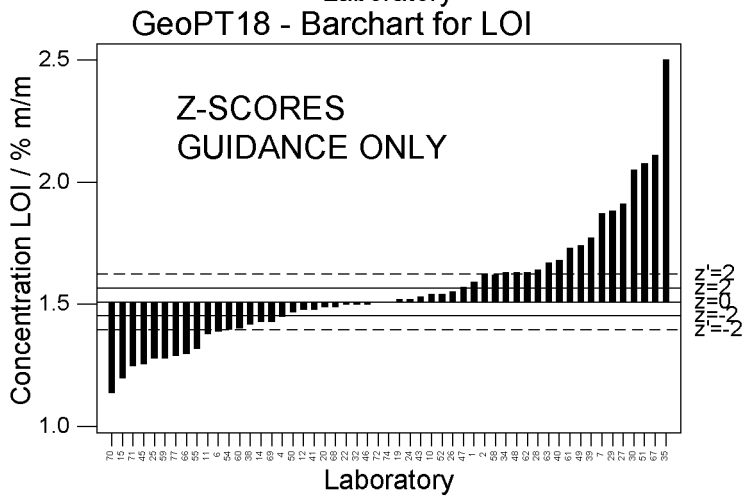


Figure 2: GeoPT18 Quartz diorite KPT-1. Data distribution charts for elements for which Z-scores are for guidance only.
Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).

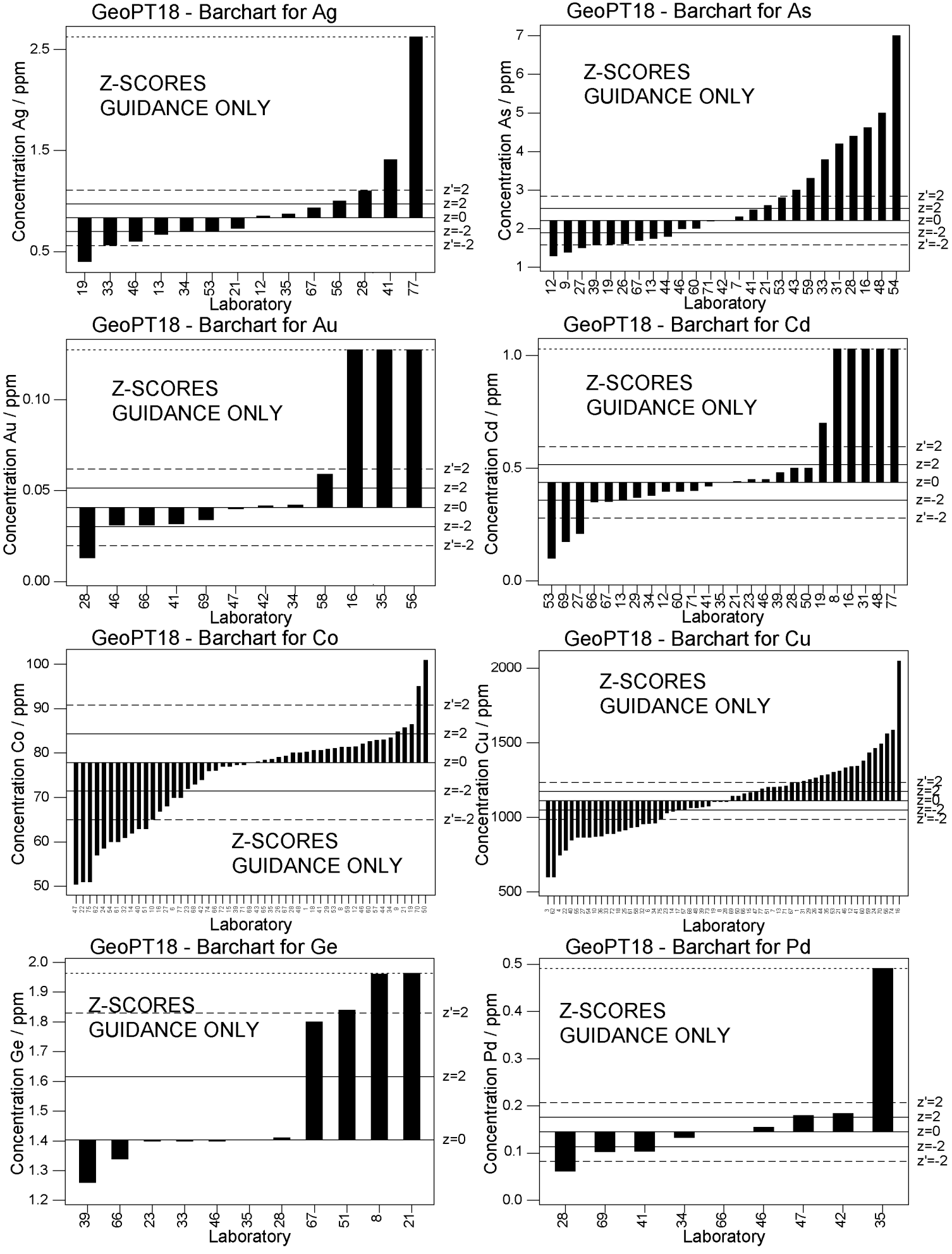


Figure 2: GeoPT18 Quartz diorite KPT-1. Data distribution charts for elements for which values were assigned for guidance only. Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).

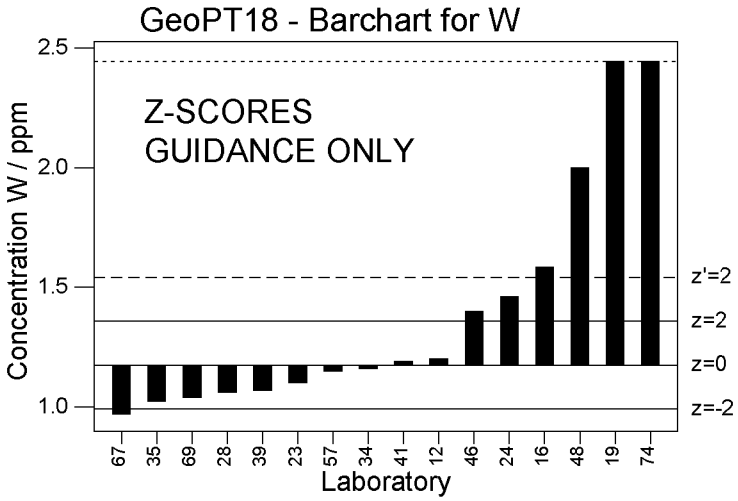
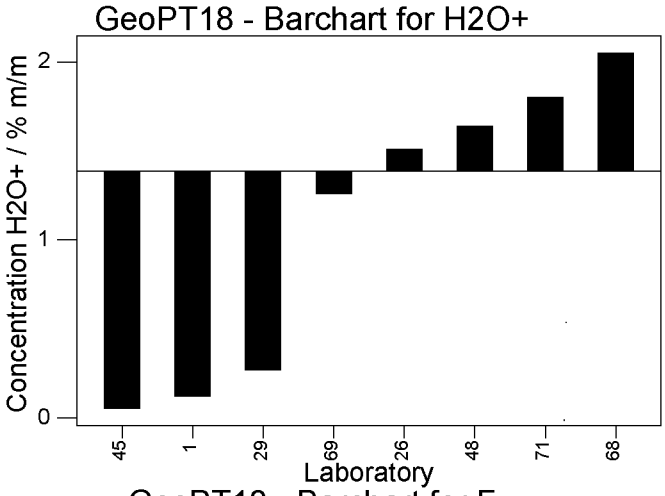
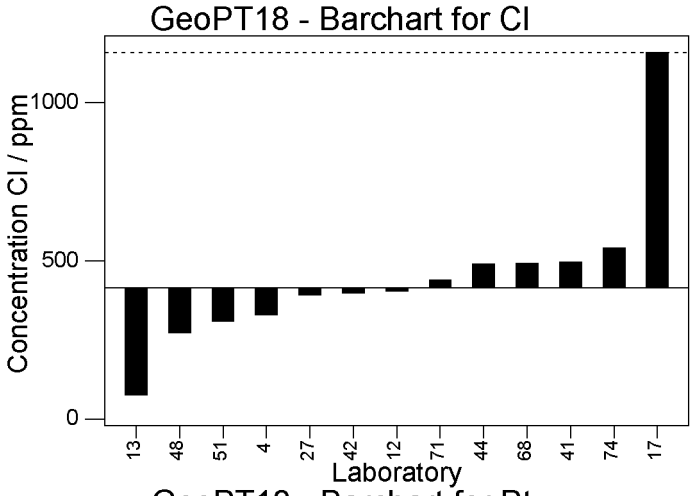
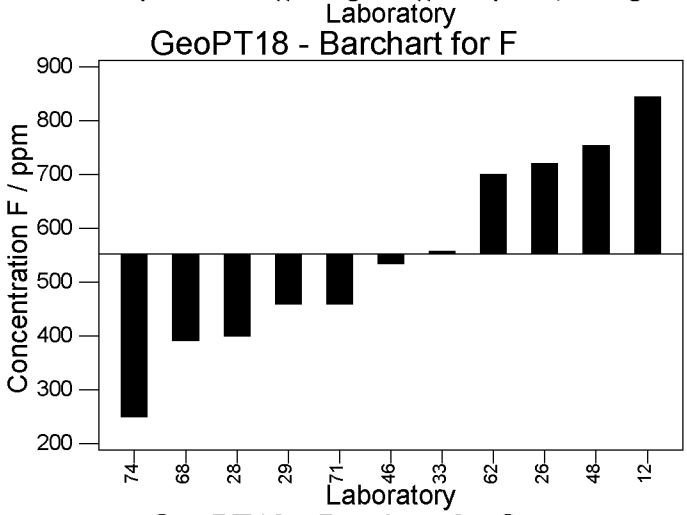
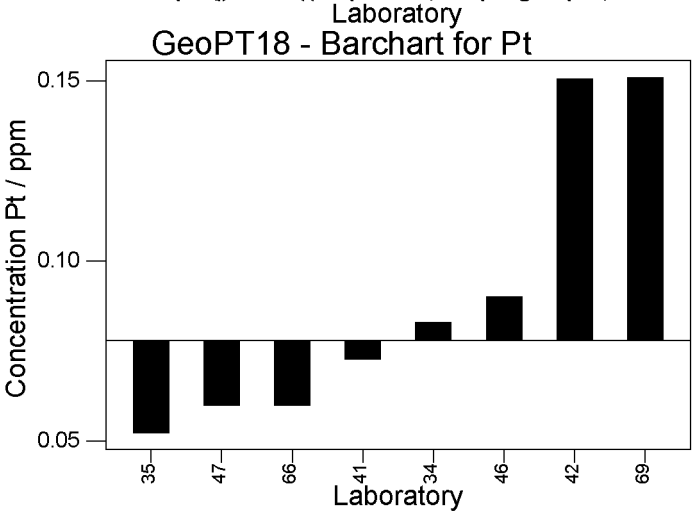


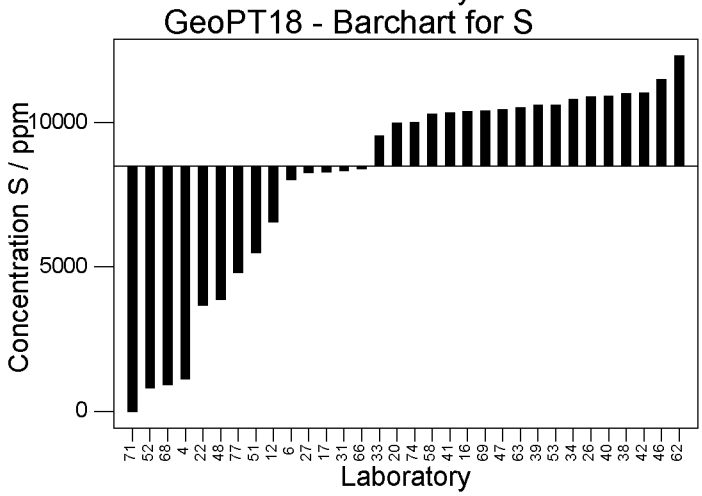
Figure 2: GeoPT18 Quartz diorite KPT-1. Data distribution charts for elements for which Z-scores are for guidance only. Horizontal lines show the limits for -2<z<2 for pure geochemistry labs (solid lines) and -2<z'<2 for applied geochemistry labs (pecked lines).











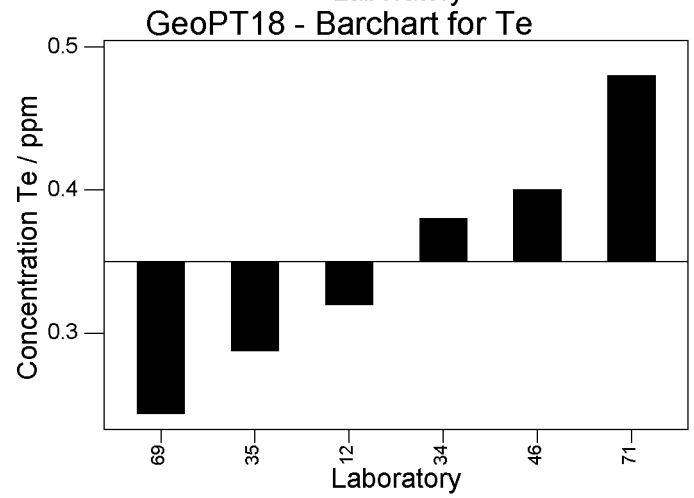


Figure 3: GeoPT18 Quartz diorite KPT-1. Data distribution charts for elements for which values could not be assigned.

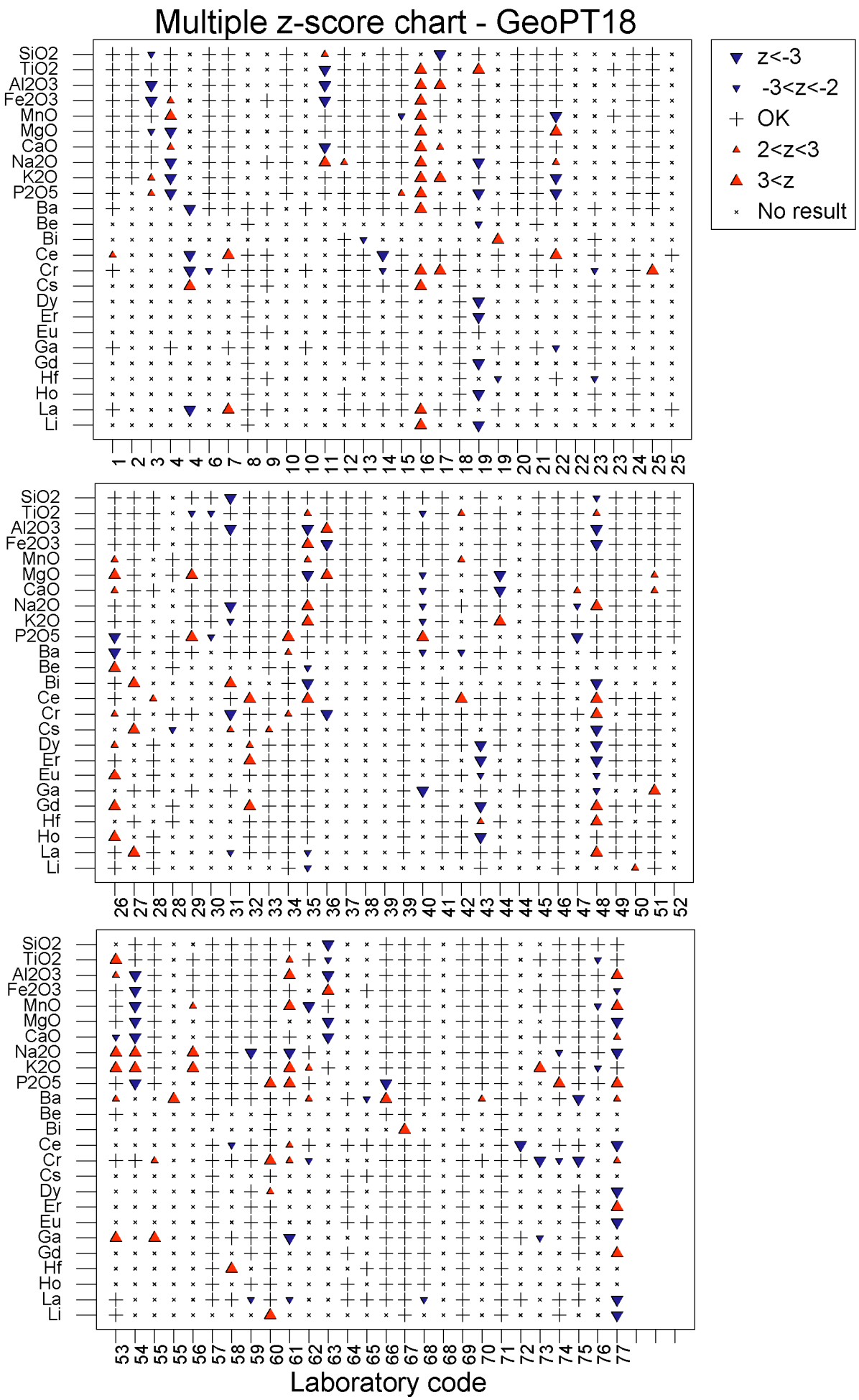


Figure 4: GeoPT18 - Quartz diorite KPT-1. Multiple z-score charts for laboratories participating in the GeoPT18 round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria. Satisfactory data are plotted as '+'. Data for other categories are plotted as follows: z<-3 (t), -3<z<-2 (t), +2<z<+3 (s), Z>+3 (s).

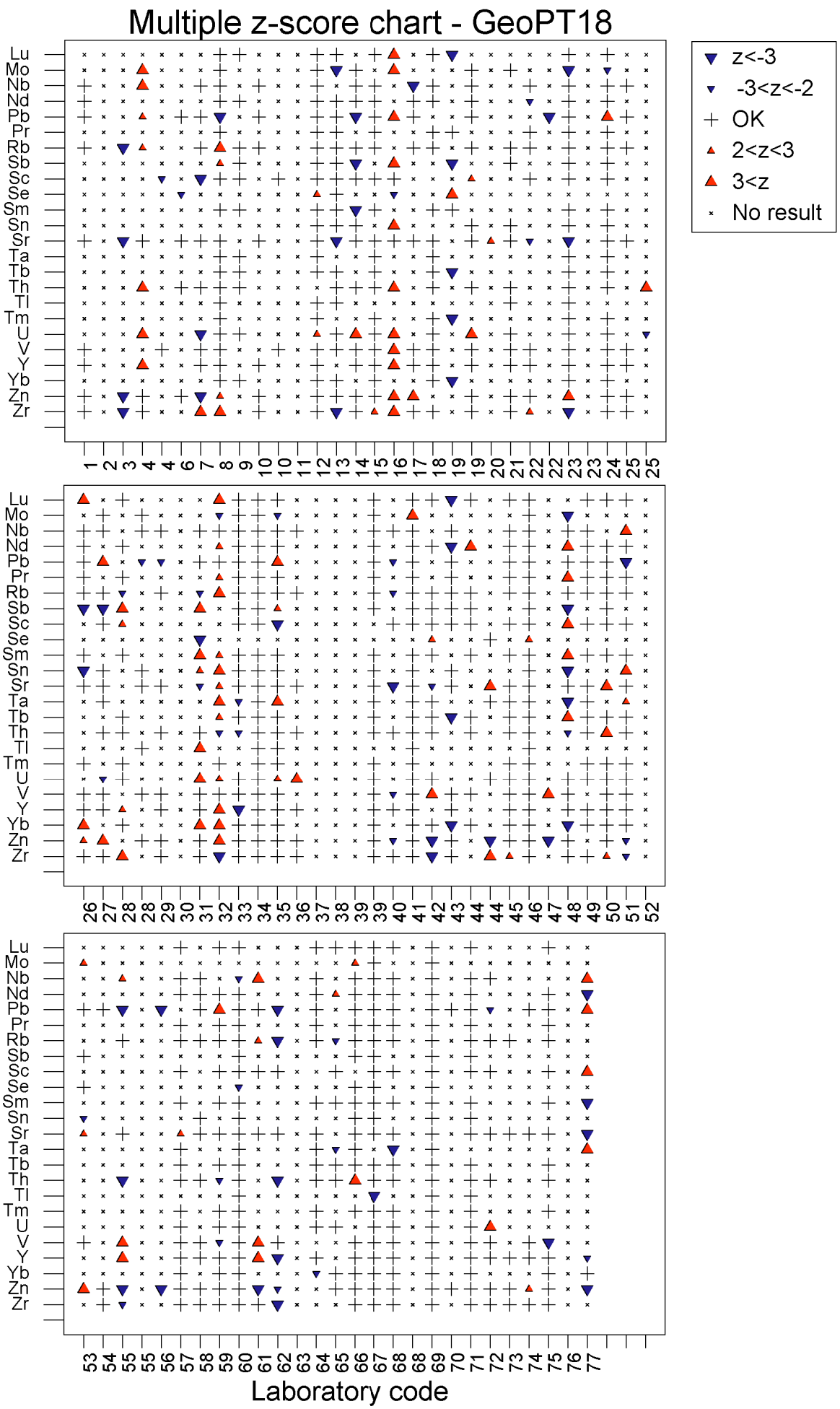


Figure 4: GeoPT18 - Quartz diorite KPT-1. Multiple z-score charts for laboratories participating in the GeoPT18 round. Symbols indicate whether or not an elemental result complies with the -2<z<+2 criteria. Satisfactory data are plotted as '+'. Data for other categories are plotted as follows: z<-3 (t), -3<z<-2 (t), +2<z<+3 (s), Z>+3 (s).

Erratum GeoPT18

During data processing, on converting several ‘,’ separators to decimal ‘.’, for laboratory S26 the value of 1.22 ppm for Eu became 122 ppm. Consequently, the position for lab. S26 (Figure 1) in the Eu plot is represented incorrectly. The correct z-score value has been included in Table 3, however.

Note that data for two additional laboratories (S78 and S79) are recorded in Table 1 and Table 3. These data had been submitted but were not received.