



Minéraux indicateurs du district aurifère de Meliadine (Nunavut, Canada)

Mémoire

Nelly Manégli

Maîtrise interuniversitaire en sciences de la Terre
Maître ès sciences (M. Sc.)

Québec, Canada

© Nelly Manégli, 2017

Minéraux indicateurs du district aurifère de Meliadine (Nunavut, Canada)

Mémoire

Nelly Manégli

Sous la direction de :

Georges Beaudoin, directeur de recherche

Résumé

Le district aurifère de Meliadine se situe à 25 kilomètres au nord de Rankin Inlet, Nunavut (Canada), dans la ceinture archéenne de roches vertes de Rankin Inlet. L'assise rocheuse est composée de roches sédimentaires métamorphosées au grade des schistes verts incluant des Formations de Fer Rubanées (FFR) intercalées avec des roches mafiques. La minéralisation aurifère est distribuée le long de la faille Pyke. Des FFR abritent la minéralisation aurifère composée de veines de quartz riches en sulfures. Sept échantillons de till ont été prélevés parallèlement au sens de l'écoulement glaciaire à l'indice Mustang, le long d'un transect de 2 km. Deux échantillons ont été collectés en amont de l'indice et cinq dans le train de dispersion. La composition de la magnétite, de la tourmaline, de la scheelite, de l'arsénopyrite et de la galène a été investiguée par microsonde électronique et par ablation laser et spectrométrie de masse à plasma à couplage inductif. La composition chimique de ces minéraux indicateurs provenant des dépôts est comparée avec celle des grains des échantillons de tills. La signature chimique de la magnétite des FFR est plus riche en Al que la signature de la magnétite magmatique et métamorphique, qui elle est plus riche en V. Cependant elle se confond en partie avec celle de la magnétite hydrothermale. Des grains de tourmaline avec un profil de terres rares plat avec anomalie positive en europium sont présents dans des veines de quartz-carbonate des dépôts et dans certains échantillons de till en aval de l'indice Mustang. Des grains de scheelite avec un profil de terres rares en cloche et une anomalie négative en europium sont retrouvés à l'indice Mustang ainsi que dans certains échantillons en aval de l'indice. L'abondance des grains d'or ainsi que la scheelite et la tourmaline portant la signature géochimique des dépôts de Meliadine permettent de détecter l'indice d'or Mustang partiellement érodé par les glaciers.

Abstract

The Meliadine Gold District is located about 25 kilometres north of Rankin Inlet, Nunavut (Canada), in the Archean Rankin Inlet greenstone belt. The bedrock is composed of greenschist facies metamorphic sedimentary rocks including Banded Iron Formations (BIF), interbedded with mafic volcanic rocks. Auriferous mineralization is distributed along the Pyke fault. Iron formations host the gold mineralization composed of sulfide-rich mesothermal quartz veins. Gold is mainly disseminated in BIF and quartz-carbonate veins. Seven till samples were collected parallel to the direction of ice flow at the Mustang showing, along a 2 km transect. Two are located up-ice and five down-ice in the dispersal train. The composition of magnetite, tourmaline, scheelite, arsenopyrite and galena has been investigated by Electron Probe Micro-Analyser and Laser Ablation Inductively Coupled Plasma Mass Spectrometry. The chemical composition of these indicator minerals in the deposits is compared with the composition of grains extracted from the till samples. Magnetite from BIF is enriched in Al and bears chemical similarities with hydrothermal magnetite, whereas magnetite from magmatic and metamorphic sources has a higher content in V. Tourmaline from quartz-carbonate veins hosted by mafic rocks is characterised by a flat Rare Earth Elements (REE) pattern with a positive europium anomaly also found in tourmaline from till samples down-ice of the Mustang showing. Scheelite with a bell-shape REE pattern and a negative europium anomaly from the Mustang showing is also found in till samples within the dispersal train. Gold grain abundance, as well as the signature of scheelite and tourmaline reflecting the gold deposits allow detecting the partially eroded gold mineralization.

Table des matières

Résumé	iii
Abstract.....	iv
Liste des figures.....	vii
Liste des tableaux.....	ix
Avant-propos.....	x
Remerciements.....	x
Chapitre 1 - Introduction	1
1 Introduction générale.....	1
2 Problématique et objectifs du projet	1
3 Méthodologie	3
3.1 Ciblage des sites et prélèvements des échantillons.....	3
3.2 Préparation des échantillons.....	5
3.3 Paramétrage des analyses.....	8
4 Présentation de l'article	12
Chapitre 2 - Indicator minerals of the Meliadine orogenic gold district in till samples, Nunavut (Canada)	14
Abstract	14
Résumé.....	15
2.1 Introduction.....	16
2.2 Regional geology.....	17
2.3 Geology of the deposits of the Meliadine Gold District.....	21
2.4 Glacial history.....	24
2.5 Sampling and analytical methods.....	25
2.5.1 Sampling.....	25
2.5.2 Electron Probe MicroAnalysis (EPMA).....	27
2.5.3 Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry analysis (LA-ICP-MS)	27
2.6 Petrographic descriptions of the indicator minerals.....	28
2.7 Results.....	30
2.7.1 Till composition	30
2.7.2 Number of grains of indicator minerals along the Mustang showing transect	30
2.7.3 Geochemistry of indicator minerals.....	33
2.7.3.1 Magnetite	33

2.7.3.2 Tourmaline	39
2.7.3.3 Scheelite	42
2.7.3.4 Galena.....	45
2.8 Discussion	46
2.8.1 Abundance of indicator minerals along the transect across the Mustang showing	46
2.8.2 Chemical composition of the indicator minerals	47
2.9 Conclusions	49
Acknowledgements	50
Chapitre 3 - Informations supplémentaires	51
3.1 Désagrégation par impulsions électriques.....	51
3.2 Arsénopyrite	53
Chapitre 4 - Conclusion générale	57
Références.....	58
Appendix A - Description of the till samples.....	65
Appendix B - Description of the samples submitted to EPD	68
Appendix C - EPMA parameters, composition maps and data	69
Appendix D - LA-ICP-MS parameters, composition maps and data	185
Appendix E - Scheelite grains under cathodoluminescence	373

Liste des figures

Fig. 1-1 Echantillonnage de till. a) Photographie de la zone de Mustang, b) Till présentant une texture aérée, c) Ostiole, d) Ostiole échantillonnée.....4

Fig. 1-2 Diagramme de préparation des concentrés de minéraux lourds provenant des échantillons de tills et des échantillons de roches soumis à l'EPD (modifié de McMartin, 2000).....6

Fig. 2-1 Regional western Churchill lithological map (modified from Davies et al., 2010; Lawley et al., 2016). 18

Fig. 2-2 Regional map of the Meliadine Gold District adapted from Agnico Eagle Mines.20

Fig. 2-3 Metamorphic facies of the Meliadine Gold District modified from Carpenter and Duke (2004) and Lawley et al. (2015b). Arrows are pointing toward regions of increasing metamorphic grade.21

Fig. 2-4 Geological setting of the a) Tiriganiaq, b) Discovery, c) Pump and d) F-Zone deposits (modified from Caron et al., 2010 and Lawley et al., 2016).....23

Fig. 2-5 Ice flow directions (modified from McMartin, 2000). Concentrations of gold above the 75th percentile (> 8 ppb) in the < 0.063 mm fraction of surface till are outlined in green (modified from McMartin, 2009).25

Fig. 2-6 Local geology of Mustang area with the position of showings and samples collected parallel to the local SE ice flow direction. Geology adapted from Agnico Eagle Mines.26

Fig. 2-7 Photomicrographs of typical indicator minerals of the Meliadine deposits. a) Band of anhedral to subhedral magnetite (Mag) grains in equilibrium with pyrrhothite (Po) from BIF, b) Euhedral magmatic magnetite cut by pyrrhothite, c) Magnetite band with acicular grunerite (Gru), d) Arsenopyrite (Apy) grain with magnetite inclusions, surrounded by magnetite and acicular grunerite, e) Magnetite with carbonates (Car) and chlorite (Chl), f) Gold (Au) crystal in calcite (Cal) vein, g) Coarse idioblastic arsenopyrite crystals with pyrrhothite and gold inclusions, h) Galena (Gn) with arsenopyrite inclusions in calcite vein, i) Tourmaline (Tur) with typical darker rim.29

Fig. 2-8 Number of a) gold, b) magnetic, c) tourmaline and d) scheelite grains of < 2mm sized fraction normalized to 10 kg of till samples along the 2 km Mustang transect.....32

Fig. 2-9 Discriminant diagrams for iron oxide from Dupuis and Beaudoin (2011), a) Ni+Cr vs Si+Mg, b) Al/(Zn+Ca) vs Cu/(Si+Ca), c) Ni/(Cr+Mn) vs Ti+V, d) Ca+Al+Mn vs Ti+V.35

Fig. 2-10 Concentration of Al, Mn and V for bedrock and till magnetite.....36

Fig. 2-11 Multielement variation diagrams for magnetite from Meliadine deposits compared to magnetite data from Dare et al. (2014).37

Fig. 2-12 Multielement variation diagrams of the five most compatible elements in magnetite normalized to bulk continental crust (values from Rudnick and Gao, 2003). .38

Fig. 2-13 Tourmaline composition using the diagrams of Henry et al. (2011), a) Primary tourmaline groups based on the X site, b) Tourmaline species based on the Mg/(Mg+Fe) vs Vac/(Na+K+Vac) ratios.	40
Fig. 2-14 REE pattern of tourmaline from the deposits and average REE patterns from tourmaline from till samples normalized to chondrite values from Taylor and McLennan (1985).....	41
Fig. 2-15 The different patterns of REE found in tourmaline from till samples with typical patterns (means) represented by the larger lines.	41
Fig. 2-16 V and Ti composition of tourmaline grains.	42
Fig. 2-17 REE patterns of the eleven scheelite grains from till samples and Qv 506. The values of REE have been normalized to chondrite (Sun and McDonough, 1995).	44
Fig. 2-18 Mo and Na composition (ppm) in scheelite from LA-ICP-MS illustrating the low concentrations of Mo and Na in scheelite from Qv 506 from the Mustang showing and EPMA Limit of Detection (LOD).	44
Fig. 2-19 Galena composition from Meliadine orogenic gold deposits compared to other types of deposits (adapted from Georges et al., 2015).	45
Fig. 2-20 Summary of indicator minerals detecting gold at the Mustang showing and suggesting another possible gold zone. a) Gold, b) Tourmaline, c) Scheelite.	49
Fig. 3-1 Composition de la magnétite en Mn, V et Al des trois échantillons soumis à l'EPD.	52
Fig. 3-2 Corrélations entre As, S, Fe et Co pour les grains d'arsénopyrite des quatre dépôts et de l'indice Mustang.	55
Fig. 3-3 Géothermomètre de Krestschmar et Scott (1976). Le champ bleu correspond aux données de cette étude. Les lignes pointillées représentent l'incertitude du système pour des températures inférieures à 400°C. <i>Abréviations:</i> Apy = Arsénopyrite, As = Arsenic, L = Liquide, Lo = Löllingite, Po = Pyrrhothite et Py = Pyrite.	56
Fig. C-1 Elemental map of Tourmaline grains, a) T559T1, b) T559T2, c) T611T1, d) T611T2 from Tiriganiaq and e) MU03T1 from the Mustang showing.	72
Fig. C-2 Elemental map of arsenopyrite grains a) 037A from the Mustang showing, b) A535A1 from F-Zone deposit, c) A628A from Tiriganiaq deposit, d) A660A from Discovery deposit and e) A590 from Tiriganiaq deposit.	73
Fig. D-1 Composition map (in ppm) of T1-1, a regional tourmaline grain from till sample 01 (0.5 to 1 mm sized fraction).	189
Fig. D-2 Composition map (in ppm) of TD14, a tourmaline grain from sample 538 (Tiriganiaq deposit) recovered using EPD.	190
Fig. D-3 Composition map of an arsenopyrite grain from Tiriganiaq deposit (A590). ...	191
Fig. D-4 Composition map of an arsenopyrite grain from F-Zone deposit (A653).	192
Fig. D-5 Composition map of an arsenopyrite grain from Pump deposit (A596).....	193
Fig. E-1 Cathodoluminescence of the scheelite grains from Qv 506 and till samples...	373

Liste des tableaux

Table 2-1 Number of grains along the Mustang showing transect, normalized to 10 kg of the < 2 mm sized fraction.	33
Table 2-2 Range of compositions of the different types of magnetite (ppm).	38
Table 3-1 Données de microsonde pour l'arsénopyrite.....	55
Table A-1 Weight (kg wet).....	65
Table A-2 Clasts description (percentage).....	65
Table A-3 Matrix description (< 2.0 mm).....	65
Table A-4 Gold grains	66
Table A-5 Heavy mineral processing weight (g)	67
Table B-1 Description of rock and core samples submitted to EPD.	68
Table C-1 Analytical conditions for magnetite EPMA analysis.	69
Table C-2 Analytical conditions for arsenopyrite EPMA analysis.	69
Table C-3 Analytical conditions for scheelite EPMA analysis.....	70
Table C-4 Analytical conditions for tourmaline EPMA analysis.	70
Table C-5 Analytical conditions for galena EPMA analysis.	71
Table C-6 EPMA magnetite data.	74
Table C-7 EPMA tourmaline data.	160
Table C-8 EPMA scheelite data.	176
Table C-9 EPMA galena data.	177
Table C-10 EPMA arsenopyrite data	179
Table D-1 LA-ICP-MS parameters.....	185
Table D-2 LA-ICP-MS recovery for magnetite.	185
Table D-3 LA-ICP-MS recovery for tourmaline.	186
Table D-4 LA-ICP-MS recovery for scheelite.	188
Table D-5 LA-ICP-MS magnetite data.	194
Table D-6 LA-ICP-MS tourmaline data.	266
Table D-7 LA-ICP-MS scheelite data.....	346
Table D-8 LA-ICP-MS arsenopyrite data.	361

Avant-propos

L'intégralité de ce mémoire, incluant l'article du chapitre 2, a été écrite par Nelly Manégli. Le co-auteur de l'article est Georges Beaudoin, mon directeur de recherche à l'Université Laval.

Remerciements

Je souhaiterais remercier mon directeur de maîtrise pour son expertise géologique mais aussi pour sa gestion irréprochable lorsque des obstacles sont venus menacer ce projet.

J'aimerais aussi remercier l'équipe d'Agnico-Eagle Mines Ltd : Marc Legault, Denis Vaillancourt, Marjorie Simard, Sophie Lafontaine, Francine Fallara, Morgan Hjorth et Faith Meadow.

L'aspect technique et analytique de ce projet a bénéficié du soutien de Marc Choquette, André Ferland, Edmond Rousseau et Martin Plante des laboratoires de l'Université Laval, Dany Savard et Marko Kudrna Prasek du laboratoire LabMATER de l'Université de Québec à Chicoutimi.

Un remerciement spécial pour Anne-Aurélien Sappin, Donald Grzela et Pierre Therrien. Ce projet a été réalisé grâce au financement du Conseil de Recherches en Sciences Naturelles et en Génie (CRSNG) du Canada en partenariat avec Agnico Eagle Mines et le Ministère de l'Énergie et des Ressources Naturelles.

Je souhaiterais enfin remercier ma famille et mes amis pour leur support.

Chapitre 1 - Introduction

1 Introduction générale

Cette étude fait partie d'un groupe de quatre études de cas sur les minéraux indicateurs des gisements d'or orogénique développé par la chaire de recherche industrielle CRSNG - Agnico Eagle en exploration minérale de l'Université Laval. Cette chaire de recherche a pour but de développer de nouvelles méthodes d'exploration utilisant la forme et les textures de surface, l'association minérale et la composition chimique de minéraux indicateurs pour découvrir des gisements d'or orogénique.

2 Problématique et objectifs du projet

L'exploration minérale via les minéraux indicateurs est une technique connue et utilisée avant les Romains. Un des cas les plus connus est l'utilisation de l'or détritique dans les rivières pour localiser une source économiquement significative lors des nombreuses ruées vers l'or des années 1830 en Géorgie, 1850 en Australie, 1858 au Colorado, et la ruée vers l'or du Klondike, au Yukon, à partir de 1896. Les minéraux lourds retrouvés dans les placers de Snake River en Idaho (Hill, 1906; Schultz, 1907) ainsi que la source de cet or détritique (Day et Richards, 1905; Irvine, 1908) ont été documentés et discutés en début du 20^{ième} siècle. Depuis les 50 dernières années, l'utilisation des minéraux indicateurs s'est de plus en plus développée. Elle s'applique à plusieurs types de dépôts. Certains gisements de métaux précieux, de base et de pierres précieuses ont été localisés grâce à la découverte de minéraux spécifiquement associés, tels que les grenats riches en Cr pour les dépôts de Ni-Cu (Aumo et Salonen, 1986; Peltonen et al.1992; Karimzadeh Somarin, 2004; McClenaghan, 2005) et pour les kimberlites diamantifères (Gurney, 1984; Fipke et al., 1995). La scheelite et la fluorite indiquent la présence de dépôts de tungstène (Lindmark, 1977; Stendal, 1982), le cinabre indique la présence de mercure (Plouffe, 2001). Les dépôts d'étain peuvent être localisés grâce à la cassitérite (Zantop et Nespereira, 1979; Ryan et al., 1988). Cette technique permet donc de localiser de nombreux types de gisements en se basant sur l'étude de différents types de matériel de surface comme les sédiments de rivière, de plage ou éoliens, les eskers, les alluvions et le till.

Un minéral indicateur est un minéral dont les caractéristiques physiques et chimiques permettent de le lier à un dépôt, un processus de formation, une altération typique ou

une roche encaissante minéralisée. Il doit être présent dans les sédiments de surface, avoir une histoire de transport connue ou prévisible, être facilement récupérable et assez abondant (McClenaghan, 2005). Les minéraux indicateurs potentiels de cette étude sont retrouvés dans le till, un sédiment de surface, transporté par les glaciers ayant recouverts le Canada et peuvent être facilement échantillonnés.

Lors d'un transport glaciaire, le matériel érodé est toujours déplacé en aval de sa source (Bennett et Glasser, 1996; Boulton, 1996; Kjaer et al., 2006). Un échantillon de till sera originaire d'une zone en amont du site d'échantillonnage et reflètera la composition primaire du socle rocheux de cette zone et celle de sources plus distantes. Cette propriété, associée à sa facilité d'échantillonnage lorsqu'il est en surface, en fait un matériel de premier choix pour l'exploration des zones recouvertes par des sédiments glaciaires.

Le district aurifère de Meliadine, proche de la côte ouest de la Baie de Hudson, est un site propice pour cette étude car les indicateurs d'écoulement et de transport glaciaire suggèrent une direction linéaire prédominante du nord-ouest vers le sud-est, ce qui permettra de localiser facilement les sources (McMartin, 2000). A l'échelle locale, la direction de l'écoulement glaciaire a été caractérisée par la cartographie de 275 indicateurs d'érosion glaciaire comme les stries, les cannelures, les queues-de-rat, les marques et fractures de broutage, les roches moutonnées et la topographie « stoss-and-lee » (McMartin, 2000). Ces indicateurs présentent un sens d'écoulement glaciaire moyen à 131° aux alentours de la zone d'échantillonnage de till à Mustang. De plus, une étude des tills dans la région de Kivalliq a prouvé que ce type d'échantillons reflète adéquatement la lithologie locale (McMartin, 2000, 2009).

La présente étude vise à développer une méthode d'exploration utilisant les minéraux indicateurs provenant d'échantillons de tills pour découvrir de nouveaux gisements d'or orogénique dans les régions du Grand Nord canadien ayant une épaisse couverture de sédiments glaciaires. Les variations de composition chimique des minéraux indicateurs devraient permettre de générer un modèle simple de répartition de ces minéraux dans le train de dispersion permettant de détecter la présence et la localisation de leur source.

L'objectif de cette maîtrise est de caractériser les minéraux indicateurs des gisements de Meliadine et de les comparer à ceux retrouvés dans les échantillons de till 1) en

sélectionnant les minéraux indicateurs d'intérêt grâce à une étude préalable des rapports de la compagnie Mines Agnico Eagle Ltée, 2) en étudiant la composition chimique des minéraux indicateurs sélectionnés dans la minéralisation, 3) en étudiant la composition chimique des minéraux indicateurs présents dans les échantillons de till et 4) en comparant les signatures géochimiques des minéraux indicateurs dans la minéralisation avec ceux des échantillons de till. Le nombre de grains d'or, de magnétite, de tourmaline, de galène et de scheelite le long du profil d'échantillonnage et la composition chimique de ces minéraux indicateurs dans le till sont comparés aux minéraux prélevés dans la minéralisation et à l'indice Mustang pour démontrer que l'on peut reconnaître la signature d'un dépôt d'or dans le till.

3 Méthodologie

3.1 Ciblage des sites et prélèvements des échantillons

Quatre des principaux dépôts, Tiriganiaq, Pump, F-Zone, et Discovery, situés le long de la faille Pyke (Fig. 2-2), ont été ciblés pour déterminer l'empreinte chimique du dépôt d'or avec une attention particulière pour le dépôt le plus riche en or, Tiriganiaq. Dix des 18 forages utilisés dans cette étude appartiennent à quatre sections de ce dépôt (de l'ouest vers l'est : 8600, 9100, 9800 et 10850) et cinq forages appartiennent aux trois autres dépôts pour étudier la variation de la composition chimique des minéraux indicateurs le long de la faille. Les minéraux indicateurs potentiels sont la magnétite, la tourmaline, l'arsénopyrite et la galène. La scheelite n'a pas pu être identifiée sur place lors de l'échantillonnage des dépôts.

L'indice Mustang se situe au nord-ouest de la propriété (Fig. 1-1a) dans une zone au faciès métamorphique des amphibolites inférieur (Figs. 2-2 et 2-3; Carpenter et Duke, 2004). Cette veine de quartz, encaissée dans des roches mafiques, a été choisie pour l'échantillonnage des tills pour sa forte valeur en or de 36.58 g/t et pour sa localisation en amont des autres dépôts d'or déjà connus par rapport à la direction de l'écoulement glaciaire, réduisant le risque de contamination par d'autres sources aurifères. Trois forages, un au site de l'indice et deux aux alentours, ont aussi été échantillonnés.

Sept échantillons de till, de 13 à 14.5 kg (Fig. 1-1b; McClenaghan, 2005; McMartin et Campbell, 2009; Spirito et al., 2011), ont été collectés parallèlement à la direction de l'écoulement glaciaire, le long d'un transect de 2 km. Deux échantillons (Till 06 et Till 07) sont localisés en amont de l'indice à respectivement 368 et 980 mètres et serviront à établir le bruit de fond régional. Les 5 autres ont été prélevés jusqu'à 1 km dans la trainée de dispersion à 101, 201, 323, 602 et 1035 mètres en aval de l'indice Mustang (Fig. 2-6). Lors de la collecte, les outils ont été nettoyés à l'eau entre chaque prélèvement pour éviter tout transfert de grains d'un échantillon à l'autre. Les sacs de prélèvement ont été doublés et hermétiquement fermés. Les échantillons de tills ont été prélevés dans des ostioles de toundra entre 15 et 70 cm de profondeur (Fig. 1-1c et d).

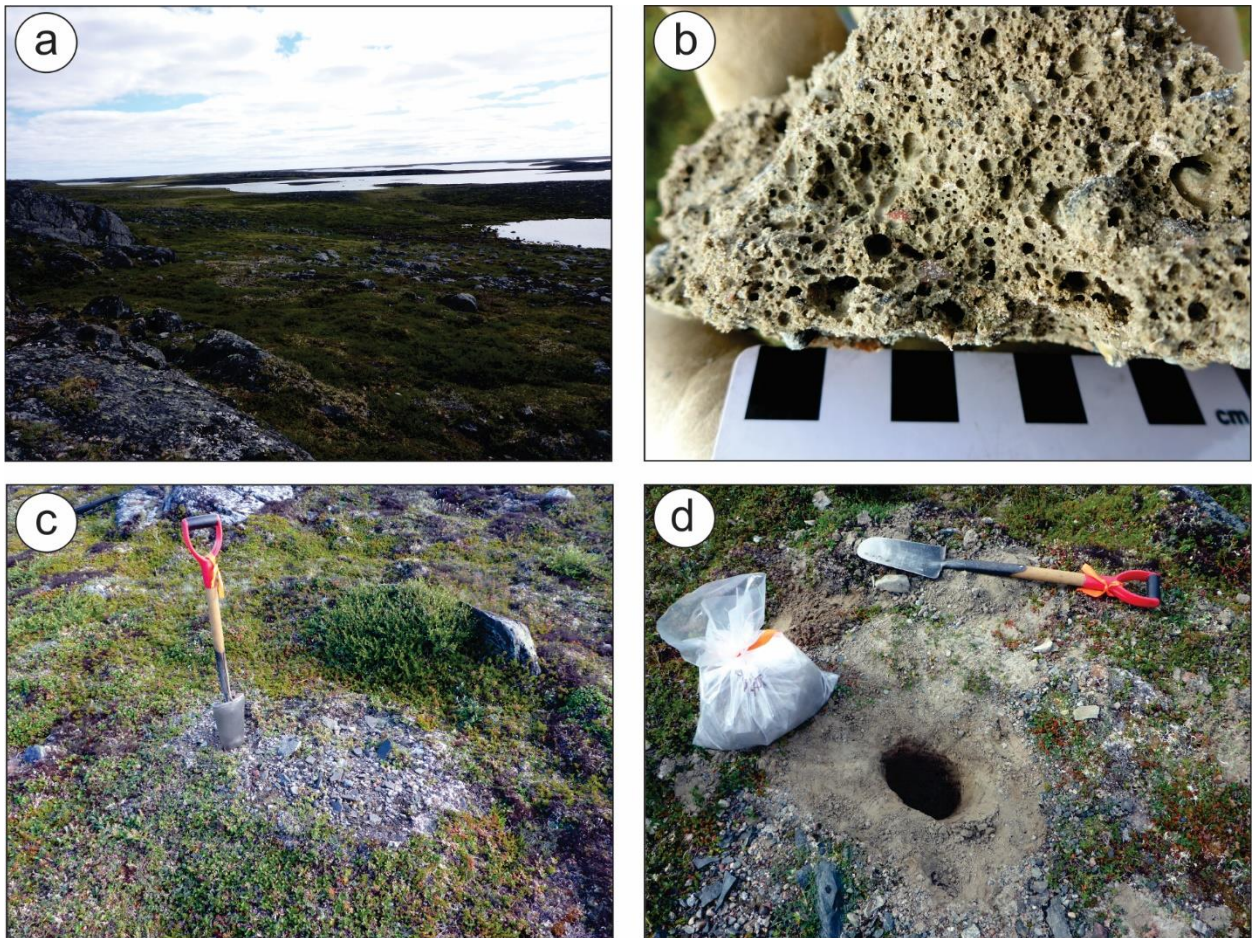


Fig. 1-1 Echantillonnage de till. a) Photographie de la zone de Mustang, b) Till présentant une texture aérée, c) Ostiole, d) Ostiole échantillonnée.

3.2 Préparation des échantillons

Cent quatre-vingt-douze échantillons prélevés sur 17 forages documentent les 4 dépôts le long de la faille Pyke (Tiriganiaq, Pump, F-zone, Discovery) et l'indice Mustang. De ces échantillons, 112 biscuits ont été coupés en ciblant la magnétite, la tourmaline, l'arsénopyrite et la galène. Deux échantillons contenant des veines de quartz, Qv 506 riche en arsénopyrite provenant de l'indice Mustang et Qv 503 riche en tourmaline provenant d'un affleurement voisin, ont aussi été utilisés. Les lames minces polies ont été fabriquées au laboratoire de l'Université Laval en utilisant une technique de polissage aux tissus pour éviter toute contamination au plomb des tables de polissage classiques. La dernière étape du polissage à 0.5 microns, traditionnellement faite avec de l'alumine (Al_2O_3), n'a pas été complétée pour prévenir toute contamination possible en aluminium.

Neuf carottes représentatives et deux échantillons de roches ont été soumis à la désagrégation par impulsions électriques (EPD) pour optimiser la récupération de minéraux indicateurs potentiels (Gnos et al., 2006). La procédure a été complétée avec un Spark 2 Electric-Pulse Disaggregator par la compagnie Overburden Drilling Management (ODM) à Ottawa (QC).

Les 7 échantillons de tills ainsi que les 11 échantillons soumis à la désagrégation ont été traités par ODM pour récupérer les concentrés de minéraux lourds et les grains d'or, comptés, mesurés et classifiés selon leur morphologie (DiLabio, 1990; Averill, 2001). Dans cette étude, la gravité spécifique utilisée pour la séparation par les liqueurs lourdes est de 3 g/cm^3 pour permettre une meilleure récupération de la tourmaline dont la densité varie entre 2.82 à 3.32. La séparation a été faite dans de l'iodure de méthylène (diiodométhane) dilué avec de l'acétone. Les différentes étapes de la procédure sont présentées dans la figure 1-2. Une fois séparée par un aimant à main « Sepor Automagnet », la fraction magnétique contient la magnétite et d'autres minéraux magnétiques. La tourmaline, la scheelite, la galène et l'arsénopyrite sont récupérées dans les fractions non magnétiques.

Les échantillons de tills 01, 03 et 04 ont été pannés une deuxième fois pour vérifier la présence d'autres grains d'or. Un échantillon de sable de quartz stérile a été utilisé en début de procédure pour éviter la contamination par un autre lot de tills préalablement traité.

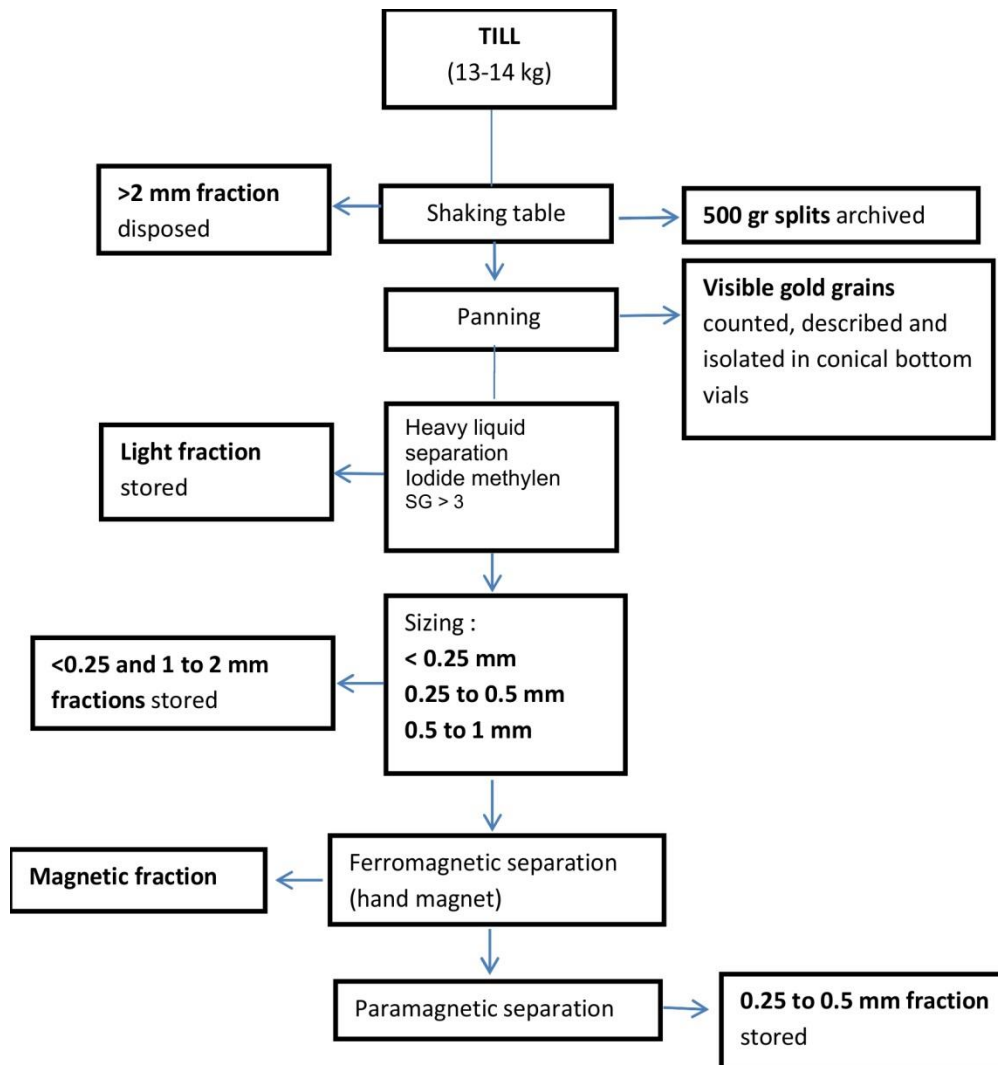


Fig. 1-2 Diagramme de préparation des concentrés de minéraux lourds provenant des échantillons de tills et des échantillons de roches soumis à l'EPD (modifié de McMartin, 2000).

La fraction magnétique de 0.5 à 1 mm des concentrés de minéraux lourds a été séparée, lorsque nécessaire, pour obtenir des aliquotes d'environ 100 grains statistiquement représentatifs des populations présentes (i.e. Sappin et al., 2014). Le poids de 100 grains a été mesuré, permettant de planifier la séparation aléatoire de la fraction mère en lots d'une centaine de grains statistiquement identiques. Un micro

séparateur Jones de type riffle à 14 chutes (Pitard, 1993; Gerlach et Nocerino, 2003) a été utilisé en prenant soin de le nettoyer à l'air comprimé entre chaque échantillon pour déloger les grains coincés et éviter toute contamination croisée. Pour chaque échantillon, un lot a été monté en pastille, plaçant les grains en ligne de 10 pour faciliter leur identification. Le sablage et le polissage ont été faits individuellement à la main pour minimiser la perte de grains lors de ces étapes abrasives (perte inférieure à 1%). Le polissage a été fait avec des pâtes de diamant à 6, 3 puis 1 micron. Comme pour la confection des lames minces polies, l'étape de polissage à 0.5 micron n'a pas été effectuée pour éviter toute contamination possible en aluminium. Chaque pastille a été passée dans un bain à ultrason pour déloger de possibles résidus de confection. Chaque pastille a été cartographiée, chaque grain nommé et photographié.

La tourmaline a été isolée à la main à partir de la fraction non magnétique sous une binoculaire LEICA M420. Le faible nombre de grains retrouvé dans la fraction de 0.5 à 1 mm a conduit à l'utilisation de la fraction de taille inférieure, 0.25 à 0.5 mm. Comme cette fraction était trop riche, elle a été séparée en plus petites fractions statistiquement représentatives en utilisant le micro séparateur Jones. Le quart ou la moitié de la fraction de départ a été utilisé afin de pouvoir extraire une centaine de grains représentatifs de tourmaline. La séparation des aliquotes, lorsque le nombre de grains de tourmaline était supérieur à 150, a été faite en utilisant un cône de séparation sectoriel en papier (Gerlach et al., 2002; Gerlach et Nocerino, 2003) car les grains sont trop petits pour être séparés par le micro séparateur de type riffle. Le ramassage a été fait sous binoculaire en ciblant les minéraux ayant des caractéristiques physiques cohérentes avec des grains de tourmaline. Leur couleur varie de brunâtre à verdâtre et de bleu à rose. La forme des grains n'est pas systématiquement un facteur de choix car les grains ont pu se briser lors de leur transport glaciaire. L'identification visuelle de ce minéral étant difficile, 72 % de la population sélectionnée sous binoculaire a été identifiée via microscopie électronique à balayage (JEOL 840-A) comme étant de l'hornblende ou de l'augite, minéraux ayant des caractéristiques physiques très similaires à la tourmaline. Le protocole de fabrication est identique à celui des pastilles de magnétite avec toutefois une très grande attention à l'étape de sablage pour assurer la conservation d'une surface maximale sur ces plus petits grains. Pour chaque pastille de tourmaline provenant de la fraction 0.25 à 0.5 mm, dix grains de la population de tourmaline avérée sont analysés. Leur sélection est basée sur leurs critères physiques.

Les 11 grains de la fraction 0.5 à 1 mm, tous tills confondus, sont analysés. Quatre échantillons de roche soumis à l'EPD ont aussi fourni quelques grains de tourmaline. Un seul grain par échantillon de ce type a été analysé. Chaque pastille a été cartographiée, chaque grain identifié et photographié.

Les grains de scheelite provenant des tills ont été extraits sous lampe UV. Ils proviennent de la totalité de la fraction non magnétique, toutes tailles confondues. La fraction magnétique a aussi été investiguée pour vérifier la présence de grains polyminéraliques pouvant contenir de la scheelite. Ce minéral est présent dans la fraction 0.25 à 0.5 mm et 0.5 à 1 mm mais n'a pas été retrouvé dans les échantillons de forage. Un seul échantillon soumis à l'EPD contenait ce minéral. Onze grains proviennent des échantillons de till et 5 de l'échantillon soumis à l'EPD. Tous ces grains ont été montés en pastilles et analysés. Chaque pastille a été cartographiée, chaque grain nommé et photographié.

L'arsénopyrite et la galène n'ont pas été retrouvés dans les échantillons de till. Ces minéraux non ferromagnétiques ne sont pas assez stables dans les sédiments de surface (McMartin et al., 2011).

3.3 Paramétrage des analyses

Les lames minces polies et les pastilles ont préalablement été investiguées en utilisant un microscope Axio Scope.A1 - Zeiss. Les micrographies en lumière réfléchie et transmise ont été acquises en utilisant ce même microscope couplé à une caméra AxioCam ICc1 et éditées via le software ZEN 2012 (Blue edition - compagnie Carl Zeiss) à l'Université Laval.

3.3.1 Analyses par microsonde

Les concentrations des éléments majeurs et des traces des minéraux indicateurs potentiels ont été obtenues en utilisant une microsonde CAMECA SX-100, à l'Université Laval. Le diamètre du faisceau est réglé à 5 ou 10 μm , un courant de 20 ou 100 nA et une différence de potentiel de 15 ou 25 kV. Le temps de comptage varie de 20 à 130 secondes pour les pics et de 10 ou 20 secondes pour le bruit de fond. Ces conditions analytiques sont développées dans l'annexe C. Des cartographies de la composition chimique pour la tourmaline et pour l'arsénopyrite ont aussi été acquises.

Huit cents trente-six analyses de grains de magnétite ont été faites dont 560 analyses provenant des tills, 70 des lames minces et 206 des concentrés provenant de l'EPD. Le protocole est identique à celui utilisé par Dupuis et Beaudoin (2011). Les concentrations stœchiométriques du fer à 72.40 %poids et de l'oxygène à 27.60 %poids ont été utilisées. Plus de 40% des analyses pour le Cr, Zn, Cu, Ni, K, Sn et P sont en dessous des limites de détection contrairement à V, Mn, Ca, Ti, Al, Si et Mg. Trois grains identifiés comme magnétite se sont avérés être de la titanomagnétite avec plus de 2 %poids de Ti et ont été écartés de l'étude. Vingt-quatre données de V ont été éliminées, leur valeur de Ti correspondante étant supérieure à 0.5 %poids. Au-dessus de ce seuil et pour ce protocole d'analyse de traces une interférence entre ces deux éléments se produit rendant la valeur de V non représentative. La valeur de Ti n'est pas affectée par cette interférence.

Cent quarante-quatre analyses de tourmaline dont 98 provenant des tills, 36 des dépôts et 10 des concentrés provenant de l'EPD, ont été effectuées. Deux protocoles distincts servent à analyser les éléments majeurs puis les traces (Grezla et al., 2016). Pour ce dernier protocole, la concentration du Fe a été fixée à 9.69 %poids, du Mg à 3.20 %poids, du Na à 1.90 %poids, du Si à 16.96 %poids, de l'Al à 15.55 %poids, du B à 3.99 %poids, de l'O à 47.86 %poids et du Ca à 0.37 %poids. Chaque grain de till a été investigué par balayage à électrons secondaires rétrodiffusés pour vérifier la présence de zonation. Plus de 40% des valeurs pour le Cr, Cu, Cl, Sr et F sont en dessous de la limite de détection contrairement aux analyses de Fe, Ca, Na, Mg, Si, Al, Mn, Ti, Zn, Ni, Co, V, Sc et K.

Les grains d'arsénopyrite ne proviennent que du dépôt et présentent parfois une zonation plus ou moins hétérogène. Trente-six grains ont été le support de 71 analyses. La valeur du fer a été fixée à 34.20 %poids, celle du S à 19.50 %poids et celle de l'As à 46.20 %poids pour l'analyse des traces. Le Zn, Sb et Si ont plus de 40% des valeurs en dessous de la limite de détection contrairement au As, Fe, S, Co, Cu, Ni, Te et Tl.

Dix-sept grains de scheelite dont 6 provenant d'un même échantillon soumis à l'EPD, ont été analysés selon le protocole de Sciuba et al. (2016). La présence d'une possible zonation a été investiguée par cathodoluminescence à 15 kV et 20 nA (Annexe E). Tous les grains sont homogènes excepté un grain ayant une petite bande d'une composition différente. Pour l'analyse des traces, les concentrations fixes de W, Ca et O

ont été réglées respectivement à 63, 14 et 23 %poids. Le Fe, Sr et Y présentent plus de 40% de valeurs en dessous de la limite de détection. Le Mo et Na ont au moins 60% de valeur au-dessus de la limite de détection.

La galène n'a pas été retrouvée dans les échantillons de till. Seulement 13 grains provenant des lames minces et 5 grains provenant de concentrés après EPD ont été analysés. Pour le protocole des traces, la valeur du soufre a été fixée à 13.40 %poids et du Pb à 86.60 %poids. Plus de 40% des valeurs pour le Ni, As, Zn et Sb sont en dessous de la limite de détection contrairement aux analyses de Pb, S, Cu, Co, Fe, Te, Ag, Bi et Se. Les grains provenant des concentrés après EPD sont assez petits. La possibilité que les analyses incluent un minéral adjacent a donc été attentivement vérifiée.

3.3.2 Analyses par LA-ICP-MS

Les données quantitatives de la composition en éléments traces et les cartographies ont été acquises à partir du même matériel utilisé pour les analyses par microsonde lorsque la taille du grain était suffisante. Les analyses ont été faites avec le système d'ablation laser couplé à un spectromètre de masse Agilent à plasma à couplage inductif du laboratoire LabMaTer de l'Université du Québec à Chicoutimi (UQAC). La taille du faisceau varie de 33 à 75 μm pour les lignes et les points et a été réglée à 19 μm pour l'acquisition de cartographie. La vitesse de déplacement a été ajustée à 5 $\mu\text{m/s}$, avec 5, 10 ou 15 Hz et une énergie réglée pour obtenir une fluence entre 2 et 6 mJ/cm^2 .

Pour la magnétite les isotopes suivants ont été analysés en accord avec le protocole d'analyse de Dare et al. (2014) : ^{24}Mg , ^{25}Mg , ^{27}Al , ^{29}Si , ^{31}P , ^{34}S , ^{39}K , ^{44}Ca , ^{45}Sc , ^{47}Ti , ^{49}Ti , ^{51}V , ^{52}Cr , ^{53}Cr , ^{55}Mn , ^{57}Fe , ^{59}Co , ^{60}Ni , ^{65}Cu , ^{66}Zn , ^{69}Ga , ^{71}Ga , ^{74}Ge , ^{75}As , ^{89}Y , ^{90}Zr , ^{92}Zr , ^{93}Nb , ^{95}Mo , ^{107}Ag , ^{111}Cd , ^{115}In , ^{118}Sn , ^{121}Sb , ^{153}Eu , ^{172}Yb , ^{178}Hf , ^{181}Ta , ^{182}W , ^{208}Pb et ^{209}Bi . La calibration a été faite en s'appuyant sur les matériaux de référence certifiés GSE-1G, GSD-1G, USGS G-Probe-6, tous trois des verres basaltiques, et BC-28, un standard maison fait de magnétite naturelle provenant du Bushveld. ^{57}Fe a été utilisé comme standard interne avec une valeur stœchiométrique de 72.36 %poids. Lorsque la surface des grains ne permettait pas de faire un profil, l'ablation s'est faite sous forme de point. ^{34}S , ^{29}Si , ^{44}Ca et ^{65}Cu ont été utilisés comme éléments diagnostiques pour contrôler la présence d'inclusions. Une mesure du signal de fond de 30 secondes a été effectuée avant chaque analyse. Le temps d'acquisition varie de 60s à 135 s. La faible épaisseur

des lames minces a conduit à une réduction de l'énergie et du temps d'ablation. Pour les points, le temps est de 60 secondes. Malgré cela quelques lignes d'ablation ont traversé l'épaisseur des grains, mélangeant le signal de la magnétite avec celui du verre des lames minces. Ces analyses ont été éliminées lors du traitement des données avec le programme Lolite. Les isotopes choisis pour représenter un même élément sont fonction des interférences et de leur abondance naturelle relative. ^{90}Zr est préféré malgré les interactions possibles entre ^{140}Ar et ^{50}Ti , ^{50}V ou ^{50}Cr car son taux de recouvrement est optimal comparé à ^{92}Zr . Il faut noter toutefois que les valeurs de ^{60}Ni , ^{65}Cu et ^{66}Zn sont légèrement surestimées. Le ^{31}P est fortement sous-estimé. Les résultats sont présentés en annexe D.

Pour la tourmaline, les 72 isotopes analysés en utilisant la même méthode que Grzela (2016) sont : ^7Li , ^9Be , ^{11}B , ^{23}Na , ^{24}Mg , ^{25}Mg , ^{27}Al , ^{39}K , ^{43}Ca , ^{44}Ca , ^{45}Sc , ^{47}Ti , ^{49}Ti , ^{51}V , ^{52}Cr , ^{53}Cr , ^{55}Mn , ^{57}Fe , ^{59}Co , ^{60}Ni , ^{61}Ni , ^{65}Cu , ^{66}Zn , ^{69}Ga , ^{71}Ga , ^{85}Rb , ^{86}Sr , ^{87}Sr , ^{88}Sr , ^{89}Y , ^{90}Zr , ^{92}Zr , ^{93}Nb , ^{95}Mo , ^{118}Sn , ^{133}Cs , ^{136}Ba , ^{137}Ba , ^{138}Ba , ^{139}La , ^{140}Ce , ^{141}Pr , ^{142}Nd , ^{144}Nd , ^{146}Nd , ^{151}Eu , ^{152}Sm , ^{153}Eu , ^{155}Gd , ^{158}Gd , ^{159}Tb , ^{160}Gd , ^{162}Dy , ^{163}Dy , ^{164}Dy , ^{165}Ho , ^{166}Er , ^{169}Tm , ^{172}Yb , ^{174}Yb , ^{175}Lu , ^{178}Hf , ^{181}Ta , ^{204}Pb , ^{206}Pb , ^{207}Pb , ^{208}Pb , ^{232}Th , ^{234}U , ^{235}U et ^{238}U . Le ^{29}Si a été utilisé comme standard interne avec une valeur de 16.6 %poids provenant de la moyenne des résultats d'analyses de cet élément par microsonde. Les images obtenues par analyses par électrons secondaires rétrodiffusés ont permis de sélectionner des zones optimales, sans inclusions, pour placer les plus longues lignes d'ablation perpendiculaires à la zonation. Cependant, dans le cas d'une zonation très fine, les points et les lignes d'ablations peuvent s'étirer sur plusieurs zones donnant ainsi une concentration moyenne au lieu de représenter cette zonation. Les matériaux de référence utilisés sont des matériaux certifiés : trois verres basaltiques (GSE-1G, GSD-1G, USGS G-Probe-6) et deux verres de silicate (NISTSRM610 et NISTSRM612). La calibration s'est faite en fonction des paires ayant la même matrice. La comparaison entre les données de microsonde et de LA-ICP-MS montre une meilleure corrélation lorsqu'USGS G-Probe-6 est utilisé comme standard externe pour Al, Mn, Mg et Ca au lieu de l'utiliser comme contrôle interne. ^{11}B , ^{25}Mg , ^{27}Al , ^{47}Ti , ^{51}V , ^{53}Cr et ^{55}Mn ont servi d'éléments diagnostiques. ^{60}Ni est fortement surestimé, ^{66}Zn surestimé et ^{65}Cu légèrement surestimé. ^{181}Ta est légèrement sous-estimé.

L'arsénopyrite et la galène partagent le même protocole d'analyse. Un seul échantillon de galène a été utilisé pour tester l'appareillage car le Pb, composant majeur de ce

minéral, reste dans le système et contamine les analyses suivantes. Les données pour ce grain analysé ne sont pas exploitables à cause d'une instabilité lors de la mesure du standard interne. Le ^{57}Fe , avec la valeur moyenne de 34.4 %poids obtenue par microsonde, a été utilisé pour l'extraction de la majorité des données, toutefois le soufre, paramétré à 20.7 %poids (moyenne par microsonde) a fournis de meilleurs résultats pour l'intégration des données de ^{121}Sb , ^{125}Te , ^{189}Os , ^{191}Ir et ^{193}Ir . Les isotopes analysés sont : ^9Be , ^{24}Mg , ^{27}Al , ^{29}Si , ^{33}S , ^{34}S , ^{39}K , ^{43}Ca , ^{45}Sc , ^{47}Ti , ^{51}V , ^{53}Cr , ^{55}Mn , ^{59}Co , ^{60}Ni , ^{61}Ni , ^{63}Cu , ^{65}Cu , ^{66}Zn , ^{75}As , ^{82}Se , ^{88}Sr , ^{90}Zr , ^{95}Mo , ^{99}Ru , ^{101}Ru , ^{103}Rh , ^{105}Pd , ^{106}Pd , ^{107}Ag , ^{108}Pd , ^{111}Cd , ^{115}In , ^{121}Sb , ^{125}Te , ^{137}Ba , ^{138}Ba , ^{139}La , ^{182}W , ^{187}Re , ^{189}Os , ^{191}Ir , ^{193}Ir , ^{195}Pt , ^{197}Au , ^{202}Hg , ^{206}Pb , ^{208}Pb , ^{209}Bi et ^{238}U . L'utilisation des blancs de Ni (NISE-A) et Cu (Cu_976) permet d'appliquer les corrections d'interférences pour ^{103}Rh , ^{105}Pd et ^{101}Ru si nécessaire. Trois cartographies de grains ont été acquises.

La scheelite a été analysée en accord avec le protocole de Sciuba et al. (2016). Les isotopes analysés sont : ^7Li , ^{11}B , ^{23}Na , ^{24}Mg , ^{29}Si , ^{33}S , ^{34}S , ^{39}K , ^{43}Ca , ^{47}Ti , ^{49}Ti , ^{51}V , ^{53}Cr , ^{55}Mn , ^{57}Fe , ^{58}Fe , ^{59}Co , ^{63}Cu , ^{65}Cu , ^{66}Zn , ^{75}As , ^{88}Sr , ^{89}Y , ^{93}Nb , ^{95}Mo , ^{107}Ag , ^{118}Sn , ^{137}Ba , ^{139}La , ^{140}Ce , ^{141}Pr , ^{146}Nd , ^{147}Sm , ^{153}Eu , ^{157}Gd , ^{159}Tb , ^{163}Dy , ^{165}Ho , ^{166}Er , ^{169}Tm , ^{172}Yb , ^{175}Lu , ^{181}Ta , ^{182}W , ^{208}Pb , ^{232}Th et ^{238}U . Les matériaux de références sont identiques à ceux du protocole de la tourmaline (NISTSRM610, NISTSRM612, GSE-1G, GSD-1G et USGS G-Probe-6). Le ^{44}Ca , avec une valeur de 14.04 %poids (moyenne de microsonde), est utilisé comme standard interne. ^{29}Si , ^{34}S , ^{47}Ti , ^{57}Fe , ^{75}As et ^{182}W ont servis d'éléments diagnostiques.

4 Présentation de l'article

Le second chapitre présente l'article « Indicator minerals of the Meliadine orogenic gold district in till samples, Nunavut (Canada) » qui sera soumis à un journal scientifique pour publication. Cet article présente les travaux de recherches effectués lors du projet de maîtrise présenté dans ce mémoire. Il a été entièrement écrit par l'auteur de ce mémoire et a été révisé par Georges Beaudoin de l'Université Laval.

La géologie régionale puis la géologie du district aurifère de Meliadine sont suivies par l'histoire glaciaire de la région. L'échantillonnage et les méthodes analytiques sont ensuite développés. Les résultats concernant chaque minéral indicateur potentiel sont

présentés dans la partie Résultats. Finalement la discussion, suivie par une conclusion générale, termine l'article. Les données supplémentaires à l'article sont présentées dans le chapitre 3 de ce mémoire.

Chapitre 2 - Indicator minerals of the Meliadine orogenic gold district in till samples, Nunavut (Canada)

Abstract

The Meliadine Gold District is located about 25 kilometres north of Rankin Inlet, in the Kivalliq region of Nunavut (Canada). The bedrock is composed of greenschist facies metamorphosed sedimentary rocks including Banded Iron Formation (BIF) and greywacke, interbedded with mafic volcanic rocks. This assemblage belongs to the Archean Rankin Inlet greenstone belt. Auriferous mineralization is distributed along or spatially associated with the NW-SE, 80 kilometers long, Pyke fault. BIF, intercalated with mafic volcanic rocks, host the gold mineralization composed of sulfide rich mesothermal quartz veins. Gold is mainly disseminated in BIF and quartz-carbonate veins. Arsenopyrite, pyrrhotite and pyrite are disseminated in the wall rocks as well as in the BIF. Core samples from eighteen drill holes document four main deposits (Tiriganiaq, Pump, F-zone and Discovery deposits), and the Mustang showing. Eleven rock samples were submitted to Electric Pulse Disaggregation to optimise the extraction of potential indicator minerals. Seven till samples were collected parallel to the direction of ice flow at the Mustang showing, along a 2 km transect. Two samples are located up-ice, the others up to 1 km down-ice, in the dispersal train. The composition of magnetite, tourmaline, scheelite and galena has been investigated by Electron Probe Micro-Analyser and Laser Ablation Inductively Coupled Plasma Mass Spectrometry. The chemical composition of these indicator minerals from the deposits is compared with the composition of grains extracted from the seven till samples. Magnetite from BIF is enriched in Al and bears chemical similarities with hydrothermal magnetite, whereas magnetite from magmatic and metamorphic sources has a higher content in V. Tourmaline, in quartz-carbonate veins hosted by mafic rocks, is characterised by a flat Rare Earth Elements (REE) pattern with a positive europium anomaly and is found in some tourmalines from till samples down-ice of the showing. Scheelite from the showing has a bell-shape REE pattern with a negative europium anomaly, also found in some till samples in the dispersal train. The abundance of gold grains coupled with the occurrence of scheelite and tourmaline having the chemical signature of the Meliadine gold deposits permit to track the Mustang showing for 300 m down-ice and suggests the presence of another mineralized zone between 600 and 1 km down-ice of the showing. Gold, tourmaline and scheelite are useful to locate a small orogenic gold showing, and could be used as indicator minerals to find new orogenic gold deposits in areas covered by glacial sediments.

Résumé

Le district aurifère de Meliadine se situe à environ 25 kilomètres au nord de Rankin Inlet, dans la région de Kivalliq au Nunavut (Canada). L'assise rocheuse est composée de roches sédimentaires métamorphosées au grade de schistes verts et incluent des Formations de Fer Rubané (FFR) et des greywackes intercalés avec des roches mafiques. Cet assemblage appartient à la ceinture archéenne de roches vertes Rankin Inlet. La minéralisation aurifère est distribuée et associée spatialement le long de la faille Pyke qui coure sur 80 km. Des FFR et des greywackes, intercalées avec des roches mafiques volcaniques, abritent la minéralisation aurifère composée de veines de quartz riches en sulfures. L'or est principalement disséminé dans les FFR et dans les veines de quartz-carbonates. De l'arsénopyrite, de la pyrrhotite et de la pyrite sont aussi présents, disséminés aux épontes de ces veines ainsi que dans les FFR. Les quatre dépôts principaux (Tiriganiaq, Pump, F-Zone et Discovery) ainsi que l'indice Mustang sont documentés par des échantillons de carottes provenant de 18 forages. Onze échantillons de roches ont été soumis à la désintégration par impulsions électriques pour optimiser l'extraction de minéraux indicateurs potentiels. Sept échantillons de till ont été prélevés parallèlement au sens de l'écoulement glaciaire à l'indice Mustang le long d'un profil de 2 km. Deux échantillons sont localisés en amont de l'indice et 5 répartis jusqu'à 1 km dans le train de dispersion. La composition de la magnétite, de la tourmaline, de la scheelite et de la galène a été investiguée par microsonde électronique et par spectrométrie de masse couplée avec ablation laser. La composition chimique de ces minéraux indicateurs potentiels appartenant aux dépôts est comparée avec celle des grains provenant des sept échantillons de tills. La signature chimique de la magnétite des FFR est plus riche en Al que la signature de la magnétite magmatique et métamorphique, qui elle est plus riche en V, mais se confond en partie avec celle de la magnétite hydrothermale. La tourmaline, présente dans des veines de quartz carbonate encaissées dans des roches mafiques, est caractérisée par un profil de terres rares (TR) plat avec une anomalie positive en europium. Ce profil est retrouvé dans les échantillons de till uniquement en aval de l'indice. La scheelite avec un profil de TR en cloche avec une anomalie négative en europium présente à l'indice est aussi retrouvée dans certains échantillons du train de dispersion. L'abondance des grains d'or associé à la présence de scheelite et de tourmaline portant la signature géochimique des dépôts d'or permet de retrouver l'indice et suggère aussi la présence d'une autre zone minéralisée entre 600 et 1000 m en aval. Dans cette étude de cas, l'or, la tourmaline et la scheelite permettent de localiser un petit indice jusqu'à 300 m en aval et sont considérés comme de bons minéraux indicateurs pour trouver de nouveaux dépôts d'or orogénique dans les régions couvertes par une épaisse couche de sédiments glaciaires.

2.1 Introduction

The study of indicator minerals is credited for discovery of a wide range of ore deposits. This methodology was known before the Roman age (eg. Ottensen & Theobald, 1994) and can be applied to find precious and base metals as well as gem deposits. Gold grains were used to locate gold deposits during the gold rushes in Georgia (USA) in 1830 or in the Klondike (Yukon, Canada) from 1896. Heavy minerals in placers of the Snake River (Idaho) were also used in 1905 to find the source of detrital gold (Hill, 1906; Schultz, 1907; Irvine, 1908). For the last 50 years, the methodology has been adapted to find a wider range of commodities. Among others, Cr-rich garnets are used to trace Ni-Cu deposits (Aumo & Salonen, 1986; Peltonen et al., 1992; Karimzadeh Somarin, 2004; McClenaghan, 2005) and diamantiferous kimberlites (Gurney, 1984; Fipke et al., 1995). Scheelite and fluorite are indicative of tungsten deposits (Lindmark, 1977; Stendal, 1982), cinnabar is used to localise a source of mercury (Plouffe, 2001) and cassiterite for tin deposits (Zantop & Nespereira, 1979; Ryan et al., 1988). The indicator minerals are found in different surficial media such as alluvial, eolian or glacial sediments. Indicator minerals should have a known transport history and should be specific to a rock type, an alteration zone, or a mineralized zone, resistant to transport and weathering, and abundant enough to be easily recovered (Averill, 2001). The grain size typically varies from 0.25 to 2 mm (McClenaghan, 2005).

Gold is the main indicator mineral for auriferous deposits (McClenaghan, 2005). Cinnabar (Stendal & Theobald, 1994), pyrite, arsenopyrite and jamesonite (Boyle & Gleeson, 1972; Gleeson & Boyle, 1980), native copper, galena and pyromorphite (Averill & Zimmerman, 1986), sulphides, platinum-group minerals, telluride, scheelite and rutile (McClenaghan & Cabri, 2011) have been used as indicator minerals for gold occurrences.

This case study aims to test the indicator mineral method for orogenic gold deposits in a region covered by a blanket of glacial sediments in the Canada's North. The Kivalliq region, in the western Churchill Province of the Canadian Shield, has a high potential for base and precious metals deposits (McMartin, 2009). Gold deposits occur at the Meliadine Gold District (MGD), under a layer 2 to 20 m thick of glacial sediments. Till composition indicates a simple, south-east directed glacial transport direction and accurately reflects the primary composition of the bedrock (McMartin, 2000).

In this study, we investigate potential of indicator minerals to detect the presence of a gold mineralization using their abundance in till samples and their chemical composition. The indicator minerals are hand picked and their abundance in till is evaluated along a transect parallel to the ice flow direction across a gold bearing outcrop, the Mustang showing. The chemical composition of the indicator minerals from the deposits and from the till samples is investigated by Electron Probe MicroAnalysis (EPMA) and Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry analysis (LA-ICP-MS). The signature of indicator minerals in the deposits is then compared to the signature of the indicator minerals found in till up-ice of the Mustang showing, and in the dispersal train, to recognize the chemical fingerprint of the gold mineralization in till.

2.2 Regional geology

Gold mineralization in the Meliadine Lake area (Nunavut, Canada) was discovered in 1989 (Dickson, 1991). A zone of Au-sulphide mineralization hosted by oxide facies iron-formation and smaller Au-sulphide showings were outlined at, and around, the Discovery zone. The Meliadine Gold District (MGD) is located on the western shore of Hudson Bay, at about 25 km north-west of Rankin Inlet, at the contact between the Rae craton and the combined Hearne craton and Chesterfield block, within the Archean Rankin Inlet greenstone belt of the Churchill Province (Fig. 2-1). The western Churchill Province consists of several Neoproterozoic greenstone belts separated by undifferentiated Neoproterozoic, and/or preserved remnants of Archean supracrustal and granitic rocks, unconformably overlain by Paleoproterozoic sedimentary sequences. Important gold deposits, such as Amaruq, Meadowbank, and Meliadine, are hosted by Archean greenstone belts, typically metamorphosed from the greenschist to the amphibolite facies (Davis et al., 2000; Pehrsson et al., 2013; Lawley et al., 2016). The former Rankin Inlet Nickel Mine was near the town of Rankin Inlet and was hosted by an ultramafic sill (Bannatyne, 1958).

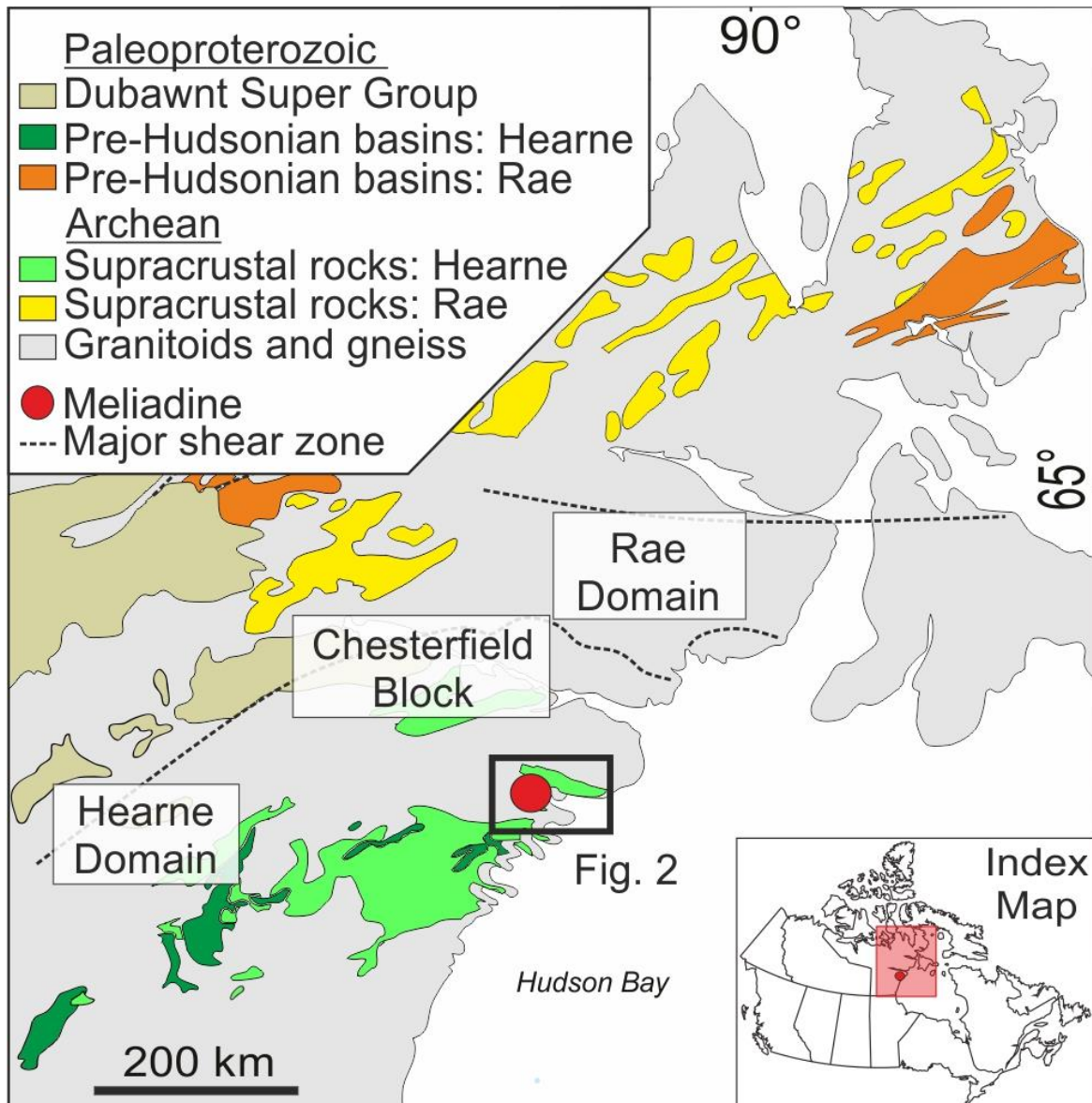


Fig. 2-1 Regional western Churchill lithological map (modified from Davies et al., 2010; Lawley et al., 2016).

The gold ore bodies of the MGD sit along the hanging wall of a lineament known as the Pyke fault (Fig. 2-2), a deformation corridor several km wide, developed during the Thelon orogeny (2.00 – 1.91 Ga), and which is interpreted to have canalised gold-bearing hydrothermal fluids (Davis et al., 2000; Carpenter, 2003; Carpenter & Duke, 2004; Hanmer et al., 2004; Caron et al., 2011). The gold endowment has been suggested to be linked to the collision of the Hearne craton with the combined Chesterfield block - Rae craton at 1.9 - 1.985 Ga (Berman et al., 2007; Lawley et al.,

2016). During this collision, four phases of regional deformation are recognized: 1) a bedding-parallel thrust and fold deformation (D_1), 2) a northeast-southeast shortening (D_2), 3) a north-south shortening (D_3) followed by 4) an east-west shortening (D_4). Shearing along the Pyke fault was caused by D_2 and D_3 during the Trans-Hudson orogeny (1.90 - 1.80 Ga). Gold is thought to have been introduced at 2.27 and/or 1.90 Ga, concomitant with D_1 and D_2 , but the time relationship is obscured by later reworking and remobilization during the late stages of the Trans-Hudson orogeny (Lawley et al., 2016).

The Meliadine Lake area underwent metamorphism (Fig. 2-3) increasing from a lower greenschist facies (Tella et al., 1986; Carpenter & Duke, 2004) or upper greenschists facies (Lawley et al., 2015b) at the Tiriganiaq, F-Zone and Pump deposits to the amphibolite facies toward Peter Lake area and the north east (Tella et al., 1992; Carpenter & Duke, 2004). The easternmost Discovery deposit shows a slightly higher amphibolite metamorphic grade (Lawley et al., 2015b). Regional metamorphism is overprinted by K, Ca, S, As, Au and Cu metasomatism (Armitage et al., 1993).

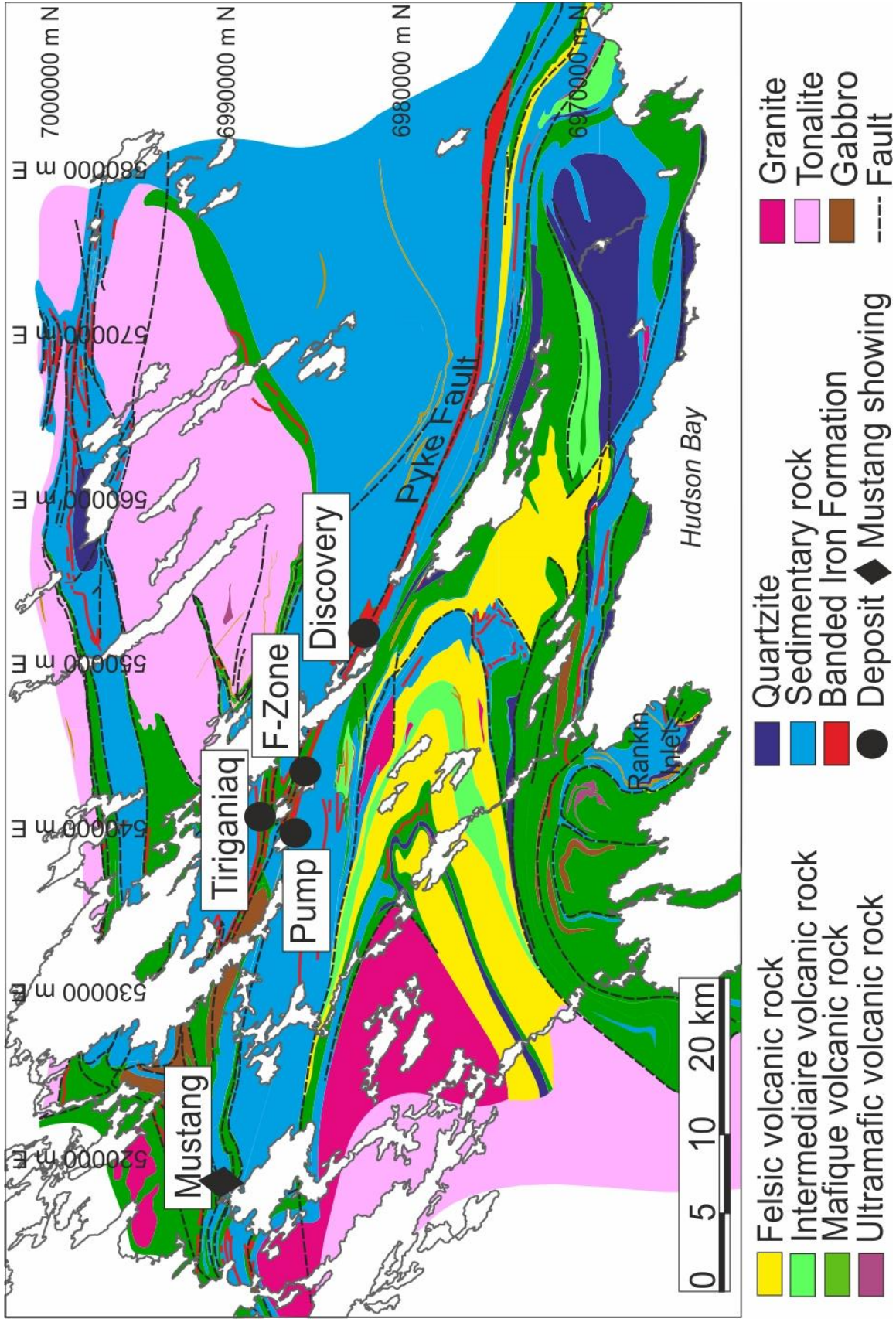


Fig. 2-2 Regional map of the Meliadine Gold District adapted from Agnico Eagle Mines.

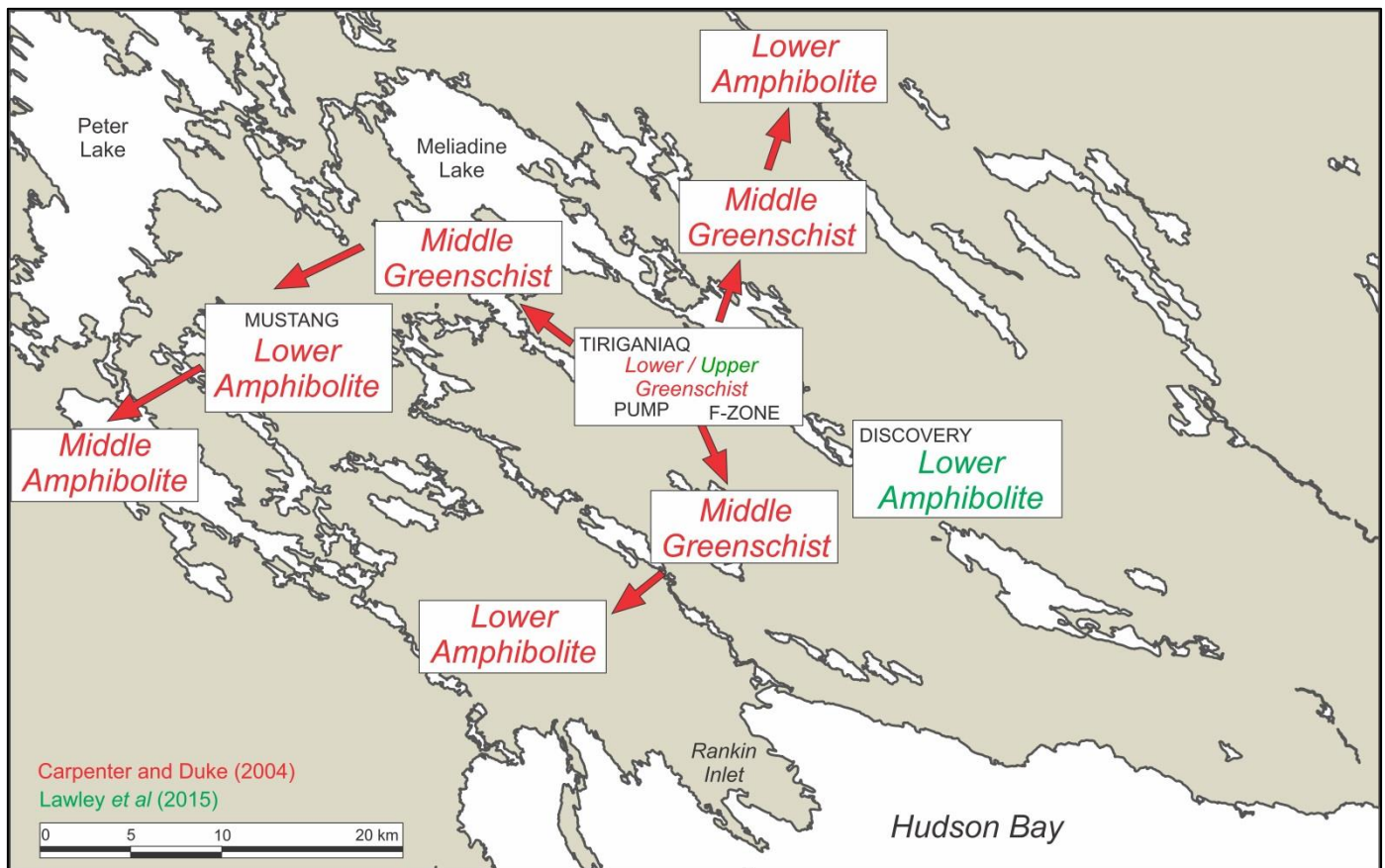


Fig. 2-3 Metamorphic facies of the Meliadine Gold District modified from Carpenter and Duke (2004) and Lawley et al. (2015b). Arrows are pointing toward regions of increasing metamorphic grade.

2.3 Geology of the deposits of the Meliadine Gold District

The MGD contains 3.4 Moz in proven and probable reserves (14.5 million tonnes at 7.32 g/t; Agnico Eagle Mines Ltd, 2016). The area is characterized by east-trending deformed felsic and mafic volcanic rocks, greywackes and iron formation. The polydeformed massive to pillowed mafic unit locally contains quartzite and felsic volcanic rocks extending to a dacitic composition. These dominantly basaltic volcanoclastic rocks are interbedded with siltstone-greywacke successions, argillite and Algoma-type Banded Iron Formation (BIF). Syn- to post-tectonic felsic granite and tonalite, numerous gabbroic to ultramafic dykes and sills, and lamprophyre dykes cut the others units (Armitage et al., 1993). The stratigraphic units generally strike northwest-southeast, dip steeply to the north and are overturned (Carpenter & Duke, 2004), with the oldest units to the north. The regional greenschist metamorphic facies is overprinted by hornblende/grunerite,

biotite, and calcite alteration near quartz calcite veining (Caron et al., 2011). The Sam Formation with its older clastic turbidites structurally overlies the Upper Oxide Formation containing BIF, chert, chloritic mudstone and greywacke. The Tiriganiaq Formation, composed of laminated siltstones, is structurally beneath the Upper Oxide Formation. The underlying Wesmeg Formation is composed of chlorite-rich, massive to pillowed, basaltic rock unit with interflow sediments (Caron et al., 2011). The Lower Lean Iron Formation is composed of a chert-magnetite-chlorite iron formation, a grunerite-cummingtonite-rich iron formation, and sulphide-rich beds in chert-dominated iron formation, is included in the Wesmeg Formation. The Lower fault is at the contact between the Tiriganiaq Formation and the Wesmeg Formation (Caron et al., 2011). Structural deformation originated with an east-southeast dipping fold and thrust faults. During the second deformation event (D2), the Archean rocks were refolded ; the Pyke fault formed as well as a well-developed centimetric to kilometric Z-shape folds (Miller et al., 1995 ; Carpenter & Duke, 2004).

The MGD consists of six main deposits, namely Tiriganiaq, Pump, F-zone, Discovery (Fig. 2-4), Wesmeg and Wolf. Four of the six deposits are documented in this study. The Tiriganiaq deposit is hosted by Tiriganiaq and Upper Oxide Formations (Fig. 2-4a). The 1000 lode zone, one of the richest semi-continuous ore zones of abundant quartz veining is located at the base of the Tiriganiaq Formation. At the Discovery deposit (Fig. 2-4b), the Upper Oxide Formation hosts gold mineralization associated with shearing and quartz veining. At the Pump deposit (Fig. 2-4c), few small ultramafic units are altered by ankerite-, silica-, chlorite- and biotite-bearing assemblages adjacent to quartz-calcite veins. The auriferous mineralization is associated with the iron formations. The F-zone deposit (Fig. 2-4d) is hosted by the Wesmeg Formation that is cut by gabbro dykes. Gold is hosted in the Lower Lean Iron Formation. Alteration is similar to that at the Discovery deposit (Caron et al., 2011).

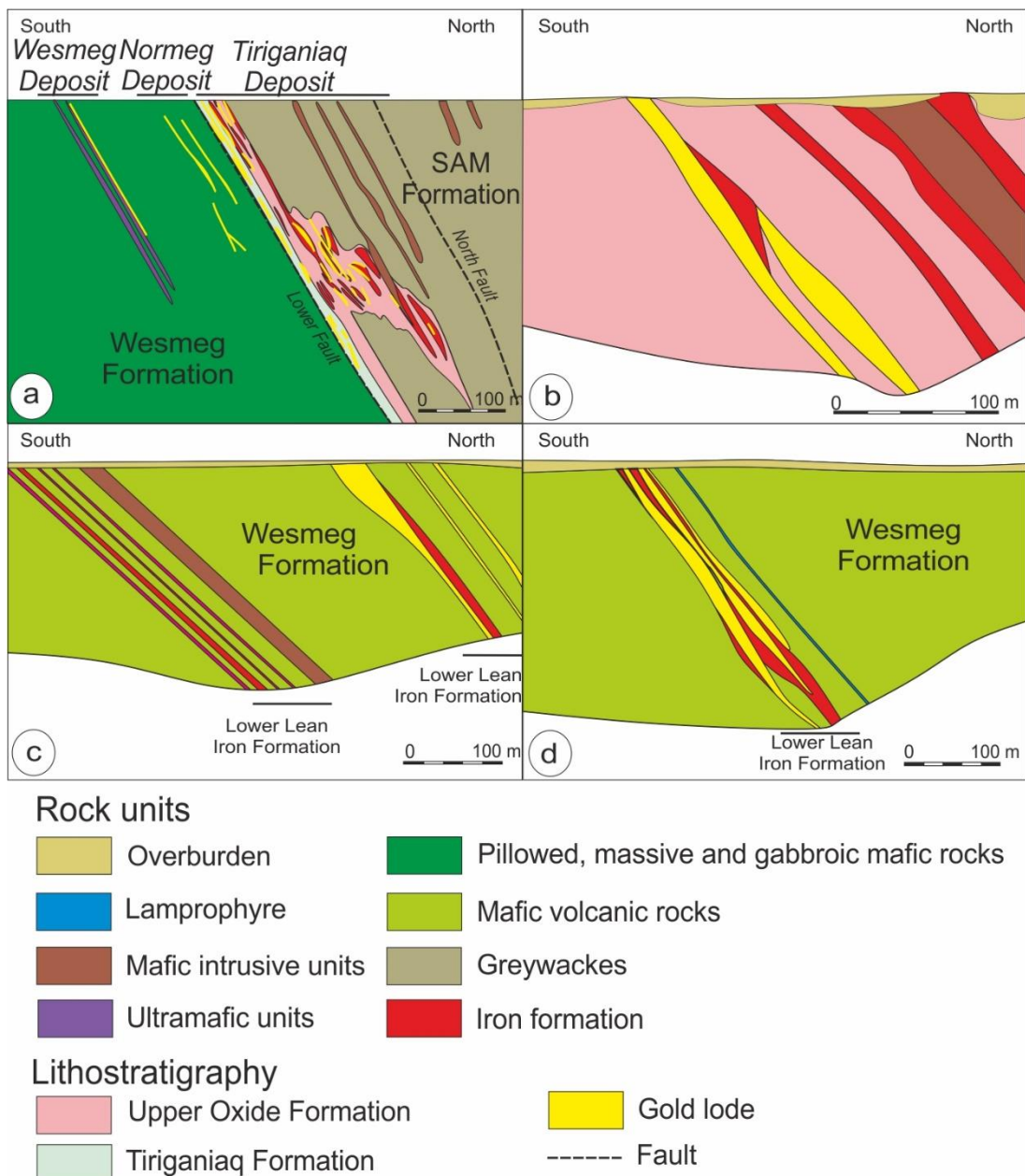


Fig. 2-4 Geological setting of the a) Tiriganiaq, b) Discovery, c) Pump and d) F-Zone deposits (modified from Caron et al., 2010 and Lawley et al., 2016).

Pyrrhotite, arsenopyrite, pyrite and minor chalcopyrite are associated with visible gold, commonly in altered oxide iron-formation. Pyrrhotite is dominant in fold hinges and is associated with coarse grained euhedral porphyroblasts of arsenopyrite. Arsenopyrite also appears within and around quartz veins or is disseminated in sheared and altered BIF. Chalcopyrite is associated with pyrrhotite replacing magnetite in BIF. Pyrite is fine-grained and associated with pyrrhotite, or arsenopyrite+pyrrhotite. The main alteration is silicification (quartz veins and quartz replacement). Chlorite bands are locally replaced by hornblende+biotite+grunerite+calcite. Grunerite is locally associated with calcite in magnetite-quartz bands. Gold, at the Tiriganiaq deposit, is associated with pyrrhotite- and arsenopyrite-bearing iron formation, and disseminated in quartz veins with ankerite,

sericite and chlorite alteration, whereas gold at the Discovery deposit is disseminated in chlorite layers, quartz veins and as fracture filling in recrystallized arsenopyrite and pyrrhotite. Gold at the F-zone and Pump deposits is found in pyrrhotite, quartz shear zones and in fractures in recrystallized arsenopyrite grains (Caron et al., 2011).

The Mustang showing is located 20 km west from the Tiriganiaq deposit, in an area metamorphosed to the lower amphibolite grade (Carpenter & Duke, 2004). It was chosen for till sampling because of the high gold value of 36.58 g/t from an outcropping quartz-carbonate vein (Qv 506) hosted by mafic rocks. Qv 503, another quartz-carbonate vein with massive tourmaline 1.5 km to the east of the Mustang showing, was also sampled. There is no significant known gold mineralization to the northwest, up-ice, of the Mustang showing.

2.4 Glacial history

During the Wisconsin glaciation, 6 regional ice movements are documented in the Kivalliq Region, based on relationship between streamlined landforms and erosional ice flow markers such as striae, crag-and-tail and roches moutonnées (McMartin and Henderson, 2004). Only 4 of these movements affected the Meliadine area. The oldest ice flow event was toward the southwest, followed by a well-defined southerly flow, then by an east-southeasterly flow and the last southeast flow from the Keewatin Ice Divide. Across the area (Fig. 2-5), glacial transport in surface till is mainly associated with the southeastward flow (Henderson, 2000; Klassen, 1995; McMartin, 2000, 2009; McMartin et al., 2003; Shilts et al., 1979). Till composition reflects bedrock sources located to the northwest. In the northwest part of the Meliadine area, till samples are rich in Dubawnt Group (5 to 8 % of clasts in the 4 to 8 mm sized fraction) and granitic clasts (85 to 100% in the 4 to 8 mm sized fraction). High values of greenstone clasts are found in till throughout the belt. Overlapping gold dispersal trains from multiple sources are responsible for a large Au anomaly (> 50 by 10 km) in till samples down-ice from the Pyke Fault (>10 grains /10 kg; McMartin, 2009). The Mustang showing is located at the northwest edge of that gold anomaly (Fig. 2-5), in an area dominated by a thin layer of till covering mafic volcanic bedrocks, affected by a dominant southeastward ice flow direction.

The surface of the area is mainly covered by glacial sediments from 2 to 20 meters in thickness, with deep-seated permafrost. The surficial materials along the shores of Hudson Bay is mainly composed by marine sediments mixed with till, whereas till covers the rest of the area. Bedrock is dominant in the northeast of the area (Fig. 2-5). Turbic cryosols covering the Meliadine area are characterized by vertical mixing of material by cryoturbation processes. Altered or fresh bedrock fragments can be mixed in with oxidized drift throughout the active layer of frostboils. The material extruded to the surface forms circular grey unsorted patterns, mainly in till (Levinson, 1980; Agriculture Canada, 1987; McMartin & Campbell, 2009).

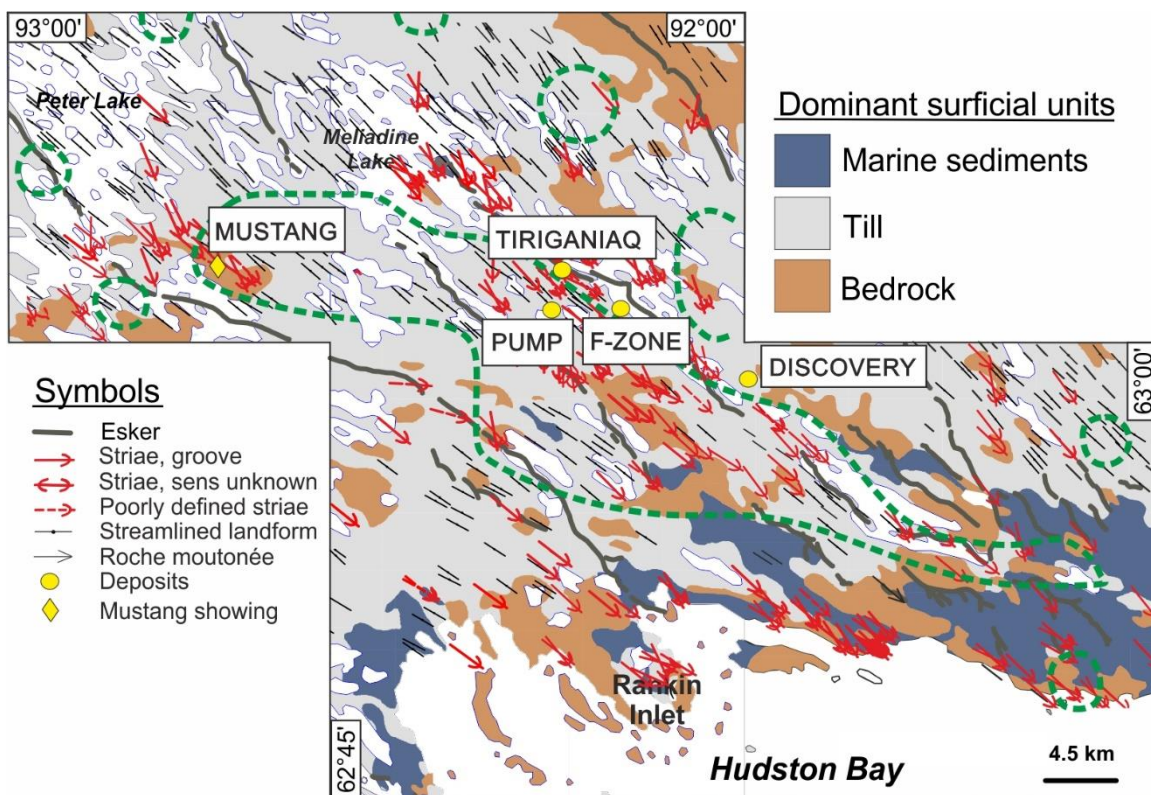


Fig. 2-5 Ice flow directions (modified from McMartin, 2000). Concentrations of gold above the 75th percentile (> 8 ppb) in the < 0.063 mm fraction of surface till are outlined in green (modified from McMartin, 2009).

2.5 Sampling and analytical methods

2.5.1 Sampling

Core samples containing targeted indicator minerals from the Tiriganiaq, Pump, F-Zone, Discovery deposits and the Mustang showing, were used to prepare 112 polished thin

sections to characterize the chemical fingerprint of the indicator minerals associated with the gold mineralization. At the Mustang showing, 7 till samples (average mass of 13.6 kg) were collected in frostboils parallel to the dominant ice flow direction along a 2 km transect (Appendix A). Two samples are located up-ice of the showing, and will serve to monitor the background signal, the 5 others are up to 1 km down-ice into the glacial dispersal train (Fig. 2-6). Eleven rocks samples were chosen to represent the different lithologies in and around the deposits and the Mustang showing (Appendix B). These rock samples were submitted to electric-pulse disaggregation (EPD) and were processed with the 7 till samples to recover heavy mineral concentrates and gold grains by Overburden Drilling Management (Ottawa). Clasts were removed by wet sieving. The < 2 mm size fraction of the till samples were panned to recover all visible gold grains. The fraction was dry-sieved to 0.25 mm. The resulting fraction of 0.25 to 2 mm sized grain was separated by density using iodide methylene (specific gravity of 3.0 g/cm³) to recover heavy minerals such as tourmaline or scheelite. A ferromagnetic separation was performed with a hand magnet. Statistically representative number of grains of magnetite, tourmaline and all the scheelite grains were mounted in epoxy stubs and polished for analysis.

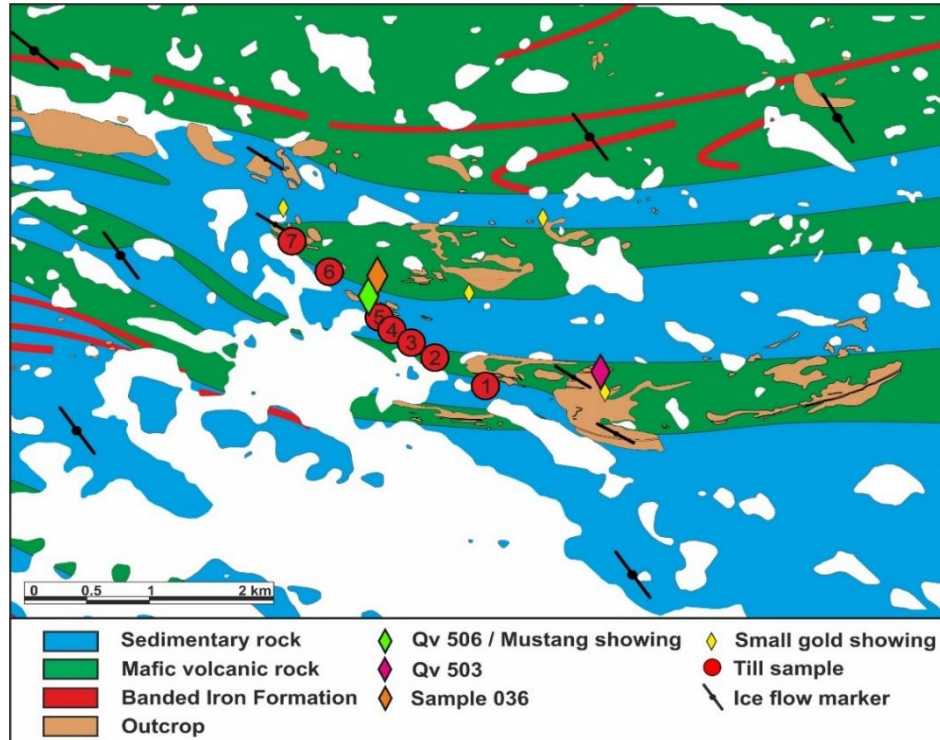


Fig. 2-6 Local geology of Mustang area with the position of showings and samples collected parallel to the local SE ice flow direction. Geology adapted from Agnico Eagle Mines.

2.5.2 Electron Probe MicroAnalysis (EPMA)

EPMA analysis of magnetite, tourmaline, scheelite and galena were conducted at Université Laval (Québec, Canada). Major and trace elements concentrations were acquired using a CAMECA SX-100 electron probe microanalyzer. The beam diameter sizes varied from 5 to 10 μm , using an acceleration voltage of 15 kV and a current of 20 nA for major, or 25 kV and 100 nA for trace elements in tourmaline, scheelite and galena, and 15 kV and 100 nA for trace elements in magnetite. The counting times on peak ranged from 20 to 130 seconds and from 10 to 20 seconds for the background. Mapping of tourmaline grains composition were acquired with 15 kV, 150 nA and 20 msec/pixel dwell time.

2.5.3 Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry analysis (LA-ICP-MS)

Quantitative trace element compositional data and maps were acquired on polished thin sections and mounts using a RESOLUTION M-50 Excimer 193 nm laser coupled to an Agilent 7700x Inductively Plasma Mass Spectrometer from LabMaTer (UQAC). Operating conditions were adapted to the analysed mineral. Beam size ranges from 33 to 75 μm for line and point analysis, and 19 μm for mapping with a scan speed of 5 $\mu\text{m}/\text{s}$, with a repetition rate of 5 to 15 Hz and energy set to produce fluency between 2 and 6 mJ/cm^2 . Three basalt glasses (GSE-1g, GSD-1g and G-Probe-6), two silicate glasses (NISTSRM610 and NISTSRM612) and an in-house natural magnetite standard from Bushveld (BC-28) were used for calibration. Stoichiometric values or average values from EPMA analysis were used to set the internal standard. Electron backscatter images allow selection of optimum areas, free of inclusions and for lines perpendicular to zonation, where present. In the case of very fine zonation, spots and lines may stretch across multiples zone giving an average concentration over one or more zones. Spots were ablated only when the grain size was too small for a line analysis. Magnetite grains were analysed according to Dare et al. (2014). For tourmaline, 72 trace elements were analysed, following the protocol of Grzela et al. (2016) whereas scheelite grains were analysed according using Sciuba et al. (2016). All data were compiled and processed using Iolite software. The instrumental characteristics and analytical procedures from EPMA and LA-ICP-MS analyses are set for each mineral in Appendices C and D with composition maps and elements data for all minerals.

2.6 Petrographic descriptions of the indicator minerals

Indicator minerals associated with the mineralization are magnetite, gold, tourmaline, galena and scheelite. Banded Iron Formations are characterised by bands of anhedral to subhedral magnetite grains intercalated with chert band (Fig. 2-7a) and local acicular grunerite (Fig. 2-7c). Magmatic magnetite is disseminated in mafic volcanic rocks and is mainly euhedral (Fig. 2-7b). Magnetite is also found associated with arsenopyrite (Fig. 2-7d), or with carbonates and chlorite (Fig. 2-7e). Gold crystals are found in calcite veins (Fig. 2-7f) or as inclusion in arsenopyrite (Fig. 2-7g). Galena with arsenopyrite or sphalerite inclusions is found in calcite veins (Fig. 2-7h). Acicular tourmaline, from quartz-carbonate veins hosted by mafic volcanic rocks, has a blue core and a dark brown rim (Fig. 2-7i). This zonation is heterogeneous within the deposits. Scheelite was not observed in thin section.

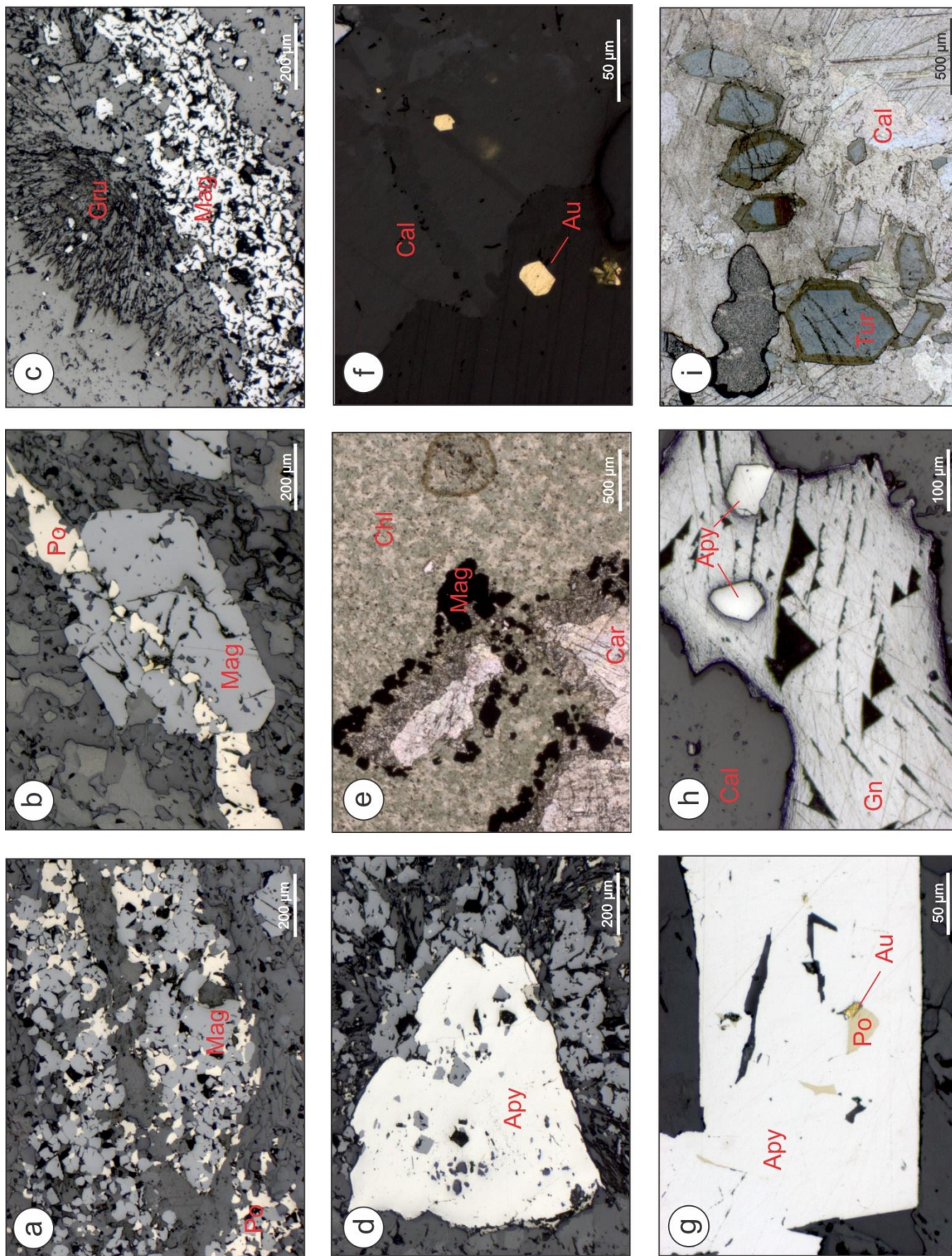


Fig. 2-7 Photomicrographs of typical indicator minerals of the Meliadine deposits. a) Band of anhedral to subhedral magnetite (Mag) grains in equilibrium with pyrrhothite (Po) from BIF, b) Euhedral magmatic magnetite cut by pyrrhothite, c) Magnetite band with acicular grunerite (Gru), d) Arsenopyrite (Apy) grain with magnetite inclusions surrounded by magnetite and acicular grunerite, e) Magnetite with carbonates (Car) and chlorite (Chl), f) Gold (Au) crystal in calcite (Cal) vein, g) Coarse idiomorphic arsenopyrite crystals with pyrrhothite and gold inclusions, h) Galena (Gn) with arsenopyrite inclusions in calcite vein, i) Tourmaline (Tur) with typical darker rim.

2.7 Results

2.7.1 Till composition

Till samples collected around the Mustang showing contain up to 30% by weight (0.9 to 3.2 kg) of pebble sized clasts. Lithologies include clasts of volcanic and/or sedimentary origin (35 to 90%), granitic origin (10 to 60%) and some red and buff-colored Proterozoic sediments (up to 5%). All samples but one have a consistent aerated texture; they all show a primary grey- to pink-beige color except for Till 03 and 04 presenting a light ochre color. Clay to sand particles compose the non-organic and unsorted matrix (Appendix A). Magnetite, tourmaline, scheelite and gold were recovered from till samples in the 0.25 to 0.5 mm, the 0.5 to 1 mm and the 1 to 2 mm sized fractions. Detrital gold grains vary from a minimum of 15 μm by 15 μm to a maximum size of 75 μm by 125 μm . Tourmaline grains show a weak to absent zonation. Inclusions of ilmenite, pyrrhotite or silicates are rarely observed in tourmaline. No grain of arsenopyrite or galena was found in the studied fractions.

2.7.2 Number of grains of indicator minerals along the Mustang showing transect

The number of gold, magnetite, tourmaline and scheelite grains < 2 mm, normalized to 10 kg, is shown along the Mustang showing transect (Fig. 2-8). Gold grains (Table 2-1) have been separated, measured and counted according to their morphology (DiLabio, 1990; Averill, 2001). Along the transect, the number of gold grains generally increases down-ice of the showing from a background mean value of 7.5 grains to a maximum value of 19.1 at the southeast end of the transect (Fig. 2-8a). The number of pristine gold grains reaches the maximum of 2.1 at 200 meters down-ice of the showing. Modified-shape grains culminate with 6.4 grains at 300 m down-ice, whereas reshaped grains reach a maximum of 13.0 grains at 1 km down-ice of the Mustang showing (Fig. 2-8a).

The number of magnetite grains recovered in the magnetic fraction is generally constant along the transect (Fig. 2-8b). The number of magnetite is reduced for Till 03 and 04 at respectively 300 and 200 m down-ice. A small amount of titanomagnetite, ilmenite, pyrrhotite and chromite was also recovered with magnetite in the ferromagnetic fraction (Fig. 2-8b). However, the number of all ferromagnetic minerals in the till samples at 200

and 300m down-ice decreases (Fig. 2-8b), a trend also presents in the weight of the magnetic fraction.

The number of tourmaline grains along the Mustang transect is constant except for a high value in the 0.25 to 0.5 mm sized grains of the till sample 1 km up-ice (Fig. 2-8c).

Nine grains of scheelite were recovered from the 0.25 to 0.5 mm sized fraction and 2 from the 0.5 to 1mm sized fraction in 4 of the 7 till samples (Fig. 2-8d). The two grains from the 0.5 to 1 mm sized fraction are found in the two most down-ice till samples in the dispersal train. The nine grains from the 0.25 to 0.5 mm sized fraction are found in till samples up and down-ice of the Mustang showing. Background values of 0 to 1.57 grains are found up-ice from Mustang. The number of scheelite grains increases from 1.92 to 3.48 from 600 to 1 km down-ice from the Mustang showing (Fig 2-8d).

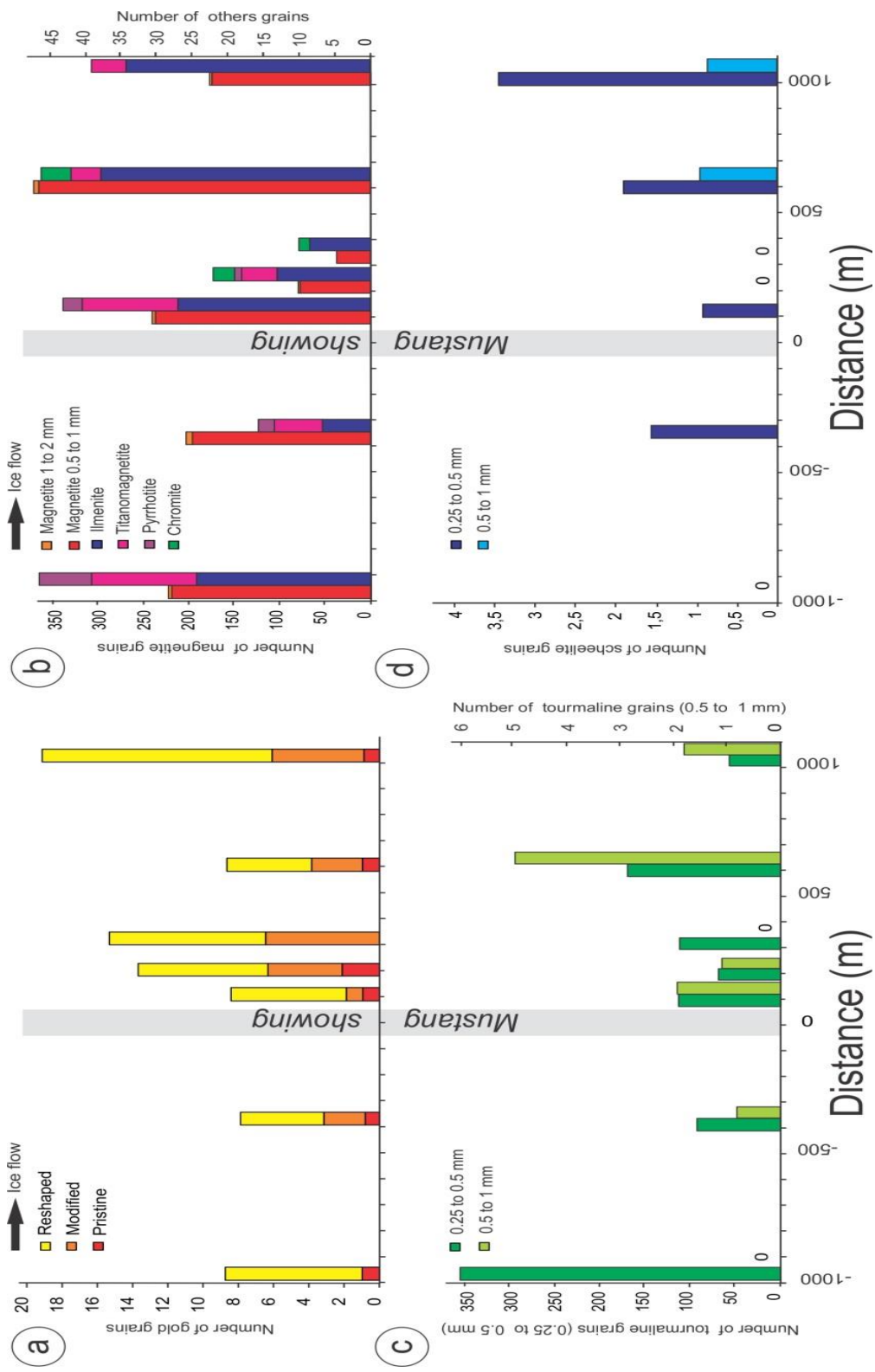


Fig. 2-8 Number of a) gold, b) magnetic, c) tourmaline and d) scheelite grains of < 2mm sized fraction normalized to 10 kg of till samples along the 2 km Mustang transect.

Table 2-1 Number of grains along the Mustang showing transect, normalized to 10 kg of the < 2 mm sized fraction.

Sample	Distance from Mustang showing (m)	Gold				Tourmaline	
		Total	Reshaped	Modified	Pristine	0.25 to 0.5 mm	0.5 to 1 mm
Till 01	1035	19.13	13.04	5.22	0.87	58.39	1.74
Till 02	602	8.65	4.81	2.88	0.96	174.63	4.81
Till 03	323	15.32	8.87	6.45	0	115.19	0
Till 04	201	13.68	7.37	4.21	2.11	70.81	1.05
Till 05	101	8.41	6.54	0.93	0.93	116.49	1.87
Till 06	-368	7.87	4.72	2.36	0.79	95.40	0.79
Till 07	-980	8.74	7.77	0	0.97	365.92	0

Sample	Scheelite		Magnetite		Minerals in the 0.5 to 1 mm sized ferromagnetic fraction			
	0.25 to 0.5 mm	0.5 to 1 mm	0.5 to 1 mm	1 to 2 mm	Ilmenite	Chromite	Titanomagnetite	Pyrrhotite
Till 01	3.48	0.87	179.45	1.74	35.89	0	5.13	0
Till 02	1.92	0.96	374.67	5.77	39.67	4.41	4.41	0
Till 03	0	0	38.71	0	8.87	1.61	0	0
Till 04	0	0	80.00	2.11	13.68	3.16	5.26	1.05
Till 05	0.93	0	242.95	3.74	28.25	0	14.13	2.83
Till 06	1.57	0	201.33	7.09	7.11	0	7.11	2.37
Till 07	0	0	224.59	3.88	25.81	0	15.49	7.74

2.7.3 Geochemistry of indicator minerals

2.7.3.1 Magnetite

In this study, aliquots of 100 grains from the 0.5 to 1 mm sized magnetic fraction of each till sample were mounted in epoxy, along with all the grains from the 1 to 2 mm sized fraction. A total of 67 magnetite grains from all the deposits and 560 magnetite grains from till samples were analysed by EPMA. One hundred and ninety-eight magnetite grains from two BIF samples disaggregated by EPD were also analysed to verify the variation of the chemical composition of magnetite from BIF. Twenty-nine grains from polished thin sections were large enough, and without inclusions or exsolutions, to be analysed by LA-ICP-MS. Eighty-six grains belonging to the seven till samples and eleven from the two BIF samples submitted to EPD were also analysed with the LA-ICP-MS.

Magnetite from the deposits and the host rocks is classified according to its textural relationships and morphology into 4 groups: 1) magnetite from BIF (n=28), typically anhedral and forming millimetric to centrimetric bands (Fig. 2-7a), 2) magmatic magnetite (up to 0.3 mm, n=10), euhedral and disseminated in mafic volcanic rocks (Fig. 2-7b), 3) coarse grains (up to 2 mm) of magnetite (n=4) of metamorphic origin, 4) hydrothermal magnetite (n=25) in quartz-carbonates veins.

The discriminant diagrams from Dupuis and Beaudoin (2011), based on the compositional difference between magnetite from different deposits allow to separate BIF magnetite from other sources. All magnetite from Meliadine deposits plots outside the field of Ni-Cu-PGE (Fig. 2-9a) or outside the Volcanic Massive Sulfide (VMS) fields (Fig. 2-9b). Magnetite from BIF plot in or near the BIF field, hydrothermal magnetite plot in the hydrothermal field (mainly IOCG and porphyry) whereas magmatic magnetite plots in the magmatic field (Fe-Ti, V, Figs. 2-9c & d). Magnetite from BIF is enriched in aluminium, whereas hydrothermal, magmatic and metamorphic magnetite has a higher value in vanadium (Fig. 2-10).

Only 5 % of the magnetite from the till samples plot in the Ni-Cu-PGE field (Fig. 2-9a) and 12.5% in the VMS field (Fig. 2-9b). A third population of magnetite Mn-rich is found in till samples (Fig. 2-10).

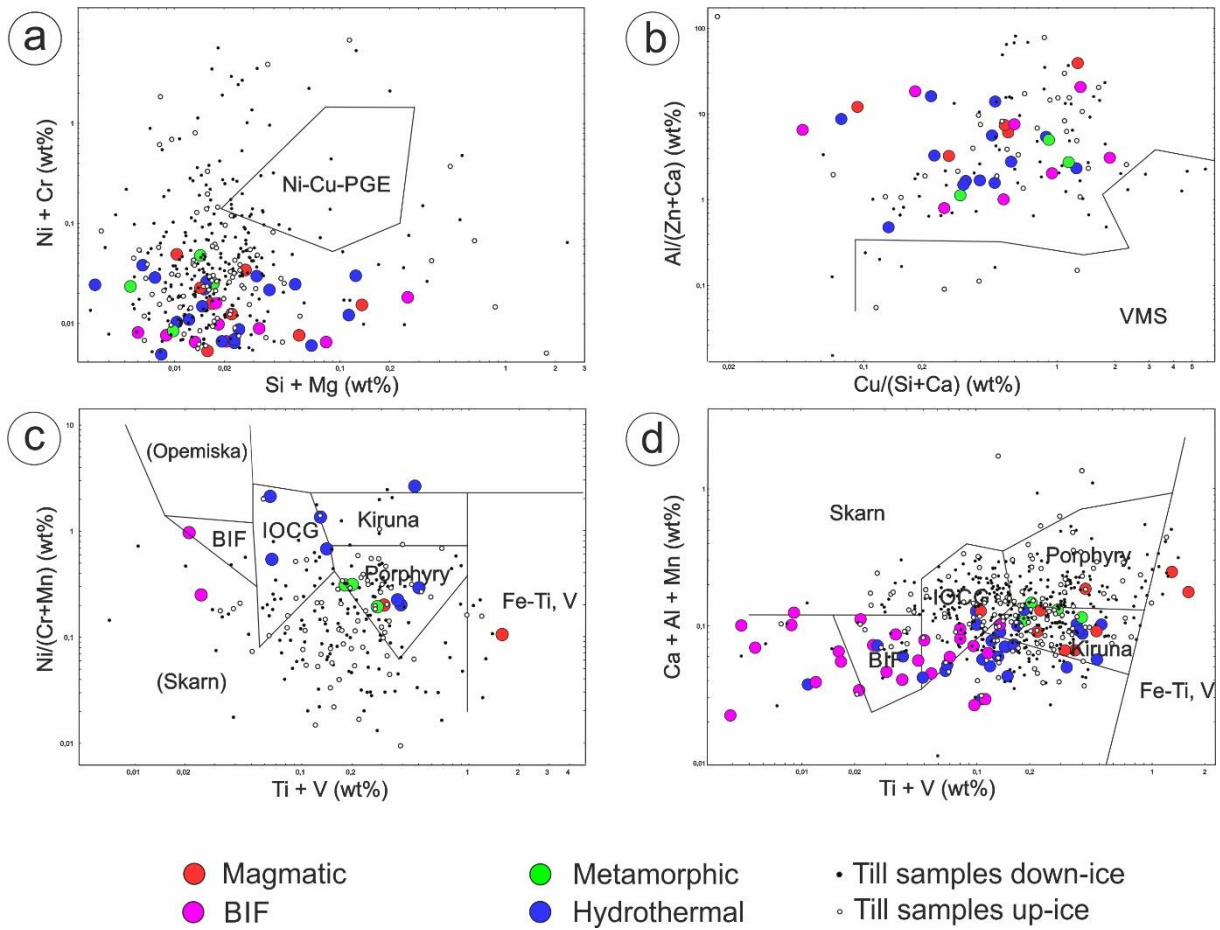


Fig. 2-9 Discriminant diagrams for iron oxide from Dupuis and Beaudoin (2011), a) Ni+Cr vs Si+Mg, b) Al/(Zn+Ca) vs Cu/(Si+Ca), c) Ni/(Cr+Mn) vs Ti+V, d) Ca+Al+Mn vs Ti+V.

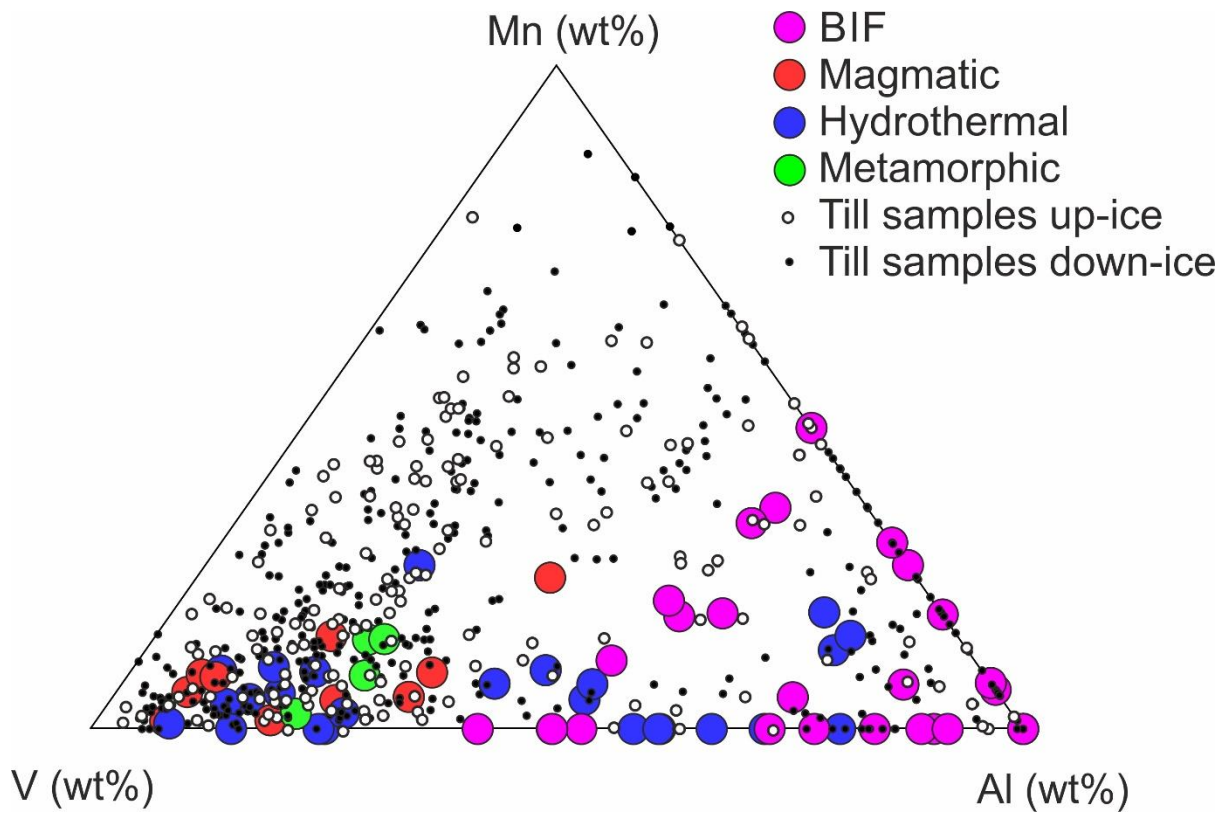


Fig. 2-10 Concentration of Al, Mn and V for bedrock and till magnetite.

Trace element concentrations normalized to bulk continental crust (Rudnick & Gao, 2003) are plotted in order of increasing compatibility with magnetite (Fig. 2-11; Dare et al., 2014). Most of the trace elements patterns of the magmatic and hydrothermal magnetite from the Meliadine deposits are, respectively, similar to the defined patterns from other magmatic (Fig. 11a) and hydrothermal (Fig. 11b) magnetite. The population of Mn-rich magnetite, found in till samples, displays a pattern similar to felsic magnetite (Fig. 11c). Magnetite from BIF is commonly depleted in Co, V and Ni compared to magmatic and metamorphic magnetite (Figs. 2-12a & b). However, these concentrations are similar to other hydrothermal magnetites (Fig. 2-12c and Table 2-2).

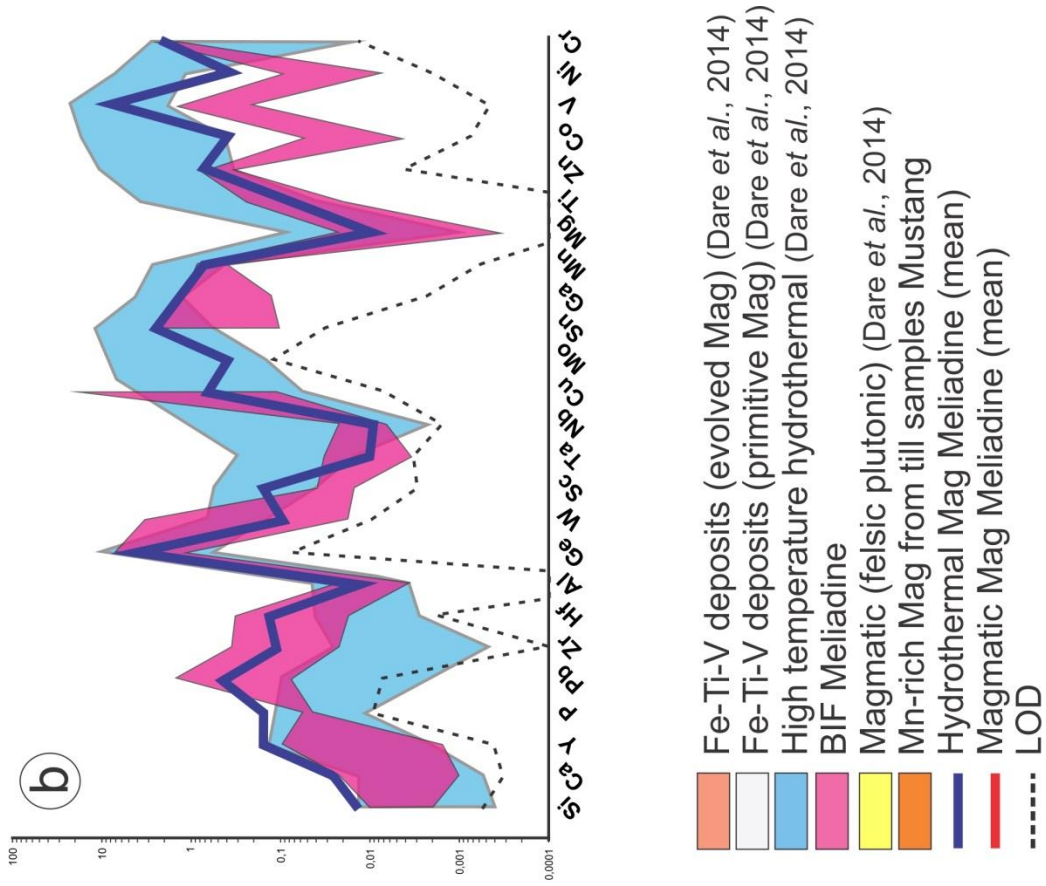


Fig. 2-11 Multi-element variation diagrams for magnetite from Meliadine deposits compared to magnetite data from Dare et al. (2014).

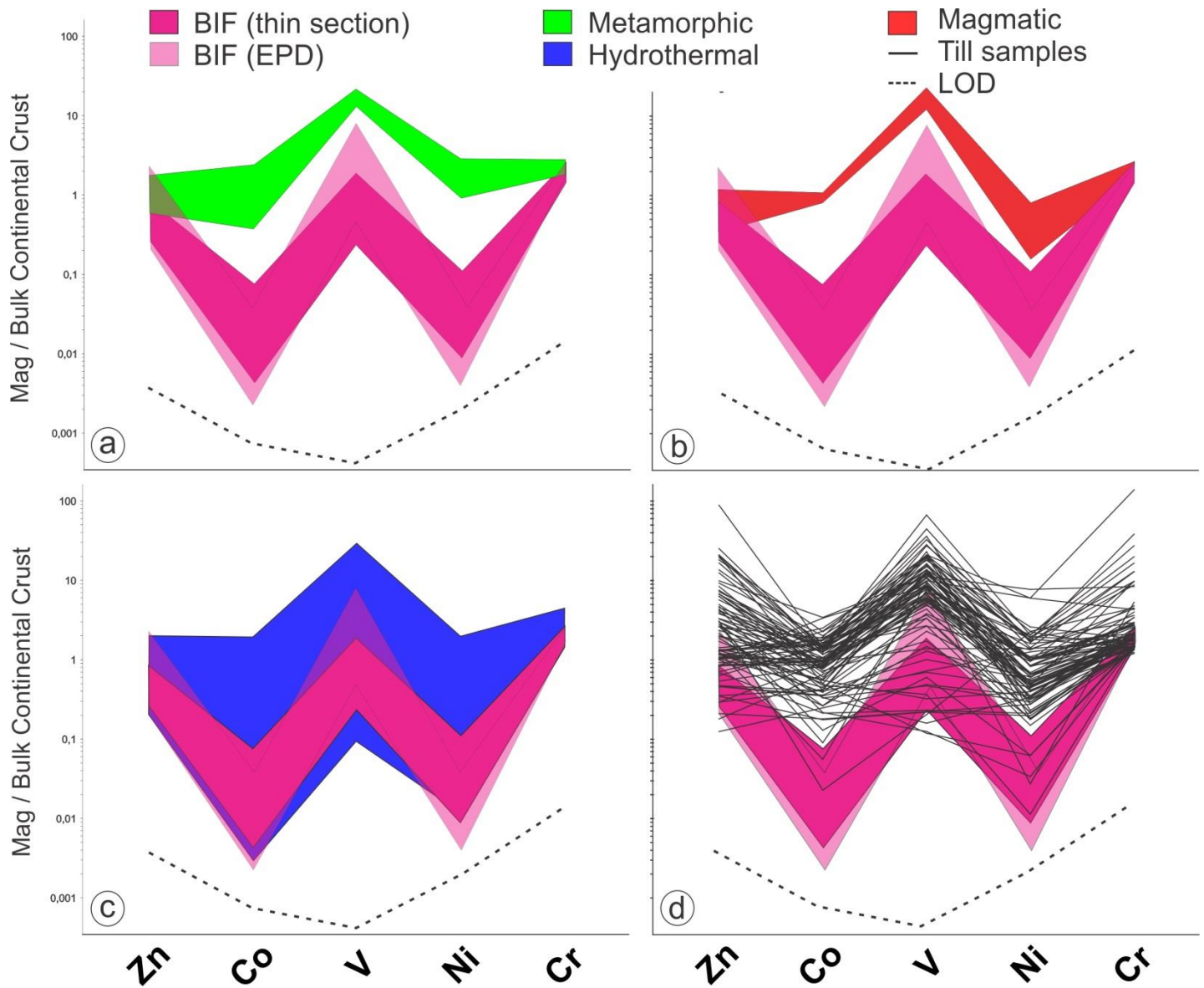


Fig. 2-12 Multielement variation diagrams of the five most compatible elements in magnetite normalized to bulk continental crust (values from Rudnick and Gao, 2003).

Table 2-2 Range of compositions of the different types of magnetite (ppm).

Magnetite type	Co	V	Ni
BIF	0.117 - 3.950	12.58 - 262.00	0.51 - 19.90
Hydrothermal	0.076 - 49.100	49.6 - 3860.0	0.67 - 111.10
Magmatic	21.44 - 28.75	1720 - 3295	9.41 - 48.40
Metamorphic	10.38 - 64.80	1800 - 3020	55.28 - 174.40
EPD	0.064 - 19.400	6.21 - 1158.00	0.25 - 30.00
Till	0.23 - 93.00	13.5 - 9240.0	0.663 - 608.900

2.7.3.2 Tourmaline

Tourmaline is a well-known indicator mineral associated with a wide variety of mineral deposits and geological environments (Rozendaal & Bruwer, 1995; Jiang et al., 1999; Torres-Ruiz et al., 2003; Raith et al., 2004; Pal et al., 2010; Slack & Trumbull, 2011; Trumbull et al., 2011). Tourmaline is stable and resistant to weathering and alteration and is formed in a wide range of pressure (from <6M to >6GPa) and temperature (from <150° to more than 900°). The environmental chemical composition is recorded within its complex structure and chemistry (Henry & Dutrow, 2012). Its formula can be simplified by $\text{XY}_3\text{Z}_6(\text{T}_6\text{O}_{18})(\text{BO}_3)_3\text{V}_3\text{W}$ with $\text{X} = \text{Na}^{1+}, \text{Ca}^{2+}, \text{K}^{1+}$ or vacancy; $\text{Y} = \text{Fe}^{2+}, \text{Mg}^{2+}, \text{Mn}^{2+}, \text{Al}^{3+}, \text{Li}^+, \text{Fe}^{3+}, \text{Cr}^{3+}$; $\text{Z} = \text{Al}^{3+}, \text{Fe}^{+3}, \text{Mg}^{2+}, \text{Cr}^{3+}$; $\text{T} = \text{Si}^{4+}, \text{Al}^{3+}, \text{B}^{3+}$; $\text{V} = \text{OH}^-, \text{O}^{2-}$ and $\text{W} = \text{OH}^-, \text{F}^-, \text{O}^{2-}$.

Tourmaline grains were only found in the Tiriganiaq, Pump and F-zone deposits. Few grains were also recovered using EPD from sample 036, a mineralized mafic volcanic rock from a drill-hole 100m north of the Mustang showing. Tourmaline from Qv 503 was also analyzed. In this sample, massive tourmaline is associated with pyrite. Tourmaline was also recovered in the heavy mineral concentrates from all till samples, mainly within the 0.25 to 0.5 mm sized fraction. Twenty-four grains from the deposits, and 71 grains from till samples, were analysed by EPMA. Among them, 20 grains from the deposits, and all the grains from till samples, were analysed by LA-ICP-MS.

The most variable sites, **X**, **Y** and **Z**, are commonly used for its characterisation (Henry et al., 2011; Fig. 2-13). The tourmaline from mineralization as well as the tourmaline from all till samples belongs to the alkali group with few grains in the X-vacant group (Fig. 2-13a). Dravite composed the bulk of the samples. Some schorl and rare magnesio-foitite are present (Fig. 2-13b).

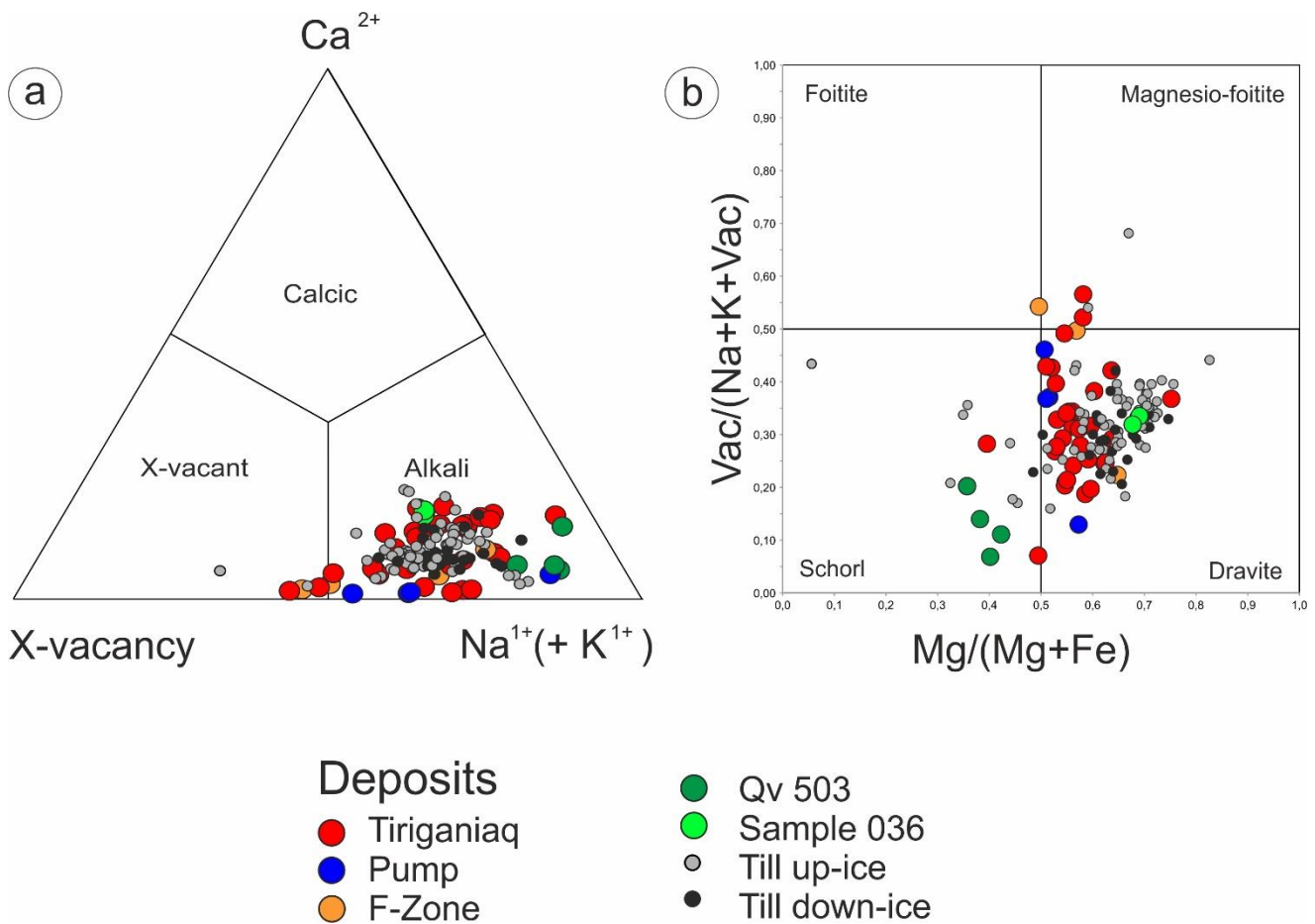


Fig. 2-13 Tourmaline composition using the diagrams of Henry et al. (2011), a) Primary tourmaline groups based on the X site, b) Tourmaline species based on the Mg/(Mg+Fe) vs Vac/(Na+K+Vac) ratios.

Tourmaline grains from the deposits generally have a rim enriched in Mg, Ca, Al, Ti and V and slightly depleted in Fe and Cr (Appendices C and D). Tourmaline grains from the deposits have a flat REE pattern with a positive Eu anomaly (Fig. 2-14). The tourmaline core commonly shows a slight enrichment in Heavy Rare Earth Elements (HREE) compared to the rim. Tourmaline from Qv 503 sample displays a flat pattern with a positive Eu anomaly and enrichment in HREE (Fig. 2-14). Tourmaline from the mineralized mafic volcanic rock 036 has a similar pattern but is enriched in Σ REE (Fig. 2-14). Tourmaline grains from till sample show 4 typical REE patterns (means). The flat REE pattern with positive Eu anomaly typical of tourmaline from the deposits is found in tourmaline from till samples (Fig. 15a). Few grains show an HREE enriched pattern similar to sample 036 (Fig. 15b). The main proportion of grains from till samples yields a negative-slope pattern with or without positive Eu anomaly (Fig. 15c & d). Tourmaline

from till samples is generally depleted in V compared to the tourmaline from the deposits and from Qv 503 (Fig. 2-16).

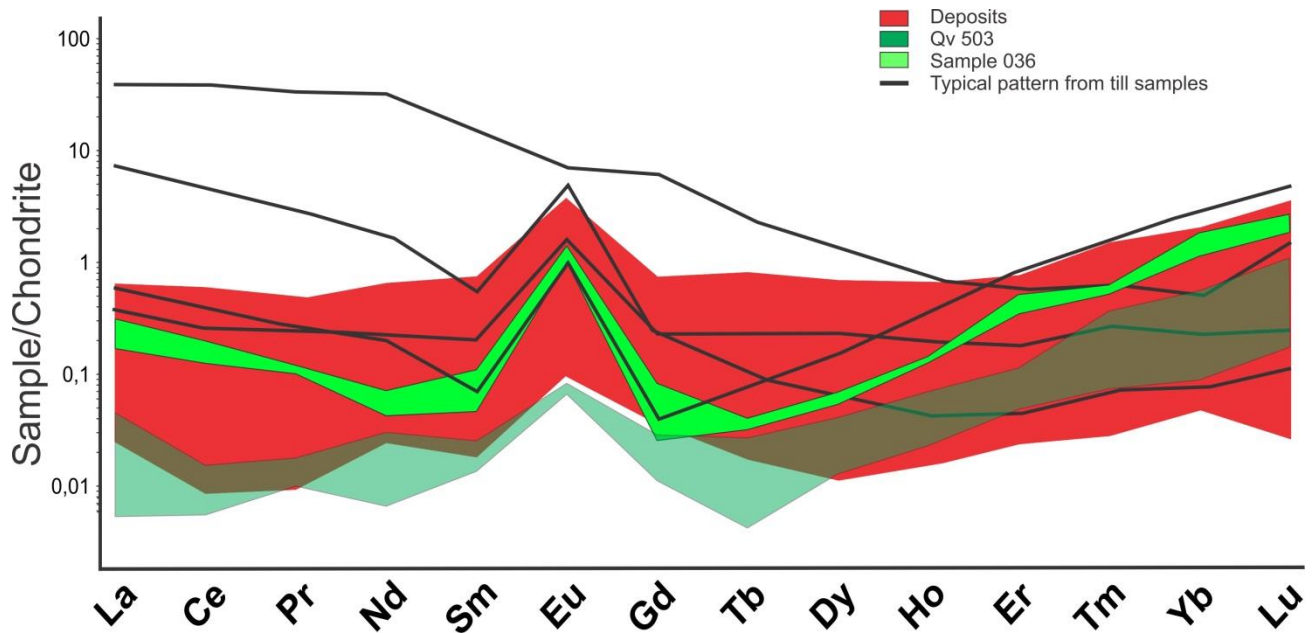


Fig. 2-14 REE pattern of tourmaline from the deposits and average REE patterns from tourmaline from till samples normalized to chondrite values from Taylor and McLennan (1985).

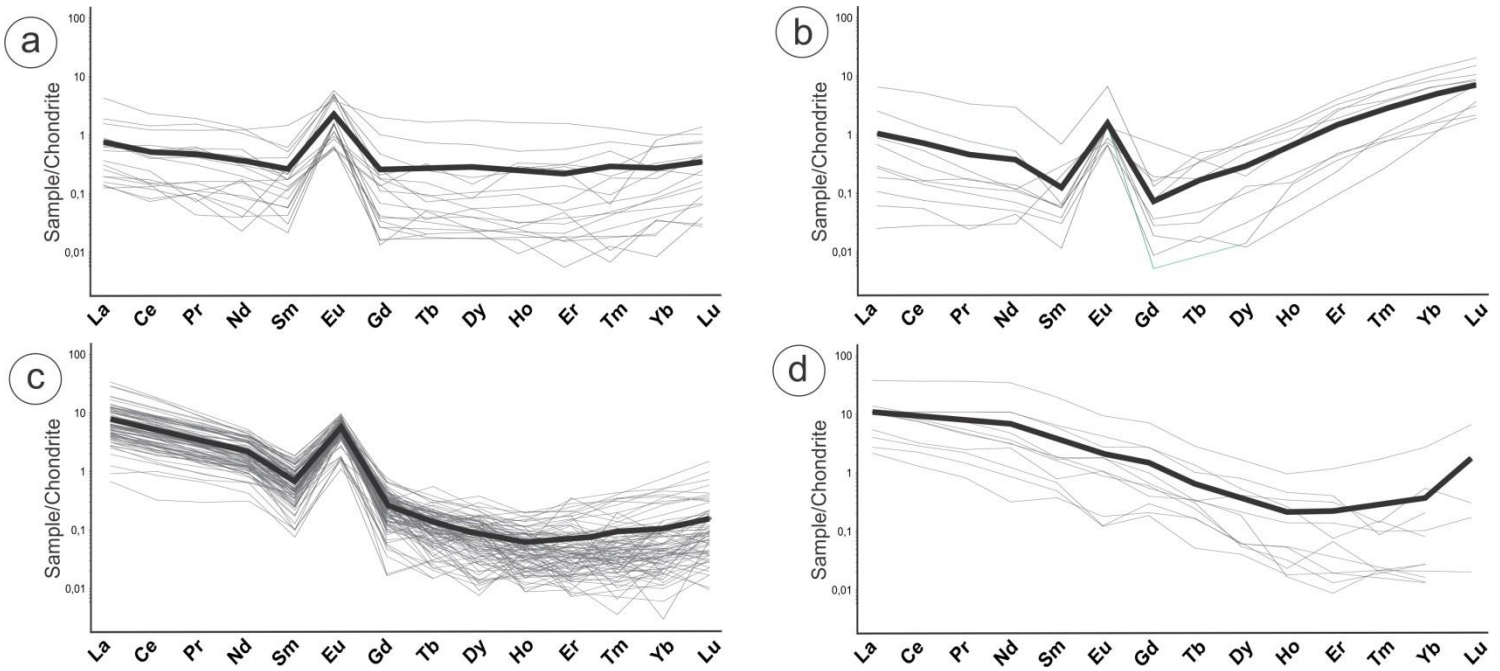


Fig. 2-15 The different patterns of REE found in tourmaline from till samples with typical patterns (means) represented by the larger lines.

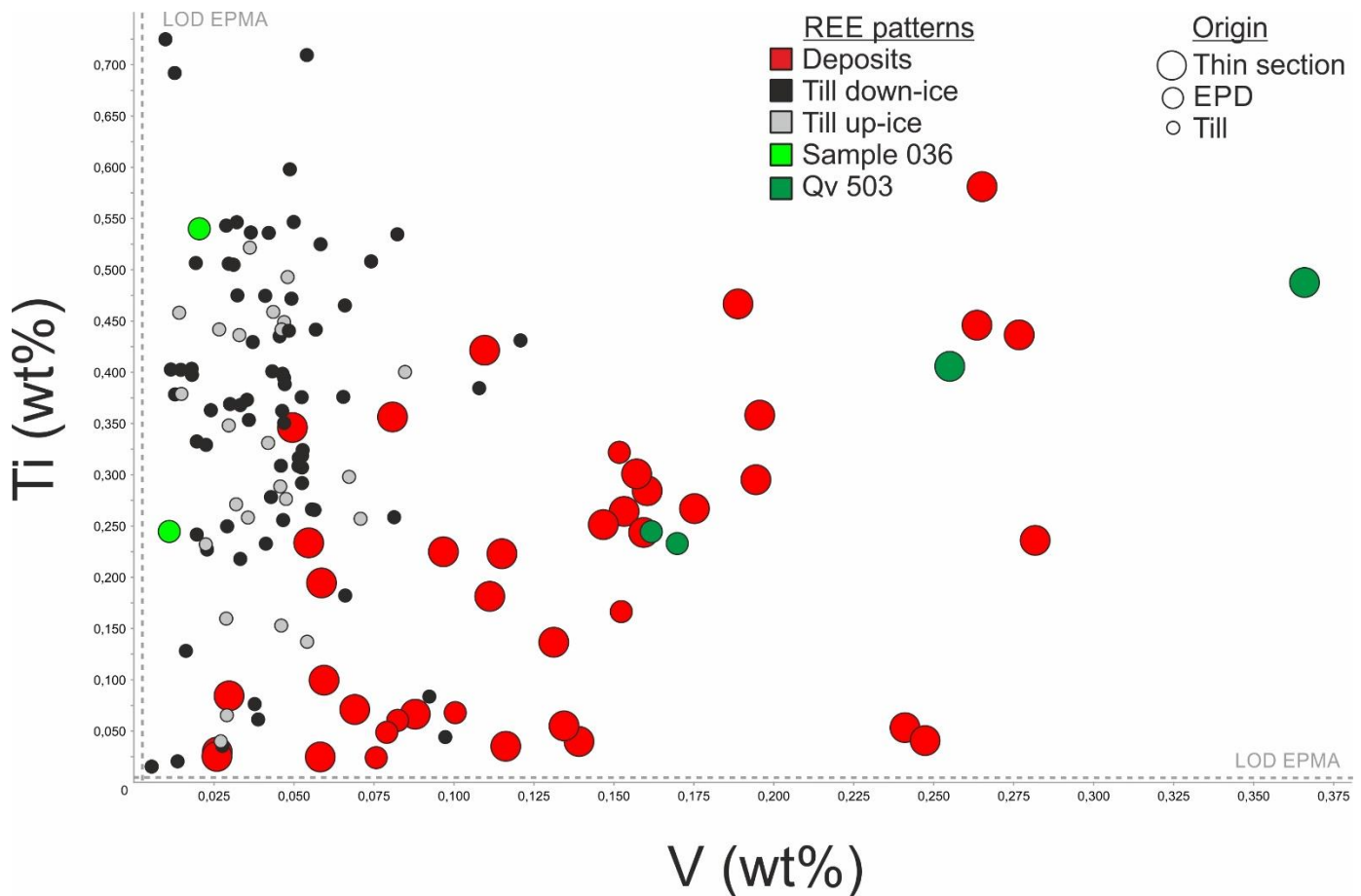


Fig. 2-16 V and Ti composition of tourmaline grains.

2.7.3.3 Scheelite

Scheelite (CaWO_4) is a common accessory mineral of diverse hydrothermal ore-deposit settings, including skarn, veins, porphyry and gold systems (De Smeth, 1985; Robert & Brown, 1986). It is a robust mineral, resisting to glacial and fluvial transport and easily recovered in heavy mineral concentrate using its fluorescence under short wave ultraviolet light. Previous studies suggested that the chemical composition of scheelite, coupled with cathodoluminescence, has the potential to discriminate different deposits types (Poulin et al., 2013; 2014; Poulin, 2016; Sciuba et al., 2016). Even if the association between gold and scheelite in orogenic gold deposits has commonly been observed, scheelite has not been identified in the Meliadine deposits. Five grains were recovered by EPD from the arsenopyrite-rich sample (Qv 506) from the outcropping

gold-bearing vein at Mustang showing. One of the grains recovered by EPD is associated with arsenopyrite and quartz, placing the scheelite within the mineralized part of the rock sample. Eleven grains were recovered from till samples, in the 0.25 to 0.5 mm sized fraction of heavy mineral concentrate.

Scheelite grains from the showing and the till samples have a homogenous texture under cathodoluminescence (appendix E), a common characteristic of scheelite from orogenic gold deposits (Sciuba et al., 2016). Cobalt, Th, U, Ti, Ba, V, Ta, Zn, Lu and B have median concentration between 0.004 and 1 ppm. Tm, La, Pr, Eu, Cu, Mg, Tb, Yb, Ho and Ce concentrations vary from 1 to 10 ppm. Sm, Fe, Mn, Er, Pb, Nd, Na, Dy, Gd, Nb and Y contents range from 10 to 100 ppm whereas S and Si median values are respectively 283 and 510 ppm. Ag, Sn, Li, Cr and K have up to 85% of censored values. Scheelite from the showing has a concentration in Mo ranging from 8 to 88 ppm, Sr from 293 to 495 ppm and As from <14 to 18 ppm. The content from scheelite in till samples varies for Mo from 124 to 5687 ppm, Sr from 49 to 403 ppm and As from <1 to 42 ppm. Scheelite from the Mustang showing displays a bell-shape REE pattern with a negative Eu anomaly (Fig. 2-17). A few scheelite grains from tills down-ice of the Mustang showing have the same bell-shape REE pattern (Fig. 2-17). Two grains from the 0.5 to 1 mm sized fraction show a flat REE pattern (Fig. 2-17). For the scheelite from the Mustang showing, the Mo values are systematically below the limit of detection ranging from 53 to 64 ppm, whereas scheelite from till samples has higher Mo contents, up to 5687 ppm (Fig. 2-18).

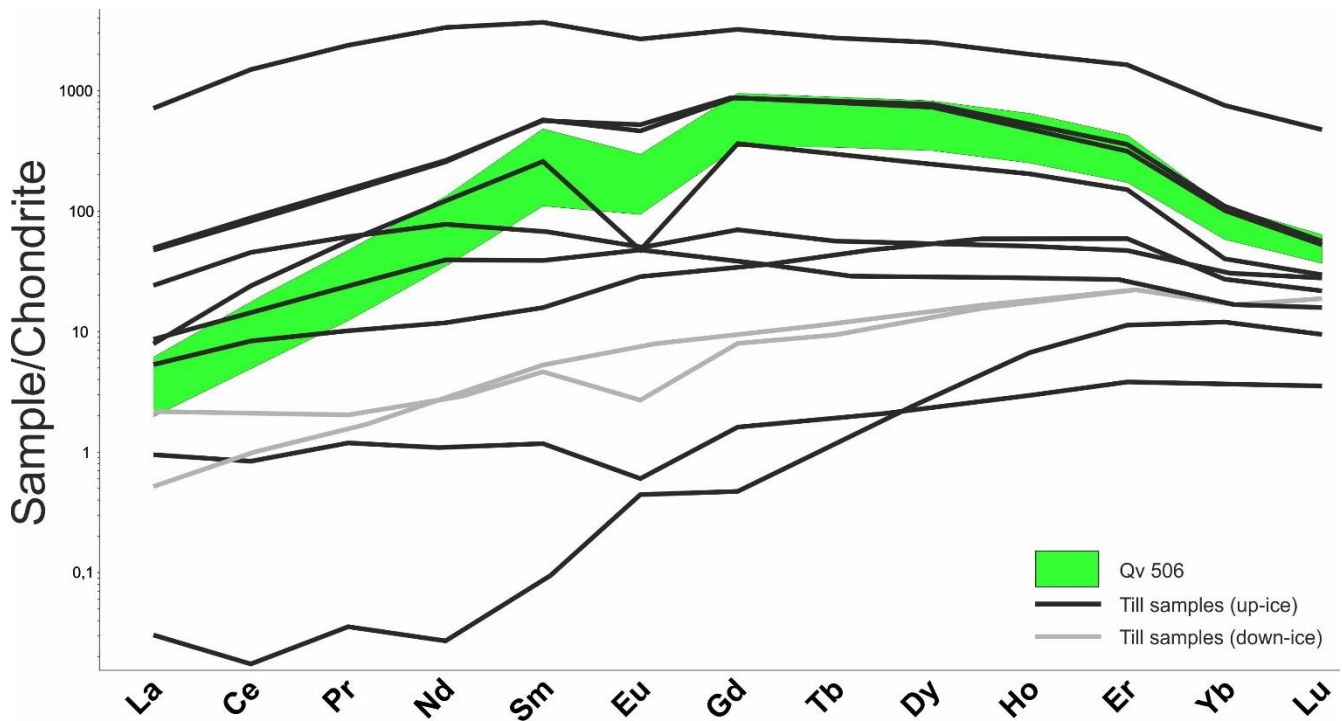


Fig. 2-17 REE patterns of the eleven scheelite grains from till samples and Qv 506. The values of REE have been normalized to chondrite (Sun and McDonough, 1995).

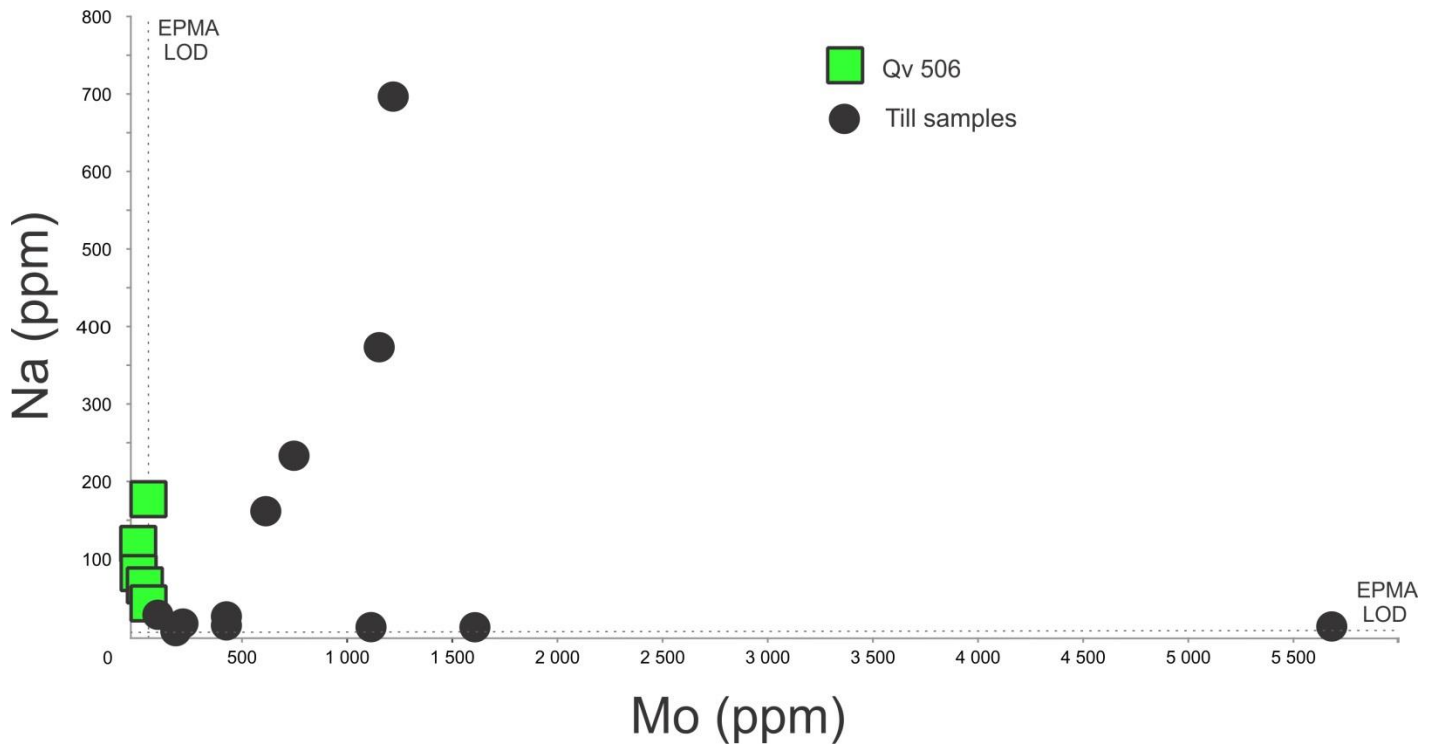


Fig. 2-18 Mo and Na composition (ppm) in scheelite from LA-ICP-MS illustrating the low concentrations of Mo and Na in scheelite from Qv 506 from the Mustang showing and EPMA Limit of Detection (LOD).

2.7.3.4 Galena

Because of its high density, galena is easily recovered in heavy mineral concentrates. But this brittle sulfide has poor resistance to mechanical transport and surficial weathering. Galena is found in the Tiriganiaq (n=12) and F-Zone (n=1) deposits, associated with calcite in quartz-carbonate veins. Five galena grains recovered using EPD belong to two samples from the Tiriganiaq deposit. In this study, we found no galena in the 0.25 to 0.5 mm size fraction of the heavy mineral concentrates of till samples. The high concentration in Fe from two grains from EPD (1.0 and 2.3 wt%) suggest that the beam probably hit the adjacent pyrrhotite. Ag and Bi values range from 0.01 to 1 wt%, Te from 0.01 to 0.1 wt%, Fe, Se and Sb from 0.001 to 1 wt %. Concentration of Cu is < 0.04 wt %, As and Zn < 0.02 wt % and Co and Ni are < 0.01 wt %. More than 65% of the values for Pd, Sn, Au, Ni, As and Zn are below the detection limit. $(Ag + Cu)^+$ and $(Bi + Sb)^{3+}$ show a linear correlation ($R^2= 0.9651$; Fig. 2-19).

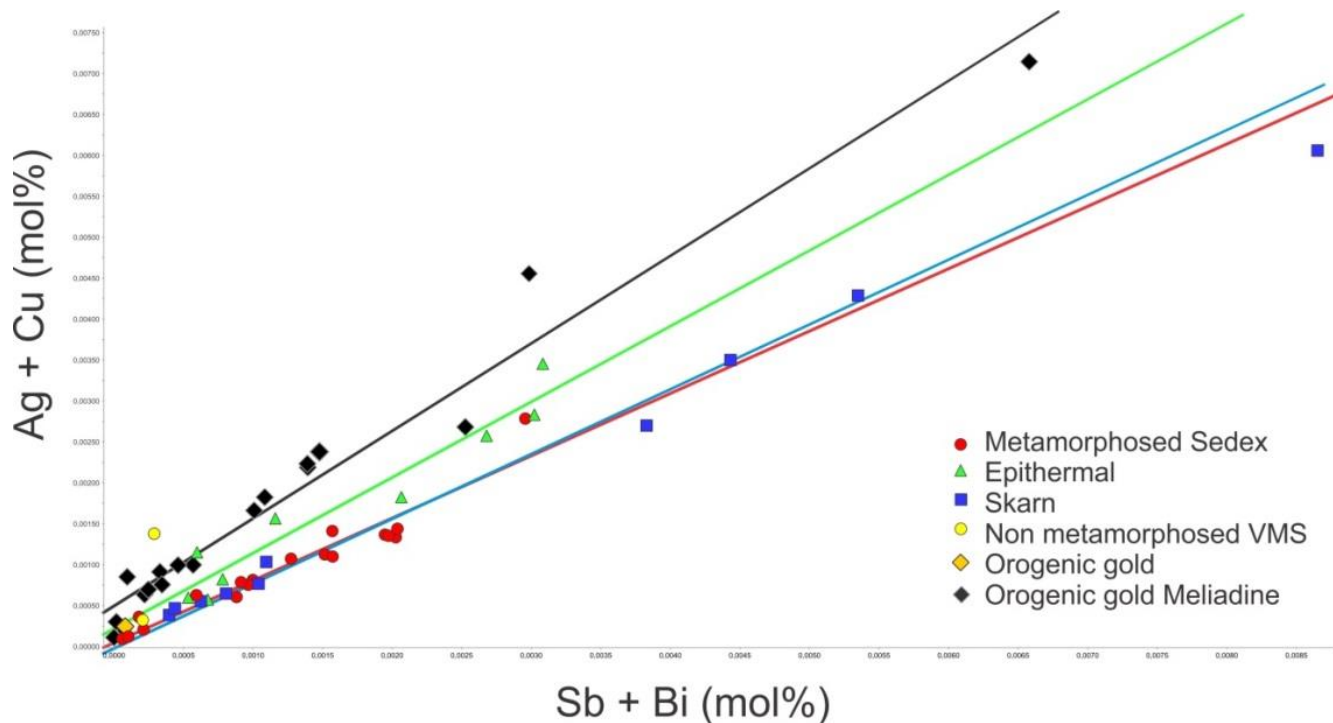


Fig. 2-19 Galena composition from Meliadine orogenic gold deposits compared to other types of deposits (adapted from Georges et al., 2015).

2.8 Discussion

2.8.1 Abundance of indicator minerals along the transect across the Mustang showing

The number of magnetite, tourmaline and scheelite grains along the till sample transect across the Mustang showing does not show a systematic variation, hence, it cannot be related to the presence of auriferous mineralization. In contrast, the number of gold grains in till samples increases toward the end of the transect, in the dispersal train, allowing detection of the Mustang showing (Fig. 2-8a). The number of gold grains in the sample located 600 m down-ice of the Mustang showing is similar to the background value, and there is an increase in the number of grains at 1 km; this pattern could suggest the presence of an unknown mineralized area between 600 m and 1 km in the dispersal train. This anomaly could originate from a local deviation of the ice flow direction with respect to the transect direction or from the depth of sampling in the frostboil (McMartin, 2009).

Magnetite is a common oxide mineral and can originate from a wide range of magmatic, metamorphic and sedimentary rocks as well as in different deposits such as iron oxide-copper-gold or banded iron formations (Beaudoin & Dupuis, 2010; Dare et al., 2014; Nadoll et al., 2014). Titanomagnetite is a constituent of a wide variety of igneous rocks, ilmenite can be derived from igneous and metamorphic rocks up-ice (Jang & Naslund, 2003; He et al., 2016). The occurrence of chromite at 200 and 300 m down-ice from the showing suggests the presence of kimberlite, or ultramafic to mafic rocks, or a fragment of these rocks transported by glaciers and set between 100 and 200 m down-ice that has not been recognized (Fig. 2-8b).

The number of tourmaline grains, showing no significant variation along the transect, does not seem to be related to the gold mineralization. However, the abundance of aegerine or hornblende, physically similar to tourmaline, in all the till samples may have decreased the efficiency of the recovery of all the tourmaline grains in the 0.25 to 0.5 mm sized fraction. The tourmaline density (2.8 to 3.3 g/cm³), close or lower than the separating density of 3 g/cm³ of the heavy mineral concentrates, could have prevented separation of some grains and introduced biases in the number of recovered grains.

A total of eleven scheelite grains were recovered in all of the 0.25 to 2 mm fraction. The number is low and does not allow to accurately reflect the gold presence using only this

mineral. However, a source of scheelite between 400 m and 1 km up-ice of the Mustang showing is suggested by the absence of scheelite at 1 km up-ice followed by its apparition at 400 m up-ice from the Mustang showing (Fig. 2-7d).

2.8.2 Chemical composition of the indicator minerals

Only 5 % of magnetite from the till samples plot in the Ni-Cu-PGE field whereas 12.5% plot in the VMS field (Fig. 2-9). These results are coherent with the low potential of that area for VMS (Barrett et al., 1991; Makvandi et al., 2015) and Ni-Cu-PGE deposits (Campos-Alvarez et al., 2012). The trace elements pattern of Mn-rich magnetite in till samples, similar to the pattern of magnetite from a felsic pluton in the study of Dare et al. (2014), suggests a magmatic origin (Fig. 2-11c). None of the magnetite from till samples bears the typical BIF signature (Fig. 2-12d), which is coherent with the result of exploration of the Mustang area where no BIF were recognized. Only magmatic magnetite was found after petrographic investigation of the rock and core samples from and around the showing. Magnetite from BIF is mainly depleted in Co, V and Ni compared to magmatic and metamorphic magnetite (Fig. 2-12a & b). However, the composition is sometimes similar to some hydrothermal magnetite making it difficult to effectively differentiate these two types (Figs. 2-10, 11b & 12c). A previous study on chert and magnetite from Meliadine suggested the contribution of a high temperature (<250°C) hydrothermal fluids that mixed with seawater to precipitate the Fe-oxhydroxides (Goucerol, 2016). This input of hydrothermal fluids during the deposition of the Algoma-type BIF hosting the Meliadine deposits could account for the signature similar between BIF and hydrothermal magnetite. From our case study, the use of magnetite to locate a BIF hosted orogenic gold deposit is not recommended because the BIF magnetite signature is indirectly linked with gold deposition as it serves as mechanical trap for gold precipitation (Caron et al., 2011; Lawley et al., 2015c).

No physical properties (size, color, shape or presence and nature of inclusions) discriminate tourmaline from the deposits from other tourmalines found in till samples. The negative slope pattern of REE in till samples is similar to that found in tourmaline from metamorphosed volcanoclastic rocks at the Uti gold deposit (India; Hazarika et al., 2016), where tourmaline is not zoned and was determined to be unrelated to the auriferous mineralization or alteration. No tourmaline was observed in the macroscopic or thin section from sample 036. Tourmaline was recovered by EPD and cannot be positively related to the mineralization. However, the chemical composition suggests a

regional origin. Tourmaline grains with the chemical signature of the deposits, a flat REE pattern with a positive Eu anomaly, are found in three till samples directly down-ice of the showing (Fig. 2-20b) reflecting the presence of the outcropping gold at the Mustang showing. The absence of grains bearing the mineralization signature 600 meters down-ice of the Mustang showing followed by the apparition of tourmaline with the chemical signature of the mineralization in the last sample of the transect suggests the presence of unknown mineralized zone between 600 and 1 km down-ice (Fig. 2-20b), which is consistent with the result of the gold grain count (Fig. 2-20a).

In this case study, scheelite was recovered only from EPD samples therefore the texture cannot be used to ascertain its relationship with the gold mineralization. As two generations of arsenopyrite have been documented in the main deposits, inferring two different fluids (Lawley et al., 2015 a), it is difficult to positively relate the gold-bearing fluid with the scheelite origin. The bell-shaped REE pattern with a negative Eu is found in other orogenic gold deposits (Poulin, 2016; Sciuba et al., 2016). A few scheelite grains from till samples down-ice of the Mustang showing have the bell-shape REE pattern, which suggests they could originate from the Mustang showing. The location of the scheelite grains having the Mustang showing fingerprint at 100 m and 1 km down-ice suggest the presence of a potential second mineralized zone between 100 m and 1km down-ice of the Mustang showing (Fig. 2-20c). This potential mineralized area is consistent with the gold grain count (Fig. 2-20a) and tourmaline results (Fig. 2-20b).

Due to its charge and size, Ag cannot be easily accommodated into the galena structure without the presence of Bi and/or Sb. Galena with high Ag and low Bi and/or Sb concentrations usually contains micro-inclusions of acanthite (Krismer et al., 2011). The coupled substitution $2\text{Pb}^{2+} \leftrightarrow (\text{Ag}, \text{Cu})^+ + (\text{Bi}, \text{Sb})^{3+}$ shows that galena from Meliadine orogenic gold deposit is richer in Ag and Cu (Fig. 2-19) compared to galena from other types of deposits (George et al., 2015).

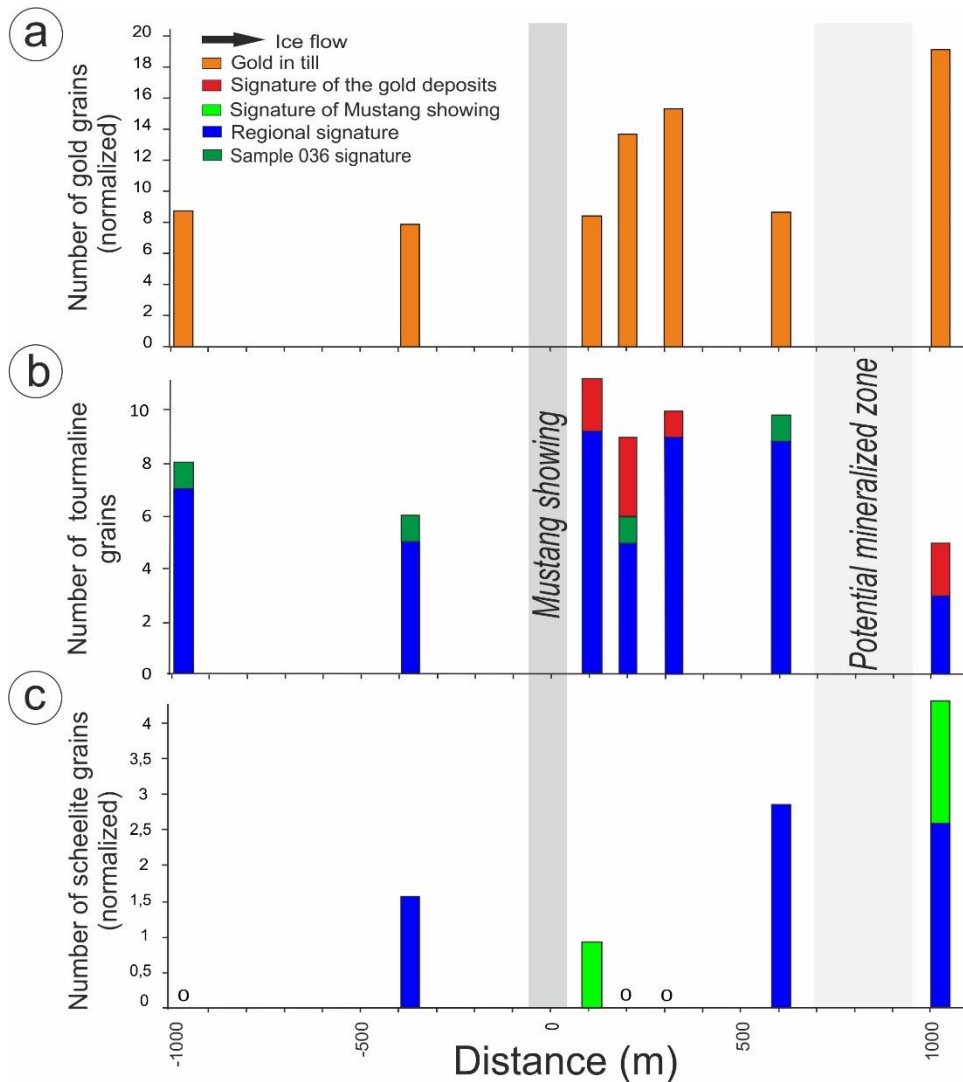


Fig. 2-20 Summary of indicator minerals detecting gold at the Mustang showing and suggesting another possible gold zone. a) Gold, b) Tourmaline, c) Scheelite.

2.9 Conclusions

The presence of gold mineralization at the Mustang showing is reflected by the increased abundance of gold grains down-ice of the Mustang showing, V-rich tourmaline, with a flat REE pattern and a positive Eu anomaly in 3 till samples down-ice of the showing, and scheelite with a low content of Mo and a bell-shaped REE pattern with a negative Eu anomaly. These 3 indicator mineral criteria suggest the presence of another mineralized zone between 600 and 1 km down-ice from the Mustang showing.

However, this anomaly could also be the result of a local deviation of the ice flow. A deviation of the dispersal train, as only one transect was sampled parallel to the main ice flow direction, could also influence the result. The depth of the frostboil sampled should also be considered as a potential explanation for that anomaly as a vertical heterogeneity of the repartition of minerals could be present (McMartin & Campbell, 2009).

The use of the chemical composition of indicator minerals to find orogenic gold deposit is considered promising. The presence of the small Mustang gold outcrop was detected up to 300 m down-ice. It is expected that a larger deposit would have a larger dispersal train. Other minerals, often present as accessory minerals in gold deposits, could reveal themselves as efficient indicator minerals such as hematite (Dupuis & Beaudoin, 2011), rutile (Clark & Williams-Jones, 2004; Meinhold, 2010) and sphalerite (Cook et al., 2009; Lockington et al., 2014).

Acknowledgements

This project is part of a group of 4 case studies on indicator minerals from orogenic gold deposits led by the NSERC - Agnico Eagle Industrial Research Chair In Mineral Exploration, founded by the Natural Sciences and Engineering Research Council of Canada, Agnico Eagle Mines and the Ministère de l'Énergie et des Ressources Naturelles.

Many thanks are given to the team of Agnico-Eagle Mines Ltd: Francine Fallara, Morgan Hjorth, Sophie Lafontaine, Marc Legault, Faith Meadow, Marjorie Simard and Denis Vaillancourt. The technical and analytical aspect of that project has benefit from the support of Marc Choquette, André Ferland, Martin Plante and Edmond Rousseau from Université Laval, Marko Kudrna Prasek and Dany Savard from LabMATER UQAC. Special thanks to Anne-Aurélien Sappin and Pierre Therrien for their precious help.

Chapitre 3 - Informations supplémentaires

3.1 Désagrégation par impulsions électriques

La désagrégation par impulsion électrique a été utilisée sur huit échantillons typiques des dépôts et trois échantillons de roches provenant de la région de l'indice Mustang (Annexe B). Les poids des échantillons traités varient de 289.6 à 1269.3 g (Table B-1).

Cette technique offre certains avantages par rapport à des méthodes conventionnelles de libération de grains. La contamination est très restreinte voir absente au concassage des roches. Un fort courant électrique est transmis à l'échantillon baignant dans une chambre d'eau. L'application rapide de chocs électriques provoque la libération des grains principalement au niveau des contacts et de leur zone de faiblesse. Très peu de poussière de roche est ainsi produit (Gnos et al., 2006), la récupération est donc optimale. La forme et la taille originale des grains sont bien conservées. La désagrégation est effectuée jusqu'à obtention d'environ 90% des grains inférieurs à 2 mm. Une fois les échantillons désagrégés, les fractions de 0.036 à 2 mm sont traitées selon le même protocole que des échantillons de tills. Les grains sont triés par taille et magnétisme.

Les grains d'or de la fraction > 0.063 mm sont séparés, comptés et classifiés. Six échantillons contiennent de l'or, de 176 à 4496 grains, nombre normalisé sur 10 kg d'échantillon total (Tableau B-1).

Les échantillons 610 et 538 n'ont retournés aucune fraction magnétique. Des aliquotes représentatifs de 100 grains, de la fraction de 0.5 à 1 mm et de la fraction de 1 à 2 mm, ont été montés en pastille pour les autres échantillons. Sur 965 grains montés, seuls 205 (soit environ 20%), appartenant à 3 échantillons sur les 11 (603 - 7.6%, 669 - 26.6% et 598 - 84.8%), contiennent de la magnétite, le reste étant de la pyrrhotite. La majorité de la magnétite des échantillons 669 et 598 provient des BIF en accord avec leur lithologie (Fig. 3-1). La nature hydrothermale de la magnétite trouvée dans l'échantillon 603 est déduite de par sa faible présence et son association avec de la pyrrhotite remplissant une fracture dans une veine de quartz d'un greywacke. Aucune autre occurrence de magnétite n'a été observée dans l'échantillon macroscopique. Cette magnétite est pauvre en Mn et riche en V (Annexes C et D), ce qui correspond à une magnétite régionale selon le graphe Mn-V-Al (Fig. 3-1).

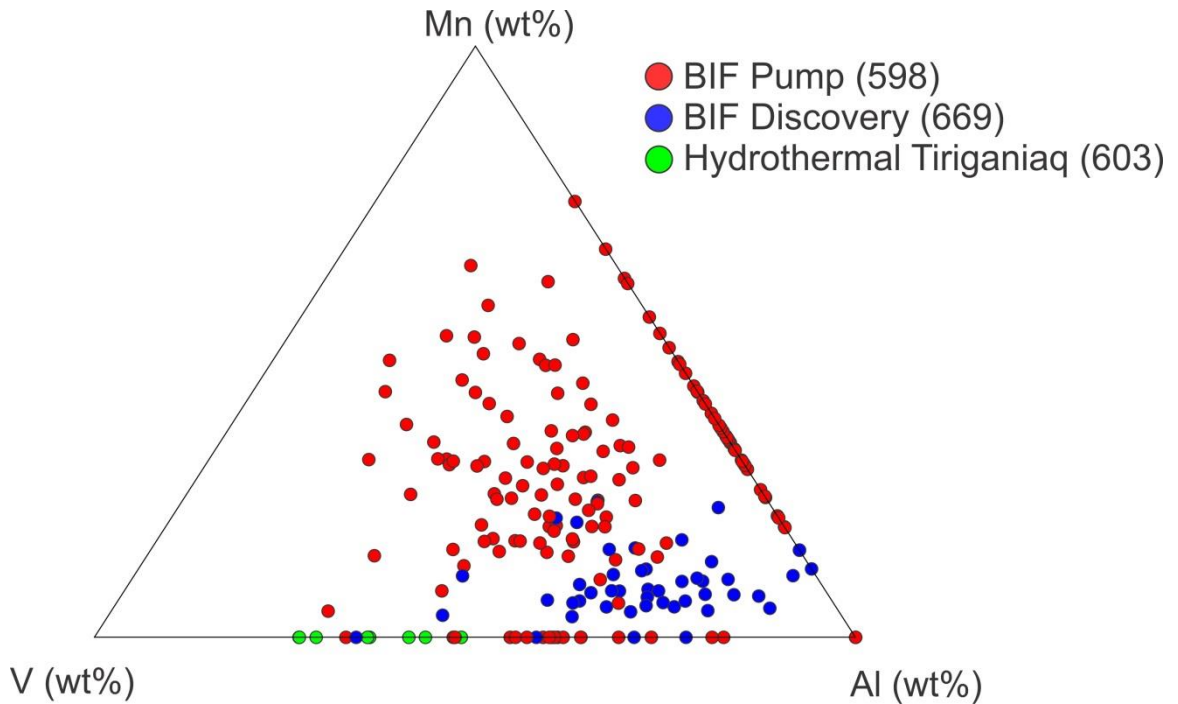


Fig. 3-1 Composition de la magnétite en Mn, V et Al des trois échantillons soumis à l'EPD.

Des grains de petites tailles de galène ont été repérés lors des analyses par microsonde des pastilles contenant la fraction magnétique des échantillons 629, 603 et 036. Quatre échantillons (036, Qv 503, 538 et 610) contenaient de la tourmaline. De la scheelite a aussi été retrouvée dans l'échantillon Qv 506.

Le taux de libération varie en fonction des minéraux. Elle passe de ~ 1% pour la pentlandite libérée par concasseur à mâchoires à ~ 50% pour une libération par EPD. Le recouvrement de la chromite passe de ~ 38 à ~ 89%, de pyrrhotite de ~ 38 à ~ 56% et des minéraux appartenant au groupe du platine de ~ 1 à ~ 56%. Le taux de recouvrement de la chalcopryrite diminue passant de ~ 71% à ~ 20% (Gnos et al., 2006). A ce jour, aucune étude sur la libération des oxydes de fer, de la tourmaline, de la scheelite ou bien de la galène n'a encore été menée. Il est donc envisageable que le recouvrement de la magnétite ne soit pas complet et qu'une partie de l'information soit perdue dans ce processus. De plus l'application d'un fort courant provoque des pics locaux de températures pouvant atteindre 10000 K (Giese et al., 2009). Ces pics de chaleurs provoquent une fusion du minéral en bordure jusqu'à 2 µm préférentiellement sur les minéraux conducteurs comme la magnétite (Gnos et al., 2006) ce qui pourrait poser problème dans le cas d'une étude des textures de surface. Les grains d'or en

contact direct avec le courant explosent et forment de petites sphérules. La modification de la composition chimique au niveau de la répartition des éléments est donc envisageable. Cette technique est donc mieux adaptée à minéraux non métalliques dont la source est déjà connue.

La caractérisation individuelle des grains ne peut plus être faite car la désagrégation supprime toutes les informations pertinentes quant à l'association des grains et leur relation texturale avec des grains adjacents. L'EPD est donc utilisable lorsque les grains peuvent être distingués par un autre moyen que leur association texturale ou pour une extraction de grains difficilement accessibles par des méthodes conventionnelles.

3.2 Arsénopyrite

L'arsénopyrite est un sulfure communément retrouvé dans les systèmes aurifères encaissés dans des sédiments. Elle n'a pas été retrouvée dans les échantillons de tills mais est fréquente dans le dépôt et à l'indice. Malgré sa bonne corrélation avec les zones à fortes teneurs en or, l'arsénopyrite n'est pas un minéral indicateur à fort potentiel de par l'existence de zones aurifères totalement dépourvue en arsénopyrite et son absence dans les fractions de 0.25 à 2 mm des échantillons de till. A Meliadine, plusieurs générations d'arsénopyrite ont été observées. L'or était mobile durant les différentes étapes de cristallisation et a été interprété comme ayant précipité en dernier (Lawley et al., 2015 a). Les valeurs de Co et Ni varient de 0.002 à 2 %poids alors que le Cu, Sb, Si, Te et Zn varient de 0.002 à 0.1 %poids. La concentration en TI varie de 0.01 à 0.1 %poids.

Les résultats d'analyse à la microsonde montrent une forte corrélation entre le S, le Fe et l'As (Fig. 3-1a, b et c) ainsi qu'une plus faible corrélation entre le Co et le Fe (Fig. 3-1d). Une zonation des grains, parfois subtile, parfois plus prononcée, est courante. Elle est généralement hétérogène et concerne principalement le Ni et le Co. Certains éléments traces comme le Te et le TI présentent aussi une différence de concentration entre la bordure et le cœur de certains grains. Les cartographies acquises par microsonde (Fig. B-2) illustrent ces zonations. Parmi les 5 exemples, deux grains riches en Co avec zonation proviennent de l'indice Mustang (Fig. B-2a) et du dépôt de Tiriganiaq (Fig. B-2e) alors que trois grains plus homogènes (Fig. B-2b, c et d) proviennent des dépôts de Tiriganiaq, Discovery et F-Zone. Le Ni et le Co sont les

éléments montrant la plus forte zonation. Le Fe et le S ont une répartition uniforme dans tous les grains cartographiés (Fig. B-2). Ces zonations ont été documenté dans de récentes études (Lawley et al., 2015a) démontrant la présence de deux générations d'arsénopyrite. L'arsénopyrite primitive finement grenue est plus riche en Au que la seconde génération de porphyroblastes d'arsénopyrite. L'or natif proviendrait de la dissolution de l'or invisible contenue dans les cristaux d'arsénopyrite de première génération recristallisant pour atteindre l'équilibre lors du pic métamorphique. (Lawley et al., 2015 a).

Les données de microsonde concernant la teneur en As pour les grains d'arsénopyrite à l'équilibre permettent l'utilisation du géothermomètre de Krestschmar et Scott (1976; Fig. 3-2). Les valeurs de LA-ICP-MS ne sont pas utilisées car l'arsenic s'accumule dans le système et crée des anomalies lors de décharges par à-coups. Le taux de recouvrement pour un même lot analysé en LA-ICP-MS passe de 100% à 31700 %, prouvant cette accumulation. Les valeurs obtenues par EPMA sont donc plus fiables. L'utilisation du géothermomètre est limitée à cause de l'absence de löllingite. Un grain d'arsénopyrite (A628A) de Tiriganiaq et un grain de Mustang (A036A) semblent être à l'équilibre avec de la pyrite et de la pyrrhotite. Toutefois, leurs valeurs d'As, respectivement trop faible ou trop élevée (29.75 et 34.40 At%), suggèrent que ces deux grains ne sont pas à l'équilibre. Les autres grains utilisables sont isolés de la pyrite ou de la pyrrhotite. La température moyenne est de 406°C (médiane, Tableau 3-1) et concorde avec le faciès métamorphique des schistes verts de la zone.

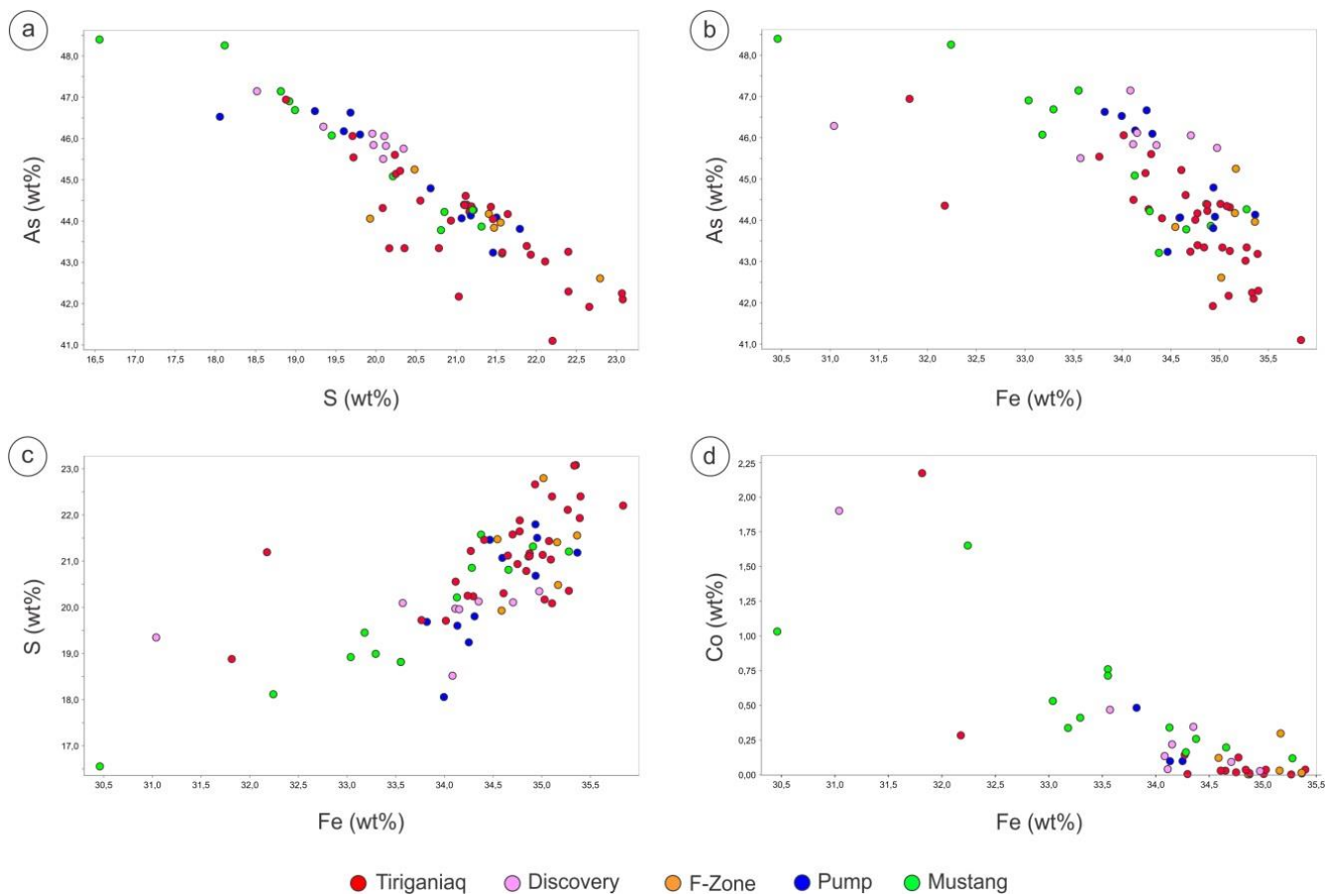


Fig. 3-2 Corrélations entre As, S, Fe et Co pour les grains d'arsénopyrite des quatre dépôts et de l'indice Mustang.

Table 3-1 Données de microsonde pour l'arsénopyrite.

Échantillon	Site	As (%at)	Température (°C)	Échantillon	Site	As (%at)	Température (°C)
A574A1 a	Tiriganiaq	31.35	406	T580A	Tiriganiaq	31.26	403
A574A1 b	Tiriganiaq	31.47	411	T534A	F-Zone	32.19	438
A590A2 a	Tiriganiaq	31.53	413	MU02AA a	Mustang	31.31	405
A590A2 d	Tiriganiaq	30.31	367	MU02AA b	Mustang	30.85	387
A590A2 e	Tiriganiaq	31.34	406	MU02AA c	Mustang	31.78	422
A613A a	Tiriganiaq	30.74	383	A596A1 a	Pump	31.99	430
A613A b	Tiriganiaq	31.52	412	A596A1 b	Pump	30.94	390
A613A c	Tiriganiaq	31.20	400	A598A1 a	Pump	30.97	391
G042A2	Tiriganiaq	31.75	421	A598A1 b	Pump	31.54	413
G042A3 a	Tiriganiaq	31.62	416	A598A1 c	Pump	31.28	403
G629A	Tiriganiaq	31.53	413	A598A2	Pump	31.21	401
A628A	Tiriganiaq	29.75	n.d	A036A	Mustang	34.40	n.d

n.d : non déterminé

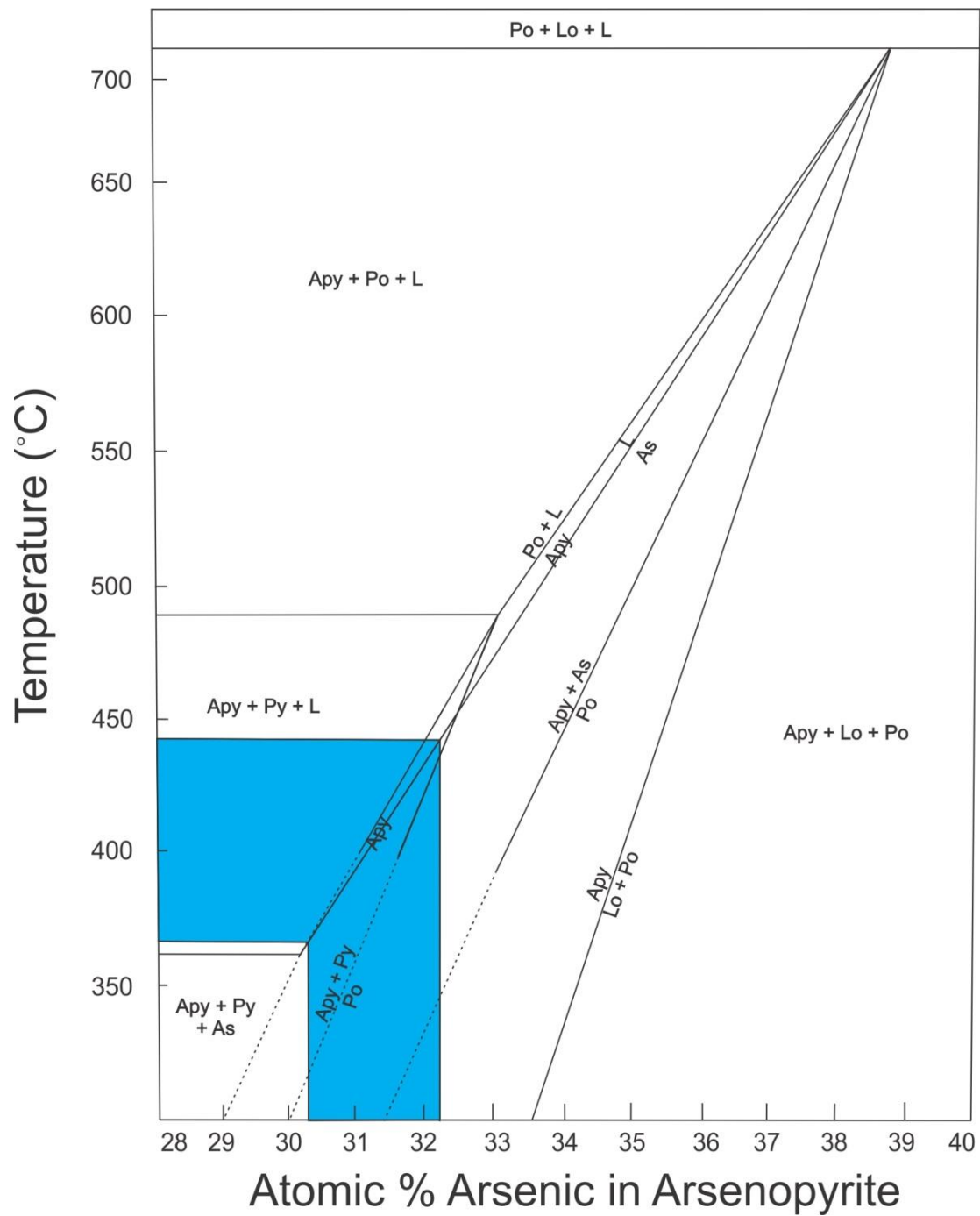


Fig. 3-3 Géothermomètre de Krestschmar et Scott (1976). Le champ bleu correspond aux données de cette étude. Les lignes pointillées représentent l'incertitude du système pour des températures inférieures à 400°C. Abréviations: Apy = Arsénopyrite, As = Arsenic, L = Liquide, Lo = Löllingite, Po = Pyrrothite et Py = Pyrite.

Chapitre 4 - Conclusion générale

Cette étude a permis d'identifier certains minéraux indicateurs des gisements d'or orogénique. L'or, la tourmaline et la scheelite ont un fort potentiel. La magnétite n'est pas caractérisée comme un bon indicateur de ce style de minéralisation. L'arsénopyrite et la galène, n'ayant pas été retrouvés dans les échantillons de till, ne sont pas considérées en tant que minéraux indicateurs malgré leur association avec la minéralisation.

Cette étude établie que la présence de la minéralisation à l'indice se reflète dans 1) l'évolution du nombre de grains d'or le long du profil d'échantillonnage de tills, 2) la localisation dans le till des grains de tourmaline portant la signature chimique du dépôt (forte concentration en V et patron de TR plat avec anomalie positive en Eu) et 3) la localisation dans le till des grains de scheelite portant la signature chimique de la minéralisation à l'indice (faible teneur en Mo et patron de TR en cloche avec anomalie négative en Eu). Ces trois facteurs combinés suggèrent aussi la présence d'une autre zone minéralisée entre 600 et 1 km en aval de l'indice. Cependant, une déviation locale dans le flux glaciaire ou encore la profondeur d'échantillonnage dans l'ostiole pourraient être la source de cette anomalie.

L'utilisation de la composition chimique des minéraux indicateurs pour trouver de nouveaux gites d'or orogénique semblent prometteuse. La présence d'un petit indice a pu être détectée à partir de 100 m en aval de la source. Comme les cibles plus larges devraient avoir des trains de dispersion plus importants, le résultat devrait être amplifié pour les dépôts d'intérêt économique. D'autres minéraux pourraient se révéler être des minéraux indicateurs efficaces de par leur association avec la minéralisation aurifère comme l'hématite, le rutile et la sphalérite. Dans cette étude de cas sur le district aurifère de Meliadine, la combinaison minérale la plus prometteuse est l'or + tourmaline + scheelite.

Références

- Agnico Eagle Mines Ltd (2016) Internal report
- Agriculture Canada Expert Committee on Soil Survey (1987) The Canadian system of soil classification. 2nd Edition, Agriculture Canada Publication 1646, 164 p
- Armitage AE, Tella S, Miller AR (1993) Iron-formation-hosted gold mineralization and its geological setting, Meliadine Lake area, District of Keewatin, Northwest Territories. Current Research, Part C, Geological Survey of Canada, paper 93-1C, pp 187-195
- Aumo R, Salonen VP (1986) Uvarovite and glacial transportation distance as provenance indicators of ore mineralization in the southern part of the Outokumpu district, north Karelia, Finland. In: Prospecting in Areas of Glaciated terrain – 1986 Institution of mining and Metallurgy, London, pp 17-23
- Averill SA (2001) The application of heavy mineralogy in mineral exploration with emphasis on base metal indicators in glaciated metamorphic and plutonic terrains. Geological Society Special Publication, London 185 (1):69-8
- Averill SA, Zimmerman JR (1986) The Riddle resolved: the discovery of the Partridge gold zone using sonic drilling in glacial overburden at Waddy Lake, Saskatchewan. Canadian Geology Journal of the CIM, 1: 14–20
- Bannatyne MJ (1958) The geology of the Rankin Inlet area and North Rankin Nickel Mines Limited, Northwest Territories. Unpublished M.Sc thesis, University of Manitoba
- Barrett TJ, Catalani S, MacLean WH (1991) Massive sulphide deposits of Noranda area. Quebec. I. The horne Mine. Canadian Journal of Earth Sciences. 28:465-488
- Beaudoin G, Dupuis C (2010) Iron-oxide trace element fingerprinting of mineral deposit types. In Corriveau, L. & Mumin, A.H. (eds) Exploring for Iron Oxide Copper-Gold Deposits: Canada and Global Analogues. Geological Association of Canada, Short Course Notes, 20:111–126
- Bennett MR, Glasser NF (1996) Glacial Geology: Ice Sheets and landforms. John Willey & Son Ltd., p.364
- Berman RG, Davis WJ, Pehrsson S (2007) The collisional Snowbird tectonic zone resurrected: growth of Laurentia during the 1.9 Ga accretionary phase of the Trans-Hudson orogeny. Geology 35: 911–914
- Boulton GS (1996) Theory of glacial erosion, transport and deposition as a consequence of subglacial sediment deformation. Journal of glaciology 42: 43-62
- Boyle RW, Gleeson CF (1972) Gold in heavy mineral concentrates of stream sediments, Keno Hill area, Yukon Territory. Paper 71-51. Geological Survey of Canada.
- Campos-Alvarez NO, Samson IM, Fryer BJ (2012) The roles of magmatic and hydrothermal processes in PGE mineralization, Ferguson Lake deposit, Nunavut, Canada. Mineralium Deposita 47 (4): 441-465
- Caron B, Connell L, Duquette D, Fournier J, Matte P, Petrucci F (2011) Technical Report on the December 31, 2010, mineral Resource and Mineral Reserve Estimate, Meliadine Gold Project, Nunavut, Canada
- Carpenter RL (2003) Relative and absolute timing of supracrustal deposition, tectonothermal activity and gold mineralization, West Meliadine region, Rankin Inlet Greenstone Belt, Nunavut, Canada. Unpublished Ph.D Thesis, University of Western Ontario
- Carpenter RL, Duke NA (2004) Geological setting of the west Meliadine gold deposits, Western Churchill Province, Nunavut, Canada. Exploration and Mining Geology 13:49-65

- Clark JR, Williams-Jones AE (2004) Rutile as a potential indicator mineral for metamorphosed metallic ore deposits Sous-project SC2 Rapport final
- Cook NJ, Ciobanu CL, Pring A, Skinner W, Shimizu M, Danyushevsky L, Saini-Eidukat B, Melcher F (2009) Trace and minor elements in sphalerite: A LA-ICP-MS study. *Geochimica et Cosmochimica Acta* 73:4761–4791
- Dare SAS, Barnes S-J, Beaudoin G, Méric J, Boutroy E, Potvin-Doucet C (2014) Trace elements in magnetite as petrogenetic indicators. *Mineralium Deposita*, 49:785–796
- Davies T., Richards JP, Creaser RA, Heaman LM, Chacko T, Simonetti A, Williamson J, McDonald DW (2010) Paleoproterozoic Age Relationships in the Three Bluffs Archean Iron Formation-Hosted Gold Deposit, Committee Bay Greenstone Belt, Nunavut, Canada, *Exploration and Mining. Geology*, 19 : 55–80.
- Davis WJ, Hanmer S, Aspler L, Sandeman H, Tella S, Zaleski E, Relf C, Ryan J, Berman R, MacLachlan K (2000) Regional differences in the Neoproterozoic crustal evolution of the Western Churchill Province: Can we make sense of it? In: Geological Association of Canada - Mineralogical Association of Canada, Annual Meeting, Calgary, Alberta
- Day DT, Richards RH (1905) Useful minerals in the Black Sands of the Pacific Slope. U.S. Geological Survey, Min. Res., pp.11 75-1246
- De Smeth JB, Rao KSP, Schuiling RD (1985) Gold-scheelite mineralization in the Veligallu schist belt, Andhra Pradesh, India; *Economic Geology*, 80:1996-2000
- Dickson G (1991) Geology and gold mineralization on the Asamera/Comaplex Meliadine Project, Rankin Inlet area, N.W.T. *Exploration Overview 1990, Northwest Territories*; (ed.) S.P.Goff.
- DiLabio RNW (1990) Classification and interpretation of the shapes and surface textures of gold grains from till on the Canadian Shield. *Current Research, Part C. Geological Survey of Canada, paper 88-1C*, pp 61-65
- Dupuis C, Beaudoin G (2011) Discriminant diagrams for iron oxide trace element fingerprinting of mineral deposit types. *Mineralium Deposita*, 46:319–335
- Fipke CE, Gurney JJ, Moore RO (1995) Diamond exploration techniques emphasizing indicator mineral geochemistry and Canadian examples. *Geological Survey of Canada, Bulletin 426*
- Fulton RJ (1995) Surficial materials of Canada, *Geological Survey of Canada, Map 1880A*, scale 1:5000000
- George L, Cook NJ, Ciobanu CL, Wade BP (2015) Trace and minor elements in galena: A reconnaissance LA-ICP-MS study, *AmeriCanadian Mineralogist*, 100:548–569
- Gerlach RW, Dobb DE, Raab GA, Nocerino JN (2002) Gy sampling theory in environmental studies I: assessing soil splitting protocols. *Journal of Chemometrics*, 16 (7):871-878
- Gerlach RW, Nocerino JN (2003) Guidance for obtaining representative laboratory analytical subsamples from particulate laboratory samples. *Environmental protection agency – United States*
- Giese J, Seward D, Stuart FM, Wuthrich E, Gnos E, Kurz D, Eggenberger U, Schreurs G (2009) Electrodynamic Disaggregation: Does it Affect Apatite Fission-Track and (U-Th)/He Analyses? *International Association of Geoanalysts*
- Gleeson CF, Boyle RW (1980) Minor and trace element distribution in the heavy minerals of rivers and streams of the Keno Hill District, Yukon Territory. Paper 76-31. *Geological Survey of Canada*,
- Gnos E, Kurz D, Eggenberger U (2006) Electrodynamic disaggregation of geologic material. 4th Swiss Geoscience Meeting, Bern 2006

- Gourcerol B (2016) Characterization of Banded Iron Formations associated with gold mineralization: Primary geochemical signatures and exploration implications. Ph.D thesis in Mineral Deposits and Precambrian Geology, Laurentian University Sudbury, Ontario, Canada
- Grzela D, Beaudoin G, Huot F, Dubuc R, Simard P (2016) Chemical composition of indicator minerals from orogenic gold deposits and glacial sediments, Val-d'Or, Québec. Geological Association of Canada - Mineralogical Association of Canada Annual Meeting Prog Abs, 1-3 June, Whitehorse
- Gurney JJ (1984) A correlation between garnets and diamonds in kimberlites. In: Kimberlite Occurrences and Origin: a Basis for Conceptual Models in Exploration. Publication, 8. Geology Department and University Extension, University of Western Australia, pp 143-166
- Hanmer S, Sandeman HA, Davis WJ, Aspler LB, Rainbird RH, Ryan JJ, Relf C, Peterson TD (2004) Geology and Neoarchean tectonic setting of the Central Hearne supracrustal belt, Western Churchill Province, Nunavut, Canada. *Precambrian research*, 134: 63-83
- Hazarika P, Mishra B, Pruseth KL (2016) Scheelite, apatite, calcite and tourmaline compositions from the late Archean Hutti orogenic gold deposit: Implications for analogous two stage ore fluids. *Ore Geology Reviews* 72:989-1003
- He H-L, Yu S-Y, Song X-Y, Du Z-S, Dai Z-H, Zhou T, Xie W (2016) Origin of nelsonite and Fe-Ti oxides ore of the Damiao anorthosite complex, NE China: Evidence from trace element geochemistry of apatite, plagioclase, magnetite and ilmenite *Ore Geology Reviews* 79:367-381
- Henderson PJ (2000) Drift composition and surficial geology, MacQuoid Lake area, (NTS 55 M/7 and 55 M/10), Kivalliq region, Nunavut: a guide to drift prospecting. Geological Survey of Canada, Open File Report 3944
- Henry DJ, Dutrow BI (2012) Tourmaline at diagenetic to low-grade metamorphic conditions: Its petrologic applicability. *Lithos*, 154:16-32
- Henry DJ, Novak M, Hawthorne FC, Ertl A, Dutrow BI, Uher P, Pezzotta F (2011) Nomenclature of the tourmaline-supergroup minerals, *American Mineralogist*, 96:895-913
- Hill JM (1906) Notes on the Fine Gold of Snake River, Idaho. U.S. Geological Survey Bulletin. 620, pp. 271-294
- Irvine CB (1908) Fine Gold of Snake River. *Mining World*, 29 pp 916
- Jang YD, Naslund HR (2003) Major and trace element variation in ilmenite in the Skaergaard Intrusion: petrologic implications. *Chemical Geology* 193:109-125
- Jiang SY, Palmer, MR, Slack JF, Shaw DR (1999) Boron isotope systematics of tourmaline formation in the Sullivan Pb-Zn-Ag deposit, British Columbia, Canada. *Chemical Geology* 158:131-144
- Karimzadeh Somarin A (2004) Garnet composition as an indicator of Cu mineralization: evidence from skarn deposits in NW Iran. *Journal of Geochemical Exploration*, 81:47-57
- Kjaer KH, Larsen E, Van der Meer JJ, Ingolfsson O, Krüger J, Benediktsson IÖ, Knudsen CG, Schomacker A (2006) Subglacial decoupling at the sediment/bedrock interface; a new mechanism for rapid flowing ice. *Quaternary Science reviews*, 25: 2704-2712.
- Klassen RA (1995) Drift composition and glacial dispersal trains, Baker Lake area, District of Keewatin, Northwest Territories. Geological Survey of Canada, Bulletin 485
- Kretschmar U, Scott SD (1976) Phase relations involving arsenopyrite in the system Fe-As-S and their application. *Canadian Mineralogist* 14:364-386

- Krismer M, Vavtar F, Tropper P, Sartory B, Kaindl R (2011) Mineralogy, mineral chemistry and petrology of the Ag-bearing Cu-Fe-Pb-Zn sulfide mineralizations of the Pfunderer Berg (South Tyrol, Italy). *Austrian Journal of Earth Science*, 104:36–48
- Lawley CJM, Creaser RA, Jackson SE, Yang Z, Davis BJ, Pehrsson SJ, Dubé B, Mercier-Langevin P, Vaillancourt D (2015 a) Unraveling the Western Churchill Province paleoproterozoic gold metallogeny: Constraints from Re-Os arsenopyrite and U-Pb xenotime geochronology and LA-ICP-MS arsenopyrite trace element chemistry at the BIF-hosted Meliadine Gold District, Nunavut, Canada. *Economic Geology* 110:1425-1454
- Lawley CJM, Dubé B, Mercier-Langevin P, Kjarsgaard B, Knigh R, Vaillancourt D (2015 b) Defining and mapping hydrothermal footprints at the BIF-hosted Meliadine gold district, Nunavut, Canada. *Journal of Geochemical Exploration*, 155:33-35
- Lawley CJM, Dubé B, Mercier-Langevin P, McNicoll VJ, Creaser RA, Pehrsson SJ, Castonguay S, Blais J-C, Simard M, David WJ, Jackson SE (2015 c) Setting, age, and hydrothermal footprint of the emerging Meliadine gold district, Nunavut, In: Targeted Geoscience Initiative 4: Contributions to the Understanding of Precambrian Lode Gold Deposits and Implications for Exploration, (ed.) B. Dubé and P. Mercier-Langevin; Geological Survey of Canada, open File 7852, p.99-111.
- Lawley CJM, McNicoll V, Sandeman H, Pehrsson S, Simard M, Castonguay S, Mercier-Langevin P, Dubé B (2016) Age and geological setting of the Rankin inlet greenstone belt and its relationship to the gold endowment of the Meliadine gold district, Nunavut, Canada. *Precambrian research*, 275:471-495
- Levinson AA (1980) Introduction to exploration geochemistry. The 1980 Supplement; Applied Publishing, Chicago, Illinois
- Lindmark B (1977) Till-sampling methods used in exploration for scheelite in Kaustinen, Finland. In: *Prospecting in Areas of Glaciated Terrain – 1977*. Institution of Mining and Metallurgy, London, 46–48
- Lockington JA, Cook NJ, Ciobanu CL (2014) Trace and minor elements in sphalerite from metamorphosed sulphide deposits, *Mineralogy and Petrology* 108:873–890
- Makvandi S, Beaudoin G, McClenaghan BM, Layton-Matthews D (2015) The surface texture and morphology of magnetite from the Izok Lake volcanogenic massive sulfide deposit and local glacial sediments, Nunavut, Canada: Application to mineral exploration, *Journal of Geochemical Exploration*, 150:84-103
- McClenaghan MB (2005) Indicator mineral methods in mineral exploration. *Geochemistry: Exploration, Environment, Analysis*, 5:233–245
- McClenaghan MB, Cabri LJ (2011) Review of gold and platinum group element (PGE) indicator minerals methods for surficial sediment sampling. *Geochemistry: Exploration, Environment, Analysis* 11 (4): 251-263
- McMartin I (2000) Till composition across the meliadine trend, Rankin Inlet area, Kivalliq region, Nunavut, Geological Survey of Canada, Open File 3747
- McMartin I (2009) Till composition along the Meliadine Trend near Rankin Inlet, Nunavut: applications to gold exploration in permafrost terrain. In: R.C. Paulen and I. McMartin (eds.), *Application of Till and Stream Sediment Heavy Mineral and Geochemical Methods to Mineral Exploration in Western and Northern Canada*; Geological Association of Canada, GAC Short Course Notes 18, p. 153-166
- McMartin I and Henderson PJ (2004) Evidence from Keewatin (central Nunavut) for paleo-ice divide migration. *Géographie physique et Quaternaire*, 58 (2-3): 163-186

- McMartin I, Henderson PJ, Kjarsgaard BA, Venance K (2003) Regional distribution and chemistry of kimberlite indicator minerals, Rankin Inlet and Macquoid Lake areas, Kivalliq region, Nunavut; Geological Survey of Canada, Open File Report 1575
- McMartin I, Corriveau L, Beaudoin G (2011) An orientation study of the heavy mineral signature of the NICO Co-Au-Bi deposit, Great Bear magmatic zone, NW Territories, Canada. *Geochemistry: Exploration, Environment, Analysis*, 11 : 293–307
- Meinhold G (2010) Rutile and its applications in earth sciences *Earth-Science Reviews* 102 :1-28
- Miller AR, Balog MJ, Tella S (1995) Oxide iron-formation hosted lode gold, Meliadine Trend, Rankin Inlet Group, Churchill Province, Northwest Territories. *Current Research 1995-C*, Geological Survey of Canada, p. 163-174
- Nadoll P, Angerer T, Mauk JL, French D, Walshe J (2014) The chemistry of hydrothermal magnetite: A review *Ore Geology Reviews* 61 1–32
- Ottensen RT, Theobald PK (1994) Stream sediments in mineral exploration. In: Hale M & Plant JA (eds) *Drainage Geochemistry. Handbook of Exploration Geochemistry*, 6:147–184
- Pal DC, Trumbull R, Wiedenbeck M (2010) Chemical and boron isotope compositions of tourmaline from the Jaduguda U (-Cu-Fe) deposit, Singhbhum shear zone, India: implications for the source and evolution of the mineralizing fluid. *Chemical Geology* 277:245–260
- Paul D, Hanmer S, Tella S, Peterson TD, LeCheminant AN (2002) *Geology, Compilation, Bedrock Geology of Part of the Western Churchill Province, Nunavut-Northwest Territories*. Geological Survey of Canada, Open File 4236, scale 1:1 000 000
- Pehrsson SJ, Berman RG, Davis WJ (2013) Paleoproterozoic orogenesis during Nuna aggregation: a case study of reworking of the Rae craton, Woodburn Lake, Nunavut. *Precambrian research* 232:167–188
- Peltonen P, Huhta P, Korsman K (1992) Occurrence and mineral chemistry of chrome spinel in till – implication for prospecting magmatic Ni-Cu sulfide ores in Svecofennian terrain. *Report of Investigation, 111*. Geological Survey of Finland
- Pitard FR (1993) *Pierre Gy's sampling theory and sampling practice: heterogeneity, sampling correctness, and statistical process control*. Second edition. CRS press, Boca Raton, FL
- Plouffe A (2001) The glacial transport and physical partitioning of mercury and gold in till: implications for mineral exploration with examples from central British Columbia, Canada. In: McClenaghan MB, Cook S & Bobrowsky PT (eds) *Drift Exploration in Glaciated Terrain. Special Volume, 185*. Geological Society, London, 287–299
- Poulin RS (2016) *A study of the crystal chemistry, cathodoluminescence, geochemistry and oxygen isotopes in Scheelite: application towards discriminating among differing ore-deposit systems- Thesis*
- Poulin RS, McDonald AM, Kontak DJ, McClenaghan MB (2013) A crystal-chemical investigation of the suitability of scheelite as a discriminator for different ore-forming settings: Initial results from cathodoluminescence studies; in *Program with Abstracts, Geological Association of Canada-Mineralogical Association of Canada, Annual Meeting 2013*, p. 165
- Poulin RS, McDonald AM, Kontak DJ, McClenaghan MB (2014) Scheelite geochemical signatures and potential for fingerprinting ore deposits; in *Program with Abstracts, Geological Association of Canada – Mineralogical Association of Canada, Annual Meeting 2014*, p. 227

- Raith JG, Riemer N, Meisel ST (2004) Boron metasomatism and behaviour of rare earth elements during formation of tourmaline rocks in the eastern Arunta Inlier, central Australia. *Contribution in Mineralogy and Petrology* 147:91–109
- Robert F, Brown AC (1986) Archean gold-bearing quartz veins at the Sigma mine, Abitibi greenstone belt, Quebec: Part II. Vein paragenesis and hydrothermal alteration; *Economic Geology*, 81:593–616
- Rozendaal A, Bruwer L (1995) Tourmaline nodules: indicators of hydrothermal alteration and Sn-Zn-(W) mineralization in the Cape Granite Suite, South Africa. *Journal African of Earth Science*, 21:153–167
- Rudnick RL, Gao S (2003) Composition of the Continental Crust - Treatise on Geochemistry, Volume 3. Editor: Roberta L. Rudnick. Executive Editors: Heinrich D. Holland and Karl K. Turekian. pp. 659. ISBN 0-08-043751-6. Elsevier, p.1-64
- Ryan RJ, Turner RG, Stea RR, Rogers PJ (1988) Heavy minerals and sediment dispersal as exploration tools for potential tin and gold paleoplacers in Carboniferous rocks, Nova Scotia. In: MACDONALD, D.R. & MILLS, K.A. (eds) *Prospecting in Areas of Glaciated Terrain – 1988*. Canadian Institute of Mining and Metallurgy, 41–56
- Sappin AA, Dupuis C, Beaudoin G, Pozza M, McMartin I, McClenaghan MB (2014) Optimal ferromagnetic fraction in till samples along ice-flow paths: case studies from the Sue-Dianne and Thompson deposits, Canada. *Geochemistry: Exploration, Environment, Analysis*, 14(4):315-32
- Schultz AR (1907) Gold Developments in Central Uinta County, Wyoming, and at Other Points on Snake River. U.S. Geological Survey Bulletin, 315: 71-88
- Sciuba M, Beaudoin G, Huot F (2016) Texture, cathodoluminescence and trace element composition of scheelite, indicator mineral of orogenic gold deposits. Geological Association of Canada - Mineralogical Association of Canada. Annual Meeting Program with Abstracts, 1-3 June, Whitehorse
- Shilts WW, Cunningham CM, Kaszycki CA (1979) Keewatin Ice Sheet – Re-evaluation of the traditional concept of the Laurentide Ice Sheet. *Geology*, 7:537-541
- Slack JF, Trumbull RB (2011) Tourmaline as a recorder of ore-forming processes. *Element* 7:321–326
- Spirito WA, McClenaghan MB, Plouffe A, McMartin I, Campbell JE, Paulen RC, Garrett RG, Hall GEM (2011) Till sampling and analytical protocols for GEM projects: from field to archive. Geological Survey of Canada, Open File 6850, pp 83
- Stendal H (1982) Geochemical trends for metals in inorganic sediment samples in an arctic area, east Greenland. In: *Prospecting in Areas of Glaciated Terrain – 1982*. Canadian Institute of Mining and Metallurgy, 160–178
- Stendal H, Theobald PK (1994) Heavy-mineral concentrates in geochemical exploration. In: Hale M & Plant, JA (eds) *Drainage Geochemistry. Handbook of Exploration Geochemistry*, 6:185–225.
- Sun SS, McDonough WF (1995) The composition of the Earth. *Chemical Geology* 120:223–253
- Taylor SR, McLennan SM (1985) *The Continental Crust: Its Composition and Evolution*. Blackwell, Oxford, pp 312
- Tella S, Annesley IR, Borradaile GJ Henderson JR (1986) Precambrian geology of parts of Tavani, Marble Island and Chesterfield Inlet map areas, District of Keewatin, N.W.T. Geological Survey of Canada, paper 86-13, pp 20
- Tella S, Schau M, Armitage AE, Seemayer BE, Lemkow D (1992) Precambrian geology and economic potential of the Meliadine Lake-Barbour Bay region, District of Keewatin, Northwest Territories. *Current Research, Part C*, Geological Survey of Canada, paper 92-1C, pp 1-11

- Torres-Ruiz J, Pesquera A, Gil-Crespo PP, Velilla N (2003) Origin and petrogenetic implications of tourmaline-rich rocks in the Sierra Nevada (Betic Cordillera, southeastern Spain). *Chemical Geology*, 197:55–8
- Trumbull RB, Slack JF, Krienitz M-S, Belkin HE, Wiedenbeck M (2011) Fluid sources and metallogenesis in the Blackbird Co–Cu–Au–Bi–Y– REE district, Idaho, U.S.A.: insights from major-element and boron isotopic compositions of tourmaline. *Canadian Mineralogist* 49:225–244
- Zantop H, Nespeira J (1979) Heavy mineral panning techniques in the exploration for tin and tungsten in northwestern Spain, In: Theobald, P.K. (ed.) *Geochemical Exploration 1978*. Association of Exploration Geochemists, 329–336

Appendix A - Description of the till samples

Table A-1 Weight (kg wet)

Sample	Total	Archived Split	Table Split	+2.0 mm Clasts	Table Feed
Till 01	13.0	0.5	12.5	1.0	11.5
Till 02	12.7	0.5	12.2	1.8	10.4
Till 03	14.0	0.5	13.5	1.1	12.4
Till 04	13.2	0.5	12.7	3.2	9.5
Till 05	12.7	0.5	12.2	1.5	10.7
Till 06	14.1	0.5	13.6	0.9	12.7
Till 07	13.3	0.5	12.8	2.5	10.3

Table A-2 Clasts description (percentage)

Sample	Size	Volcanics and/or sediments	Granitics	Proterozoic sediments
Till 01	Pebbles	80	20	0
Till 02	Pebbles	50	50	0
Till 03	Pebbles	70	25	5
Till 04	Pebbles	90	10	Traces
Till 05	Pebbles	35	60	5
Till 06	Pebbles	45	50	5
Till 07	Pebbles	60	35	5

Table A-3 Matrix description (< 2.0 mm)

Sample	Distribution			Colour	
	Sand	Silt	Clay	Sand	Clay
Till 01	+	Yes	-	Grey Beige	Grey Beige
Till 02	Yes	Yes	Yes	Grey Beige	Grey Beige
Till 03	Yes	Yes	Yes	Ligth Ocre	Ligth Ocre
Till 04	Yes	Yes	Yes	Ligth Ocre	Ligth Ocre
Till 05	Yes	+	-	Grey Beige	Grey Beige
Till 06	Yes	+	-	Pink Beige	Pink Beige
Till 07	Yes	+	-	Pink Beige	Grey Beige

+ : Fraction more abundant than normal

- : Fraction less abundant than normal

Table A-4 Gold grains

Sample	Dimensions (microns)			Number of Visible Gold Grains			
	Thickness calculated	Width	Length	Reshaped	Modified	Pristine	Total
Till 01	3	15	15	3	1		4
	5	25	25	4	1		5
	8	25	50	2	1		3
	10	25	75	1	1		2
	10	50	50	1			1
	13	50	75		1	1	2
	15	50	100	2	1		3
	15	75	75	2			2
Till 02	5	25	25	2	1	1	4
	8	25	50	1	1		2
	10	25	75		1		1
	13	50	75	1			1
	18	75	100	1			1
Till 03	3	15	15	2	3		5
	5	25	25	4	2		6
	8	25	50	3	2		5
	10	25	75	2	1		3
Till 04	3	15	15	3	1		4
	5	25	25	1			1
	10	50	50	2			2
	13	50	75		1	1	2
	15	50	100		1		1
Till 05	5	25	25	1			1
	8	25	50	1	1		2
	10	50	50	1		1	2
	13	50	75	1			1
	15	50	100	2			2
	20	75	125	1			1
Till 06	3	15	15	3	1		4
	5	25	25	1			1
	8	25	50	1	1		2
	13	50	75	1		1	2
	20	75	125		1		1
Till 07	3	15	15	1			1
	5	25	25	1		1	2
	8	25	50	2			2
	10	25	75	2			2
	13	50	75	1			1
	20	75	125	1			1

Table A-5 Heavy mineral processing weight (g)

Sample	<2.0 mm Table Concentrate										
	Total	Lights S.G<3.0	Heavy Liquid Separation S.G=3.0								
			Total	-0.25 mm		0.25-0.5 mm		0.5-1.0 mm		1.0-2.0 mm	
				Magnetic	Non magnetic	Magnetic	Non magnetic	Magnetic	Non magnetic	Magnetic	Non magnetic
Till 01	301.7	228.4	73.3	5.8	53.3	0.7	10.4	0.20	2.5	<0.01	0.4
Till 02	255.3	161.9	93.4	7.1	69.5	0.9	11.5	0.30	3.7	0.02	0.4
Till 03	280.1	197.9	82.2	3.1	71.0	0.3	6.8	0.03	0.9	0.00	0.1
Till 04	241.2	179.7	61.5	5.2	47.2	0.3	5.8	0.06	2.4	<0.01	0.5
Till 05	324.7	220.3	104.4	8.0	80.7	0.8	11.6	0.20	2.5	0.01	0.6
Till 06	314.0	238.5	75.5	6.3	58.5	0.5	7.7	0.20	2.1	0.03	0.2
Till 07	278.8	188.2	90.6	7.6	64.9	1.0	13.7	0.20	2.9	0.02	0.3

Appendix B - Description of the samples submitted to EPD

Table B-1 Description of rock and core samples submitted to EPD.

Sample	Site	Lithology	Nb of gold grain (Normalized)	Weight (g)	Description	Analysed mineral
503	Mustang	Quartz-tourmaline vein	0	1252	-Massive tourmaline in 15 cm quartz vein.	Tourmaline
506	Mustang	Mineralized Mafic Volcaniclastics	4496	829	-Idiomorphic arsenopyrite (> 5mm) near and within a 2 cm quartz vein with pyrite and chalcopyrite.	Scheelite
538	Tiriganiaq	Mafic Volcaniclastics	0	631	-Tourmaline in veinlet cross-cutting foliation associated with idiomorphic pyrite (up to 5 mm).	Tourmaline
598	Pump	Mineralized Chert- Magnetite Iron Formation	3234	327	-Magnetite associated with pyrrhotite, arsenopyrite, chalcopyrite and pyrite at crossing between a veinlet and a 6 cm quartz vein.	Magnetite
603	Tiriganiaq	Mineralized Greywacke with Chloritic Siltstone	427	445	-Disseminated arsenopyrite near a 4 mm quartz vein with galena and pyrrhotite within cracks and magnetite.	Magnetite Galena
610	Tiriganiaq	Mafic Volcaniclastics	0	447	-Massive tourmaline in irregular 4 cm quartz + ankerite vein sub-parallel to foliation - Chloritic matrix with trace pyrite.	Tourmaline
629	Tiriganiaq	Mineralized Mafic Volcaniclastics	2028	281	-Arsenopyrite at margin of 2 cm quartz vein and disseminated + Trace pyrrhotite, chalcopyrite, galena and magnetite in cracks of sub-parallel 3 cm quartz vein.	Galena
645	F-Zone	Mafic Volcaniclastics	0	1064	-Discontinuous sub-parallel bands of pyrrhotite + tourmaline in 2 cm quartz+carbonate vein sub-parallel to foliation.	-
669	Discovery	Mineralized Chert- Magnetite Iron Formation	179	614	-Arsenopyrite at the rim of a 3 cm quartz vein cross-cutting foliation + massive and discontinuous sub-parallel bands of pyrrhotite and magnetite.	Magnetite
O35	Mustang	Mafic Volcaniclastics	0	834	-Hypidiomorphic disseminated pyrite and massive cluster of pyrrhotite in 5 mm quartz+calcite vein with trace of arsenopyrite.	-
O36	Mustang	Mineralized Mafic Volcaniclastics	201	744	-Arsenopyrite filling a fracture and disseminated, associated with pyrrhotite.	Tourmaline

Appendix C - EPMA parameters, composition maps and data

Table C-1 Analytical conditions for magnetite EPMA analysis.

Element	Crystal	Line	Counting time (s)		Range of detection limits (ppm)	Standard
			Peak	Background		
Zn	LLIF	K α	40	15	103-117	sphal
Cu	LLIF	K α	40	20	81-90	chalco
Ni	LLIF	K α	40	20	61-67	nick
Mn	LLIF	K α	40	20	39-48	rhodo
Cr	LIF	K α	80	20	45-58	chromi
V	LIF	K α	80	20	48-60	V-ATX
K	LPET	K α	40	20	14-16	ortho
Ca	LPET	K α	40	20	15-17	diop
Ti	LPET	K α	40	15	17-21	rut
Sn	LPET	L α	40	20	41-51	cassit
Al	TAP	K α	40	20	17-19	cor
Si	TAP	K α	60	20	14-16	qzvz
Mg	TAP	K α	40	20	21-23	olivsprin
P	TAP	K α	40	15	23-25	apt

Condition 15.0 kV and 100.0 nA and fixed concentrations for trace analysis: Fe = 72.4 wt% and O = 27.6 wt%
Beam diameter: 5 μ m

Table C-2 Analytical conditions for arsenopyrite EPMA analysis.

Element	Crystal	Line	Counting time (s)		Range of detection limits (ppm)	Standard
			Peak	Background		
Majors (15.0 kV and 20.0 nA)						
As	TAP	L α	20	10	370-585	GaAs-ATX
Fe	LLIF	K α	20	10	284-443	pyrvz
S	LPET	K α	20	10	219-413	pyrvz
Traces (25.0 kV and 100.0 nA)						
Zn	LLIF	K α	40	20	30-32	sphal
Cu	LLIF	K α	40	20	27-28	chalco
Ni	LLIF	K α	40	20	23-29	nick
Co	LLIF	K α	40	20	25-1200	skux
Te	LPET	L α	40	20	32-51	Te-ATX
Sb	LPET	L α	40	20	30-49	stibvz
Tl	LPET	M α	40	20	121-196	TlBrI-ATX
Si	TAP	K α	40	20	19-20	qzvz

Fixed concentrations for trace analysis: As = 46.2 wt%, Fe = 34.2 wt%, and S = 19.5 wt%
Beam diameter: 5 μ m

Table C-3 Analytical conditions for scheelite EPMA analysis.

Element	Crystal	Line	Counting time (s)		Range of detection limits (ppm)	Standard
			Peak	Background		
Majors (15.0 kV and 20.0 nA)						
W	LLIF	L α	20	10	986-2569	ScheeTmp
Ca	LPET	K α	20	10	81-203	ScheeTmp
Traces (15.0 kV and 100.0 nA)						
Fe	LLIF	K α	120	30	31-31	hemvz
Mo	LPET	L α	120	30	53-64	Mo-ATX
Sr	LPET	L α	120	30	86-88	celest
Y	TAP	L α	120	30	43-44	YPO4
Na	TAP	K α	120	30	13-14	alb

Fixed concentrations for trace analysis: W = 63.0 wt%, Ca = 14.0 wt%, and O = 23.0 wt%

Beam diameter: 10 μ m

Table C-4 Analytical conditions for tourmaline EPMA analysis.

Element	Crystal	Line	Counting time (s)		Range of detection limits (ppm)	Standard
			Peak	Background		
Majors (15.0 kV and 20.0 nA)						
Fe	LIF	K α	20	10	623-940	hemvz
Cr	LLIF	K α	20	10	221-273	chromi
Ca	LPET	K α	20	10	109-125	diop
Na	TAP	K α	20	10	133-191	alb
Mg	TAP	K α	20	10	105-140	olivsprin
Si	TAP	K α	20	10	127-151	qzvz
Al	TAP	K α	20	10	134-336	cor
Traces (25.0 kV and 100.0 nA)						
Mn	LIF	K α	40	20	45-53	rhodo
Ti	LIF	K α	40	20	44-67	rut
Zn	LLIF	K α	40	20	22-24	sphal
Cu	LLIF	K α	40	20	19-20	chalco
Ni	LLIF	K α	40	20	16-17	nick
Co	LLIF	K α	40	20	15-17	Co-ATX
V	LLIF	K α	40	20	20-24	V-ATX
Sc	LPET	K α	40	20	5-7	Sc-ATX
K	LPET	K α	40	20	7-8	ortho
Cl	LPET	K α	40	20	9-10	tugvz
Sr	TAP	L α	40	20	45-52	celest
F	LPC0	K α	40	20	92-147	fluor

Fixed concentrations for trace analysis: Fe = 9.687 wt%, Mg = 3.200 wt%, Na = 1.900 wt%, Si = 16.961 wt%, Al = 15.550 wt%, Ca = 0.370 wt%, B = 3.990 wt% and O = 47.860 wt%

Beam diameter: 5 μ m

Table C-5 Analytical conditions for galena EPMA analysis.

Element	Crystal	Line	Counting time (s)		Range of detection limits (ppm)	Standard
			Peak	Background		
Majors (15.0 kV and 20.0 nA)						
S	LPET	K α	20	10	217-324	pyrvz
Pb	LPET	M α	20	10	1265-1800	Gal-temp
Traces (25.0 kV and 100.0 nA)						
Zn	LLIF	K α	40	20	24-26	sphal
Cu	LLIF	K α	40	20	21-23	chalco
Ni	LLIF	K α	40	20	18-20	nick
Co	LLIF	K α	40	20	19-19	skux
Fe	LLIF	K α	40	20	26-33	hemvz
Te	LPET	L α	40	15	37-54	Te-ATX
Sb	LPET	L α	40	15	38-54	Sb-ATX
Ag	LPET	L α	40	15	62-74	Ag-ATX
Bi	LPET	M β	40	15	131-155	bitevz
Au	LPET	M α	40	15	93-100	Au-ATX
Se	TAP	L α	40	20	53-58	Se-ATX
As	TAP	L α	40	20	57-64	GaAs-ATX

Fixed concentrations for trace analysis: Pb = 86.6 wt % and S = 13.4 wt%

Beam diameter: 5 μ m

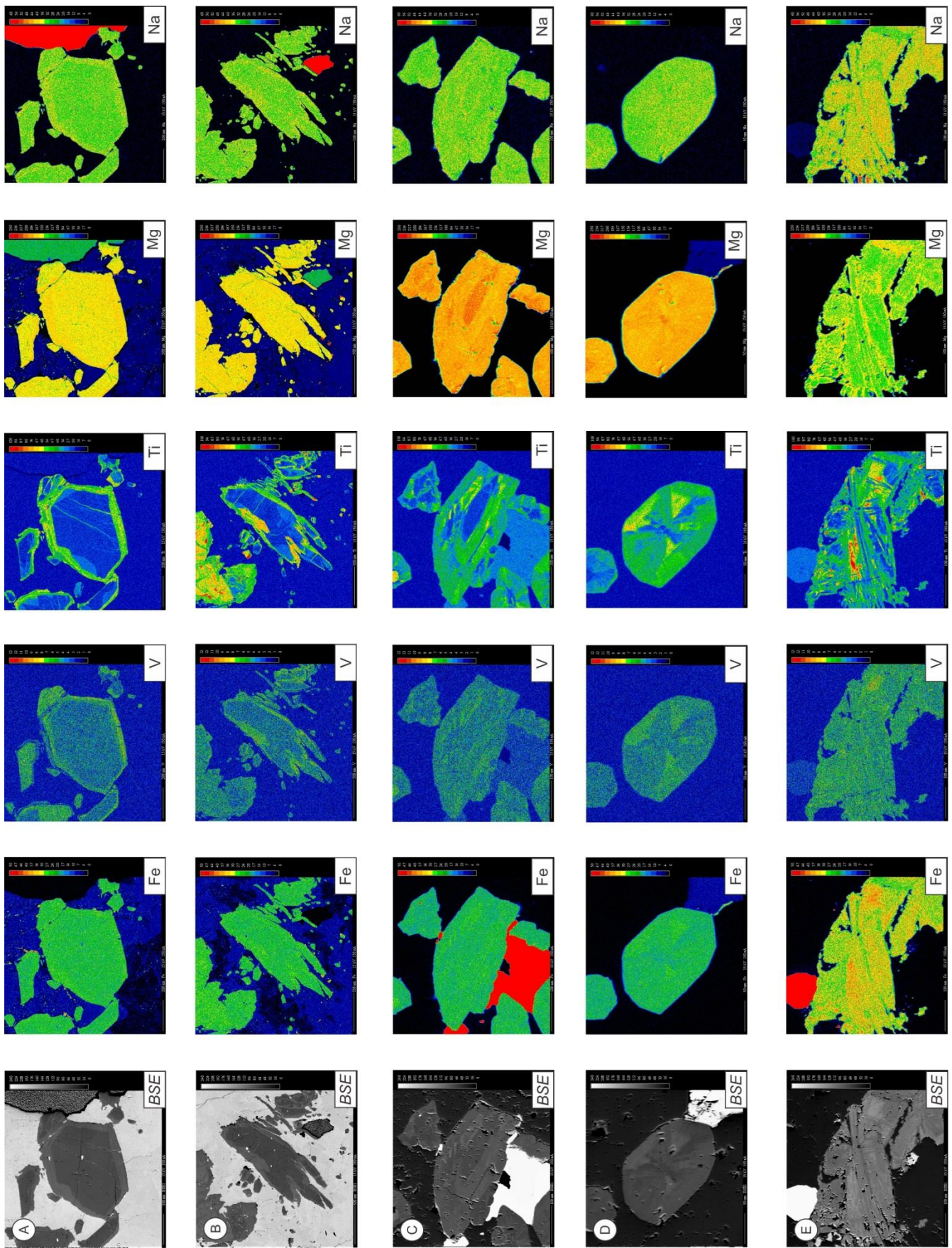


Fig. C-1 Elemental map of Tourmaline grains, a) T559T1, b) T559T2, c) T611T1, d) T611T2 from Tirigniaq and e) MU03T1 from the Mustang showing.

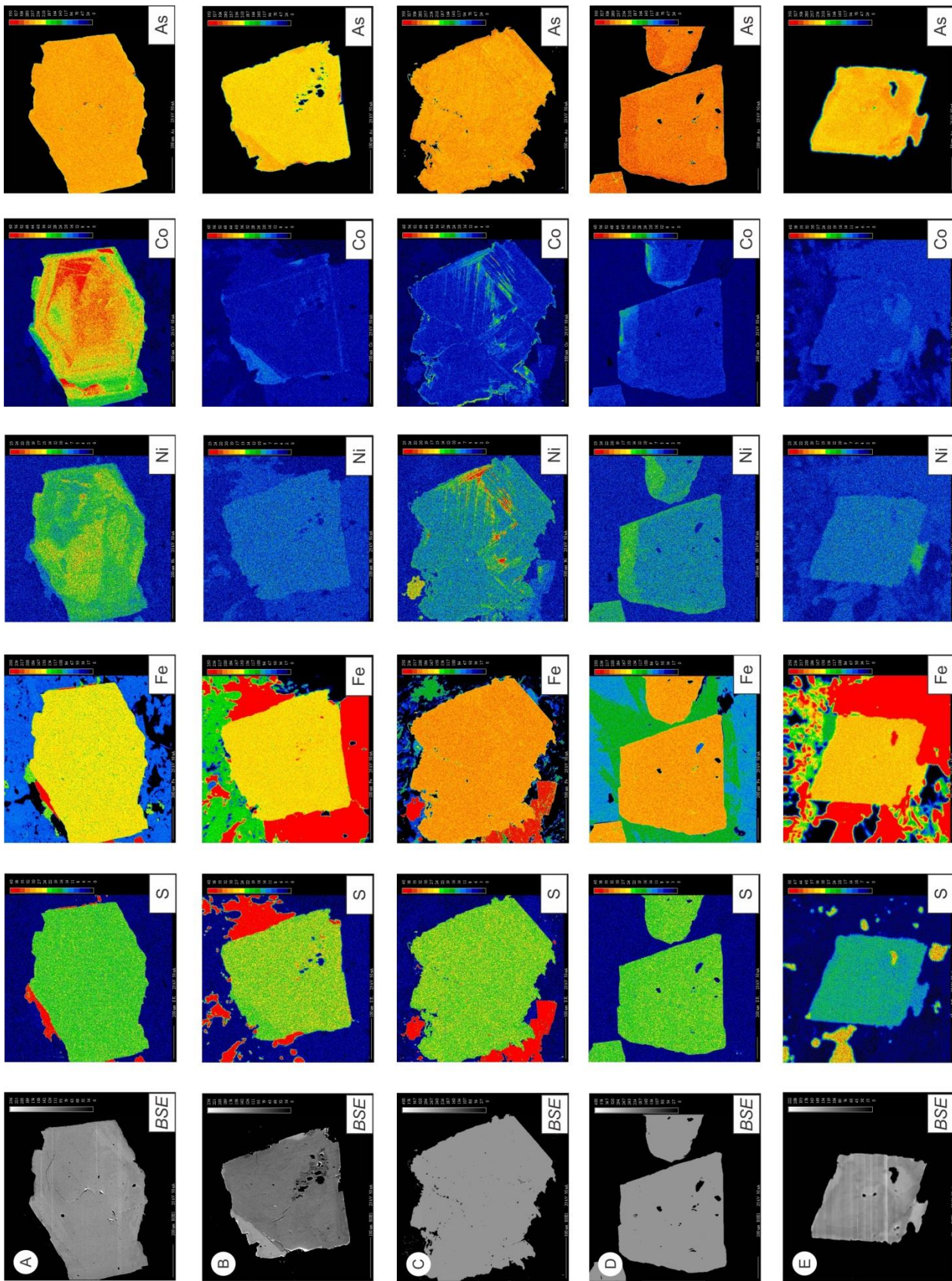


Fig. C-2 Elemental map of arsenopyrite grains a) 037A from the Mustang showing, b) A535A1 from F-Zone deposit, c) A628A from Tiriganiaq deposit, d) A660A from Discovery deposit and e) A590 from Tiriganiaq deposit.

Table C-6 EPMA magnetite data.

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
M1-1	Till sample	Till 01	NA	0.0685	0.0018	0.0021	0.0015	0.0752	0.0048
M1-2	Till sample	Till 01	NA	0.1457	0.0018	0.0059	0.0015	0.035	0.0047
MG01.10	Till sample	Till 01	NA	0.0162	0.0017	0.064	0.0015	0.983	0.0048
MG01.101	Till sample	Till 01	NA	0.0812	0.0018	< LOD	0	0.0154	0.0045
MG01.103	Till sample	Till 01	NA	0.116	0.0018	< LOD	0	0.012	0.0047
MG01.105	Till sample	Till 01	NA	0.0961	0.0018	< LOD	0.0015	0.0226	0.0047
MG01.107	Till sample	Till 01	NA	0.0797	0.0018	0.0055	0.0015	< LOD	0.0048
MG01.11	Till sample	Till 01	NA	0.015	0.0018	0.0475	0.0015	< LOD	0
MG01.12	Till sample	Till 01	NA	0.0475	0.0018	0.0021	0.0015	0.3534	0.0048
MG01.13	Till sample	Till 01	NA	0.0699	0.0018	0.0367	0.0015	0.0398	0.0047
MG01.14	Till sample	Till 01	NA	0.0218	0.0018	0.0031	0.0015	0.0976	0.0048
MG01.15	Till sample	Till 01	NA	0.0336	0.0018	0.0021	0.0015	0.0102	0.0047
MG01.17	Till sample	Till 01	NA	0.0958	0.0018	0.0946	0.0015	0.0209	0.0047
MG01.18	Till sample	Till 01	NA	0.0637	0.0018	0.0047	0.0015	0.0195	0.0047
MG01.19	Till sample	Till 01	NA	0.0652	0.0018	0.0709	0.0015	0.0151	0.0046
MG01.2	Till sample	Till 01	NA	0.0545	0.0018	< LOD	0	0.0733	0.0048
MG01.22	Till sample	Till 01	NA	0.1055	0.0018	0.2255	0.0015	< LOD	0
MG01.23	Till sample	Till 01	NA	0.043	0.0018	0.0099	0.0015	0.0143	0.0048
MG01.25	Till sample	Till 01	NA	0.0692	0.0018	0.0088	0.0015	0.0317	0.0047
MG01.26	Till sample	Till 01	NA	0.242	0.0018	< LOD	0.0015	0.0274	0.0048
MG01.28	Till sample	Till 01	NA	0.0211	0.0018	0.071	0.0015	0.5442	0.005
MG01.29	Till sample	Till 01	NA	0.0991	0.0018	0.0271	0.0015	< LOD	0.0048
MG01.3	Till sample	Till 01	NA	0.045	0.0018	< LOD	0	< LOD	0
MG01.31	Till sample	Till 01	NA	0.0107	0.0018	0.0883	0.0015	0.2881	0.0047
MG01.32	Till sample	Till 01	NA	0.0692	0.0018	0.0028	0.0015	0.0099	0.0047
MG01.34	Till sample	Till 01	NA	0.0603	0.0018	< LOD	0.0015	0.0177	0.0047
MG01.35	Till sample	Till 01	NA	0.0729	0.0018	0.0138	0.0015	0.0108	0.0046
MG01.37	Till sample	Till 01	NA	0.0044	0.0018	0.2432	0.0015	0.0409	0.0049
MG01.38	Till sample	Till 01	NA	0.0074	0.0018	0.002	0.0015	< LOD	0
MG01.39	Till sample	Till 01	NA	0.0234	0.0018	< LOD	0	0.009	0.0048
MG01.40	Till sample	Till 01	NA	0.0482	0.0018	< LOD	0	0.0576	0.0048
MG01.42	Till sample	Till 01	NA	0.4268	0.0018	0.0018	0.0015	0.0062	0.0047
MG01.43	Till sample	Till 01	NA	0.0695	0.0017	< LOD	0	0.0246	0.0048
MG01.44	Till sample	Till 01	NA	0.1275	0.0018	0.0157	0.0015	0.0118	0.0047
MG01.46	Till sample	Till 01	NA	0.0793	0.0018	< LOD	0.0015	0.0062	0.0048
MG01.47	Till sample	Till 01	NA	0.0862	0.0018	0.0025	0.0015	0.0123	0.0047
MG01.48	Till sample	Till 01	NA	0.397	0.0018	0.0171	0.0015	0.0107	0.0046
MG01.5	Till sample	Till 01	NA	0.0683	0.0018	< LOD	0	< LOD	0
MG01.50	Till sample	Till 01	NA	0.1892	0.0018	< LOD	0	0.0233	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
M1-1	< LOD	0.0083	0.0115	0.0014	< LOD	0	0.0066	0.0039
M1-2	< LOD	0.0082	< LOD	0.0014	< LOD	0.0022	0.0164	0.004
MG01.10	< LOD	0.0084	0.0094	0.0015	0.0036	0.0022	0.0115	0.004
MG01.101	< LOD	0	< LOD	0.0014	0.0101	0.0022	0.1043	0.004
MG01.103	< LOD	0	< LOD	0.0014	0.0149	0.0021	0.1828	0.004
MG01.105	0.012	0.0083	< LOD	0.0014	0.0088	0.0021	0.0944	0.0039
MG01.107	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0228	0.004
MG01.11	< LOD	0.0083	0.0019	0.0014	< LOD	0.0022	0.007	0.004
MG01.12	< LOD	0	0.0028	0.0014	0.0083	0.0022	0.0386	0.004
MG01.13	< LOD	0.0084	0.0017	0.0014	< LOD	0	0.0254	0.0041
MG01.14	< LOD	0	< LOD	0	< LOD	0.0022	0.019	0.004
MG01.15	0.0099	0.0083	< LOD	0.0014	0.0077	0.0022	0.0847	0.004
MG01.17	0.0138	0.0082	0.0054	0.0014	< LOD	0	0.105	0.0039
MG01.18	< LOD	0.0083	0.0016	0.0014	0.0039	0.0022	0.0367	0.004
MG01.19	< LOD	0	0.0037	0.0014	0.0035	0.0021	0.0524	0.004
MG01.2	0.0189	0.0082	0.003	0.0014	0.0104	0.0022	0.1496	0.004
MG01.22	< LOD	0	< LOD	0.0015	0.0145	0.0021	0.0054	0.004
MG01.23	< LOD	0	< LOD	0.0014	0.0109	0.0022	0.0449	0.0039
MG01.25	< LOD	0.0082	< LOD	0	0.0093	0.0021	0.098	0.004
MG01.26	< LOD	0	< LOD	0.0014	0.0254	0.0022	0.0453	0.004
MG01.28	< LOD	0.0084	0.0036	0.0014	< LOD	0.0022	0.0503	0.004
MG01.29	< LOD	0	0.0043	0.0014	0.0024	0.0022	< LOD	0.004
MG01.3	< LOD	0.0083	< LOD	0	0.0038	0.0022	0.098	0.004
MG01.31	< LOD	0.0083	0.0025	0.0014	0.0047	0.0022	0.0161	0.004
MG01.32	< LOD	0.0083	0.0036	0.0014	0.0069	0.0021	0.0681	0.004
MG01.34	< LOD	0	< LOD	0.0014	0.0169	0.0021	0.0457	0.004
MG01.35	< LOD	0.0083	< LOD	0.0014	0.0133	0.0022	0.0475	0.004
MG01.37	< LOD	0.0083	0.0024	0.0014	0.0029	0.0021	0.0697	0.004
MG01.38	< LOD	0.0083	0.0048	0.0014	< LOD	0	< LOD	0.0039
MG01.39	< LOD	0	< LOD	0	0.008	0.0022	0.12	0.0039
MG01.40	0.0107	0.0083	< LOD	0	0.0204	0.0022	0.0155	0.0039
MG01.42	< LOD	0.0084	< LOD	0	0.0109	0.0022	0.0704	0.004
MG01.43	< LOD	0.0083	< LOD	0.0014	0.0106	0.0022	0.0251	0.004
MG01.44	< LOD	0.0083	< LOD	0.0014	0.0124	0.0022	0.0451	0.004
MG01.46	< LOD	0	0.0034	0.0014	0.0155	0.0022	0.0766	0.0039
MG01.47	< LOD	0.0083	0.0017	0.0014	0.0139	0.0022	0.0606	0.004
MG01.48	< LOD	0.0083	< LOD	0	0.0201	0.0021	0.0202	0.004
MG01.5	< LOD	0	< LOD	0.0014	0.0042	0.0022	0.0636	0.004
MG01.50	< LOD	0.0083	0.002	0.0014	0.0072	0.0022	0.007	0.0039

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
M1-1	< LOD	0.0062	< LOD	0	0.0105	0.0014	< LOD	0
M1-2	< LOD	0.0062	< LOD	0	0.0148	0.0014	0.0055	0.0041
MG01.10	0.0308	0.0063	< LOD	0	0.0238	0.0015	< LOD	0.0048
MG01.101	< LOD	0	0.003	0.0023	0.0042	0.0015	< LOD	0
MG01.103	< LOD	0.0063	< LOD	0	0.009	0.0015	< LOD	0.0047
MG01.105	< LOD	0.0062	< LOD	0.0023	0.0051	0.0015	< LOD	0
MG01.107	0.011	0.0062	< LOD	0.0023	0.007	0.0015	< LOD	0.0047
MG01.11	0.0124	0.0062	< LOD	0.0023	0.0169	0.0015	< LOD	0
MG01.12	0.0069	0.0063	0.0027	0.0023	0.0054	0.0015	< LOD	0
MG01.13	< LOD	0.0063	< LOD	0	0.0192	0.0015	< LOD	0.0048
MG01.14	< LOD	0.0062	0.0028	0.0023	0.0057	0.0015	< LOD	0
MG01.15	< LOD	0	< LOD	0	0.0043	0.0015	< LOD	0
MG01.17	< LOD	0	0.0113	0.0023	0.0293	0.0015	< LOD	0
MG01.18	0.018	0.0062	< LOD	0	0.0062	0.0015	< LOD	0
MG01.19	< LOD	0.0062	< LOD	0.0023	0.019	0.0015	0.0056	0.0047
MG01.2	0.0146	0.0062	< LOD	0	0.0163	0.0015	< LOD	0.0047
MG01.22	0.0112	0.0062	< LOD	0.0023	0.1858	0.0015	< LOD	0
MG01.23	0.0165	0.0062	< LOD	0	0.0048	0.0015	< LOD	0
MG01.25	< LOD	0	< LOD	0	0.0027	0.0015	< LOD	0
MG01.26	0.0183	0.0063	< LOD	0	0.0029	0.0015	< LOD	0.0048
MG01.28	< LOD	0.0063	< LOD	0.0023	0.0084	0.0015	< LOD	0.0047
MG01.29	< LOD	0	< LOD	0.0023	0.0134	0.0015	< LOD	0.0047
MG01.3	< LOD	0.0062	< LOD	0	0.0017	0.0015	< LOD	0
MG01.31	0.0145	0.0062	0.0025	0.0023	0.0098	0.0015	< LOD	0
MG01.32	< LOD	0	< LOD	0	0.0043	0.0015	< LOD	0
MG01.34	0.0152	0.0062	< LOD	0	0.006	0.0015	< LOD	0.0047
MG01.35	0.0188	0.0062	< LOD	0.0023	0.007	0.0015	< LOD	0.0047
MG01.37	0.0268	0.0062	< LOD	0.0023	0.024	0.0015	< LOD	0.0048
MG01.38	< LOD	0	< LOD	0	0.2247	0.0015	< LOD	0
MG01.39	0.0208	0.0062	< LOD	0	0.0052	0.0015	0.0119	0.0047
MG01.40	0.0388	0.0063	< LOD	0	0.0142	0.0015	0.0094	0.0047
MG01.42	< LOD	0.0063	< LOD	0	0.004	0.0015	< LOD	0.0048
MG01.43	0.015	0.0062	< LOD	0.0023	0.0032	0.0015	0.0074	0.0047
MG01.44	0.0076	0.0062	< LOD	0.0023	0.017	0.0015	< LOD	0.0047
MG01.46	0.009	0.0062	< LOD	0	0.0067	0.0015	< LOD	0
MG01.47	< LOD	0.0062	< LOD	0	0.0033	0.0015	< LOD	0.0047
MG01.48	< LOD	0.0062	< LOD	0.0023	0.0113	0.0015	< LOD	0.0048
MG01.5	< LOD	0	< LOD	0.0023	0.006	0.0015	< LOD	0
MG01.50	0.0109	0.0063	< LOD	0.0023	0.0069	0.0015	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
M1-1	0.0399	0.0017	0.0804	0.0053	< LOD	0
M1-2	0.0477	0.0017	0.0207	0.0051	< LOD	0
MG01.10	0.0271	0.0019	0.3419	0.005	0.0254	0.0106
MG01.101	0.0681	0.0019	0.1195	0.0054	0.0288	0.0104
MG01.103	0.0231	0.0019	0.2105	0.0052	< LOD	0
MG01.105	0.0285	0.0019	0.034	0.0053	< LOD	0
MG01.107	0.1059	0.0019	0.1905	0.0052	< LOD	0
MG01.11	0.0339	0.0019	0.0911	0.0054	0.0175	0.0104
MG01.12	0.0194	0.0019	0.0204	0.0053	0.0279	0.0104
MG01.13	0.7878	0.0019	0.4091	0.0053	0.0202	0.0106
MG01.14	0.0178	0.0019	0.1686	0.0051	< LOD	0.0105
MG01.15	0.0041	0.0019	0.1375	0.005	< LOD	0
MG01.17	0.1359	0.0019	0.0104	0.0054	< LOD	0
MG01.18	0.0134	0.0019	0.2557	0.0052	< LOD	0.0105
MG01.19	0.1374	0.0019	0.208	0.0053	0.0124	0.0106
MG01.2	0.0314	0.0019	0.1146	0.0052	0.0112	0.0105
MG01.22	0.0581	0.0019	0.2963	0.0051	0.0144	0.0106
MG01.23	0.0534	0.0019	0.243	0.0051	< LOD	0.0105
MG01.25	0.0722	0.0019	0.0322	0.0049	0.0174	0.0105
MG01.26	0.8164	0.0019	0.3048	0.0055	0.1571	0.0106
MG01.28	0.0427	0.0019	0.1075	0.0052	< LOD	0
MG01.29	0.0447	0.0019	0.311	0.0052	< LOD	0.0105
MG01.3	0.0186	0.0019	0.01	0.0052	< LOD	0.0105
MG01.31	0.1316	0.0019	0.0639	0.0055	0.0186	0.0105
MG01.32	0.0246	0.0019	0.0195	0.005	0.0169	0.0105
MG01.34	0.0384	0.0019	0.2416	0.0053	< LOD	0.0105
MG01.35	0.0425	0.0019	0.1417	0.0051	< LOD	0.0105
MG01.37	< LOD	0	0.1046	0.0051	0.0448	0.0106
MG01.38	< LOD	0	< LOD	0	< LOD	0.0105
MG01.39	0.0105	0.0019	0.2517	0.0053	0.0171	0.0106
MG01.40	0.0266	0.0019	0.1803	0.0053	< LOD	0.0106
MG01.42	0.2816	0.0019	0.0869	0.0053	0.4567	0.0106
MG01.43	0.0046	0.0019	0.3294	0.0053	0.0149	0.0105
MG01.44	0.1294	0.0019	0.0118	0.0052	0.0119	0.0105
MG01.46	0.0622	0.0019	0.2538	0.0052	0.0212	0.0105
MG01.47	0.0594	0.0019	0.2576	0.0052	0.0153	0.0105
MG01.48	0.4089	0.0019	0.0426	0.0053	< LOD	0
MG01.5	0.0431	0.0019	0.0311	0.0052	0.0333	0.0105
MG01.50	0.0717	0.0019	0.0595	0.0052	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG01.51	Till sample	Till 01	NA	0.0406	0.0018	0.0198	0.0015	< LOD	0.0047
MG01.52	Till sample	Till 01	NA	0.0474	0.0018	< LOD	0	0.414	0.0047
MG01.57	Till sample	Till 01	NA	0.0433	0.0018	< LOD	0.0015	0.0182	0.0047
MG01.58	Till sample	Till 01	NA	0.0801	0.0018	< LOD	0	< LOD	0
MG01.59	Till sample	Till 01	NA	0.4584	0.0018	0.0109	0.0016	0.8991	0.0052
MG01.62	Till sample	Till 01	NA	0.1864	0.0018	0.0074	0.0015	0.047	0.0046
MG01.66	Till sample	Till 01	NA	0.0984	0.0018	0.0039	0.0015	0.0256	0.0047
MG01.67	Till sample	Till 01	NA	0.0421	0.0017	0.0258	0.0015	0.0622	0.0048
MG01.68	Till sample	Till 01	NA	0.0655	0.0018	< LOD	0.0015	0.0984	0.0047
MG01.69	Till sample	Till 01	NA	0.0442	0.0018	0.0026	0.0015	0.0153	0.0046
MG01.7	Till sample	Till 01	NA	0.0589	0.0018	0.0619	0.0015	0.8625	0.0049
MG01.70	Till sample	Till 01	NA	0.0298	0.0018	< LOD	0.0015	0.0122	0.0048
MG01.71	Till sample	Till 01	NA	1.1038	0.0018	< LOD	0.0015	< LOD	0.0049
MG01.73	Till sample	Till 01	NA	0.0684	0.0018	0.0016	0.0015	0.007	0.0048
MG01.74	Till sample	Till 01	NA	0.0946	0.0018	< LOD	0	0.0061	0.0046
MG01.75	Till sample	Till 01	NA	0.079	0.0018	< LOD	0	0.0076	0.0049
MG01.76	Till sample	Till 01	NA	0.0686	0.0018	0.0052	0.0015	0.0217	0.0048
MG01.78	Till sample	Till 01	NA	0.0961	0.0018	< LOD	0.0015	< LOD	0.0048
MG01.79	Till sample	Till 01	NA	0.0751	0.0018	0.0016	0.0015	0.0567	0.0048
MG01.8	Till sample	Till 01	NA	0.0153	0.0018	0.1214	0.0015	0.447	0.005
MG01.80	Till sample	Till 01	NA	0.0755	0.0018	< LOD	0.0015	0.0109	0.0047
MG01.82	Till sample	Till 01	NA	0.0152	0.0018	0.0213	0.0015	0.0144	0.0046
MG01.83	Till sample	Till 01	NA	0.1795	0.0018	0.0213	0.0015	0.0204	0.0046
MG01.84	Till sample	Till 01	NA	0.0432	0.0018	0.0059	0.0015	< LOD	0.0048
MG01.85	Till sample	Till 01	NA	0.0072	0.0018	0.0981	0.0015	0.0267	0.0048
MG01.89	Till sample	Till 01	NA	0.0526	0.0018	0.0083	0.0015	0.0136	0.0048
MG01.9	Till sample	Till 01	NA	0.0801	0.0017	0.014	0.0015	0.0107	0.0049
MG01.92	Till sample	Till 01	NA	0.0665	0.0018	< LOD	0	0.0144	0.0047
MG01.93	Till sample	Till 01	NA	0.0074	0.0018	0.0407	0.0015	0.0106	0.0049
MG01.96	Till sample	Till 01	NA	0.0764	0.0018	0.0468	0.0015	0.0123	0.0048
MG01.97	Till sample	Till 01	NA	0.0379	0.0017	0.005	0.0015	0.0101	0.0046
MG01.98	Till sample	Till 01	NA	0.1122	0.0018	0.0045	0.0015	0.0463	0.0048
MG01.99	Till sample	Till 01	NA	0.0766	0.0018	0.0024	0.0015	0.0211	0.0048
M2-1	Till sample	Till 02	NA	0.0723	0.0018	0.0278	0.0015	0.1135	0.0049
M2-2	Till sample	Till 02	NA	0.0661	0.0018	< LOD	0	0.0164	0.005
M2-3	Till sample	Till 02	NA	0.0434	0.0018	0.0428	0.0016	3.465	0.0053
M2-4	Till sample	Till 02	NA	0.0482	0.0017	0.0622	0.0015	0.2633	0.0049
M2-6	Till sample	Till 02	NA	0.0629	0.0018	< LOD	0	0.0065	0.0048
MG02.1	Till sample	Till 02	NA	0.0225	0.0018	0.0053	0.0015	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG01.51	0.0095	0.0083	0.0024	0.0014	0.005	0.0022	0.0087	0.004
MG01.52	< LOD	0.0084	0.002	0.0014	0.0046	0.0022	0.0963	0.004
MG01.57	< LOD	0.0083	0.0018	0.0014	0.0079	0.0022	0.1111	0.004
MG01.58	< LOD	0.0083	< LOD	0	0.0078	0.0022	0.0405	0.004
MG01.59	< LOD	0.0084	< LOD	0.0015	0.0222	0.0022	0.0373	0.0041
MG01.62	0.0105	0.0083	< LOD	0.0014	0.0213	0.0022	0.0243	0.0039
MG01.66	< LOD	0	< LOD	0	0.0111	0.0022	0.0662	0.004
MG01.67	< LOD	0.0083	< LOD	0.0014	0.0051	0.0022	0.0169	0.004
MG01.68	< LOD	0.0083	0.0017	0.0014	0.0119	0.0022	0.0393	0.004
MG01.69	0.0126	0.0083	< LOD	0	0.0027	0.0022	0.0305	0.0039
MG01.7	< LOD	0.0084	< LOD	0.0014	< LOD	0.0022	0.0364	0.0041
MG01.70	< LOD	0	< LOD	0	0.0039	0.0022	0.028	0.004
MG01.71	< LOD	0	< LOD	0.0015	0.0218	0.0022	< LOD	0.004
MG01.73	< LOD	0	0.0032	0.0014	0.0136	0.0022	0.0702	0.004
MG01.74	< LOD	0	< LOD	0.0014	0.0227	0.0022	0.0527	0.004
MG01.75	< LOD	0	0.0037	0.0014	0.0088	0.0022	0.0245	0.0039
MG01.76	< LOD	0.0082	< LOD	0.0014	0.0151	0.0021	0.1195	0.0039
MG01.78	< LOD	0.0083	< LOD	0.0014	0.009	0.0022	0.1944	0.004
MG01.79	< LOD	0.0083	0.0022	0.0014	0.0025	0.0022	< LOD	0.004
MG01.8	0.0092	0.0083	0.0075	0.0015	< LOD	0	0.0178	0.004
MG01.80	0.0165	0.0083	< LOD	0.0014	0.007	0.0022	0.1152	0.004
MG01.82	< LOD	0	< LOD	0	< LOD	0.0022	0.0099	0.004
MG01.83	< LOD	0.0083	0.0021	0.0014	0.0386	0.0021	0.0325	0.0039
MG01.84	0.01	0.0083	< LOD	0.0014	< LOD	0.0022	0.0068	0.004
MG01.85	< LOD	0	0.0024	0.0014	0.003	0.0022	0.0193	0.004
MG01.89	< LOD	0.0084	0.0051	0.0014	0.0023	0.0022	0.0126	0.004
MG01.9	< LOD	0	< LOD	0.0015	< LOD	0.0022	0.0066	0.004
MG01.92	< LOD	0.0083	< LOD	0	0.0098	0.0021	0.018	0.004
MG01.93	< LOD	0	0.0314	0.0014	0.0022	0.0021	0.0185	0.004
MG01.96	< LOD	0.0083	0.0022	0.0014	0.0159	0.0022	0.0936	0.004
MG01.97	< LOD	0.0083	0.0028	0.0014	< LOD	0.0022	0.0488	0.0039
MG01.98	< LOD	0.0083	< LOD	0.0014	0.0122	0.0022	0.0384	0.004
MG01.99	< LOD	0	0.0024	0.0014	0.009	0.0022	0.1131	0.004
M2-1	< LOD	0	< LOD	0.0014	0.0074	0.0022	0.0271	0.004
M2-2	0.0159	0.0082	0.002	0.0014	0.0101	0.0022	0.0856	0.0039
M2-3	0.0122	0.0086	0.0022	0.0015	0.0256	0.0022	0.074	0.0043
M2-4	< LOD	0.0084	0.0015	0.0014	0.0225	0.0023	0.0254	0.004
M2-6	0.0117	0.0082	< LOD	0	0.0024	0.0022	0.0744	0.0039
MG02.1	0.0181	0.0082	0.0192	0.0015	< LOD	0	0.0139	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG01.51	< LOD	0	0.0036	0.0023	0.0057	0.0015	< LOD	0.0047
MG01.52	< LOD	0	< LOD	0.0023	0.0072	0.0015	< LOD	0.0048
MG01.57	0.0117	0.0061	< LOD	0	0.0023	0.0015	< LOD	0
MG01.58	0.0065	0.0062	0.003	0.0023	0.0045	0.0015	< LOD	0.0047
MG01.59	0.0587	0.0063	< LOD	0	0.0153	0.0015	< LOD	0
MG01.62	0.0098	0.0062	< LOD	0.0023	0.009	0.0015	< LOD	0.0048
MG01.66	< LOD	0	< LOD	0.0023	0.0039	0.0015	< LOD	0
MG01.67	< LOD	0.0063	0.0095	0.0023	0.0219	0.0014	0.0077	0.0047
MG01.68	< LOD	0.0062	< LOD	0	0.0045	0.0015	< LOD	0
MG01.69	0.0103	0.0062	< LOD	0	0.0061	0.0015	< LOD	0
MG01.7	0.0272	0.0063	< LOD	0	0.0071	0.0015	< LOD	0
MG01.70	0.0111	0.0062	< LOD	0	0.0056	0.0015	< LOD	0.0047
MG01.71	< LOD	0.0063	< LOD	0	0.0086	0.0015	< LOD	0
MG01.73	< LOD	0.0062	0.0027	0.0023	0.0082	0.0015	< LOD	0
MG01.74	0.0425	0.0062	< LOD	0.0023	0.0017	0.0015	< LOD	0
MG01.75	< LOD	0	< LOD	0.0023	0.003	0.0015	< LOD	0
MG01.76	0.0101	0.0062	< LOD	0	0.0084	0.0015	< LOD	0
MG01.78	< LOD	0.0062	< LOD	0.0023	0.0054	0.0015	< LOD	0
MG01.79	0.0171	0.0062	< LOD	0	0.0061	0.0015	< LOD	0
MG01.8	0.0094	0.0063	0.0101	0.0023	0.0128	0.0015	0.0055	0.0047
MG01.80	< LOD	0.0063	< LOD	0.0023	0.0035	0.0015	< LOD	0
MG01.82	< LOD	0	0.0028	0.0023	0.0025	0.0015	0.0056	0.0048
MG01.83	< LOD	0.0063	< LOD	0.0023	0.0068	0.0015	< LOD	0.0047
MG01.84	0.0135	0.0062	< LOD	0	0.0031	0.0015	< LOD	0
MG01.85	0.0367	0.0062	< LOD	0.0023	0.0052	0.0015	< LOD	0
MG01.89	0.0127	0.0062	< LOD	0	0.333	0.0015	< LOD	0
MG01.9	0.0101	0.0062	< LOD	0.0023	0.0133	0.0015	0.0056	0.0047
MG01.92	0.0132	0.0063	< LOD	0.0023	0.0062	0.0015	< LOD	0
MG01.93	< LOD	0	< LOD	0.0023	0.0132	0.0015	0.0078	0.0047
MG01.96	< LOD	0.0062	< LOD	0.0023	0.0043	0.0015	< LOD	0.0047
MG01.97	0.0073	0.0062	< LOD	0	0.0061	0.0015	< LOD	0.0048
MG01.98	< LOD	0.0063	0.0026	0.0023	0.0031	0.0015	< LOD	0.0048
MG01.99	< LOD	0	< LOD	0	0.0097	0.0015	0.0048	0.0047
M2-1	< LOD	0.0063	< LOD	0	0.0052	0.0014	< LOD	0.0041
M2-2	0.0107	0.0062	< LOD	0	0.0085	0.0014	< LOD	0
M2-3	0.0716	0.0065	< LOD	0	0.0059	0.0015	< LOD	0
M2-4	0.0362	0.0063	< LOD	0.0023	0.0107	0.0014	< LOD	0
M2-6	< LOD	0	0.0031	0.0023	0.0069	0.0014	< LOD	0
MG02.1	< LOD	0.0063	< LOD	0	0.0322	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG01.51	0.0176	0.0019	0.1693	0.0053	< LOD	0.0105
MG01.52	0.0064	0.0019	0.0966	0.0053	0.0114	0.0106
MG01.57	0.0214	0.0019	0.0849	0.0053	0.0124	0.0106
MG01.58	0.054	0.0019	0.1998	0.0051	< LOD	0
MG01.59	0.4745	0.0019	0.8148	0.0056	0.0178	0.0107
MG01.62	0.0323	0.0019	0.4124	0.0053	0.012	0.0106
MG01.66	0.0707	0.0019	0.3666	0.0051	0.0249	0.0105
MG01.67	0.2031	0.0019	0.3598	0.0051	< LOD	0.0107
MG01.68	0.0395	0.0019	0.2475	0.005	< LOD	0
MG01.69	0.043	0.0019	0.1739	0.0053	0.0137	0.0105
MG01.7	0.0571	0.0019	0.1939	0.0053	< LOD	0
MG01.70	0.0196	0.0019	0.1786	0.0051	0.0293	0.0106
MG01.71	0.4501	0.0019	0.0071	0.0054	< LOD	0
MG01.73	0.0389	0.0019	0.1923	0.0054	< LOD	0.0106
MG01.74	0.0107	0.0019	< LOD	0	< LOD	0.0105
MG01.75	0.0206	0.0019	0.2996	0.0051	< LOD	0.0105
MG01.76	0.0505	0.0019	0.2023	0.0053	< LOD	0
MG01.78	0.0638	0.0019	0.1887	0.0052	< LOD	0.0106
MG01.79	0.0225	0.0019	0.4001	0.0054	0.0143	0.0105
MG01.8	0.0134	0.0019	0.0973	0.0052	< LOD	0.0107
MG01.80	0.0119	0.0019	0.1065	0.0051	0.0351	0.0106
MG01.82	0.0174	0.0019	0.1454	0.0054	0.0139	0.0106
MG01.83	0.0455	0.0019	0.2624	0.0054	< LOD	0.0105
MG01.84	0.0111	0.0019	0.2859	0.0052	0.0288	0.0105
MG01.85	0.0117	0.0019	0.0573	0.0052	< LOD	0
MG01.89	0.0792	0.0019	0.2206	0.0053	< LOD	0.0107
MG01.9	0.1349	0.0019	0.7199	0.0054	< LOD	0.0106
MG01.92	0.0162	0.0019	0.5265	0.0053	0.0129	0.0105
MG01.93	0.0278	0.0019	0.0786	0.0052	< LOD	0.0105
MG01.96	0.1079	0.0019	0.1464	0.0052	< LOD	0
MG01.97	0.0342	0.0019	0.1385	0.0052	0.0202	0.0106
MG01.98	0.0449	0.0019	0.5801	0.0053	< LOD	0
MG01.99	0.0741	0.0019	0.4809	0.0051	0.0199	0.0105
M2-1	0.1243	0.0017	0.3854	0.0055	< LOD	0.0105
M2-2	0.0544	0.0017	0.2466	0.0051	< LOD	0
M2-3	0.0389	0.0018	0.2019	0.0054	0.0238	0.0109
M2-4	0.0357	0.0017	0.113	0.0052	< LOD	0
M2-6	0.0176	0.0017	0.0119	0.0054	< LOD	0.0106
MG02.1	0.011	0.0019	0.0179	0.0051	< LOD	0.0105

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG02.100	Till sample	Till 02	NA	0.0551	0.0018	0.0047	0.0015	0.0111	0.0047
MG02.101	Till sample	Till 02	NA	0.0198	0.0018	0.0017	0.0015	0.0095	0.0046
MG02.102	Till sample	Till 02	NA	0.1316	0.0018	0.0023	0.0015	0.1355	0.0049
MG02.103	Till sample	Till 02	NA	0.0338	0.0018	0.004	0.0015	< LOD	0
MG02.104	Till sample	Till 02	NA	0.0305	0.0018	0.0017	0.0015	0.0841	0.0045
MG02.105	Till sample	Till 02	NA	0.0113	0.0018	< LOD	0	< LOD	0
MG02.106	Till sample	Till 02	NA	0.0089	0.0018	< LOD	0	0.015	0.0046
MG02.107	Till sample	Till 02	NA	0.0546	0.0018	0.002	0.0015	0.0121	0.0047
MG02.108	Till sample	Till 02	NA	0.0339	0.0018	< LOD	0	0.0098	0.0046
MG02.109	Till sample	Till 02	NA	0.0629	0.0018	< LOD	0	< LOD	0.0047
MG02.111	Till sample	Till 02	NA	0.0441	0.0018	< LOD	0.0015	0.016	0.0047
MG02.112	Till sample	Till 02	NA	0.0063	0.0018	0.041	0.0015	0.0739	0.0047
MG02.115	Till sample	Till 02	NA	0.2457	0.0018	0.005	0.0015	0.0312	0.0047
MG02.116	Till sample	Till 02	NA	0.0058	0.0018	0.0432	0.0015	0.1035	0.0048
MG02.117	Till sample	Till 02	NA	0.1428	0.0018	0.0018	0.0015	0.064	0.0047
MG02.118	Till sample	Till 02	NA	0.0368	0.0018	< LOD	0	0.0129	0.0049
MG02.12	Till sample	Till 02	NA	0.0097	0.0018	0.0761	0.0015	0.0562	0.0047
MG02.122	Till sample	Till 02	NA	0.0118	0.0018	0.0188	0.0015	< LOD	0.0048
MG02.124	Till sample	Till 02	NA	0.0207	0.0018	0.0054	0.0015	0.0372	0.0047
MG02.126	Till sample	Till 02	NA	0.1305	0.0018	0.0749	0.0015	0.2806	0.0048
MG02.127	Till sample	Till 02	NA	0.5121	0.0018	0.0155	0.0015	0.0117	0.0048
MG02.17	Till sample	Till 02	NA	0.468	0.0017	0.0104	0.0015	0.4768	0.0049
MG02.18	Till sample	Till 02	NA	0.0637	0.0018	0.0186	0.0015	0.0152	0.0048
MG02.2	Till sample	Till 02	NA	< LOD	0.0018	0.0187	0.0015	0.0226	0.0048
MG02.21	Till sample	Till 02	NA	0.0189	0.0018	0.0845	0.0015	0.0187	0.0048
MG02.22	Till sample	Till 02	NA	0.0697	0.0018	0.0815	0.0015	0.3191	0.0048
MG02.24	Till sample	Till 02	NA	0.0639	0.0018	< LOD	0.0015	< LOD	0
MG02.26	Till sample	Till 02	NA	0.0027	0.0018	0.1444	0.0015	0.0098	0.0048
MG02.28	Till sample	Till 02	NA	0.0213	0.0018	0.0371	0.0016	2.619	0.0053
MG02.30	Till sample	Till 02	NA	0.0755	0.0017	0.0388	0.0015	0.0642	0.0048
MG02.31	Till sample	Till 02	NA	0.2138	0.0018	0.0061	0.0015	0.2503	0.0048
MG02.32	Till sample	Till 02	NA	0.1526	0.0018	0.006	0.0015	0.0562	0.0049
MG02.33	Till sample	Till 02	NA	0.1246	0.0019	0.0956	0.0016	5.6394	0.0055
MG02.35	Till sample	Till 02	NA	0.2775	0.0018	0.1544	0.0016	0.0297	0.0049
MG02.36	Till sample	Till 02	NA	0.0073	0.0018	0.0023	0.0015	0.0272	0.0047
MG02.4	Till sample	Till 02	NA	0.0453	0.0018	< LOD	0.0015	< LOD	0.0048
MG02.40	Till sample	Till 02	NA	0.0291	0.0018	0.0045	0.0015	< LOD	0
MG02.41	Till sample	Till 02	NA	0.1781	0.0018	< LOD	0	0.5311	0.0047
MG02.42	Till sample	Till 02	NA	0.0316	0.0018	0.09	0.0016	2.8552	0.005

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG02.100	< LOD	0.0083	0.0017	0.0014	0.0071	0.0022	0.067	0.004
MG02.101	< LOD	0	< LOD	0.0014	0.0076	0.0022	0.0862	0.004
MG02.102	< LOD	0	0.0017	0.0014	0.018	0.0022	0.0615	0.004
MG02.103	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.1542	0.004
MG02.104	0.0141	0.0082	< LOD	0	0.0026	0.0022	0.0618	0.004
MG02.105	< LOD	0.0083	0.0018	0.0014	0.0029	0.0022	0.0563	0.0039
MG02.106	< LOD	0.0082	< LOD	0.0014	0.0074	0.0022	0.1231	0.004
MG02.107	< LOD	0.0083	0.0015	0.0014	0.0139	0.0022	0.0877	0.004
MG02.108	< LOD	0	< LOD	0	0.0074	0.0022	0.0549	0.004
MG02.109	< LOD	0.0083	< LOD	0.0014	0.0061	0.0022	0.084	0.0039
MG02.111	< LOD	0.0082	< LOD	0.0014	0.0257	0.0022	0.0524	0.004
MG02.112	< LOD	0	0.0016	0.0014	< LOD	0	0.0165	0.0039
MG02.115	0.0157	0.0083	< LOD	0	0.0086	0.0022	0.0206	0.004
MG02.116	< LOD	0	0.0049	0.0014	0.0036	0.0022	0.0299	0.004
MG02.117	0.0108	0.0083	< LOD	0	0.0224	0.0022	0.0647	0.004
MG02.118	< LOD	0.0083	< LOD	0.0014	< LOD	0	0.0429	0.004
MG02.12	< LOD	0	0.0054	0.0014	< LOD	0.0022	< LOD	0.004
MG02.122	< LOD	0.0083	< LOD	0.0014	< LOD	0	0.0079	0.004
MG02.124	0.0085	0.0082	0.0023	0.0014	0.0036	0.0022	0.0311	0.0039
MG02.126	< LOD	0.0083	0.003	0.0014	< LOD	0	0.0595	0.004
MG02.127	0.0114	0.0083	0.0034	0.0014	< LOD	0.0022	0.0322	0.004
MG02.17	< LOD	0.0084	< LOD	0.0014	0.1252	0.0022	0.055	0.0041
MG02.18	< LOD	0.0082	0.0015	0.0014	0.0103	0.0022	0.0313	0.0039
MG02.2	< LOD	0	0.0027	0.0014	< LOD	0.0022	0.0115	0.004
MG02.21	< LOD	0.0083	0.0023	0.0014	0.0028	0.0022	0.0166	0.0039
MG02.22	< LOD	0.0084	< LOD	0.0014	0.0041	0.0021	0.0249	0.004
MG02.24	0.0131	0.0082	< LOD	0.0014	0.0086	0.0021	0.0808	0.0039
MG02.26	0.019	0.0082	0.0016	0.0014	0.007	0.0022	0.0269	0.0039
MG02.28	< LOD	0	0.0029	0.0015	0.0105	0.0022	0.0255	0.0043
MG02.30	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.01	0.004
MG02.31	0.0101	0.0083	< LOD	0	0.0139	0.0022	0.0286	0.004
MG02.32	< LOD	0	< LOD	0.0014	0.02	0.0022	0.0589	0.004
MG02.33	0.011	0.0088	0.006	0.0015	0.0059	0.0022	0.4437	0.0045
MG02.35	< LOD	0	0.0025	0.0015	0.0349	0.0022	0.0809	0.0041
MG02.36	< LOD	0	< LOD	0	0.0059	0.0022	0.0699	0.0039
MG02.4	< LOD	0	< LOD	0.0014	0.0081	0.0022	0.1665	0.004
MG02.40	< LOD	0.0083	0.0026	0.0014	0.0027	0.0022	0.0315	0.0039
MG02.41	< LOD	0.0083	< LOD	0.0015	0.0104	0.0022	0.018	0.004
MG02.42	< LOD	0.0085	0.0017	0.0015	0.0113	0.0022	0.0418	0.0043

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG02.100	0.0113	0.0061	< LOD	0	0.0054	0.0015	< LOD	0
MG02.101	< LOD	0.0062	< LOD	0.0023	0.0032	0.0015	< LOD	0
MG02.102	< LOD	0	< LOD	0	0.0063	0.0015	< LOD	0
MG02.103	< LOD	0	< LOD	0	0.0052	0.0015	< LOD	0
MG02.104	0.0159	0.0061	< LOD	0.0023	0.0049	0.0015	< LOD	0.0047
MG02.105	< LOD	0.0062	< LOD	0.0023	0.0078	0.0015	< LOD	0.0047
MG02.106	< LOD	0.0063	< LOD	0	0.0039	0.0015	< LOD	0
MG02.107	< LOD	0.0062	< LOD	0.0023	0.0061	0.0015	< LOD	0
MG02.108	< LOD	0	< LOD	0.0023	0.0063	0.0015	< LOD	0
MG02.109	< LOD	0.0062	< LOD	0.0023	0.0066	0.0015	< LOD	0
MG02.111	< LOD	0.0063	< LOD	0	0.0349	0.0015	< LOD	0.0047
MG02.112	0.0204	0.0062	< LOD	0.0023	0.0099	0.0015	< LOD	0
MG02.115	< LOD	0.0062	< LOD	0	0.0251	0.0015	< LOD	0
MG02.116	0.0408	0.0061	< LOD	0.0023	0.0123	0.0015	< LOD	0.0048
MG02.117	0.0165	0.0062	< LOD	0	0.0055	0.0015	< LOD	0
MG02.118	< LOD	0.0063	< LOD	0.0023	< LOD	0.0015	< LOD	0.0048
MG02.12	0.0249	0.0062	< LOD	0.0023	0.0116	0.0015	0.0075	0.0047
MG02.122	< LOD	0.0062	< LOD	0.0023	0.0068	0.0015	< LOD	0
MG02.124	0.0064	0.0063	< LOD	0	0.0115	0.0015	< LOD	0
MG02.126	0.0302	0.0062	< LOD	0.0023	0.0127	0.0015	< LOD	0
MG02.127	0.0068	0.0063	0.0046	0.0023	0.0133	0.0015	< LOD	0
MG02.17	< LOD	0.0063	< LOD	0.0023	0.4208	0.0015	< LOD	0
MG02.18	< LOD	0	< LOD	0	0.0073	0.0015	< LOD	0
MG02.2	0.028	0.0061	< LOD	0	0.0069	0.0015	< LOD	0
MG02.21	< LOD	0.0062	0.004	0.0023	0.0135	0.0015	< LOD	0
MG02.22	< LOD	0.0063	< LOD	0.0023	0.0354	0.0015	< LOD	0
MG02.24	< LOD	0	< LOD	0	0.0036	0.0015	< LOD	0.0047
MG02.26	< LOD	0.0063	< LOD	0	0.1316	0.0015	< LOD	0
MG02.28	0.0744	0.0064	< LOD	0	0.0151	0.0015	< LOD	0
MG02.30	< LOD	0.0063	< LOD	0	0.0114	0.0015	< LOD	0
MG02.31	0.0225	0.0062	< LOD	0	0.0056	0.0015	< LOD	0
MG02.32	< LOD	0.0063	< LOD	0	0.0051	0.0015	0.0061	0.0047
MG02.33	0.029	0.0066	< LOD	0.0024	0.0124	0.0016	< LOD	0
MG02.35	0.009	0.0063	< LOD	0	0.1359	0.0015	< LOD	0.0048
MG02.36	0.0163	0.0062	< LOD	0.0023	0.0048	0.0015	< LOD	0
MG02.4	< LOD	0	< LOD	0.0023	0.0053	0.0015	< LOD	0
MG02.40	< LOD	0	< LOD	0.0023	0.0052	0.0015	< LOD	0.0048
MG02.41	< LOD	0.0064	0.0027	0.0023	0.0151	0.0015	0.0143	0.0047
MG02.42	0.0882	0.0064	< LOD	0	0.0107	0.0015	< LOD	0.0049

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG02.100	0.0567	0.0019	0.2687	0.0053	< LOD	0.0105
MG02.101	0.0121	0.0019	0.0842	0.0051	< LOD	0
MG02.102	0.033	0.0019	0.2878	0.0054	< LOD	0
MG02.103	0.02	0.0019	0.0641	0.0057	< LOD	0
MG02.104	0.0142	0.0019	0.0667	0.0053	0.0134	0.0105
MG02.105	0.0071	0.0019	0.0224	0.0053	< LOD	0.0105
MG02.106	0.0041	0.0019	0.199	0.0051	0.0257	0.0105
MG02.107	0.0829	0.0019	0.2177	0.0053	< LOD	0
MG02.108	0.0056	0.0019	0.0799	0.0053	< LOD	0.0105
MG02.109	0.0468	0.0019	0.0322	0.0053	< LOD	0.0105
MG02.111	0.0347	0.0019	0.2155	0.0053	< LOD	0
MG02.112	0.0184	0.0019	0.1556	0.0052	< LOD	0.0105
MG02.115	0.3596	0.0019	0.7345	0.0054	< LOD	0
MG02.116	0.0442	0.0019	0.0777	0.0051	0.0133	0.0105
MG02.117	0.0354	0.0019	0.3065	0.0052	0.0137	0.0106
MG02.118	0.023	0.0019	0.7904	0.0052	0.0137	0.0105
MG02.12	0.0117	0.0019	0.1454	0.0053	< LOD	0.0105
MG02.122	0.0276	0.0019	0.2199	0.0052	< LOD	0
MG02.124	0.0188	0.0019	0.0687	0.0052	< LOD	0.0105
MG02.126	0.3609	0.0019	0.3786	0.0054	< LOD	0
MG02.127	0.6142	0.0019	0.4185	0.0055	0.0331	0.0107
MG02.17	0.0463	0.0019	0.2976	0.0051	< LOD	0
MG02.18	0.052	0.0019	0.1329	0.0051	0.0162	0.0106
MG02.2	0.0287	0.0019	0.069	0.0052	< LOD	0
MG02.21	0.0403	0.0019	0.1154	0.0052	< LOD	0
MG02.22	0.0874	0.0019	0.3713	0.0052	< LOD	0
MG02.24	0.0093	0.0019	0.1547	0.0052	< LOD	0.0105
MG02.26	0.0034	0.0019	0.0546	0.0053	0.0329	0.0104
MG02.28	0.0465	0.0019	0.2204	0.0055	0.0125	0.0108
MG02.30	0.0693	0.0019	0.1344	0.0054	< LOD	0.0106
MG02.31	0.1007	0.0019	0.3049	0.0052	< LOD	0.0106
MG02.32	0.0406	0.0019	0.2925	0.0051	0.0113	0.0105
MG02.33	0.0055	0.002	0.1145	0.0056	0.423	0.0112
MG02.35	0.8341	0.0019	0.9452	0.0054	0.077	0.0107
MG02.36	0.0032	0.0019	0.1889	0.0054	0.0574	0.0105
MG02.4	0.0526	0.0019	0.0099	0.0051	0.0114	0.0105
MG02.40	0.0154	0.0019	0.0231	0.0052	0.011	0.0105
MG02.41	0.0549	0.0019	0.4649	0.0053	< LOD	0
MG02.42	0.0501	0.0019	0.2126	0.0055	0.0227	0.0109

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG02.43	Till sample	Till 02	NA	0.1442	0.0018	0.0027	0.0015	0.0268	0.0048
MG02.44	Till sample	Till 02	NA	0.0322	0.0018	0.011	0.0015	< LOD	0.0046
MG02.45	Till sample	Till 02	NA	0.0742	0.0018	< LOD	0.0015	0.0069	0.0047
MG02.46	Till sample	Till 02	NA	0.033	0.0018	0.032	0.0015	0.0465	0.0048
MG02.50	Till sample	Till 02	NA	0.0074	0.0018	0.0046	0.0015	0.1026	0.0048
MG02.51	Till sample	Till 02	NA	0.1391	0.0018	0.0042	0.0015	0.2651	0.0049
MG02.53	Till sample	Till 02	NA	0.1218	0.0018	< LOD	0	0.0963	0.0048
MG02.56	Till sample	Till 02	NA	0.1426	0.0018	< LOD	0.0015	0.1238	0.0046
MG02.58	Till sample	Till 02	NA	0.0759	0.0018	0.0287	0.0015	0.0115	0.0046
MG02.60	Till sample	Till 02	NA	0.1663	0.0018	0.0497	0.0015	0.1162	0.0047
MG02.62	Till sample	Till 02	NA	0.0592	0.0018	< LOD	0.0015	< LOD	0
MG02.63	Till sample	Till 02	NA	0.0031	0.0018	0.0821	0.0015	< LOD	0.0047
MG02.65	Till sample	Till 02	NA	0.0761	0.0018	0.0112	0.0015	0.1231	0.0049
MG02.68	Till sample	Till 02	NA	0.0211	0.0018	0.1653	0.0016	2.3591	0.005
MG02.69	Till sample	Till 02	NA	0.1979	0.0018	< LOD	0.0015	0.0361	0.0048
MG02.70	Till sample	Till 02	NA	0.0719	0.0018	< LOD	0.0015	0.0106	0.0047
MG02.71	Till sample	Till 02	NA	0.0672	0.0018	< LOD	0	0.02	0.0047
MG02.72	Till sample	Till 02	NA	0.0635	0.0017	0.0018	0.0015	< LOD	0
MG02.74	Till sample	Till 02	NA	0.4347	0.0018	0.0956	0.0015	0.0214	0.0048
MG02.75	Till sample	Till 02	NA	0.0605	0.0018	0.1017	0.0015	0.2112	0.0048
MG02.76	Till sample	Till 02	NA	0.0468	0.0018	0.0038	0.0015	0.0082	0.0046
MG02.77	Till sample	Till 02	NA	0.1828	0.0018	0.0052	0.0015	0.0073	0.0048
MG02.79	Till sample	Till 02	NA	0.0832	0.0018	0.0162	0.0016	5.1672	0.0055
MG02.8	Till sample	Till 02	NA	0.0082	0.0018	0.0093	0.0015	0.2265	0.0048
MG02.80	Till sample	Till 02	NA	0.2275	0.0018	< LOD	0	0.0194	0.0046
MG02.81	Till sample	Till 02	NA	0.5254	0.0018	0.0214	0.0015	0.1094	0.0049
MG02.82	Till sample	Till 02	NA	0.0714	0.0018	< LOD	0	< LOD	0
MG02.83	Till sample	Till 02	NA	0.0745	0.0018	0.0022	0.0015	0.0168	0.0047
MG02.84	Till sample	Till 02	NA	0.1185	0.0018	< LOD	0.0015	0.0126	0.0047
MG02.85	Till sample	Till 02	NA	0.1954	0.0018	< LOD	0.0015	< LOD	0.0048
MG02.86	Till sample	Till 02	NA	0.0418	0.0018	< LOD	0.0015	< LOD	0.0046
MG02.87	Till sample	Till 02	NA	0.0412	0.0018	< LOD	0.0015	0.007	0.0047
MG02.88	Till sample	Till 02	NA	0.0156	0.0018	0.0021	0.0015	0.0419	0.0049
MG02.89	Till sample	Till 02	NA	0.0903	0.0018	0.0244	0.0015	0.0312	0.0047
MG02.90	Till sample	Till 02	NA	0.0715	0.0018	0.0024	0.0015	0.014	0.0046
MG02.91	Till sample	Till 02	NA	0.0459	0.0018	0.0023	0.0015	< LOD	0
MG02.92	Till sample	Till 02	NA	0.1831	0.0018	0.0206	0.0015	0.0511	0.0048
MG02.93	Till sample	Till 02	NA	0.0741	0.0018	< LOD	0.0015	0.0123	0.0047
MG02.94	Till sample	Till 02	NA	0.0152	0.0018	< LOD	0	0.0052	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG02.43	< LOD	0.0083	< LOD	0.0015	0.0053	0.0022	0.0237	0.004
MG02.44	< LOD	0.0082	< LOD	0.0014	0.0037	0.0022	0.0231	0.004
MG02.45	0.009	0.0082	< LOD	0.0014	0.0091	0.0022	0.0272	0.0039
MG02.46	< LOD	0	< LOD	0	< LOD	0.0022	0.0241	0.004
MG02.50	0.0187	0.0083	0.002	0.0014	0.004	0.0022	0.0146	0.004
MG02.51	< LOD	0.0083	0.0027	0.0014	0.0161	0.0022	0.0739	0.004
MG02.53	< LOD	0.0083	< LOD	0.0014	0.0205	0.0022	0.0573	0.004
MG02.56	< LOD	0	< LOD	0.0014	0.0203	0.0022	0.0568	0.004
MG02.58	0.0113	0.0082	< LOD	0.0014	0.0066	0.0022	0.014	0.0039
MG02.60	< LOD	0	< LOD	0.0014	0.0058	0.0022	0.0213	0.004
MG02.62	< LOD	0.0083	0.0023	0.0014	0.0049	0.0022	0.0861	0.0039
MG02.63	< LOD	0	0.0055	0.0014	0.005	0.0022	0.0334	0.004
MG02.65	< LOD	0.0084	0.0017	0.0014	< LOD	0.0022	0.0189	0.004
MG02.68	< LOD	0	< LOD	0	0.008	0.0022	0.0312	0.0042
MG02.69	< LOD	0.0083	< LOD	0	0.0241	0.0022	0.0261	0.004
MG02.70	< LOD	0.0083	< LOD	0.0014	0.0041	0.0022	0.0264	0.0039
MG02.71	< LOD	0	< LOD	0.0014	0.0159	0.0022	0.0841	0.0039
MG02.72	0.0112	0.0082	< LOD	0	< LOD	0	0.1105	0.0039
MG02.74	< LOD	0	0.0019	0.0014	0.0045	0.0022	0.019	0.004
MG02.75	< LOD	0	0.0023	0.0014	0.0039	0.0022	0.0157	0.004
MG02.76	< LOD	0.0083	< LOD	0.0014	0.0028	0.0022	0.0236	0.004
MG02.77	< LOD	0.0082	< LOD	0	0.0049	0.0022	0.0057	0.004
MG02.79	0.0182	0.0087	< LOD	0	0.1171	0.0023	0.2214	0.0045
MG02.8	< LOD	0.0083	0.0016	0.0014	0.0045	0.0022	0.0217	0.004
MG02.80	< LOD	0	< LOD	0.0014	0.0079	0.0022	0.0434	0.004
MG02.81	< LOD	0.0084	< LOD	0.0015	0.0137	0.0022	0.0334	0.004
MG02.82	< LOD	0	< LOD	0	0.0096	0.0022	0.1173	0.004
MG02.83	< LOD	0	0.0027	0.0014	0.0078	0.0022	0.0141	0.004
MG02.84	0.0096	0.0083	0.0017	0.0014	0.0166	0.0022	0.1296	0.004
MG02.85	0.0093	0.0083	< LOD	0.0014	0.0122	0.0022	0.0336	0.004
MG02.86	< LOD	0	< LOD	0	0.0056	0.0022	0.1172	0.0039
MG02.87	0.0099	0.0082	0.0015	0.0014	0.0243	0.0022	0.0728	0.004
MG02.88	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0627	0.004
MG02.89	< LOD	0	< LOD	0	0.0061	0.0022	0.2212	0.004
MG02.90	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.1096	0.004
MG02.91	< LOD	0.0082	< LOD	0.0014	0.0063	0.0022	0.0401	0.004
MG02.92	< LOD	0.0084	< LOD	0.0015	0.0136	0.0022	< LOD	0
MG02.93	0.0167	0.0083	< LOD	0	0.009	0.0022	0.0279	0.004
MG02.94	0.0128	0.0082	0.0028	0.0014	< LOD	0.0022	0.191	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG02.43	< LOD	0	< LOD	0.0023	0.0182	0.0015	< LOD	0.0048
MG02.44	< LOD	0	< LOD	0	0.0059	0.0015	< LOD	0
MG02.45	< LOD	0.0063	< LOD	0	0.0059	0.0015	< LOD	0
MG02.46	< LOD	0.0063	0.0065	0.0023	0.0111	0.0015	< LOD	0
MG02.50	< LOD	0.0062	0.0025	0.0023	0.0058	0.0015	< LOD	0
MG02.51	0.0103	0.0062	< LOD	0	0.0064	0.0015	< LOD	0
MG02.53	0.0231	0.0062	0.0048	0.0023	0.005	0.0015	0.0088	0.0047
MG02.56	0.0165	0.0062	< LOD	0.0023	0.0018	0.0015	0.0086	0.0047
MG02.58	< LOD	0.0063	< LOD	0	0.0136	0.0015	< LOD	0
MG02.60	0.0065	0.0063	< LOD	0.0023	0.0232	0.0015	< LOD	0
MG02.62	< LOD	0.0062	< LOD	0.0023	0.0063	0.0015	< LOD	0
MG02.63	0.0077	0.0062	< LOD	0.0023	0.024	0.0015	< LOD	0
MG02.65	< LOD	0	< LOD	0	< LOD	0	< LOD	0
MG02.68	0.076	0.0064	< LOD	0	0.0162	0.0015	< LOD	0.0049
MG02.69	0.009	0.0062	< LOD	0	0.0095	0.0015	< LOD	0
MG02.70	< LOD	0.0062	< LOD	0	0.005	0.0015	< LOD	0
MG02.71	< LOD	0	< LOD	0.0023	0.0091	0.0015	< LOD	0.0047
MG02.72	< LOD	0	< LOD	0.0023	0.0117	0.0015	< LOD	0
MG02.74	0.0083	0.0063	< LOD	0	0.0203	0.0015	< LOD	0.0048
MG02.75	0.0076	0.0063	< LOD	0	0.0125	0.0015	< LOD	0
MG02.76	< LOD	0.0062	< LOD	0.0023	0.0031	0.0015	< LOD	0
MG02.77	< LOD	0.0062	< LOD	0	0.0078	0.0015	0.0078	0.0048
MG02.79	0.1621	0.0066	< LOD	0	0.0079	0.0015	< LOD	0
MG02.8	0.0153	0.0062	< LOD	0.0023	0.011	0.0015	< LOD	0
MG02.80	< LOD	0.0062	< LOD	0	0.0051	0.0015	< LOD	0
MG02.81	0.0078	0.0063	< LOD	0	0.0147	0.0015	< LOD	0.0048
MG02.82	0.0102	0.0062	< LOD	0	0.0046	0.0015	0.0051	0.0047
MG02.83	< LOD	0.0062	< LOD	0	0.0091	0.0015	< LOD	0
MG02.84	< LOD	0	< LOD	0.0023	0.0073	0.0015	< LOD	0
MG02.85	< LOD	0	< LOD	0	0.0059	0.0015	< LOD	0
MG02.86	< LOD	0	< LOD	0.0023	0.0037	0.0015	< LOD	0
MG02.87	0.0107	0.0062	< LOD	0	< LOD	0.0015	< LOD	0
MG02.88	0.0154	0.0062	< LOD	0	0.0038	0.0015	< LOD	0
MG02.89	< LOD	0.0062	< LOD	0.0023	0.0058	0.0015	< LOD	0
MG02.90	< LOD	0.0062	< LOD	0.0023	0.0057	0.0015	0.008	0.0047
MG02.91	< LOD	0.0062	< LOD	0	0.0032	0.0015	< LOD	0
MG02.92	0.0363	0.0063	0.0026	0.0023	0.0359	0.0015	< LOD	0
MG02.93	< LOD	0.0063	< LOD	0	0.0025	0.0015	< LOD	0
MG02.94	< LOD	0.0062	< LOD	0	0.0082	0.0015	< LOD	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG02.43	0.3322	0.0019	0.8161	0.0053	< LOD	0.0106
MG02.44	0.0394	0.0019	< LOD	0.0053	< LOD	0.0106
MG02.45	0.0493	0.0019	0.1709	0.0052	< LOD	0.0105
MG02.46	0.0853	0.0019	0.2261	0.0051	0.0135	0.0106
MG02.50	0.017	0.0019	0.2456	0.0051	0.0108	0.0105
MG02.51	0.0447	0.0019	0.2764	0.0052	< LOD	0
MG02.53	0.0266	0.0019	0.3288	0.0051	0.0121	0.0106
MG02.56	0.0416	0.0019	0.2722	0.0053	< LOD	0
MG02.58	0.1635	0.0019	0.0093	0.0052	0.0227	0.0105
MG02.60	0.599	0.0019	0.458	0.0055	< LOD	0.0107
MG02.62	0.0534	0.0019	0.133	0.0055	0.0156	0.0104
MG02.63	0.0576	0.0019	0.0189	0.0052	0.0165	0.0104
MG02.65	0.7906	0.0019	0.2016	0.0055	< LOD	0.0105
MG02.68	0.0282	0.0019	0.2033	0.0054	< LOD	0.0108
MG02.69	0.102	0.0019	< LOD	0.0053	< LOD	0
MG02.70	0.1757	0.0019	0.1801	0.0053	0.0163	0.0104
MG02.71	0.0484	0.0019	0.2549	0.0051	0.0198	0.0105
MG02.72	0.0527	0.0019	0.0728	0.0051	0.0326	0.0104
MG02.74	0.4128	0.0019	0.4971	0.0054	0.0155	0.0106
MG02.75	0.059	0.0019	0.4413	0.0053	< LOD	0
MG02.76	0.0062	0.0019	< LOD	0.0053	< LOD	0.0105
MG02.77	0.0702	0.0019	0.0538	0.0052	< LOD	0.0105
MG02.79	0.4772	0.002	0.1904	0.0056	0.112	0.0112
MG02.8	0.0048	0.0019	0.1392	0.0052	< LOD	0.0105
MG02.80	0.0442	0.0019	0.0162	0.0051	< LOD	0
MG02.81	0.8337	0.0019	0.5744	0.0051	0.0286	0.0105
MG02.82	0.0068	0.0019	0.1276	0.0053	< LOD	0.0106
MG02.83	0.0441	0.0019	0.3031	0.0052	< LOD	0
MG02.84	0.1441	0.0019	0.1845	0.0054	0.0713	0.0105
MG02.85	0.0744	0.0019	0.0242	0.005	< LOD	0
MG02.86	0.0117	0.0019	0.0423	0.0051	0.0187	0.0105
MG02.87	< LOD	0	< LOD	0.0053	0.0116	0.0104
MG02.88	0.0094	0.0019	0.1216	0.0053	0.0184	0.0105
MG02.89	0.0356	0.0019	0.1852	0.0053	0.1301	0.0107
MG02.90	0.0668	0.0019	0.0425	0.0051	< LOD	0.0105
MG02.91	0.0084	0.0019	0.0237	0.0051	< LOD	0
MG02.92	0.1876	0.0019	1.2798	0.0055	< LOD	0.0107
MG02.93	0.0632	0.0019	0.4123	0.0054	< LOD	0.0105
MG02.94	0.0085	0.0019	0.1071	0.0051	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG02.95	Till sample	Till 02	NA	0.046	0.0018	< LOD	0.0015	0.0066	0.0049
MG02.96	Till sample	Till 02	NA	0.1553	0.0018	< LOD	0.0015	0.1848	0.0049
MG02.97	Till sample	Till 02	NA	0.1534	0.0018	0.0027	0.0015	< LOD	0
MG02.98	Till sample	Till 02	NA	0.0665	0.0018	< LOD	0.0015	< LOD	0.0047
MG02.99	Till sample	Till 02	NA	0.099	0.0018	< LOD	0.0015	< LOD	0
MG03.10	Till sample	Till 03	NA	0.1823	0.0018	0.0041	0.0015	0.0623	0.0046
MG03.12	Till sample	Till 03	NA	0.0397	0.0018	0.0022	0.0015	0.0115	0.0047
MG03.13	Till sample	Till 03	NA	0.1478	0.0018	0.0032	0.0015	< LOD	0
MG03.14	Till sample	Till 03	NA	0.0145	0.0018	0.0678	0.0015	0.0063	0.0049
MG03.16	Till sample	Till 03	NA	0.0606	0.0018	0.0698	0.0015	< LOD	0
MG03.17	Till sample	Till 03	NA	0.0279	0.0018	0.0115	0.0015	0.0073	0.0047
MG03.18	Till sample	Till 03	NA	0.0463	0.0018	0.0504	0.0015	0.0087	0.0046
MG03.19	Till sample	Till 03	NA	0.2616	0.0018	0.0071	0.0015	0.0171	0.0048
MG03.2	Till sample	Till 03	NA	0.0395	0.0018	< LOD	0.0015	0.0371	0.0048
MG03.22	Till sample	Till 03	NA	0.055	0.0018	0.0026	0.0015	< LOD	0.0048
MG03.23	Till sample	Till 03	NA	0.0245	0.0018	< LOD	0	0.0085	0.0048
MG03.24	Till sample	Till 03	NA	0.0525	0.0018	< LOD	0	0.1422	0.0049
MG03.26	Till sample	Till 03	NA	0.251	0.0018	0.0016	0.0015	0.0105	0.0046
MG03.28	Till sample	Till 03	NA	0.0096	0.0018	0.0431	0.0015	< LOD	0
MG03.3	Till sample	Till 03	NA	0.013	0.0018	0.0567	0.0015	< LOD	0.0048
MG03.30	Till sample	Till 03	NA	0.0534	0.0018	0.0024	0.0015	< LOD	0.0047
MG03.31	Till sample	Till 03	NA	0.0483	0.0018	0.057	0.0015	0.4127	0.0047
MG03.33	Till sample	Till 03	NA	0.0238	0.0018	0.0026	0.0015	0.0149	0.0046
MG03.34	Till sample	Till 03	NA	0.0677	0.0018	< LOD	0	0.0291	0.0048
MG03.36	Till sample	Till 03	NA	0.1971	0.0018	< LOD	0.0015	< LOD	0
MG03.38	Till sample	Till 03	NA	0.122	0.0018	0.0519	0.0015	0.0049	0.0046
MG03.42	Till sample	Till 03	NA	0.0327	0.0018	0.0509	0.0015	< LOD	0
MG03.44	Till sample	Till 03	NA	0.1572	0.0018	< LOD	0.0015	< LOD	0
MG03.48	Till sample	Till 03	NA	0.0201	0.0018	0.0083	0.0015	0.0521	0.0046
MG03.5	Till sample	Till 03	NA	0.0185	0.0018	0.0431	0.0015	0.0175	0.0049
MG03.51	Till sample	Till 03	NA	0.0218	0.0018	0.0096	0.0015	0.0544	0.0048
MG03.53	Till sample	Till 03	NA	0.0178	0.0018	0.123	0.0015	0.0066	0.0047
MG03.54	Till sample	Till 03	NA	0.1796	0.0018	< LOD	0.0015	< LOD	0
MG03.55	Till sample	Till 03	NA	0.0382	0.0018	< LOD	0	< LOD	0
MG03.56	Till sample	Till 03	NA	0.0526	0.0018	< LOD	0	0.0081	0.0047
MG03.57	Till sample	Till 03	NA	0.0081	0.0018	0.0169	0.0015	0.1217	0.0048
MG03.61	Till sample	Till 03	NA	0.123	0.0018	< LOD	0.0015	0.0143	0.0047
MG03.62	Till sample	Till 03	NA	0.0161	0.0018	0.0047	0.0015	0.0303	0.0048
MG03.64	Till sample	Till 03	NA	0.0626	0.0018	< LOD	0	0.007	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG02.95	0.0089	0.0083	< LOD	0.0014	0.0023	0.0022	0.1475	0.004
MG02.96	< LOD	0.0083	< LOD	0	0.0196	0.0022	0.0711	0.004
MG02.97	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0123	0.0039
MG02.98	< LOD	0	< LOD	0.0014	0.0119	0.0022	0.1533	0.004
MG02.99	< LOD	0.0083	0.0033	0.0014	< LOD	0.0022	0.0218	0.0039
MG03.10	0.011	0.0083	0.0969	0.0014	0.0216	0.0021	0.0875	0.0039
MG03.12	0.0087	0.0082	0.0017	0.0014	0.0065	0.0022	0.0681	0.0039
MG03.13	< LOD	0	0.0015	0.0014	0.0049	0.0022	< LOD	0.004
MG03.14	< LOD	0	0.0029	0.0014	< LOD	0	0.0067	0.004
MG03.16	0.0142	0.0082	0.0038	0.0014	0.0049	0.0021	0.0186	0.0039
MG03.17	< LOD	0	< LOD	0	0.0072	0.0022	0.0181	0.004
MG03.18	0.0172	0.0083	0.0028	0.0014	< LOD	0.0022	0.0088	0.004
MG03.19	0.0207	0.0083	< LOD	0.0015	0.0945	0.0022	0.0444	0.004
MG03.2	< LOD	0.0083	< LOD	0.0014	0.0038	0.0022	0.107	0.004
MG03.22	< LOD	0.0083	0.0016	0.0014	0.0033	0.0022	0.1256	0.004
MG03.23	0.0086	0.0082	0.0034	0.0014	0.0056	0.0022	0.0673	0.004
MG03.24	< LOD	0	0.0027	0.0014	0.0029	0.0022	0.0303	0.004
MG03.26	< LOD	0	< LOD	0	0.0228	0.0022	0.0545	0.004
MG03.28	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0126	0.004
MG03.3	< LOD	0	0.008	0.0014	< LOD	0.0022	0.0232	0.004
MG03.30	0.0088	0.0083	0.0017	0.0014	0.0047	0.0022	0.2423	0.004
MG03.31	< LOD	0	< LOD	0.0015	0.0043	0.0022	< LOD	0
MG03.33	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0729	0.0039
MG03.34	< LOD	0.0083	< LOD	0.0014	0.0039	0.0022	0.0448	0.004
MG03.36	< LOD	0.0083	0.002	0.0014	0.0025	0.0022	0.0106	0.0039
MG03.38	< LOD	0	0.0034	0.0014	0.0304	0.0022	0.0826	0.004
MG03.42	0.0129	0.0082	0.0082	0.0014	0.0025	0.0022	0.0387	0.004
MG03.44	< LOD	0.0083	< LOD	0	0.003	0.0022	0.0243	0.004
MG03.48	< LOD	0	< LOD	0.0014	0.003	0.0022	0.0442	0.004
MG03.5	< LOD	0.0083	0.0111	0.0014	< LOD	0.0022	0.0135	0.004
MG03.51	0.0162	0.0082	0.0017	0.0014	0.0024	0.0022	0.0107	0.004
MG03.53	< LOD	0.0082	0.0048	0.0014	< LOD	0	0.0226	0.004
MG03.54	0.0129	0.0083	< LOD	0.0014	0.0082	0.0021	0.0146	0.004
MG03.55	0.0168	0.0082	< LOD	0.0014	0.0082	0.0022	0.0959	0.004
MG03.56	0.0103	0.0083	< LOD	0.0014	0.0027	0.0022	0.0548	0.004
MG03.57	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0146	0.0039
MG03.61	< LOD	0	< LOD	0.0014	0.0074	0.0022	0.0357	0.004
MG03.62	< LOD	0	< LOD	0	0.0051	0.0022	0.0111	0.004
MG03.64	0.0287	0.0082	< LOD	0.0014	0.0101	0.0022	0.1004	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG02.95	< LOD	0.0062	< LOD	0	0.0061	0.0015	< LOD	0.0048
MG02.96	0.0129	0.0062	< LOD	0.0023	0.006	0.0015	< LOD	0
MG02.97	< LOD	0	0.0077	0.0023	0.0135	0.0015	< LOD	0.0047
MG02.98	< LOD	0.0062	< LOD	0.0023	0.0055	0.0015	< LOD	0.0047
MG02.99	< LOD	0	< LOD	0.0023	0.0124	0.0015	< LOD	0
MG03.10	0.0671	0.0062	< LOD	0.0023	0.0126	0.0015	< LOD	0
MG03.12	< LOD	0.0062	0.0024	0.0023	0.0063	0.0015	< LOD	0
MG03.13	0.0086	0.0062	< LOD	0	0.0167	0.0015	< LOD	0.0047
MG03.14	< LOD	0	< LOD	0	0.0111	0.0015	< LOD	0
MG03.16	< LOD	0.0062	< LOD	0	0.0224	0.0015	< LOD	0
MG03.17	< LOD	0	< LOD	0.0023	0.0111	0.0015	< LOD	0
MG03.18	0.0087	0.0062	< LOD	0.0023	0.0097	0.0015	< LOD	0.0048
MG03.19	< LOD	0.0063	< LOD	0.0023	0.011	0.0015	< LOD	0
MG03.2	0.0085	0.0062	< LOD	0	0.0106	0.0015	< LOD	0
MG03.22	< LOD	0.0062	< LOD	0.0023	0.0075	0.0015	< LOD	0
MG03.23	0.01	0.0062	< LOD	0.0023	0.0037	0.0015	< LOD	0
MG03.24	< LOD	0	< LOD	0	0.0067	0.0015	< LOD	0
MG03.26	< LOD	0.0062	< LOD	0	0.0119	0.0015	< LOD	0
MG03.28	< LOD	0.0062	< LOD	0.0023	0.0065	0.0015	0.0072	0.0047
MG03.3	0.01	0.0062	< LOD	0	0.0109	0.0015	< LOD	0
MG03.30	< LOD	0	< LOD	0	0.0059	0.0015	0.0066	0.0048
MG03.31	0.0068	0.0063	0.0027	0.0023	0.0144	0.0015	0.0055	0.0048
MG03.33	0.0072	0.0062	< LOD	0.0023	0.0088	0.0015	0.0061	0.0047
MG03.34	0.0085	0.0062	< LOD	0	0.0059	0.0015	< LOD	0.0047
MG03.36	< LOD	0.0062	< LOD	0	0.0378	0.0015	< LOD	0.0047
MG03.38	0.0082	0.0062	< LOD	0.0023	0.0062	0.0015	< LOD	0.0047
MG03.42	< LOD	0.0062	< LOD	0.0023	0.0086	0.0015	< LOD	0
MG03.44	0.0084	0.0062	< LOD	0	0.029	0.0015	< LOD	0.0048
MG03.48	< LOD	0.0062	< LOD	0.0023	0.0363	0.0015	< LOD	0
MG03.5	< LOD	0.0062	< LOD	0	0.0324	0.0015	< LOD	0
MG03.51	0.0125	0.0062	< LOD	0	0.0172	0.0015	0.0065	0.0047
MG03.53	< LOD	0	< LOD	0.0023	0.0117	0.0014	< LOD	0.0047
MG03.54	< LOD	0	< LOD	0	0.0109	0.0015	< LOD	0.0048
MG03.55	< LOD	0.0062	< LOD	0.0023	0.0038	0.0015	< LOD	0.0047
MG03.56	< LOD	0	< LOD	0.0023	0.0042	0.0015	< LOD	0
MG03.57	< LOD	0.0063	0.0045	0.0023	0.0044	0.0015	< LOD	0.0048
MG03.61	< LOD	0	< LOD	0.0023	0.0151	0.0015	< LOD	0
MG03.62	0.018	0.0063	< LOD	0	0.0032	0.0015	< LOD	0.0048
MG03.64	< LOD	0.0063	< LOD	0.0023	0.0049	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG02.95	0.085	0.0019	0.1071	0.0053	0.0691	0.0104
MG02.96	0.0358	0.0019	0.2975	0.0054	< LOD	0.0105
MG02.97	0.0608	0.0019	0.0114	0.0052	< LOD	0
MG02.98	0.0618	0.0019	0.0331	0.0052	0.1151	0.0106
MG02.99	0.0693	0.0019	< LOD	0.0052	< LOD	0
MG03.10	0.1226	0.0019	0.2668	0.0055	0.068	0.0104
MG03.12	0.0276	0.0019	0.0924	0.0051	0.0171	0.0105
MG03.13	0.1052	0.0019	0.0235	0.0052	< LOD	0
MG03.14	0.0769	0.0019	0.2971	0.0055	0.012	0.0106
MG03.16	0.0848	0.0019	0.1133	0.0053	0.0218	0.0105
MG03.17	0.0045	0.0019	0.2153	0.0052	0.0144	0.0105
MG03.18	0.1145	0.0019	0.1937	0.0051	0.0154	0.0105
MG03.19	0.3705	0.0019	0.3625	0.0054	< LOD	0.0106
MG03.2	0.0169	0.0019	0.0782	0.0052	0.021	0.0105
MG03.22	0.0207	0.0019	0.0481	0.0053	< LOD	0.0106
MG03.23	0.0109	0.0019	0.1264	0.0052	0.0187	0.0105
MG03.24	0.0264	0.0019	0.0718	0.0052	0.0219	0.0104
MG03.26	0.0942	0.0019	0.0086	0.0051	< LOD	0
MG03.28	< LOD	0.0019	0.1249	0.0053	< LOD	0
MG03.3	0.0348	0.0019	0.0742	0.0051	< LOD	0.0106
MG03.30	0.0423	0.0019	0.0553	0.0052	0.019	0.0106
MG03.31	0.0835	0.0019	0.6193	0.0055	< LOD	0.0107
MG03.33	0.0573	0.0019	0.109	0.0053	0.0179	0.0105
MG03.34	0.0841	0.0019	0.0612	0.005	0.0782	0.0105
MG03.36	0.0438	0.0019	< LOD	0	< LOD	0.0105
MG03.38	0.0368	0.0019	0.0386	0.0052	< LOD	0.0105
MG03.42	0.0205	0.0019	0.0232	0.0051	< LOD	0.0105
MG03.44	0.045	0.0019	0.0262	0.0054	< LOD	0
MG03.48	0.0068	0.0019	0.0714	0.0051	< LOD	0.0106
MG03.5	0.1253	0.0019	0.214	0.0053	< LOD	0
MG03.51	0.0264	0.0019	0.3917	0.0052	< LOD	0
MG03.53	0.18	0.0019	0.0863	0.0052	0.02	0.0105
MG03.54	0.0712	0.0019	0.0815	0.0052	0.0137	0.0105
MG03.55	0.0304	0.0019	0.0406	0.0052	0.0302	0.0105
MG03.56	0.0136	0.0019	0.0806	0.0053	< LOD	0.0106
MG03.57	0.0023	0.0019	0.1529	0.0052	< LOD	0
MG03.61	0.0387	0.0019	0.0118	0.0051	< LOD	0
MG03.62	0.7436	0.0019	0.2872	0.0053	< LOD	0.0107
MG03.64	0.0457	0.0019	0.2162	0.0053	0.0275	0.0104

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG03.66	Till sample	Till 03	NA	0.1988	0.0018	0.0036	0.0015	0.3691	0.0049
MG03.69	Till sample	Till 03	NA	0.0369	0.0018	< LOD	0.0015	0.0097	0.0047
MG03.70	Till sample	Till 03	NA	0.03	0.0018	0.0582	0.0016	3.4354	0.0052
MG03.71	Till sample	Till 03	NA	0.0747	0.0018	0.0888	0.0015	0.2493	0.0048
MG03.72	Till sample	Till 03	NA	1.4874	0.0019	< LOD	0	0.0085	0.0049
MG03.73	Till sample	Till 03	NA	0.0425	0.0018	0.0387	0.0015	0.0186	0.0048
MG03.75	Till sample	Till 03	NA	0.1492	0.0018	0.0022	0.0015	0.0205	0.0047
MG03.76	Till sample	Till 03	NA	0.1802	0.0018	< LOD	0	< LOD	0
MG03.78	Till sample	Till 03	NA	0.0952	0.0018	< LOD	0	0.0388	0.0046
MG03.79	Till sample	Till 03	NA	0.0052	0.0018	0.0047	0.0015	0.1291	0.0048
MG03.8	Till sample	Till 03	NA	0.0083	0.0018	0.0307	0.0015	0.0052	0.0047
MG03.81	Till sample	Till 03	NA	0.065	0.0018	0.0018	0.0015	0.2703	0.0048
MG03.82	Till sample	Till 03	NA	0.0199	0.0018	0.0272	0.0015	0.0917	0.0046
M4-2	Till sample	Till 04	NA	0.0181	0.0018	0.0069	0.0015	0.1245	0.0049
MG04.1	Till sample	Till 04	NA	0.1857	0.0018	0.003	0.0015	0.0073	0.0047
MG04.10	Till sample	Till 04	NA	0.1019	0.0018	0.0157	0.0015	0.008	0.0047
MG04.102	Till sample	Till 04	NA	0.2548	0.0018	0.0296	0.0015	0.0114	0.0046
MG04.103	Till sample	Till 04	NA	0.0288	0.0017	< LOD	0	< LOD	0.0047
MG04.104	Till sample	Till 04	NA	0.0848	0.0018	0.0426	0.0015	< LOD	0
MG04.105	Till sample	Till 04	NA	0.0243	0.0018	0.1718	0.0015	< LOD	0
MG04.106	Till sample	Till 04	NA	0.1897	0.0018	0.0028	0.0015	0.0136	0.0046
MG04.108	Till sample	Till 04	NA	0.0468	0.0018	0.0255	0.0015	0.0176	0.0048
MG04.109	Till sample	Till 04	NA	0.0537	0.0018	0.0017	0.0015	0.009	0.0048
MG04.112	Till sample	Till 04	NA	0.3913	0.0018	0.0333	0.0015	0.0823	0.0049
MG04.113	Till sample	Till 04	NA	0.0319	0.0018	0.0216	0.0015	0.0472	0.0047
MG04.114	Till sample	Till 04	NA	0.0518	0.0018	0.0038	0.0015	< LOD	0.0049
MG04.115	Till sample	Till 04	NA	0.0279	0.0018	0.0058	0.0015	0.1906	0.0047
MG04.118	Till sample	Till 04	NA	0.0502	0.0018	0.0161	0.0015	< LOD	0
MG04.13	Till sample	Till 04	NA	0.0958	0.0018	< LOD	0.0015	< LOD	0
MG04.14	Till sample	Till 04	NA	0.0232	0.0018	0.1461	0.0015	0.0098	0.0046
MG04.16	Till sample	Till 04	NA	0.0744	0.0018	0.0223	0.0015	< LOD	0
MG04.17	Till sample	Till 04	NA	0.0133	0.0017	0.08	0.0015	0.0352	0.0047
MG04.18	Till sample	Till 04	NA	0.0146	0.0018	0.0359	0.0015	0.0762	0.0047
MG04.19	Till sample	Till 04	NA	0.0106	0.0018	0.0453	0.0015	0.0461	0.0048
MG04.2	Till sample	Till 04	NA	0.107	0.0018	0.0172	0.0015	0.0057	0.0047
MG04.20	Till sample	Till 04	NA	0.0693	0.0017	0.0305	0.0015	0.0356	0.0049
MG04.21	Till sample	Till 04	NA	0.0263	0.0018	0.145	0.0015	0.0237	0.0049
MG04.22	Till sample	Till 04	NA	0.0517	0.0018	0.0016	0.0015	0.0734	0.0048
MG04.23	Till sample	Till 04	NA	0.0544	0.0018	0.0096	0.0016	0.0365	0.0049

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG03.66	< LOD	0	< LOD	0	< LOD	0.0022	0.0282	0.0041
MG03.69	< LOD	0	< LOD	0.0014	0.0097	0.0021	0.2572	0.004
MG03.70	< LOD	0.0087	0.0023	0.0015	0.0032	0.0022	0.1493	0.0043
MG03.71	< LOD	0.0083	0.0073	0.0014	0.0142	0.0022	0.0634	0.004
MG03.72	0.0127	0.0084	< LOD	0.0015	0.0025	0.0022	0.019	0.004
MG03.73	0.0087	0.0083	< LOD	0	< LOD	0	0.0251	0.004
MG03.75	0.0108	0.0084	< LOD	0.0015	0.003	0.0022	0.0124	0.0041
MG03.76	0.0143	0.0083	< LOD	0.0014	0.0079	0.0022	0.0369	0.0039
MG03.78	< LOD	0.0082	< LOD	0	0.0042	0.0022	0.0095	0.0039
MG03.79	< LOD	0.0083	0.0016	0.0014	0.0853	0.0022	0.0163	0.004
MG03.8	< LOD	0.0083	0.0086	0.0014	< LOD	0	0.0392	0.004
MG03.81	< LOD	0.0083	0.0023	0.0014	< LOD	0.0022	0.0136	0.0039
MG03.82	0.0143	0.0083	0.003	0.0014	0.0044	0.0021	0.0143	0.004
M4-2	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0253	0.004
MG04.1	< LOD	0.0082	< LOD	0.0014	< LOD	0.0022	0.0172	0.004
MG04.10	< LOD	0.0083	< LOD	0.0014	< LOD	0	0.0155	0.0039
MG04.102	< LOD	0	0.005	0.0014	0.0046	0.0021	0.0147	0.004
MG04.103	< LOD	0.0083	0.0181	0.0014	0.0145	0.0022	0.0062	0.004
MG04.104	0.0127	0.0082	0.0058	0.0014	< LOD	0.0022	0.1033	0.004
MG04.105	< LOD	0	0.0039	0.0015	0.0114	0.0021	0.0408	0.0041
MG04.106	< LOD	0.0083	< LOD	0	0.0051	0.0022	0.0202	0.004
MG04.108	< LOD	0.0083	0.0058	0.0014	0.0036	0.0021	0.0476	0.004
MG04.109	< LOD	0	< LOD	0.0014	0.0076	0.0021	0.0645	0.004
MG04.112	< LOD	0	< LOD	0	0.0086	0.0022	0.0276	0.004
MG04.113	< LOD	0	< LOD	0	0.0059	0.0021	0.0222	0.004
MG04.114	< LOD	0.0083	< LOD	0	0.0043	0.0022	0.0761	0.004
MG04.115	0.0157	0.0083	0.0022	0.0014	< LOD	0.0021	0.0144	0.004
MG04.118	< LOD	0	0.0025	0.0014	< LOD	0	0.0222	0.004
MG04.13	< LOD	0.0082	< LOD	0	0.0128	0.0021	0.0433	0.004
MG04.14	< LOD	0.0083	0.0148	0.0014	0.0078	0.0022	0.0365	0.004
MG04.16	< LOD	0.0083	< LOD	0	0.1575	0.0022	0.0181	0.004
MG04.17	0.0131	0.0083	0.0016	0.0014	< LOD	0.0021	0.0194	0.004
MG04.18	< LOD	0.0083	0.0029	0.0014	< LOD	0	< LOD	0.004
MG04.19	< LOD	0	< LOD	0.0015	< LOD	0.0022	0.0279	0.004
MG04.2	0.0129	0.0082	0.0016	0.0014	0.0129	0.0022	0.0996	0.004
MG04.20	< LOD	0	0.0027	0.0014	0.0049	0.0022	0.0252	0.004
MG04.21	< LOD	0	0.0018	0.0014	0.0044	0.0022	0.0136	0.004
MG04.22	< LOD	0.0083	< LOD	0	0.0043	0.0022	0.0794	0.004
MG04.23	< LOD	0	< LOD	0.0015	< LOD	0	0.0351	0.0041

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG03.66	0.0107	0.0063	< LOD	0	0.0161	0.0015	< LOD	0.0048
MG03.69	< LOD	0.0062	< LOD	0.0023	0.0079	0.0015	< LOD	0
MG03.70	0.0522	0.0066	< LOD	0.0024	0.0136	0.0015	< LOD	0
MG03.71	0.0141	0.0062	< LOD	0.0023	0.0096	0.0015	< LOD	0
MG03.72	0.0213	0.0063	< LOD	0.0023	0.0232	0.0015	0.0061	0.0049
MG03.73	< LOD	0.0062	< LOD	0	0.0062	0.0015	< LOD	0
MG03.75	0.0146	0.0062	< LOD	0	0.0158	0.0015	< LOD	0
MG03.76	< LOD	0.0062	0.003	0.0023	0.0119	0.0015	< LOD	0
MG03.78	< LOD	0.0062	< LOD	0.0023	0.0119	0.0015	< LOD	0
MG03.79	0.021	0.0062	< LOD	0	0.2308	0.0015	< LOD	0
MG03.8	0.009	0.0062	0.0134	0.0023	0.0581	0.0015	< LOD	0.0047
MG03.81	0.0114	0.0062	< LOD	0.0023	0.0124	0.0015	< LOD	0.0047
MG03.82	< LOD	0.0063	< LOD	0	0.0103	0.0015	< LOD	0.0047
M4-2	0.0151	0.0063	< LOD	0	0.0295	0.0014	0.0053	0.0041
MG04.1	0.0115	0.0061	< LOD	0	0.0106	0.0015	< LOD	0
MG04.10	< LOD	0	< LOD	0	0.0213	0.0014	< LOD	0.0047
MG04.102	< LOD	0	< LOD	0.0023	0.0272	0.0015	< LOD	0.0047
MG04.103	< LOD	0.0063	< LOD	0	0.0877	0.0015	< LOD	0.0047
MG04.104	< LOD	0	< LOD	0.0023	0.0241	0.0015	< LOD	0.0048
MG04.105	0.2317	0.0063	< LOD	0	1.0749	0.0015	0.0076	0.0048
MG04.106	0.0163	0.0062	< LOD	0.0023	0.0293	0.0015	< LOD	0.0047
MG04.108	< LOD	0	< LOD	0	0.0124	0.0015	< LOD	0.0047
MG04.109	< LOD	0.0062	< LOD	0.0023	0.0081	0.0015	< LOD	0.0047
MG04.112	0.0147	0.0063	< LOD	0.0023	0.0341	0.0015	< LOD	0.0048
MG04.113	0.0194	0.0062	< LOD	0	0.0074	0.0015	< LOD	0
MG04.114	0.0194	0.0062	< LOD	0	0.009	0.0015	< LOD	0
MG04.115	< LOD	0.0063	< LOD	0	0.0141	0.0015	< LOD	0.0047
MG04.118	0.0116	0.0062	< LOD	0	0.012	0.0015	< LOD	0
MG04.13	0.0069	0.0062	< LOD	0.0023	0.0066	0.0015	< LOD	0.0047
MG04.14	0.0072	0.0062	< LOD	0	0.1067	0.0015	< LOD	0.0047
MG04.16	< LOD	0.0063	< LOD	0.0023	1.1859	0.0015	< LOD	0
MG04.17	< LOD	0	< LOD	0	0.0036	0.0015	< LOD	0
MG04.18	0.0185	0.0062	< LOD	0	0.0165	0.0015	< LOD	0.0047
MG04.19	< LOD	0	< LOD	0	0.0235	0.0015	0.0061	0.0047
MG04.2	< LOD	0.0062	< LOD	0.0023	0.0152	0.0015	< LOD	0.0047
MG04.20	< LOD	0.0062	< LOD	0	0.012	0.0015	< LOD	0.0047
MG04.21	0.0114	0.0062	< LOD	0	0.0181	0.0015	0.0055	0.0047
MG04.22	0.0084	0.0062	< LOD	0.0023	0.0046	0.0015	< LOD	0.0047
MG04.23	< LOD	0	< LOD	0	0.0064	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG03.66	0.2547	0.0019	0.9797	0.0055	0.1826	0.0108
MG03.69	0.0376	0.0019	0.0952	0.0051	0.0441	0.0106
MG03.70	0.6592	0.002	0.4754	0.0056	0.0934	0.0111
MG03.71	0.0286	0.0019	0.356	0.0053	< LOD	0.0106
MG03.72	1.1658	0.0019	0.2058	0.0056	0.0229	0.0107
MG03.73	0.1096	0.0019	0.1789	0.0054	< LOD	0.0105
MG03.75	0.2296	0.0019	0.5744	0.0053	< LOD	0
MG03.76	0.0603	0.0019	< LOD	0	0.0278	0.0104
MG03.78	0.0626	0.0018	0.0165	0.0054	< LOD	0
MG03.79	0.0072	0.0019	< LOD	0	< LOD	0
MG03.8	0.0457	0.0019	0.0177	0.0052	< LOD	0.0105
MG03.81	0.0156	0.0019	0.065	0.0053	0.0116	0.0105
MG03.82	0.0393	0.0019	0.1701	0.0051	< LOD	0
M4-2	0.2788	0.0017	0.4563	0.0052	0.0209	0.0105
MG04.1	0.0993	0.0018	0.1032	0.0053	< LOD	0
MG04.10	0.0785	0.0019	0.214	0.0052	< LOD	0
MG04.102	0.5636	0.0019	0.1868	0.0052	< LOD	0.0107
MG04.103	0.0102	0.0019	0.1528	0.0053	< LOD	0.0105
MG04.104	0.3507	0.0019	0.0893	0.0054	< LOD	0
MG04.105	< LOD	0	< LOD	0.0053	< LOD	0.0106
MG04.106	0.0261	0.0019	0.0125	0.005	0.0193	0.0105
MG04.108	0.0506	0.0019	0.122	0.0051	0.0132	0.0105
MG04.109	0.0308	0.0019	0.1063	0.0052	0.0393	0.0105
MG04.112	0.8103	0.0019	0.5406	0.0053	< LOD	0.0107
MG04.113	0.0121	0.0019	0.1584	0.0053	< LOD	0
MG04.114	0.0073	0.0019	0.0614	0.0052	< LOD	0.0105
MG04.115	0.0079	0.0019	0.4224	0.0052	< LOD	0
MG04.118	0.048	0.0019	0.0759	0.0052	< LOD	0
MG04.13	0.0651	0.0019	< LOD	0.0052	< LOD	0.0105
MG04.14	0.0127	0.0019	0.0214	0.0052	0.016	0.0105
MG04.16	0.0484	0.0019	0.0096	0.0052	0.0168	0.0105
MG04.17	0.1509	0.0019	0.164	0.0052	< LOD	0
MG04.18	0.0186	0.0019	0.2541	0.0053	< LOD	0.0105
MG04.19	0.1477	0.0019	0.3873	0.0054	< LOD	0.0106
MG04.2	0.0628	0.0019	0.0418	0.0052	0.0237	0.0105
MG04.20	0.0453	0.0019	0.3091	0.0053	< LOD	0
MG04.21	0.0223	0.0019	0.0595	0.0053	< LOD	0.0105
MG04.22	0.0175	0.0019	0.14	0.0048	0.0347	0.0106
MG04.23	0.9595	0.0019	1.0845	0.0058	< LOD	0.0108

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG04.24	Till sample	Till 04	NA	0.0639	0.0018	< LOD	0.0015	0.0164	0.0046
MG04.28	Till sample	Till 04	NA	0.0324	0.0018	0.0282	0.0015	0.0108	0.0047
MG04.30	Till sample	Till 04	NA	0.0509	0.0018	0.0041	0.0015	0.068	0.0046
MG04.31	Till sample	Till 04	NA	0.0745	0.0018	0.0245	0.0015	0.014	0.0048
MG04.32	Till sample	Till 04	NA	0.0407	0.0018	0.0143	0.0015	0.0282	0.0046
MG04.33	Till sample	Till 04	NA	0.111	0.0018	0.0851	0.0015	0.0232	0.0048
MG04.34	Till sample	Till 04	NA	0.1613	0.0018	< LOD	0.0015	0.1147	0.0047
MG04.35	Till sample	Till 04	NA	0.1825	0.0018	0.1004	0.0015	0.041	0.0048
MG04.36	Till sample	Till 04	NA	0.0199	0.0018	0.0272	0.0015	0.0054	0.0046
MG04.38	Till sample	Till 04	NA	0.0344	0.0018	0.1796	0.0015	0.1177	0.0048
MG04.39	Till sample	Till 04	NA	0.0065	0.0018	0.076	0.0016	1.7847	0.0049
MG04.4	Till sample	Till 04	NA	0.0804	0.0018	0.0415	0.0015	0.0057	0.0048
MG04.40	Till sample	Till 04	NA	0.0431	0.0018	< LOD	0	0.0047	0.0046
MG04.41	Till sample	Till 04	NA	0.15	0.0018	< LOD	0	< LOD	0.0049
MG04.43	Till sample	Till 04	NA	0.0262	0.0017	0.0266	0.0015	0.0077	0.0048
MG04.44	Till sample	Till 04	NA	0.0742	0.0018	< LOD	0.0015	< LOD	0
MG04.45	Till sample	Till 04	NA	0.0508	0.0018	0.0652	0.0015	0.1102	0.0049
MG04.46	Till sample	Till 04	NA	0.0409	0.0018	0.0016	0.0015	0.0102	0.0046
MG04.47	Till sample	Till 04	NA	0.081	0.0018	< LOD	0	< LOD	0
MG04.49	Till sample	Till 04	NA	0.1092	0.0018	0.0021	0.0015	0.0214	0.0048
MG04.5	Till sample	Till 04	NA	0.0403	0.0018	0.0731	0.0015	0.0055	0.0047
MG04.51	Till sample	Till 04	NA	0.113	0.0018	0.0708	0.0015	0.1	0.0049
MG04.52	Till sample	Till 04	NA	0.3311	0.0018	0.0603	0.0015	0.0255	0.0048
MG04.53	Till sample	Till 04	NA	0.0086	0.0017	0.0411	0.0015	< LOD	0.0047
MG04.54	Till sample	Till 04	NA	0.1616	0.0018	0.0046	0.0015	0.0063	0.0047
MG04.56	Till sample	Till 04	NA	0.007	0.0018	0.0731	0.0015	0.0129	0.0047
MG04.57	Till sample	Till 04	NA	0.0289	0.0017	0.0018	0.0015	0.0182	0.0047
MG04.64	Till sample	Till 04	NA	0.0452	0.0018	< LOD	0	0.0164	0.0048
MG04.65	Till sample	Till 04	NA	0.1166	0.0018	0.0017	0.0015	< LOD	0
MG04.66	Till sample	Till 04	NA	0.0165	0.0018	< LOD	0.0015	< LOD	0
MG04.67	Till sample	Till 04	NA	0.0245	0.0018	< LOD	0	< LOD	0.0048
MG04.68	Till sample	Till 04	NA	0.3461	0.0018	0.5449	0.0016	0.0492	0.0049
MG04.70	Till sample	Till 04	NA	0.0494	0.0018	0.0022	0.0015	0.016	0.0047
MG04.73	Till sample	Till 04	NA	0.0427	0.0018	< LOD	0.0015	< LOD	0
MG04.74	Till sample	Till 04	NA	0.0221	0.0018	< LOD	0.0015	0.1729	0.0047
MG04.76	Till sample	Till 04	NA	0.0546	0.0018	0.0758	0.0016	2.1659	0.005
MG04.78	Till sample	Till 04	NA	0.0454	0.0018	0.0018	0.0015	0.0323	0.0049
MG04.79	Till sample	Till 04	NA	0.0422	0.0018	< LOD	0.0015	< LOD	0
MG04.8	Till sample	Till 04	NA	0.039	0.0017	0.0089	0.0015	0.0959	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG04.24	< LOD	0.0083	< LOD	0	0.0167	0.0022	0.0929	0.0039
MG04.28	< LOD	0.0083	0.0023	0.0014	0.0041	0.0022	0.0116	0.0039
MG04.30	< LOD	0	< LOD	0	0.0064	0.0022	0.0378	0.004
MG04.31	< LOD	0.0084	0.008	0.0014	< LOD	0.0022	0.0158	0.004
MG04.32	< LOD	0	0.0015	0.0014	0.0038	0.0021	0.0357	0.0039
MG04.33	< LOD	0.0083	0.0071	0.0015	0.0023	0.0022	0.0169	0.004
MG04.34	0.015	0.0083	0.0015	0.0014	0.0283	0.0022	0.0565	0.004
MG04.35	< LOD	0	0.0049	0.0014	0.0076	0.0022	0.0321	0.004
MG04.36	< LOD	0	0.0045	0.0014	0.0044	0.0021	0.0233	0.004
MG04.38	< LOD	0	< LOD	0.0014	0.0279	0.0022	0.0186	0.004
MG04.39	< LOD	0.0085	< LOD	0.0015	0.004	0.0022	0.0302	0.0042
MG04.4	< LOD	0.0083	< LOD	0	0.0052	0.0021	0.0166	0.004
MG04.40	< LOD	0	< LOD	0	0.0092	0.0022	0.1164	0.004
MG04.41	< LOD	0.0084	< LOD	0	0.0073	0.0022	0.1209	0.004
MG04.43	< LOD	0.0083	0.0027	0.0014	< LOD	0.0022	0.0228	0.004
MG04.44	< LOD	0.0083	0.0022	0.0014	0.0054	0.0022	0.0481	0.004
MG04.45	< LOD	0	0.0116	0.0014	0.0024	0.0022	0.0234	0.004
MG04.46	< LOD	0.0082	< LOD	0.0014	< LOD	0	0.053	0.004
MG04.47	< LOD	0	< LOD	0	0.0077	0.0022	0.0405	0.0039
MG04.49	< LOD	0.0083	< LOD	0.0014	0.0096	0.0021	0.0963	0.004
MG04.5	< LOD	0	< LOD	0	< LOD	0.0022	0.0234	0.004
MG04.51	< LOD	0.0083	< LOD	0.0014	0.0051	0.0021	0.0235	0.004
MG04.52	< LOD	0	0.0042	0.0015	0.0789	0.0022	0.0211	0.0041
MG04.53	< LOD	0.0082	0.0103	0.0014	< LOD	0.0022	0.0107	0.004
MG04.54	< LOD	0.0083	0.0045	0.0014	0.0089	0.0022	0.0062	0.0039
MG04.56	< LOD	0	0.0051	0.0014	< LOD	0.0021	0.0405	0.0039
MG04.57	< LOD	0.0083	< LOD	0	0.0055	0.0021	0.1337	0.004
MG04.64	< LOD	0	< LOD	0.0014	0.0091	0.0022	0.1241	0.004
MG04.65	< LOD	0	< LOD	0	0.0126	0.0022	0.0456	0.004
MG04.66	< LOD	0	< LOD	0.0014	< LOD	0	0.0925	0.004
MG04.67	< LOD	0.0083	< LOD	0.0014	0.0024	0.0022	0.0554	0.004
MG04.68	< LOD	0	0.0073	0.0015	0.8471	0.0023	0.0407	0.0041
MG04.70	< LOD	0.0083	0.0019	0.0014	0.0085	0.0022	0.1348	0.004
MG04.73	< LOD	0	< LOD	0	< LOD	0.0021	0.0123	0.004
MG04.74	0.0106	0.0083	< LOD	0	< LOD	0.0022	0.0206	0.004
MG04.76	< LOD	0	0.0045	0.0015	0.0217	0.0022	0.0255	0.0042
MG04.78	< LOD	0	< LOD	0.0014	0.0078	0.0022	0.1352	0.0039
MG04.79	0.0102	0.0082	< LOD	0.0014	< LOD	0.0022	0.092	0.0039
MG04.8	< LOD	0	< LOD	0.0014	0.0028	0.0022	0.0161	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG04.24	0.0082	0.0061	< LOD	0	0.0041	0.0015	< LOD	0.0047
MG04.28	0.0078	0.0062	< LOD	0	0.0067	0.0015	< LOD	0.0047
MG04.30	< LOD	0.0063	< LOD	0	0.0096	0.0015	< LOD	0
MG04.31	< LOD	0	< LOD	0	0.0214	0.0015	< LOD	0
MG04.32	0.0067	0.0063	< LOD	0	0.0065	0.0015	< LOD	0.0047
MG04.33	0.019	0.0062	< LOD	0	0.0269	0.0015	< LOD	0
MG04.34	0.0192	0.0062	< LOD	0	0.0057	0.0015	< LOD	0
MG04.35	0.0079	0.0063	< LOD	0.0023	0.0438	0.0015	< LOD	0.0048
MG04.36	< LOD	0.0062	< LOD	0	0.0252	0.0015	< LOD	0.0047
MG04.38	0.0203	0.0062	< LOD	0	0.0591	0.0015	< LOD	0
MG04.39	0.1293	0.0064	< LOD	0	0.0154	0.0015	< LOD	0
MG04.4	< LOD	0.0062	< LOD	0	0.0194	0.0015	< LOD	0.0047
MG04.40	< LOD	0	< LOD	0.0023	0.0051	0.0015	< LOD	0.0047
MG04.41	0.012	0.0062	0.0031	0.0023	0.0073	0.0015	< LOD	0.0048
MG04.43	< LOD	0.0063	< LOD	0.0023	0.0095	0.0015	< LOD	0
MG04.44	< LOD	0.0062	< LOD	0.0023	0.0034	0.0015	< LOD	0
MG04.45	0.0086	0.0063	< LOD	0.0023	0.0208	0.0015	< LOD	0
MG04.46	< LOD	0.0062	< LOD	0.0023	0.0053	0.0015	< LOD	0
MG04.47	0.023	0.0062	< LOD	0.0023	0.0066	0.0015	< LOD	0
MG04.49	< LOD	0	< LOD	0.0023	0.0055	0.0015	< LOD	0
MG04.5	< LOD	0	< LOD	0	0.014	0.0015	< LOD	0
MG04.51	< LOD	0.0062	< LOD	0.0023	0.014	0.0015	< LOD	0.0047
MG04.52	0.0105	0.0063	0.0031	0.0023	0.163	0.0015	< LOD	0
MG04.53	< LOD	0	< LOD	0	0.0087	0.0015	< LOD	0.0047
MG04.54	0.0119	0.0062	< LOD	0.0023	0.0109	0.0015	< LOD	0
MG04.56	< LOD	0.0063	0.0032	0.0023	0.0088	0.0015	< LOD	0
MG04.57	< LOD	0.0062	< LOD	0	0.005	0.0015	< LOD	0.0047
MG04.64	< LOD	0	< LOD	0	0.0046	0.0015	< LOD	0.0047
MG04.65	< LOD	0.0063	< LOD	0	0.0072	0.0015	< LOD	0
MG04.66	< LOD	0.0062	< LOD	0.0023	0.0053	0.0015	< LOD	0.0047
MG04.67	< LOD	0	< LOD	0	0.0043	0.0015	< LOD	0.0047
MG04.68	0.0151	0.0064	< LOD	0	1.5151	0.0015	< LOD	0
MG04.70	0.007	0.0063	0.0027	0.0023	0.0079	0.0015	0.0051	0.0047
MG04.73	0.0091	0.0062	< LOD	0	0.0105	0.0015	< LOD	0.0047
MG04.74	0.0125	0.0063	< LOD	0	0.0086	0.0015	< LOD	0.0048
MG04.76	0.0667	0.0064	< LOD	0.0024	0.0431	0.0015	< LOD	0
MG04.78	< LOD	0.0063	< LOD	0.0023	0.0072	0.0015	< LOD	0
MG04.79	< LOD	0	0.0051	0.0023	0.0075	0.0015	< LOD	0
MG04.8	0.0099	0.0063	< LOD	0	0.0105	0.0015	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG04.24	0.022	0.0019	0.0093	0.0051	< LOD	0
MG04.28	0.0716	0.0019	0.2142	0.0054	< LOD	0.0106
MG04.30	0.0402	0.0019	0.197	0.0049	< LOD	0
MG04.31	0.3147	0.0019	0.4721	0.0053	< LOD	0.0106
MG04.32	0.0501	0.0018	0.1397	0.0051	< LOD	0
MG04.33	0.2194	0.0019	0.6986	0.0052	< LOD	0.0107
MG04.34	0.063	0.0019	0.2845	0.0052	< LOD	0
MG04.35	0.1151	0.0019	1.2953	0.0056	< LOD	0
MG04.36	0.026	0.0019	0.0536	0.0049	< LOD	0.0105
MG04.38	0.0635	0.0019	0.4597	0.0052	< LOD	0
MG04.39	0.0064	0.0019	0.0708	0.0054	0.0152	0.0107
MG04.4	0.1322	0.0019	0.3308	0.005	< LOD	0.0106
MG04.40	0.0377	0.0019	0.0907	0.0051	0.024	0.0104
MG04.41	0.1226	0.0019	0.0765	0.0052	0.148	0.0106
MG04.43	0.0203	0.0019	0.1392	0.0051	< LOD	0.0106
MG04.44	0.0569	0.0019	< LOD	0.0051	< LOD	0
MG04.45	0.0824	0.0019	0.704	0.0053	< LOD	0.0107
MG04.46	0.014	0.0019	0.0788	0.0054	< LOD	0
MG04.47	0.0469	0.0019	< LOD	0.0052	0.0207	0.0105
MG04.49	0.0614	0.0019	0.0409	0.0052	0.0115	0.0106
MG04.5	0.0223	0.0019	0.0571	0.005	< LOD	0.0106
MG04.51	0.0585	0.0019	0.3199	0.0055	< LOD	0.0106
MG04.52	0.2636	0.0019	0.9291	0.0054	< LOD	0
MG04.53	0.0045	0.0019	< LOD	0	< LOD	0.0105
MG04.54	0.0485	0.0019	0.2482	0.005	0.0456	0.0107
MG04.56	0.0358	0.0019	0.0988	0.0053	< LOD	0.0105
MG04.57	0.0039	0.0019	0.0663	0.0053	0.0238	0.0105
MG04.64	0.0285	0.0019	0.1262	0.0054	< LOD	0.0107
MG04.65	0.0615	0.0019	< LOD	0	0.0409	0.0106
MG04.66	0.0059	0.0019	0.0501	0.0052	0.0645	0.0106
MG04.67	0.0124	0.0019	0.0958	0.0051	< LOD	0
MG04.68	0.0722	0.0019	0.1484	0.0055	0.044	0.0108
MG04.70	0.029	0.0019	0.1736	0.0051	0.0266	0.0105
MG04.73	0.0061	0.0019	0.1921	0.005	< LOD	0
MG04.74	0.0053	0.0019	0.3949	0.0052	< LOD	0.0106
MG04.76	0.0259	0.0019	0.5367	0.0055	< LOD	0.0109
MG04.78	0.0021	0.0019	0.1958	0.0053	< LOD	0.0105
MG04.79	0.0468	0.0019	0.0769	0.0053	0.041	0.0105
MG04.8	0.2032	0.0019	0.143	0.0052	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG04.80	Till sample	Till 04	NA	0.1381	0.0017	0.0019	0.0015	< LOD	0.0048
MG04.83	Till sample	Till 04	NA	< LOD	0.0017	0.0061	0.0015	1.1433	0.0049
MG04.84	Till sample	Till 04	NA	0.2641	0.0018	0.0534	0.0015	0.0097	0.0049
MG04.87	Till sample	Till 04	NA	0.0594	0.0017	0.0017	0.0015	< LOD	0
MG04.88	Till sample	Till 04	NA	0.0911	0.0018	< LOD	0.0015	0.0087	0.0047
MG04.9	Till sample	Till 04	NA	0.3284	0.0018	0.0173	0.0015	0.0368	0.0049
MG04.91	Till sample	Till 04	NA	0.0578	0.0018	0.0329	0.0015	0.0488	0.0048
MG04.92	Till sample	Till 04	NA	0.0172	0.0018	0.0627	0.0015	< LOD	0
MG04.95	Till sample	Till 04	NA	0.0811	0.0018	< LOD	0.0015	< LOD	0
MG04.96	Till sample	Till 04	NA	0.0426	0.0018	0.0421	0.0015	0.0578	0.0047
MG04.97	Till sample	Till 04	NA	0.0442	0.0018	0.0361	0.0015	0.3989	0.0051
MG04.98	Till sample	Till 04	NA	0.0486	0.0018	0.0022	0.0015	< LOD	0
MG04.99	Till sample	Till 04	NA	0.1254	0.0018	< LOD	0.0015	0.0757	0.0047
M5-1	Till sample	Till 05	NA	0.0917	0.0018	< LOD	0.0015	0.0068	0.0049
M5-2	Till sample	Till 05	NA	0.1336	0.0018	0.0742	0.0015	0.1158	0.005
M5-3	Till sample	Till 05	NA	0.0398	0.0018	0.0442	0.0015	0.0526	0.0048
M5-4	Till sample	Till 05	NA	0.053	0.0018	0.0174	0.0015	1.7727	0.0049
MG05.100	Till sample	Till 05	NA	0.0332	0.0018	0.0023	0.0015	0.006	0.0048
MG05.102	Till sample	Till 05	NA	0.0387	0.0018	0.0045	0.0015	0.0969	0.0047
MG05.103	Till sample	Till 05	NA	0.2246	0.0018	0.005	0.0015	0.1728	0.0051
MG05.104	Till sample	Till 05	NA	0.1842	0.0018	< LOD	0	0.0214	0.0048
MG05.105	Till sample	Till 05	NA	0.0783	0.0018	0.0021	0.0015	0.082	0.0049
MG05.107	Till sample	Till 05	NA	0.015	0.0018	< LOD	0	< LOD	0.0048
MG05.108	Till sample	Till 05	NA	0.0399	0.0018	0.003	0.0015	0.0141	0.0046
MG05.109	Till sample	Till 05	NA	0.1544	0.0018	0.0662	0.0015	0.0151	0.0047
MG05.11	Till sample	Till 05	NA	0.053	0.0018	0.0244	0.0015	0.0096	0.0048
MG05.110	Till sample	Till 05	NA	0.0461	0.0018	0.01	0.0015	< LOD	0.0049
MG05.111	Till sample	Till 05	NA	0.0502	0.0018	0.0021	0.0015	0.0048	0.0047
MG05.112	Till sample	Till 05	NA	0.0168	0.0018	0.0028	0.0015	< LOD	0
MG05.113	Till sample	Till 05	NA	0.3263	0.0018	< LOD	0.0015	0.2533	0.0046
MG05.114	Till sample	Till 05	NA	0.1701	0.0018	< LOD	0	0.0648	0.0049
MG05.115	Till sample	Till 05	NA	0.0612	0.0017	< LOD	0.0015	< LOD	0.0048
MG05.116	Till sample	Till 05	NA	0.057	0.0018	0.0588	0.0015	< LOD	0.0048
MG05.117	Till sample	Till 05	NA	0.0769	0.0018	0.0141	0.0015	0.0413	0.0048
MG05.120	Till sample	Till 05	NA	0.024	0.0018	0.0022	0.0015	0.0059	0.0048
MG05.123	Till sample	Till 05	NA	0.0605	0.0018	0.0026	0.0015	0.0087	0.0046
MG05.125	Till sample	Till 05	NA	0.2606	0.0018	0.0022	0.0015	< LOD	0.0047
MG05.127	Till sample	Till 05	NA	0.4525	0.0018	< LOD	0	0.0522	0.0048
MG05.128	Till sample	Till 05	NA	0.0124	0.0018	0.0051	0.0015	0.0992	0.0049

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG04.80	< LOD	0	< LOD	0	0.0077	0.0022	0.0822	0.0039
MG04.83	< LOD	0	0.0025	0.0014	0.0238	0.0022	0.0052	0.0041
MG04.84	0.0156	0.0083	0.0303	0.0015	0.0454	0.0022	0.0146	0.004
MG04.87	< LOD	0.0083	< LOD	0.0014	0.0025	0.0022	0.0771	0.004
MG04.88	< LOD	0.0083	< LOD	0	0.0094	0.0022	0.0779	0.004
MG04.9	< LOD	0.0084	< LOD	0	< LOD	0	0.0556	0.0041
MG04.91	0.0088	0.0083	0.0065	0.0014	< LOD	0.0022	0.0244	0.0039
MG04.92	0.0094	0.0083	0.0145	0.0014	< LOD	0	0.0323	0.004
MG04.95	0.0089	0.0082	< LOD	0.0014	0.0071	0.0022	0.0498	0.0039
MG04.96	< LOD	0	0.0033	0.0014	0.004	0.0021	0.0167	0.004
MG04.97	< LOD	0	0.0045	0.0014	0.0329	0.0022	0.0841	0.0041
MG04.98	< LOD	0	< LOD	0.0014	0.0026	0.0021	0.0176	0.004
MG04.99	< LOD	0.0083	< LOD	0	0.2493	0.0022	0.016	0.004
M5-1	< LOD	0.0083	< LOD	0	0.0035	0.0022	0.0988	0.004
M5-2	< LOD	0	< LOD	0	0.0046	0.0022	0.0362	0.004
M5-3	< LOD	0.0083	0.0016	0.0014	< LOD	0.0022	0.0635	0.004
M5-4	< LOD	0	< LOD	0.0014	< LOD	0	0.0694	0.0041
MG05.100	0.0103	0.0082	< LOD	0.0014	0.0082	0.0021	0.051	0.004
MG05.102	< LOD	0.0083	< LOD	0	0.0086	0.0021	0.035	0.004
MG05.103	< LOD	0.0084	0.0016	0.0015	0.0035	0.0022	0.0178	0.004
MG05.104	< LOD	0	< LOD	0	0.0055	0.0022	< LOD	0.004
MG05.105	< LOD	0.0083	< LOD	0.0014	0.0028	0.0022	0.0246	0.0039
MG05.107	< LOD	0.0083	< LOD	0	0.005	0.0022	0.0815	0.004
MG05.108	0.0128	0.0082	< LOD	0	0.0024	0.0022	0.1333	0.0039
MG05.109	< LOD	0.0083	0.0029	0.0014	0.014	0.0022	0.0099	0.004
MG05.11	0.0107	0.0082	< LOD	0.0014	< LOD	0.0022	0.034	0.004
MG05.110	< LOD	0	< LOD	0.0014	0.0076	0.0021	0.0787	0.004
MG05.111	< LOD	0.0083	< LOD	0	0.0038	0.0022	0.0768	0.004
MG05.112	< LOD	0.0083	< LOD	0.0014	0.0031	0.0021	0.161	0.004
MG05.113	< LOD	0.0082	0.0043	0.0014	0.0051	0.0022	< LOD	0.004
MG05.114	< LOD	0.0082	< LOD	0	0.0055	0.0022	< LOD	0
MG05.115	0.0174	0.0082	< LOD	0.0014	0.0227	0.0021	0.0654	0.0039
MG05.116	0.0105	0.0083	< LOD	0.0014	0.0029	0.0021	0.0098	0.004
MG05.117	0.0174	0.0082	< LOD	0	< LOD	0.0022	0.0076	0.004
MG05.120	< LOD	0.0083	< LOD	0	< LOD	0	0.041	0.004
MG05.123	0.0145	0.0082	0.0021	0.0014	< LOD	0.0022	0.0281	0.004
MG05.125	< LOD	0.0083	0.0016	0.0014	0.0062	0.0022	< LOD	0
MG05.127	< LOD	0.0083	< LOD	0.0014	0.0131	0.0023	0.091	0.004
MG05.128	0.0085	0.0083	< LOD	0	0.0046	0.0021	0.2544	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG04.80	< LOD	0	0.0025	0.0023	0.0056	0.0015	0.0076	0.0047
MG04.83	0.2172	0.0063	< LOD	0	0.0055	0.0015	< LOD	0.0048
MG04.84	< LOD	0.0063	< LOD	0.0023	0.1993	0.0015	< LOD	0
MG04.87	< LOD	0.0062	< LOD	0	0.0215	0.0015	< LOD	0
MG04.88	< LOD	0.0062	< LOD	0	0.0029	0.0015	< LOD	0
MG04.9	< LOD	0.0064	< LOD	0.0024	0.0357	0.0015	< LOD	0.0048
MG04.91	< LOD	0.0063	0.0351	0.0023	0.0149	0.0015	< LOD	0
MG04.92	< LOD	0	< LOD	0	0.0152	0.0015	< LOD	0.0048
MG04.95	0.0091	0.0063	< LOD	0	0.0091	0.0015	< LOD	0.0047
MG04.96	0.0218	0.0063	< LOD	0	0.0128	0.0015	< LOD	0
MG04.97	0.0415	0.0063	< LOD	0.0023	0.0553	0.0015	< LOD	0.0048
MG04.98	< LOD	0.0062	< LOD	0	0.0109	0.0015	< LOD	0.0047
MG04.99	< LOD	0.0063	< LOD	0.0023	0.0107	0.0015	< LOD	0
M5-1	< LOD	0.0062	< LOD	0.0023	0.0074	0.0014	< LOD	0.0042
M5-2	< LOD	0.0063	< LOD	0	0.0181	0.0014	< LOD	0.0042
M5-3	< LOD	0.0063	< LOD	0	0.0062	0.0014	< LOD	0.0041
M5-4	0.0243	0.0064	< LOD	0	0.0128	0.0014	< LOD	0.0042
MG05.100	0.0077	0.0062	< LOD	0	0.0039	0.0015	< LOD	0
MG05.102	< LOD	0.0062	< LOD	0	0.0075	0.0015	< LOD	0.0047
MG05.103	< LOD	0.0063	< LOD	0.0023	0.0183	0.0015	0.0081	0.0048
MG05.104	0.0122	0.0062	< LOD	0.0023	0.0145	0.0015	< LOD	0
MG05.105	< LOD	0	0.0027	0.0023	0.0239	0.0015	< LOD	0
MG05.107	0.0106	0.0062	< LOD	0.0023	0.0059	0.0015	< LOD	0.0047
MG05.108	0.0103	0.0062	0.0049	0.0023	0.0086	0.0015	< LOD	0
MG05.109	0.0313	0.0063	< LOD	0	0.017	0.0015	< LOD	0
MG05.11	< LOD	0.0062	< LOD	0.0023	0.0161	0.0015	< LOD	0
MG05.110	0.009	0.0062	< LOD	0	0.0079	0.0015	< LOD	0
MG05.111	0.0087	0.0062	< LOD	0.0023	0.0119	0.0015	< LOD	0.0047
MG05.112	< LOD	0.0062	< LOD	0.0023	0.0152	0.0015	< LOD	0
MG05.113	0.0132	0.0062	< LOD	0	0.0078	0.0015	< LOD	0
MG05.114	0.0078	0.0062	0.0034	0.0023	0.0178	0.0014	< LOD	0.0047
MG05.115	0.0119	0.0062	< LOD	0	0.0059	0.0015	< LOD	0
MG05.116	0.0242	0.0062	< LOD	0.0023	0.0066	0.0015	< LOD	0.0047
MG05.117	0.0146	0.0063	< LOD	0.0023	0.0072	0.0015	< LOD	0
MG05.120	< LOD	0	0.0049	0.0023	0.0249	0.0015	< LOD	0
MG05.123	0.0068	0.0062	< LOD	0.0023	0.0056	0.0015	< LOD	0.0048
MG05.125	< LOD	0	0.003	0.0023	0.0262	0.0015	< LOD	0
MG05.127	< LOD	0.0063	< LOD	0	0.0128	0.0015	< LOD	0.0047
MG05.128	0.025	0.0064	< LOD	0	0.0127	0.0015	< LOD	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG04.80	0.0141	0.0019	0.0995	0.0051	0.0888	0.0105
MG04.83	0.0136	0.0019	0.046	0.0052	< LOD	0.0107
MG04.84	0.3102	0.0019	0.6291	0.0054	0.0253	0.0106
MG04.87	0.048	0.0019	0.05	0.0052	0.0125	0.0105
MG04.88	0.0971	0.0019	0.0881	0.0053	0.048	0.0105
MG04.9	0.719	0.0019	1.2687	0.0057	0.0733	0.0109
MG04.91	0.0538	0.0019	0.1513	0.0054	< LOD	0
MG04.92	0.0232	0.0019	0.0589	0.0051	0.0228	0.0105
MG04.95	0.0683	0.0019	< LOD	0.0052	< LOD	0
MG04.96	0.0631	0.0019	0.1624	0.0053	< LOD	0
MG04.97	0.5376	0.0019	0.3169	0.0055	< LOD	0.0107
MG04.98	0.0066	0.0019	0.0082	0.005	< LOD	0
MG04.99	0.0402	0.0019	0.262	0.0055	< LOD	0.0106
M5-1	0.0592	0.0017	0.301	0.0053	0.0119	0.0105
M5-2	0.3146	0.0017	0.895	0.0054	< LOD	0
M5-3	0.0436	0.0017	0.1884	0.0053	0.0117	0.0105
M5-4	0.1517	0.0017	0.137	0.0054	< LOD	0
MG05.100	0.0184	0.0019	0.1501	0.0053	< LOD	0.0105
MG05.102	0.0117	0.0019	0.1747	0.0052	0.0173	0.0105
MG05.103	0.3739	0.0019	0.6512	0.0053	0.0183	0.0106
MG05.104	0.0918	0.0019	0.0386	0.0051	< LOD	0.0105
MG05.105	0.146	0.0019	0.1351	0.0054	< LOD	0
MG05.107	0.0159	0.0019	0.0893	0.0054	0.0547	0.0106
MG05.108	0.027	0.0019	0.1236	0.0052	< LOD	0.0106
MG05.109	0.022	0.0019	0.1543	0.0053	0.0169	0.0105
MG05.11	0.063	0.0019	0.1063	0.0051	< LOD	0
MG05.110	0.0446	0.0019	0.1963	0.005	< LOD	0.0106
MG05.111	0.0131	0.0019	0.036	0.0051	0.0257	0.0104
MG05.112	0.0432	0.0019	0.0351	0.0053	0.0579	0.0105
MG05.113	0.1563	0.0019	0.0988	0.0054	0.0211	0.0105
MG05.114	0.0703	0.0019	0.0302	0.0054	< LOD	0.0106
MG05.115	0.0187	0.0019	0.0111	0.005	< LOD	0.0106
MG05.116	0.0293	0.0019	0.3019	0.0051	0.011	0.0105
MG05.117	0.0026	0.0019	0.298	0.0052	0.0137	0.0105
MG05.120	0.0896	0.0019	0.011	0.0051	< LOD	0.0105
MG05.123	0.0728	0.0019	0.1201	0.0053	< LOD	0.0106
MG05.125	0.1235	0.0019	< LOD	0	< LOD	0.0105
MG05.127	0.1956	0.0019	0.0356	0.0053	0.0142	0.0105
MG05.128	0.0042	0.0019	0.1573	0.0051	0.0714	0.0106

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG05.129	Till sample	Till 05	NA	0.0538	0.0018	0.0035	0.0015	< LOD	0
MG05.13	Till sample	Till 05	NA	0.2098	0.0018	< LOD	0.0015	0.0251	0.0048
MG05.17	Till sample	Till 05	NA	0.2031	0.0018	0.0025	0.0015	0.0237	0.0047
MG05.18	Till sample	Till 05	NA	0.0699	0.0018	0.0826	0.0015	0.0058	0.0048
MG05.19	Till sample	Till 05	NA	0.1226	0.0018	0.0227	0.0015	< LOD	0
MG05.2	Till sample	Till 05	NA	0.0398	0.0018	< LOD	0.0015	< LOD	0
MG05.21	Till sample	Till 05	NA	0.0245	0.0018	< LOD	0.0015	0.0127	0.0046
MG05.22	Till sample	Till 05	NA	0.0461	0.0018	0.1118	0.0015	0.0751	0.0047
MG05.23	Till sample	Till 05	NA	0.0372	0.0018	0.0115	0.0015	0.0237	0.0048
MG05.25	Till sample	Till 05	NA	0.1292	0.0018	0.056	0.0015	0.0533	0.0048
MG05.29	Till sample	Till 05	NA	0.0063	0.0018	0.0279	0.0015	< LOD	0.0047
MG05.30	Till sample	Till 05	NA	0.1865	0.0018	< LOD	0	0.0238	0.0047
MG05.31	Till sample	Till 05	NA	0.048	0.0018	0.0614	0.0015	0.0366	0.0046
MG05.33	Till sample	Till 05	NA	0.092	0.0018	0.0047	0.0015	0.0825	0.0046
MG05.34	Till sample	Till 05	NA	0.0141	0.0018	0.121	0.0015	0.0058	0.0048
MG05.36	Till sample	Till 05	NA	0.0034	0.0018	0.0563	0.0015	0.0252	0.0048
MG05.38	Till sample	Till 05	NA	0.0548	0.0018	0.0028	0.0015	0.006	0.0047
MG05.39	Till sample	Till 05	NA	0.1502	0.0018	0.0085	0.0015	0.6668	0.0049
MG05.4	Till sample	Till 05	NA	0.1297	0.0018	0.0025	0.0015	0.0221	0.0048
MG05.40	Till sample	Till 05	NA	0.1308	0.0018	0.0322	0.0015	0.0912	0.0049
MG05.41	Till sample	Till 05	NA	0.0298	0.0018	< LOD	0.0015	0.0124	0.0047
MG05.44	Till sample	Till 05	NA	0.0279	0.0018	< LOD	0	0.0052	0.0047
MG05.45	Till sample	Till 05	NA	0.1943	0.0017	0.0016	0.0015	0.0457	0.0049
MG05.46	Till sample	Till 05	NA	0.1648	0.0018	0.0024	0.0015	0.0176	0.0047
MG05.47	Till sample	Till 05	NA	0.0268	0.0018	0.1201	0.0015	0.0584	0.0048
MG05.49	Till sample	Till 05	NA	0.0362	0.0017	< LOD	0.0015	< LOD	0
MG05.5	Till sample	Till 05	NA	0.0022	0.0018	0.0152	0.0015	2.0551	0.0051
MG05.50	Till sample	Till 05	NA	0.1734	0.0018	< LOD	0.0015	0.0571	0.0048
MG05.51	Till sample	Till 05	NA	0.12	0.0018	0.0193	0.0015	0.031	0.0048
MG05.52	Till sample	Till 05	NA	0.0297	0.0018	0.0046	0.0015	< LOD	0
MG05.55	Till sample	Till 05	NA	0.2864	0.0018	0.0215	0.0015	0.0302	0.0048
MG05.57	Till sample	Till 05	NA	0.1405	0.0018	0.0042	0.0015	0.1477	0.0047
MG05.58	Till sample	Till 05	NA	0.0621	0.0018	< LOD	0.0015	0.0195	0.0047
MG05.59	Till sample	Till 05	NA	0.0795	0.0017	0.0018	0.0015	0.0236	0.0046
MG05.6	Till sample	Till 05	NA	0.4473	0.0018	0.0099	0.0015	0.0964	0.0048
MG05.60	Till sample	Till 05	NA	0.0705	0.0018	< LOD	0.0015	0.006	0.0048
MG05.61	Till sample	Till 05	NA	0.086	0.0018	0.0055	0.0015	0.0592	0.0048
MG05.62	Till sample	Till 05	NA	0.1084	0.0018	< LOD	0.0015	< LOD	0
MG05.63	Till sample	Till 05	NA	0.0386	0.0018	< LOD	0	0.0078	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG05.129	0.014	0.0082	< LOD	0	0.0102	0.0022	0.0918	0.004
MG05.13	< LOD	0.0083	0.002	0.0014	0.0075	0.0022	< LOD	0
MG05.17	0.0214	0.0082	< LOD	0.0014	0.007	0.0021	< LOD	0
MG05.18	< LOD	0.0083	0.0019	0.0014	0.0064	0.0022	0.0239	0.004
MG05.19	0.0187	0.0082	< LOD	0	0.0258	0.0022	0.1193	0.0039
MG05.2	0.0141	0.0082	< LOD	0	0.0099	0.0022	0.2005	0.004
MG05.21	< LOD	0	< LOD	0	0.004	0.0022	0.0361	0.0039
MG05.22	< LOD	0.0083	< LOD	0	0.0034	0.0022	0.0257	0.004
MG05.23	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0066	0.004
MG05.25	< LOD	0	0.0029	0.0014	0.0076	0.0022	0.0054	0.0041
MG05.29	< LOD	0	0.0275	0.0014	< LOD	0	0.0194	0.004
MG05.30	< LOD	0.0083	0.0025	0.0014	0.0081	0.0022	0.0256	0.004
MG05.31	0.0106	0.0082	0.0155	0.0014	< LOD	0	0.0052	0.004
MG05.33	0.0162	0.0081	< LOD	0	< LOD	0	0.0089	0.0039
MG05.34	< LOD	0	0.0084	0.0014	0.0026	0.0022	0.0107	0.004
MG05.36	< LOD	0.0082	0.006	0.0014	< LOD	0.0022	0.0159	0.004
MG05.38	< LOD	0.0083	< LOD	0	0.0082	0.0022	0.0809	0.004
MG05.39	< LOD	0.0084	< LOD	0	< LOD	0.0022	0.0084	0.0041
MG05.4	< LOD	0.0083	< LOD	0.0015	< LOD	0.0022	0.0127	0.0039
MG05.40	< LOD	0.0085	0.0041	0.0015	0.0057	0.0022	0.0332	0.0041
MG05.41	< LOD	0.0083	0.0026	0.0014	0.0025	0.0022	0.0402	0.004
MG05.44	0.0132	0.0082	< LOD	0	0.0038	0.0022	0.0483	0.004
MG05.45	< LOD	0	< LOD	0	0.006	0.0021	0.0042	0.0039
MG05.46	0.0108	0.0082	< LOD	0	0.0057	0.0022	0.0046	0.004
MG05.47	< LOD	0	0.0035	0.0014	0.0023	0.0022	0.0079	0.004
MG05.49	0.0114	0.0082	< LOD	0	< LOD	0	0.05	0.0039
MG05.5	< LOD	0.0084	< LOD	0	0.1937	0.0023	0.1522	0.0041
MG05.50	< LOD	0.0083	< LOD	0	0.0038	0.0022	< LOD	0.004
MG05.51	< LOD	0	< LOD	0	0.0328	0.0022	0.0328	0.0039
MG05.52	< LOD	0.0083	< LOD	0.0014	0.0028	0.0022	0.0138	0.004
MG05.55	0.0123	0.0083	0.0017	0.0015	0.0095	0.0022	0.0301	0.004
MG05.57	0.0115	0.0082	< LOD	0.0014	0.0035	0.0022	0.0076	0.004
MG05.58	< LOD	0.0083	< LOD	0.0014	0.0073	0.0022	0.1111	0.004
MG05.59	< LOD	0.0083	< LOD	0.0014	0.0087	0.0022	0.0372	0.004
MG05.6	< LOD	0	0.0024	0.0014	0.0194	0.0022	0.0345	0.004
MG05.60	< LOD	0.0083	< LOD	0	0.0119	0.0022	0.0282	0.004
MG05.61	0.0087	0.0082	0.0108	0.0014	0.0051	0.0021	0.0064	0.004
MG05.62	0.0155	0.0082	0.0017	0.0014	0.0163	0.0022	0.0818	0.004
MG05.63	< LOD	0	0.0022	0.0014	< LOD	0.0022	0.056	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG05.129	0.0077	0.0062	0.0028	0.0023	0.0205	0.0015	< LOD	0
MG05.13	0.008	0.0062	0.0079	0.0023	0.0179	0.0015	< LOD	0
MG05.17	0.0149	0.0062	< LOD	0.0023	0.0326	0.0015	< LOD	0
MG05.18	< LOD	0	< LOD	0.0023	0.0119	0.0015	< LOD	0
MG05.19	< LOD	0	< LOD	0.0023	0.0162	0.0015	< LOD	0
MG05.2	0.0102	0.0062	< LOD	0.0023	0.0199	0.0015	< LOD	0
MG05.21	0.0093	0.0062	0.0028	0.0023	0.0162	0.0015	< LOD	0
MG05.22	< LOD	0.0063	< LOD	0.0023	0.0083	0.0014	< LOD	0.0047
MG05.23	0.0111	0.0062	< LOD	0.0023	0.0081	0.0015	< LOD	0.0047
MG05.25	< LOD	0.0063	< LOD	0	0.0194	0.0015	< LOD	0
MG05.29	< LOD	0	< LOD	0	0.0185	0.0014	0.0087	0.0047
MG05.30	< LOD	0	< LOD	0	0.0203	0.0015	< LOD	0
MG05.31	0.0095	0.0062	0.0026	0.0023	0.0129	0.0015	< LOD	0.0047
MG05.33	< LOD	0.0062	< LOD	0	0.0142	0.0015	< LOD	0
MG05.34	< LOD	0	< LOD	0	0.0187	0.0015	0.005	0.0047
MG05.36	0.0068	0.0062	< LOD	0.0023	0.0276	0.0015	0.0057	0.0047
MG05.38	< LOD	0	< LOD	0	0.0112	0.0015	< LOD	0.0047
MG05.39	0.0323	0.0063	< LOD	0	0.0107	0.0015	< LOD	0
MG05.4	0.013	0.0062	0.004	0.0023	0.0118	0.0015	< LOD	0.0047
MG05.40	< LOD	0.0063	0.0044	0.0023	0.0206	0.0015	< LOD	0
MG05.41	0.0168	0.0062	0.0047	0.0023	0.0032	0.0015	< LOD	0.0047
MG05.44	< LOD	0.0062	< LOD	0.0023	0.0035	0.0015	< LOD	0.0047
MG05.45	< LOD	0.0063	< LOD	0	0.0183	0.0014	< LOD	0.0047
MG05.46	< LOD	0.0062	< LOD	0.0023	0.0129	0.0015	< LOD	0
MG05.47	< LOD	0	< LOD	0.0023	0.0032	0.0015	< LOD	0
MG05.49	< LOD	0	< LOD	0.0023	0.0182	0.0015	< LOD	0
MG05.5	0.0488	0.0064	< LOD	0	0.0062	0.0015	0.0148	0.0047
MG05.50	< LOD	0.0062	0.0044	0.0023	0.013	0.0015	< LOD	0.0047
MG05.51	0.021	0.0062	0.0043	0.0023	0.0708	0.0015	0.007	0.0047
MG05.52	0.0093	0.0062	< LOD	0.0023	0.0563	0.0015	< LOD	0
MG05.55	0.012	0.0063	< LOD	0	0.0204	0.0015	0.0076	0.0048
MG05.57	0.0068	0.0062	< LOD	0	0.0185	0.0015	< LOD	0.0047
MG05.58	0.008	0.0062	0.0039	0.0023	0.0054	0.0015	0.0063	0.0047
MG05.59	0.009	0.0062	< LOD	0	0.0063	0.0015	< LOD	0.0047
MG05.6	0.0122	0.0062	0.0044	0.0023	0.511	0.0015	< LOD	0.0047
MG05.60	0.0137	0.0062	< LOD	0	0.0053	0.0015	< LOD	0
MG05.61	0.0096	0.0062	< LOD	0	0.0105	0.0015	< LOD	0
MG05.62	< LOD	0.0062	< LOD	0	0.0054	0.0015	< LOD	0
MG05.63	< LOD	0.0062	< LOD	0.0023	0.004	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG05.129	0.0445	0.0019	0.1085	0.0049	< LOD	0
MG05.13	0.1191	0.0019	0.0373	0.0053	< LOD	0
MG05.17	0.089	0.0019	0.0325	0.0053	< LOD	0
MG05.18	0.0446	0.0019	0.2274	0.0053	< LOD	0.0105
MG05.19	0.0356	0.0019	0.091	0.0051	< LOD	0.0105
MG05.2	0.0133	0.0019	0.0765	0.0052	< LOD	0.0105
MG05.21	0.0123	0.0019	0.1235	0.0052	< LOD	0.0106
MG05.22	0.2379	0.0019	0.1516	0.0053	< LOD	0
MG05.23	0.0574	0.0019	0.2557	0.0053	0.0269	0.0104
MG05.25	0.1385	0.0019	0.734	0.0054	< LOD	0
MG05.29	0.0125	0.0019	0.058	0.0052	< LOD	0
MG05.30	0.0595	0.0019	0.0163	0.0052	< LOD	0.0105
MG05.31	0.0291	0.0019	0.0411	0.005	< LOD	0
MG05.33	0.0209	0.0019	< LOD	0	< LOD	0.0105
MG05.34	0.1196	0.0019	0.2324	0.0053	< LOD	0
MG05.36	0.0028	0.0019	0.0344	0.0054	< LOD	0
MG05.38	0.0541	0.0019	0.2361	0.0054	< LOD	0
MG05.39	0.1011	0.0019	0.8329	0.0051	0.0497	0.0108
MG05.4	0.0821	0.0019	0.3646	0.0055	0.0156	0.0105
MG05.40	0.1562	0.0019	2.4377	0.0056	0.0183	0.0108
MG05.41	0.0166	0.0019	0.1742	0.0052	0.0179	0.0105
MG05.44	0.0104	0.0019	0.0572	0.0051	< LOD	0
MG05.45	0.095	0.0019	0.0525	0.0052	< LOD	0
MG05.46	0.0853	0.0019	0.0326	0.0054	< LOD	0.0104
MG05.47	0.5695	0.0019	0.356	0.0054	0.0272	0.0105
MG05.49	0.1061	0.0019	< LOD	0.0053	0.023	0.0105
MG05.5	0.0313	0.0019	0.0987	0.0054	0.0202	0.0107
MG05.50	0.0934	0.0019	0.0446	0.0054	< LOD	0.0105
MG05.51	0.0677	0.0019	0.2545	0.0052	0.0147	0.0105
MG05.52	0.0378	0.0019	0.1166	0.0051	< LOD	0
MG05.55	0.2686	0.0019	0.8175	0.0053	< LOD	0
MG05.57	0.0532	0.0019	0.1421	0.0052	0.0236	0.0104
MG05.58	0.008	0.0018	0.0954	0.0054	< LOD	0
MG05.59	0.0314	0.0019	0.2167	0.0053	0.0321	0.0104
MG05.6	0.2393	0.0019	0.0612	0.005	< LOD	0.0105
MG05.60	0.0077	0.0019	0.255	0.0051	< LOD	0.0105
MG05.61	0.0626	0.0019	0.2328	0.0052	< LOD	0.0105
MG05.62	0.0374	0.0019	0.0148	0.005	0.0546	0.0105
MG05.63	0.0659	0.0019	0.1735	0.0053	< LOD	0.0105

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG05.65	Till sample	Till 05	NA	0.1412	0.0017	0.0105	0.0015	< LOD	0
MG05.68	Till sample	Till 05	NA	0.05	0.0018	< LOD	0.0015	< LOD	0.0048
MG05.7	Till sample	Till 05	NA	0.0229	0.0017	0.0046	0.0015	< LOD	0
MG05.70	Till sample	Till 05	NA	0.2509	0.0018	< LOD	0.0015	0.0737	0.0047
MG05.71	Till sample	Till 05	NA	0.0382	0.0018	0.0049	0.0015	0.0126	0.0048
MG05.72	Till sample	Till 05	NA	0.0498	0.0018	0.0025	0.0015	0.0066	0.0047
MG05.75	Till sample	Till 05	NA	0.0858	0.0018	< LOD	0	< LOD	0
MG05.76	Till sample	Till 05	NA	0.1961	0.0018	0.0141	0.0015	0.0238	0.0047
MG05.77	Till sample	Till 05	NA	0.0408	0.0018	0.0028	0.0015	< LOD	0.0047
MG05.78	Till sample	Till 05	NA	0.4413	0.0018	0.0229	0.0016	1.0968	0.005
MG05.8	Till sample	Till 05	NA	0.0394	0.0018	< LOD	0.0015	0.0078	0.0048
MG05.80	Till sample	Till 05	NA	0.1881	0.0018	< LOD	0.0015	0.0423	0.0047
MG05.83	Till sample	Till 05	NA	0.1496	0.0018	0.0731	0.0015	0.0366	0.0049
MG05.84	Till sample	Till 05	NA	0.0309	0.0018	0.002	0.0015	0.0051	0.0046
MG05.85	Till sample	Till 05	NA	0.0916	0.0018	< LOD	0.0015	< LOD	0
MG05.86	Till sample	Till 05	NA	0.0618	0.0018	0.0376	0.0015	0.1713	0.0049
MG05.87	Till sample	Till 05	NA	0.0503	0.0018	0.0065	0.0015	0.0627	0.0046
MG05.88	Till sample	Till 05	NA	0.0192	0.0018	0.032	0.0015	0.0102	0.0047
MG05.89	Till sample	Till 05	NA	0.0641	0.0018	< LOD	0.0015	< LOD	0.0046
MG05.90	Till sample	Till 05	NA	0.0684	0.0018	< LOD	0.0015	< LOD	0
MG05.91	Till sample	Till 05	NA	0.2146	0.0018	< LOD	0.0015	0.0392	0.0049
MG05.93	Till sample	Till 05	NA	0.0468	0.0018	0.0033	0.0015	0.0194	0.0049
MG05.95	Till sample	Till 05	NA	0.2773	0.0018	0.0023	0.0015	< LOD	0
MG05.97	Till sample	Till 05	NA	0.004	0.0018	0.0359	0.0015	0.2068	0.0049
MG05.98	Till sample	Till 05	NA	0.0068	0.0018	0.0664	0.0015	0.206	0.0049
MG05.99	Till sample	Till 05	NA	0.0554	0.0018	0.0018	0.0015	0.0092	0.0047
M6-1	Till sample	Till 06	NA	0.0027	0.0018	0.0054	0.0015	0.0315	0.005
M6-2	Till sample	Till 06	NA	0.0779	0.0018	0.0026	0.0015	0.0065	0.0047
M6-3	Till sample	Till 06	NA	0.0258	0.0018	0.0077	0.0015	0.009	0.0048
M6-4	Till sample	Till 06	NA	0.0652	0.0018	0.0095	0.0015	0.0063	0.0048
M6-5	Till sample	Till 06	NA	0.0369	0.0018	< LOD	0.0015	< LOD	0.0048
M6-6	Till sample	Till 06	NA	0.0291	0.0017	0.0148	0.0015	< LOD	0
M6-7	Till sample	Till 06	NA	0.0038	0.0018	0.01	0.0015	0.0251	0.0049
M6-8	Till sample	Till 06	NA	0.0736	0.0018	0.0036	0.0015	< LOD	0
MG06.10	Till sample	Till 06	NA	0.075	0.0017	0.0042	0.0015	< LOD	0.0047
MG06.101	Till sample	Till 06	NA	0.2445	0.0018	< LOD	0.0015	0.0225	0.0049
MG06.105	Till sample	Till 06	NA	0.0263	0.0018	0.0062	0.0015	0.0144	0.0047
MG06.106	Till sample	Till 06	NA	0.1723	0.0018	< LOD	0	< LOD	0.0047
MG06.107	Till sample	Till 06	NA	0.072	0.0017	0.0097	0.0015	< LOD	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG05.65	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0227	0.0039
MG05.68	0.0119	0.0083	< LOD	0.0014	0.0045	0.0022	0.0358	0.004
MG05.7	< LOD	0.0082	< LOD	0.0014	0.006	0.0022	0.0223	0.0039
MG05.70	< LOD	0.0083	< LOD	0.0014	0.0068	0.0022	< LOD	0.004
MG05.71	< LOD	0.0082	0.0044	0.0014	< LOD	0.0022	0.0219	0.004
MG05.72	< LOD	0	< LOD	0.0014	0.0127	0.0021	0.0634	0.0039
MG05.75	< LOD	0.0083	< LOD	0.0014	0.0036	0.0021	0.0778	0.004
MG05.76	0.0132	0.0083	< LOD	0	0.0072	0.0022	0.0165	0.004
MG05.77	< LOD	0.0083	0.0035	0.0014	< LOD	0.0022	0.0604	0.004
MG05.78	< LOD	0	< LOD	0	< LOD	0.0022	0.0231	0.0041
MG05.8	< LOD	0	< LOD	0.0014	0.0024	0.0022	0.0407	0.0039
MG05.80	< LOD	0	< LOD	0	0.0049	0.0022	< LOD	0
MG05.83	< LOD	0.0084	< LOD	0.0015	0.0091	0.0021	0.0357	0.0041
MG05.84	< LOD	0	0.0032	0.0014	0.0075	0.0022	0.2707	0.004
MG05.85	< LOD	0	0.0023	0.0014	0.0032	0.0022	0.0424	0.0039
MG05.86	< LOD	0.0083	0.0029	0.0014	0.0046	0.0022	0.0163	0.004
MG05.87	< LOD	0	< LOD	0.0014	0.0322	0.0022	0.0156	0.0039
MG05.88	< LOD	0	0.0393	0.0014	< LOD	0.0022	0.0156	0.004
MG05.89	< LOD	0.0083	< LOD	0	0.0129	0.0022	0.0687	0.004
MG05.90	< LOD	0.0083	< LOD	0	0.0038	0.0022	0.1631	0.004
MG05.91	0.0106	0.0082	0.0028	0.0014	0.0062	0.0022	< LOD	0.004
MG05.93	< LOD	0	< LOD	0.0014	0.0095	0.0021	0.0925	0.004
MG05.95	< LOD	0.0082	< LOD	0	0.0144	0.0022	0.0043	0.004
MG05.97	< LOD	0	0.0024	0.0014	< LOD	0.0022	0.0284	0.004
MG05.98	< LOD	0.0083	0.0066	0.0014	< LOD	0.0022	0.0285	0.0039
MG05.99	< LOD	0	< LOD	0.0014	0.0144	0.0022	0.0826	0.004
M6-1	0.0155	0.0083	0.0106	0.0014	< LOD	0.0022	0.0391	0.004
M6-2	0.013	0.0082	0.0015	0.0014	0.0091	0.0022	0.078	0.004
M6-3	0.0085	0.0082	< LOD	0.0014	0.0028	0.0022	0.0117	0.004
M6-4	0.0116	0.0083	< LOD	0.0014	0.0098	0.0022	0.0579	0.004
M6-5	< LOD	0.0083	< LOD	0.0014	0.0035	0.0022	0.057	0.004
M6-6	0.0105	0.0082	< LOD	0	< LOD	0	0.0258	0.0039
M6-7	< LOD	0	< LOD	0.0014	0.0076	0.0022	0.1164	0.0039
M6-8	< LOD	0.0083	< LOD	0	0.0068	0.0022	0.0402	0.004
MG06.10	0.0095	0.0082	0.0026	0.0014	0.0076	0.0022	0.0188	0.004
MG06.101	< LOD	0	< LOD	0	0.008	0.0022	0.021	0.004
MG06.105	< LOD	0.0083	< LOD	0	0.0067	0.0021	0.0234	0.004
MG06.106	< LOD	0.0083	0.0015	0.0014	0.0169	0.0022	0.0903	0.004
MG06.107	< LOD	0.0083	< LOD	0.0014	0.0058	0.0021	0.0104	0.0039

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG05.65	< LOD	0	< LOD	0.0023	0.0147	0.0014	< LOD	0
MG05.68	0.0069	0.0062	< LOD	0.0023	0.0067	0.0015	< LOD	0.0047
MG05.7	< LOD	0.0062	< LOD	0.0023	0.0147	0.0014	< LOD	0.0047
MG05.70	< LOD	0.0063	< LOD	0	0.0134	0.0015	< LOD	0.0048
MG05.71	< LOD	0.0062	< LOD	0.0023	0.007	0.0015	< LOD	0.0047
MG05.72	< LOD	0.0062	< LOD	0	0.0272	0.0015	< LOD	0.0047
MG05.75	< LOD	0.0063	< LOD	0	0.0084	0.0015	< LOD	0
MG05.76	0.017	0.0063	0.0033	0.0023	0.0131	0.0015	< LOD	0
MG05.77	< LOD	0	< LOD	0	0.0173	0.0015	< LOD	0.0047
MG05.78	0.0327	0.0063	< LOD	0	0.0138	0.0015	< LOD	0.0049
MG05.8	< LOD	0.0062	< LOD	0.0023	0.0216	0.0015	< LOD	0
MG05.80	0.0075	0.0062	< LOD	0.0023	0.0141	0.0015	0.005	0.0047
MG05.83	< LOD	0.0063	< LOD	0.0023	0.0222	0.0015	< LOD	0
MG05.84	< LOD	0	< LOD	0	0.0049	0.0015	< LOD	0
MG05.85	< LOD	0	< LOD	0.0023	0.0038	0.0015	< LOD	0
MG05.86	< LOD	0.0063	< LOD	0.0023	0.0119	0.0015	< LOD	0
MG05.87	0.0091	0.0062	< LOD	0.0023	0.0436	0.0015	< LOD	0
MG05.88	0.0079	0.0062	0.0084	0.0023	0.0156	0.0015	< LOD	0
MG05.89	< LOD	0	< LOD	0.0023	0.0068	0.0015	< LOD	0
MG05.90	< LOD	0	< LOD	0	0.009	0.0015	< LOD	0
MG05.91	< LOD	0.0062	0.0027	0.0023	0.0151	0.0015	< LOD	0
MG05.93	< LOD	0	< LOD	0.0023	0.0048	0.0015	< LOD	0.0048
MG05.95	< LOD	0	0.0031	0.0023	0.0204	0.0015	< LOD	0.0047
MG05.97	0.0118	0.0062	0.0033	0.0023	0.0051	0.0015	< LOD	0
MG05.98	0.0076	0.0063	< LOD	0.0023	0.0092	0.0015	< LOD	0
MG05.99	< LOD	0	< LOD	0	0.0055	0.0015	< LOD	0
M6-1	0.0074	0.0062	< LOD	0.0023	0.0068	0.0014	0.0062	0.0041
M6-2	0.0068	0.0063	< LOD	0	0.0064	0.0014	0.0049	0.0041
M6-3	0.0122	0.0063	< LOD	0.0023	0.0058	0.0014	< LOD	0
M6-4	< LOD	0.0062	< LOD	0.0023	0.0052	0.0014	< LOD	0
M6-5	< LOD	0.0062	< LOD	0	0.015	0.0014	0.0046	0.0041
M6-6	< LOD	0	< LOD	0	0.1382	0.0014	< LOD	0.0041
M6-7	< LOD	0.0062	< LOD	0.0023	0.0383	0.0014	< LOD	0
M6-8	< LOD	0.0062	< LOD	0	0.0103	0.0014	< LOD	0
MG06.10	< LOD	0.0062	< LOD	0	0.0217	0.0014	< LOD	0.0047
MG06.101	< LOD	0.0062	0.0032	0.0023	0.0181	0.0015	< LOD	0.0048
MG06.105	< LOD	0.0063	< LOD	0.0023	0.0058	0.0015	< LOD	0.0047
MG06.106	< LOD	0	< LOD	0	0.0101	0.0015	< LOD	0.0047
MG06.107	< LOD	0.0062	< LOD	0	0.014	0.0015	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG05.65	0.1693	0.0019	0.047	0.0052	< LOD	0.0105
MG05.68	0.0769	0.0019	0.1346	0.005	0.0112	0.0106
MG05.7	0.0092	0.0019	0.1664	0.0052	< LOD	0.0105
MG05.70	0.1486	0.0019	0.0499	0.0052	< LOD	0.0105
MG05.71	0.0327	0.0019	0.1387	0.0053	0.0214	0.0105
MG05.72	0.1119	0.0019	0.01	0.0053	< LOD	0.0104
MG05.75	0.1018	0.0019	0.0253	0.0051	0.0115	0.0105
MG05.76	0.1976	0.0019	0.1699	0.0052	< LOD	0.0106
MG05.77	0.0082	0.0019	< LOD	0	< LOD	0.0105
MG05.78	0.6041	0.0019	1.1481	0.0058	0.0194	0.0108
MG05.8	0.0569	0.0019	0.2979	0.0051	< LOD	0.0105
MG05.80	0.0776	0.0019	0.0444	0.0051	0.0125	0.0105
MG05.83	0.1743	0.0019	0.8287	0.0055	0.02	0.0105
MG05.84	0.0265	0.0019	0.0104	0.005	0.0168	0.0106
MG05.85	0.0353	0.0019	0.0088	0.0051	< LOD	0.0105
MG05.86	0.139	0.0019	0.4064	0.0054	< LOD	0
MG05.87	0.0355	0.0019	0.2162	0.0053	< LOD	0.0105
MG05.88	0.0664	0.0019	0.2885	0.0053	< LOD	0.0106
MG05.89	0.0453	0.0019	0.0171	0.0053	< LOD	0
MG05.90	0.0362	0.0019	0.0964	0.0051	< LOD	0.0106
MG05.91	0.0778	0.0019	0.0422	0.0052	< LOD	0
MG05.93	0.0354	0.0019	0.067	0.0051	< LOD	0.0105
MG05.95	0.0708	0.0019	0.0126	0.0052	< LOD	0.0106
MG05.97	0.0671	0.0019	0.2288	0.0053	< LOD	0
MG05.98	0.0068	0.0019	0.1217	0.0053	< LOD	0
MG05.99	0.0213	0.0019	0.2969	0.0051	< LOD	0.0106
M6-1	0.0084	0.0017	0.0588	0.005	0.0126	0.0105
M6-2	0.05	0.0017	0.1864	0.0052	0.031	0.0105
M6-3	0.0056	0.0017	0.2155	0.0052	< LOD	0.0105
M6-4	0.0497	0.0017	0.2263	0.0052	< LOD	0.0107
M6-5	0.0229	0.0017	< LOD	0	0.0107	0.0106
M6-6	0.0131	0.0017	0.0152	0.0053	< LOD	0
M6-7	0.0099	0.0017	0.0309	0.0051	< LOD	0
M6-8	0.0484	0.0017	0.0163	0.0051	0.0211	0.0105
MG06.10	0.3275	0.0019	0.0877	0.0052	0.0146	0.0105
MG06.101	0.0769	0.0019	0.0256	0.005	< LOD	0
MG06.105	0.0161	0.0019	0.0964	0.0053	0.0156	0.0105
MG06.106	0.1513	0.0019	0.0811	0.0053	0.0849	0.0106
MG06.107	0.0619	0.0019	0.1406	0.0053	< LOD	0.0106

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG06.11	Till sample	Till 06	NA	0.0296	0.0018	0.0054	0.0015	< LOD	0.0047
MG06.111	Till sample	Till 06	NA	0.0145	0.0018	0.1283	0.0015	0.3194	0.0049
MG06.112	Till sample	Till 06	NA	0.0152	0.0018	0.0028	0.0015	0.0093	0.0049
MG06.113	Till sample	Till 06	NA	0.1068	0.0018	0.0019	0.0015	< LOD	0.0047
MG06.114	Till sample	Till 06	NA	0.0154	0.0018	0.055	0.0015	< LOD	0
MG06.115	Till sample	Till 06	NA	0.0184	0.0018	< LOD	0.0015	0.0199	0.0047
MG06.116	Till sample	Till 06	NA	0.0135	0.0018	0.068	0.0015	0.0698	0.0048
MG06.117	Till sample	Till 06	NA	0.026	0.0018	< LOD	0	0.0236	0.0047
MG06.118	Till sample	Till 06	NA	0.0551	0.0018	0.0088	0.0015	< LOD	0.0048
MG06.119	Till sample	Till 06	NA	0.0364	0.0017	0.0141	0.0015	0.0205	0.0047
MG06.12	Till sample	Till 06	NA	0.0532	0.0018	0.0059	0.0015	< LOD	0
MG06.120	Till sample	Till 06	NA	0.0537	0.0018	0.0019	0.0015	< LOD	0
MG06.121	Till sample	Till 06	NA	0.0182	0.0018	0.008	0.0015	0.0266	0.0048
MG06.123	Till sample	Till 06	NA	0.2085	0.0018	0.0064	0.0015	0.0104	0.0048
MG06.124	Till sample	Till 06	NA	0.1118	0.0018	0.0039	0.0015	0.0389	0.0048
MG06.126	Till sample	Till 06	NA	0.019	0.0017	< LOD	0	0.0056	0.0047
MG06.127	Till sample	Till 06	NA	0.0719	0.0018	0.0503	0.0015	< LOD	0
MG06.128	Till sample	Till 06	NA	0.0519	0.0018	0.0035	0.0015	0.0075	0.0049
MG06.14	Till sample	Till 06	NA	0.039	0.0018	0.0945	0.0015	0.0466	0.0046
MG06.15	Till sample	Till 06	NA	0.0222	0.0018	< LOD	0.0015	0.0078	0.0048
MG06.18	Till sample	Till 06	NA	0.3245	0.0018	0.0025	0.0015	0.009	0.0047
MG06.19	Till sample	Till 06	NA	0.6267	0.0018	0.0045	0.0015	0.0146	0.0048
MG06.2	Till sample	Till 06	NA	0.0616	0.0018	0.039	0.0016	3.8576	0.0053
MG06.21	Till sample	Till 06	NA	0.0754	0.0018	0.0033	0.0015	0.0231	0.0047
MG06.23	Till sample	Till 06	NA	0.0824	0.0018	0.01	0.0015	0.0057	0.0047
MG06.26	Till sample	Till 06	NA	0.1374	0.0018	0.0525	0.0015	0.1121	0.0047
MG06.27	Till sample	Till 06	NA	0.0461	0.0018	0.002	0.0015	0.0336	0.0047
MG06.28	Till sample	Till 06	NA	0.0392	0.0017	0.0028	0.0015	0.0158	0.0048
MG06.29	Till sample	Till 06	NA	0.0578	0.0018	0.0101	0.0015	< LOD	0
MG06.3	Till sample	Till 06	NA	0.0268	0.0018	0.0271	0.0015	0.0728	0.0047
MG06.31	Till sample	Till 06	NA	0.0195	0.0018	< LOD	0.0015	0.0096	0.0047
MG06.32	Till sample	Till 06	NA	0.0296	0.0018	0.0022	0.0015	0.0087	0.0048
MG06.34	Till sample	Till 06	NA	1.7231	0.0018	0.0132	0.0015	0.0129	0.0048
MG06.35	Till sample	Till 06	NA	0.0283	0.0018	0.0025	0.0015	0.0076	0.0048
MG06.36	Till sample	Till 06	NA	0.0632	0.0017	< LOD	0.0015	< LOD	0.0048
MG06.38	Till sample	Till 06	NA	0.0252	0.0018	< LOD	0.0015	0.0386	0.0047
MG06.39	Till sample	Till 06	NA	0.0269	0.0018	0.0294	0.0015	< LOD	0.0048
MG06.4	Till sample	Till 06	NA	0.0396	0.0017	0.0184	0.0015	0.0055	0.0047
MG06.40	Till sample	Till 06	NA	0.3089	0.0018	< LOD	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG06.11	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0562	0.004
MG06.111	< LOD	0.0084	< LOD	0	0.0037	0.0021	0.0279	0.004
MG06.112	< LOD	0.0083	< LOD	0.0014	0.0066	0.0021	0.0492	0.004
MG06.113	< LOD	0.0083	< LOD	0.0014	0.0104	0.0022	0.0622	0.0039
MG06.114	< LOD	0	0.0269	0.0014	< LOD	0.0021	0.0251	0.004
MG06.115	< LOD	0.0083	< LOD	0.0014	0.0098	0.0021	0.0559	0.004
MG06.116	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0619	0.004
MG06.117	< LOD	0.0084	0.0015	0.0014	< LOD	0.0022	0.0736	0.004
MG06.118	0.0203	0.0083	0.0043	0.0014	< LOD	0	< LOD	0.004
MG06.119	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0349	0.004
MG06.12	< LOD	0	< LOD	0.0014	0.0042	0.0022	0.0445	0.004
MG06.120	< LOD	0	0.0017	0.0014	0.0116	0.0022	0.098	0.0039
MG06.121	< LOD	0	< LOD	0.0014	< LOD	0	0.0701	0.004
MG06.123	< LOD	0	< LOD	0	0.0049	0.0021	0.0151	0.004
MG06.124	0.0128	0.0083	0.0032	0.0014	0.0036	0.0022	0.0051	0.004
MG06.126	< LOD	0	< LOD	0.0014	0.0025	0.0021	0.0351	0.004
MG06.127	0.0089	0.0083	0.0026	0.0014	0.0063	0.0022	0.0129	0.004
MG06.128	< LOD	0.0083	0.0017	0.0014	0.0066	0.0022	0.0617	0.004
MG06.14	< LOD	0	0.0091	0.0014	0.0045	0.0022	0.0079	0.004
MG06.15	< LOD	0.0083	< LOD	0	0.0054	0.0022	0.0566	0.004
MG06.18	< LOD	0	< LOD	0.0014	0.0057	0.0022	< LOD	0.004
MG06.19	0.0107	0.0084	0.2713	0.0015	0.2706	0.0022	< LOD	0
MG06.2	< LOD	0	< LOD	0	0.021	0.0022	0.0895	0.0044
MG06.21	< LOD	0.0083	< LOD	0.0015	< LOD	0	0.0047	0.0041
MG06.23	0.0162	0.0082	< LOD	0	0.0035	0.0021	0.0236	0.004
MG06.26	< LOD	0	< LOD	0	0.0034	0.0021	0.0105	0.004
MG06.27	< LOD	0	< LOD	0	0.0067	0.0022	0.1867	0.004
MG06.28	< LOD	0.0083	< LOD	0	0.0095	0.0022	0.0644	0.004
MG06.29	< LOD	0	< LOD	0	< LOD	0.0022	0.033	0.004
MG06.3	< LOD	0.0083	< LOD	0	< LOD	0	0.0205	0.004
MG06.31	< LOD	0	< LOD	0.0014	0.0067	0.0022	0.096	0.004
MG06.32	< LOD	0.0083	< LOD	0.0014	0.0024	0.0022	0.1154	0.004
MG06.34	< LOD	0	0.002	0.0014	0.0114	0.0022	< LOD	0.004
MG06.35	< LOD	0.0083	< LOD	0	0.0134	0.0021	0.1203	0.004
MG06.36	< LOD	0	0.0032	0.0014	0.0091	0.0022	0.0758	0.004
MG06.38	< LOD	0	< LOD	0.0014	0.0036	0.0022	0.0288	0.004
MG06.39	< LOD	0.0083	< LOD	0.0014	0.003	0.0022	0.051	0.004
MG06.4	0.0114	0.0082	0.0036	0.0014	0.0095	0.0021	0.0129	0.004
MG06.40	< LOD	0	< LOD	0	0.0042	0.0022	0.0125	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG06.11	< LOD	0	0.068	0.0023	0.0207	0.0015	< LOD	0.0047
MG06.111	0.0116	0.0062	< LOD	0	0.0121	0.0015	0.0087	0.0047
MG06.112	0.0142	0.0062	< LOD	0.0023	0.0091	0.0015	< LOD	0
MG06.113	< LOD	0	< LOD	0.0023	0.021	0.0015	< LOD	0
MG06.114	< LOD	0	< LOD	0.0023	0.0173	0.0015	< LOD	0
MG06.115	0.0141	0.0062	< LOD	0.0023	0.015	0.0015	< LOD	0
MG06.116	0.0134	0.0062	< LOD	0	0.0036	0.0015	< LOD	0
MG06.117	0.0206	0.0062	< LOD	0	0.0057	0.0015	< LOD	0.0047
MG06.118	0.0085	0.0062	< LOD	0.0023	0.0093	0.0015	< LOD	0
MG06.119	0.0189	0.0062	< LOD	0.0023	0.0129	0.0015	< LOD	0.0047
MG06.12	< LOD	0.0062	< LOD	0.0023	0.0104	0.0015	< LOD	0
MG06.120	< LOD	0	< LOD	0	0.0159	0.0015	< LOD	0.0048
MG06.121	0.0112	0.0062	< LOD	0	0.0185	0.0015	< LOD	0
MG06.123	< LOD	0	< LOD	0	0.021	0.0015	0.0072	0.0047
MG06.124	0.0093	0.0062	< LOD	0.0023	0.028	0.0015	< LOD	0.0047
MG06.126	< LOD	0.0062	< LOD	0	0.0113	0.0015	< LOD	0
MG06.127	0.0071	0.0062	< LOD	0	0.0185	0.0015	< LOD	0
MG06.128	< LOD	0.0062	0.0024	0.0023	0.0178	0.0015	< LOD	0
MG06.14	0.0113	0.0062	< LOD	0	0.0122	0.0015	< LOD	0
MG06.15	< LOD	0.0063	< LOD	0	0.006	0.0015	< LOD	0
MG06.18	< LOD	0.0063	< LOD	0.0023	0.0174	0.0015	< LOD	0.0047
MG06.19	< LOD	0.0063	< LOD	0.0023	0.595	0.0015	0.0057	0.0048
MG06.2	0.0272	0.0066	< LOD	0	0.0155	0.0015	< LOD	0
MG06.21	< LOD	0.0063	< LOD	0	0.0194	0.0015	0.0082	0.0047
MG06.23	< LOD	0.0062	0.0047	0.0023	0.0212	0.0015	< LOD	0
MG06.26	0.0331	0.0063	< LOD	0.0023	0.0148	0.0015	< LOD	0.0048
MG06.27	0.0118	0.0062	< LOD	0	0.0123	0.0015	< LOD	0
MG06.28	0.0228	0.0062	< LOD	0.0023	0.0036	0.0015	< LOD	0.0047
MG06.29	< LOD	0	< LOD	0.0023	0.0147	0.0015	< LOD	0
MG06.3	0.0133	0.0062	< LOD	0	0.0078	0.0015	< LOD	0
MG06.31	< LOD	0.0062	0.0029	0.0023	0.0028	0.0015	< LOD	0.0047
MG06.32	0.0068	0.0062	< LOD	0	0.0057	0.0015	< LOD	0
MG06.34	0.0181	0.0063	< LOD	0.0023	0.0112	0.0015	< LOD	0.0048
MG06.35	0.01	0.0062	< LOD	0.0023	0.0064	0.0015	< LOD	0
MG06.36	< LOD	0	0.0024	0.0023	0.014	0.0015	< LOD	0.0048
MG06.38	< LOD	0	< LOD	0	0.0045	0.0015	0.0049	0.0047
MG06.39	0.0119	0.0063	< LOD	0	0.0084	0.0015	< LOD	0.0047
MG06.4	0.0099	0.0063	< LOD	0.0023	0.0188	0.0015	< LOD	0
MG06.40	< LOD	0	< LOD	0	0.0193	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG06.11	0.0275	0.0019	0.011	0.0051	0.0222	0.0105
MG06.111	0.0359	0.0019	0.1154	0.0053	< LOD	0.0106
MG06.112	0.0672	0.0019	0.2074	0.005	0.02	0.0107
MG06.113	0.0239	0.0019	0.0083	0.0051	0.0118	0.0106
MG06.114	0.0238	0.0019	0.0166	0.0053	0.0176	0.0105
MG06.115	0.0114	0.0019	0.0284	0.005	< LOD	0
MG06.116	0.1427	0.0019	0.1703	0.0053	0.0308	0.0106
MG06.117	0.0241	0.0019	0.1099	0.0053	< LOD	0
MG06.118	0.0463	0.0019	0.1508	0.0052	< LOD	0
MG06.119	0.0224	0.0019	0.1563	0.0053	< LOD	0.0106
MG06.12	0.0076	0.0019	< LOD	0	< LOD	0
MG06.120	0.0395	0.0019	0.1112	0.0052	0.0158	0.0105
MG06.121	0.0222	0.0019	0.0845	0.0051	< LOD	0
MG06.123	0.0549	0.0019	0.0138	0.0053	< LOD	0.0106
MG06.124	0.0607	0.0019	0.0653	0.0052	0.0109	0.0106
MG06.126	0.015	0.0019	0.0513	0.0052	< LOD	0
MG06.127	0.0424	0.0019	0.252	0.0052	0.016	0.0105
MG06.128	0.0713	0.0019	0.3016	0.0055	0.0212	0.0105
MG06.14	0.0355	0.0019	0.1395	0.0052	0.0208	0.0106
MG06.15	0.0111	0.0019	0.1198	0.0051	< LOD	0.0106
MG06.18	0.1889	0.0019	0.0131	0.005	0.0175	0.0105
MG06.19	0.066	0.0019	0.2308	0.0054	< LOD	0
MG06.2	1.17	0.002	0.1968	0.0057	0.0772	0.0111
MG06.21	0.2216	0.0019	0.5389	0.0056	< LOD	0.0106
MG06.23	0.0813	0.0019	0.0649	0.0051	< LOD	0.0105
MG06.26	0.0438	0.0019	0.2573	0.0052	0.0114	0.0106
MG06.27	0.0096	0.0019	0.1167	0.0053	< LOD	0.0106
MG06.28	0.0301	0.0019	0.1376	0.0054	< LOD	0.0105
MG06.29	0.0931	0.0019	0.0139	0.0051	0.0133	0.0105
MG06.3	0.0233	0.0019	0.1974	0.0052	< LOD	0.0105
MG06.31	0.0077	0.0019	0.0878	0.0054	< LOD	0.0106
MG06.32	0.0228	0.0019	0.0856	0.0052	0.0959	0.0106
MG06.34	0.0585	0.0019	0.0736	0.0053	< LOD	0
MG06.35	0.0044	0.0019	0.1472	0.0052	< LOD	0
MG06.36	0.0708	0.0019	0.2841	0.0051	0.0272	0.0105
MG06.38	0.0065	0.0019	0.1269	0.0052	< LOD	0
MG06.39	0.0129	0.0019	0.0814	0.005	0.0187	0.0106
MG06.4	0.0249	0.0019	0.0841	0.0051	< LOD	0
MG06.40	0.0914	0.0019	0.0109	0.0052	0.0143	0.0105

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG06.41	Till sample	Till 06	NA	0.056	0.0017	0.0195	0.0015	< LOD	0.0047
MG06.42	Till sample	Till 06	NA	0.065	0.0018	0.0042	0.0015	0.0221	0.0046
MG06.43	Till sample	Till 06	NA	0.0265	0.0018	0.1851	0.0015	0.0828	0.0048
MG06.44	Till sample	Till 06	NA	0.0401	0.0018	0.0056	0.0015	0.005	0.0049
MG06.46	Till sample	Till 06	NA	0.0134	0.0017	0.0479	0.0015	0.0847	0.0047
MG06.48	Till sample	Till 06	NA	0.0254	0.0018	< LOD	0	0.0086	0.0047
MG06.49	Till sample	Till 06	NA	0.0348	0.0018	< LOD	0.0015	0.0081	0.0047
MG06.5	Till sample	Till 06	NA	0.0713	0.0018	0.0045	0.0015	< LOD	0.0048
MG06.50	Till sample	Till 06	NA	0.0337	0.0017	< LOD	0.0015	0.0109	0.0047
MG06.51	Till sample	Till 06	NA	0.0052	0.0018	0.053	0.0015	< LOD	0.0048
MG06.52	Till sample	Till 06	NA	0.0125	0.0018	0.0113	0.0015	0.0119	0.0048
MG06.53	Till sample	Till 06	NA	0.0455	0.0018	0.0069	0.0015	0.0075	0.0048
MG06.54	Till sample	Till 06	NA	0.3678	0.0018	0.0928	0.0015	0.0263	0.0049
MG06.55	Till sample	Till 06	NA	0.0222	0.0017	0.0034	0.0015	0.0279	0.0047
MG06.57	Till sample	Till 06	NA	0.1521	0.0018	< LOD	0.0015	0.1965	0.0047
MG06.58	Till sample	Till 06	NA	0.1091	0.0018	0.0441	0.0015	0.0347	0.0049
MG06.59	Till sample	Till 06	NA	0.0487	0.0018	0.002	0.0015	< LOD	0
MG06.6	Till sample	Till 06	NA	0.0634	0.0018	0.0031	0.0015	0.0141	0.0047
MG06.62	Till sample	Till 06	NA	0.0757	0.0017	0.0164	0.0015	0.015	0.0049
MG06.64	Till sample	Till 06	NA	0.0994	0.0018	< LOD	0.0015	< LOD	0.0047
MG06.65	Till sample	Till 06	NA	0.0194	0.0018	0.0866	0.0015	0.006	0.005
MG06.66	Till sample	Till 06	NA	0.0094	0.0018	0.0152	0.0015	0.0507	0.0046
MG06.67	Till sample	Till 06	NA	0.0885	0.0018	< LOD	0.0015	0.0294	0.0047
MG06.70	Till sample	Till 06	NA	0.6848	0.0019	0.0813	0.0017	6.7255	0.0058
MG06.71	Till sample	Till 06	NA	0.1369	0.0018	< LOD	0	0.0067	0.0048
MG06.73	Till sample	Till 06	NA	0.0505	0.0017	0.0469	0.0015	0.0329	0.0048
MG06.74	Till sample	Till 06	NA	0.0484	0.0018	< LOD	0.0015	0.0101	0.0049
MG06.75	Till sample	Till 06	NA	0.089	0.0018	< LOD	0	0.0245	0.0047
MG06.79	Till sample	Till 06	NA	0.0597	0.0017	< LOD	0	< LOD	0.0046
MG06.80	Till sample	Till 06	NA	0.051	0.0018	< LOD	0.0015	0.0123	0.0047
MG06.82	Till sample	Till 06	NA	0.0224	0.0018	< LOD	0.0015	0.0145	0.0047
MG06.83	Till sample	Till 06	NA	0.0489	0.0018	0.0028	0.0015	0.0178	0.0049
MG06.85	Till sample	Till 06	NA	0.0199	0.0017	0.1151	0.0015	0.0118	0.0047
MG06.87	Till sample	Till 06	NA	0.0706	0.0018	0.0031	0.0015	< LOD	0.0049
MG06.88	Till sample	Till 06	NA	0.1187	0.0018	< LOD	0.0015	0.0053	0.005
MG06.89	Till sample	Till 06	NA	0.0453	0.0018	< LOD	0	< LOD	0.0048
MG06.91	Till sample	Till 06	NA	0.0091	0.0018	0.0307	0.0015	0.0441	0.0048
MG06.92	Till sample	Till 06	NA	0.042	0.0018	< LOD	0	< LOD	0.0047
MG06.95	Till sample	Till 06	NA	0.2207	0.0018	0.003	0.0015	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG06.41	0.018	0.0083	< LOD	0.0014	< LOD	0	0.0079	0.004
MG06.42	0.012	0.0083	< LOD	0	0.0057	0.0022	0.0054	0.004
MG06.43	< LOD	0	0.0075	0.0014	< LOD	0.0021	0.0208	0.004
MG06.44	< LOD	0.0084	0.0016	0.0015	0.4273	0.0022	0.0574	0.004
MG06.46	< LOD	0	< LOD	0.0014	< LOD	0	0.0916	0.004
MG06.48	< LOD	0.0083	< LOD	0	0.0074	0.0021	0.0779	0.0039
MG06.49	0.0104	0.0083	< LOD	0.0014	0.0039	0.0022	0.0746	0.004
MG06.5	0.0118	0.0083	< LOD	0	0.0055	0.0022	0.0315	0.004
MG06.50	< LOD	0.0082	< LOD	0.0014	0.0092	0.0021	0.1111	0.004
MG06.51	< LOD	0.0083	0.0044	0.0014	< LOD	0	0.0131	0.004
MG06.52	< LOD	0	< LOD	0	< LOD	0.0021	0.025	0.0039
MG06.53	< LOD	0.0082	0.0031	0.0014	0.0076	0.0022	0.018	0.004
MG06.54	< LOD	0	< LOD	0	0.2193	0.0022	0.0223	0.004
MG06.55	< LOD	0.0083	0.0087	0.0014	< LOD	0.0022	0.0565	0.004
MG06.57	< LOD	0.0084	< LOD	0	0.0044	0.0022	< LOD	0
MG06.58	< LOD	0	0.0075	0.0014	0.0063	0.0022	0.0095	0.004
MG06.59	< LOD	0	< LOD	0	0.0078	0.0022	0.1361	0.004
MG06.6	0.0192	0.0082	< LOD	0	0.009	0.0022	0.0477	0.004
MG06.62	< LOD	0	0.0029	0.0014	0.0113	0.0021	0.0057	0.004
MG06.64	< LOD	0.0084	< LOD	0.0014	0.0117	0.0022	0.0743	0.004
MG06.65	< LOD	0	0.0148	0.0014	< LOD	0	0.0082	0.004
MG06.66	< LOD	0.0083	< LOD	0	< LOD	0	0.0069	0.004
MG06.67	< LOD	0.0083	< LOD	0	0.0106	0.0021	0.0858	0.004
MG06.70	< LOD	0.009	< LOD	0.0016	0.1059	0.0023	0.5906	0.0048
MG06.71	< LOD	0	< LOD	0	0.0117	0.0022	0.1321	0.004
MG06.73	0.0096	0.0083	0.008	0.0014	0.0069	0.0022	0.0421	0.004
MG06.74	< LOD	0.0083	< LOD	0.0014	0.0041	0.0022	0.0486	0.004
MG06.75	< LOD	0	< LOD	0	0.0039	0.0022	0.0711	0.004
MG06.79	< LOD	0	< LOD	0	< LOD	0.0022	0.0186	0.004
MG06.80	< LOD	0.0083	< LOD	0	0.0096	0.0022	0.026	0.004
MG06.82	< LOD	0.0083	< LOD	0.0014	0.0042	0.0021	0.0168	0.004
MG06.83	0.0183	0.0082	< LOD	0	0.0053	0.0022	0.1267	0.004
MG06.85	< LOD	0.0083	0.0093	0.0014	0.0095	0.0022	0.0357	0.004
MG06.87	< LOD	0.0083	< LOD	0	0.0061	0.0022	0.0679	0.004
MG06.88	0.0104	0.0083	< LOD	0.0015	0.0025	0.0022	0.1124	0.004
MG06.89	0.0108	0.0083	0.0021	0.0014	0.0056	0.0021	0.1063	0.004
MG06.91	< LOD	0.0083	< LOD	0.0014	< LOD	0	0.0583	0.004
MG06.92	< LOD	0	< LOD	0.0014	0.004	0.0022	0.0914	0.004
MG06.95	< LOD	0.0083	< LOD	0	0.0106	0.0021	0.113	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG06.41	0.0164	0.0062	0.005	0.0023	0.017	0.0015	< LOD	0
MG06.42	< LOD	0	< LOD	0	0.0078	0.0015	< LOD	0.0048
MG06.43	< LOD	0	< LOD	0.0023	0.0114	0.0015	< LOD	0.0047
MG06.44	< LOD	0.0063	< LOD	0.0023	1.3253	0.0015	< LOD	0.0048
MG06.46	0.0095	0.0062	< LOD	0.0023	0.0056	0.0015	< LOD	0
MG06.48	< LOD	0.0062	< LOD	0	0.0068	0.0015	< LOD	0.0047
MG06.49	0.0097	0.0062	< LOD	0.0023	0.0055	0.0015	< LOD	0.0047
MG06.5	< LOD	0	< LOD	0.0023	0.0163	0.0015	< LOD	0
MG06.50	< LOD	0	< LOD	0	0.0018	0.0015	< LOD	0
MG06.51	0.0068	0.0063	< LOD	0.0023	0.0091	0.0015	0.005	0.0047
MG06.52	< LOD	0.0062	0.0026	0.0023	0.0065	0.0015	< LOD	0
MG06.53	0.0141	0.0062	< LOD	0	0.0085	0.0015	< LOD	0
MG06.54	0.0407	0.0063	< LOD	0.0023	0.4302	0.0015	< LOD	0
MG06.55	< LOD	0.0062	< LOD	0	0.0067	0.0015	< LOD	0
MG06.57	< LOD	0.0063	< LOD	0.0023	0.0114	0.0015	< LOD	0.0048
MG06.58	0.0106	0.0063	< LOD	0.0023	0.0222	0.0015	< LOD	0
MG06.59	0.01	0.0062	0.0071	0.0023	0.0096	0.0015	< LOD	0
MG06.6	0.0071	0.0063	< LOD	0.0023	0.0087	0.0015	< LOD	0
MG06.62	< LOD	0	< LOD	0	0.0084	0.0015	< LOD	0
MG06.64	< LOD	0	< LOD	0.0023	0.0092	0.0014	< LOD	0
MG06.65	0.0098	0.0063	< LOD	0	0.0139	0.0015	< LOD	0
MG06.66	< LOD	0	< LOD	0	0.0253	0.0015	< LOD	0
MG06.67	< LOD	0.0062	< LOD	0	0.0059	0.0015	< LOD	0
MG06.70	0.0694	0.0067	< LOD	0.0025	0.008	0.0016	< LOD	0
MG06.71	< LOD	0.0062	< LOD	0	0.0068	0.0015	< LOD	0
MG06.73	< LOD	0	< LOD	0	0.0148	0.0015	< LOD	0.0048
MG06.74	< LOD	0.0063	< LOD	0	0.008	0.0015	< LOD	0
MG06.75	0.0066	0.0063	< LOD	0	0.0057	0.0015	< LOD	0
MG06.79	< LOD	0.0062	< LOD	0	0.0082	0.0015	< LOD	0.0048
MG06.80	0.014	0.0063	< LOD	0	0.0087	0.0014	< LOD	0
MG06.82	< LOD	0.0062	0.0033	0.0023	0.0066	0.0015	< LOD	0.0047
MG06.83	0.0125	0.0062	< LOD	0	0.0052	0.0015	< LOD	0
MG06.85	< LOD	0.0063	< LOD	0.0023	0.0477	0.0015	< LOD	0
MG06.87	< LOD	0.0063	0.0024	0.0023	0.0085	0.0015	0.0067	0.0047
MG06.88	< LOD	0	0.0027	0.0023	0.0077	0.0015	< LOD	0
MG06.89	< LOD	0	< LOD	0.0023	0.0082	0.0015	< LOD	0
MG06.91	< LOD	0.0063	< LOD	0	0.0027	0.0015	< LOD	0.0047
MG06.92	< LOD	0.0062	0.0024	0.0023	0.008	0.0015	< LOD	0.0047
MG06.95	0.0139	0.0062	< LOD	0	0.0043	0.0015	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG06.41	0.0481	0.0019	0.012	0.0052	0.0108	0.0106
MG06.42	0.0756	0.0019	0.5136	0.0052	< LOD	0.0106
MG06.43	0.0242	0.0019	0.1235	0.0051	0.015	0.0106
MG06.44	0.0215	0.0019	< LOD	0	0.0167	0.0106
MG06.46	0.0752	0.0019	0.134	0.005	0.0176	0.0106
MG06.48	0.0154	0.0019	0.075	0.0052	< LOD	0.0105
MG06.49	0.0922	0.0019	0.079	0.0051	< LOD	0
MG06.5	0.1282	0.0019	0.0287	0.0049	< LOD	0.0106
MG06.50	0.0173	0.0019	0.09	0.0052	< LOD	0.0106
MG06.51	0.0058	0.0019	0.0879	0.0053	< LOD	0.0105
MG06.52	0.0274	0.0019	0.185	0.0053	< LOD	0.0105
MG06.53	0.0635	0.0019	0.1994	0.0052	< LOD	0.0105
MG06.54	0.6047	0.0019	0.1322	0.0054	0.0163	0.0107
MG06.55	0.0154	0.0019	0.0339	0.0051	< LOD	0.0106
MG06.57	0.0431	0.0019	0.0902	0.0055	< LOD	0
MG06.58	0.1103	0.0019	0.494	0.0053	0.0171	0.0106
MG06.59	0.0515	0.0019	< LOD	0	0.0128	0.0106
MG06.6	0.0513	0.0019	0.1615	0.0052	< LOD	0.0106
MG06.62	0.1291	0.0019	0.3103	0.0051	< LOD	0
MG06.64	0.0186	0.0019	0.006	0.0051	< LOD	0.0105
MG06.65	0.0389	0.0019	0.6638	0.0052	< LOD	0.0106
MG06.66	< LOD	0	0.1047	0.0053	0.0169	0.0105
MG06.67	0.084	0.0019	0.2335	0.0055	< LOD	0
MG06.70	0.091	0.0021	0.3066	0.006	0.1899	0.0115
MG06.71	0.0676	0.0019	0.1379	0.0051	0.0791	0.0107
MG06.73	0.0561	0.0019	0.123	0.0053	< LOD	0.0106
MG06.74	0.2795	0.0019	0.0747	0.0053	0.0261	0.0106
MG06.75	0.062	0.0019	0.0709	0.0052	0.0146	0.0105
MG06.79	0.0589	0.0019	0.0671	0.0051	< LOD	0
MG06.80	0.0374	0.0019	0.1935	0.0054	< LOD	0
MG06.82	0.0052	0.0019	0.2891	0.005	< LOD	0.0105
MG06.83	0.0346	0.0019	0.1464	0.0053	0.0159	0.0105
MG06.85	0.0026	0.0019	0.0392	0.0052	< LOD	0.0106
MG06.87	0.015	0.0019	0.0098	0.0052	0.0144	0.0106
MG06.88	0.0604	0.0019	0.339	0.0051	0.0111	0.0106
MG06.89	0.0135	0.0019	0.1312	0.0053	0.0418	0.0104
MG06.91	0.0505	0.0019	0.0786	0.0053	< LOD	0
MG06.92	0.0684	0.0019	0.111	0.0052	0.0281	0.0105
MG06.95	0.0526	0.0019	0.0308	0.0051	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG06.97	Till sample	Till 06	NA	0.0484	0.0017	0.0028	0.0015	0.0129	0.0047
MG06.98	Till sample	Till 06	NA	0.0139	0.0018	0.0106	0.0015	< LOD	0.0046
M7-1	Till sample	Till 07	NA	0.075	0.0018	0.0183	0.0015	0.038	0.0046
M7-2	Till sample	Till 07	NA	0.0319	0.0018	0.0032	0.0015	0.0355	0.0049
M7-3	Till sample	Till 07	NA	0.106	0.0018	0.0342	0.0015	0.2346	0.0047
MG07.104	Till sample	Till 07	NA	0.0376	0.0018	0.0049	0.0015	< LOD	0
MG07.105	Till sample	Till 07	NA	0.5349	0.0018	0.0035	0.0015	0.0073	0.0047
MG07.108	Till sample	Till 07	NA	0.0046	0.0018	0.0503	0.0015	< LOD	0.0047
MG07.109	Till sample	Till 07	NA	0.0067	0.0018	0.1007	0.0016	1.7919	0.0051
MG07.11	Till sample	Till 07	NA	0.1719	0.0018	0.0022	0.0015	0.1192	0.0047
MG07.111	Till sample	Till 07	NA	0.0735	0.0018	0.1236	0.0015	0.1199	0.0047
MG07.112	Till sample	Till 07	NA	0.0155	0.0018	0.0114	0.0015	0.0241	0.0048
MG07.113	Till sample	Till 07	NA	0.0822	0.0018	0.0032	0.0015	0.0068	0.0047
MG07.114	Till sample	Till 07	NA	0.2336	0.0018	0.0444	0.0015	0.0181	0.0047
MG07.115	Till sample	Till 07	NA	0.0625	0.0018	0.0056	0.0015	< LOD	0
MG07.116	Till sample	Till 07	NA	0.0206	0.0018	0.0509	0.0015	0.0479	0.0048
MG07.119	Till sample	Till 07	NA	0.0223	0.0018	0.0017	0.0015	0.0053	0.0049
MG07.12	Till sample	Till 07	NA	0.0863	0.0018	0.0223	0.0015	0.0482	0.0047
MG07.120	Till sample	Till 07	NA	0.2128	0.0018	0.0404	0.0015	0.0402	0.0048
MG07.122	Till sample	Till 07	NA	0.1049	0.0018	0.006	0.0015	< LOD	0
MG07.123	Till sample	Till 07	NA	0.047	0.0018	0.0146	0.0015	< LOD	0
MG07.124	Till sample	Till 07	NA	0.0353	0.0018	< LOD	0	< LOD	0.0047
MG07.125	Till sample	Till 07	NA	0.019	0.0018	0.0249	0.0015	0.0069	0.0046
MG07.129	Till sample	Till 07	NA	0.0751	0.0018	0.0036	0.0015	0.0259	0.0049
MG07.13	Till sample	Till 07	NA	0.0874	0.0018	0.0024	0.0015	< LOD	0
MG07.132	Till sample	Till 07	NA	0.0225	0.0018	0.0027	0.0015	< LOD	0.0048
MG07.14	Till sample	Till 07	NA	0.0612	0.0018	< LOD	0	0.039	0.0047
MG07.15	Till sample	Till 07	NA	0.1899	0.0018	0.0427	0.0016	0.0632	0.0051
MG07.16	Till sample	Till 07	NA	0.0286	0.0018	0.0249	0.0015	< LOD	0.0046
MG07.17	Till sample	Till 07	NA	0.0994	0.0018	0.0068	0.0015	0.0521	0.0047
MG07.2	Till sample	Till 07	NA	0.1345	0.0018	0.0016	0.0015	< LOD	0
MG07.20	Till sample	Till 07	NA	0.0391	0.0017	0.0021	0.0015	0.0126	0.0047
MG07.21	Till sample	Till 07	NA	0.2133	0.0018	0.0056	0.0015	0.0222	0.0049
MG07.22	Till sample	Till 07	NA	0.1311	0.0018	< LOD	0	< LOD	0.0048
MG07.23	Till sample	Till 07	NA	0.0341	0.0018	0.101	0.0015	0.0513	0.0047
MG07.25	Till sample	Till 07	NA	0.0442	0.0018	< LOD	0.0015	0.0116	0.0047
MG07.26	Till sample	Till 07	NA	0.0134	0.0018	0.0043	0.0015	< LOD	0
MG07.27	Till sample	Till 07	NA	0.2797	0.0018	0.1003	0.0015	< LOD	0
MG07.28	Till sample	Till 07	NA	0.0533	0.0018	0.0336	0.0015	< LOD	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG06.97	0.0092	0.0083	< LOD	0	0.0062	0.0021	0.0224	0.004
MG06.98	< LOD	0.0083	0.0022	0.0014	0.0036	0.0022	0.0184	0.004
M7-1	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0189	0.004
M7-2	< LOD	0	< LOD	0.0015	< LOD	0	0.0308	0.004
M7-3	< LOD	0.0082	0.0021	0.0014	0.003	0.0021	0.0186	0.004
MG07.104	< LOD	0.0082	< LOD	0	0.0033	0.0022	0.0374	0.004
MG07.105	< LOD	0	< LOD	0.0015	0.0063	0.0022	0.0102	0.004
MG07.108	0.0193	0.0083	< LOD	0	< LOD	0.0022	0.0202	0.004
MG07.109	0.0126	0.0084	0.005	0.0015	< LOD	0.0022	0.0395	0.0042
MG07.11	0.0208	0.0083	< LOD	0.0014	< LOD	0.0022	0.0113	0.004
MG07.111	< LOD	0.0083	< LOD	0.0015	0.0025	0.0021	0.0179	0.004
MG07.112	0.0105	0.0083	0.0047	0.0014	< LOD	0	0.0117	0.004
MG07.113	0.0124	0.0083	< LOD	0	< LOD	0.0022	0.0375	0.004
MG07.114	< LOD	0.0084	< LOD	0	0.0064	0.0022	0.0105	0.004
MG07.115	< LOD	0.0083	< LOD	0	< LOD	0	0.0169	0.004
MG07.116	< LOD	0	< LOD	0	< LOD	0	0.0108	0.004
MG07.119	< LOD	0	< LOD	0	< LOD	0	0.1072	0.004
MG07.12	< LOD	0	< LOD	0	0.0123	0.0022	0.0953	0.004
MG07.120	< LOD	0.0084	0.0039	0.0014	< LOD	0.0022	0.0108	0.004
MG07.122	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0066	0.004
MG07.123	< LOD	0.0082	< LOD	0.0014	< LOD	0.0021	0.0116	0.004
MG07.124	< LOD	0.0083	< LOD	0.0014	0.003	0.0022	0.0738	0.004
MG07.125	< LOD	0	< LOD	0.0014	< LOD	0	0.0154	0.004
MG07.129	< LOD	0	< LOD	0.0015	0.0077	0.0021	0.0275	0.004
MG07.13	< LOD	0	0.0021	0.0014	< LOD	0.0022	0.0339	0.004
MG07.132	0.0153	0.0083	< LOD	0	0.0088	0.0021	0.0822	0.004
MG07.14	< LOD	0	< LOD	0.0014	< LOD	0	< LOD	0.004
MG07.15	< LOD	0.0085	0.0021	0.0015	< LOD	0	0.0136	0.0041
MG07.16	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0061	0.004
MG07.17	< LOD	0.0083	< LOD	0.0014	0.0026	0.0022	0.0112	0.004
MG07.2	< LOD	0	< LOD	0.0014	0.006	0.0022	0.1732	0.004
MG07.20	< LOD	0.0083	0.0017	0.0014	0.0046	0.0022	0.0754	0.004
MG07.21	< LOD	0	0.0031	0.0014	0.0055	0.0022	0.0174	0.004
MG07.22	< LOD	0.0083	< LOD	0	0.0076	0.0022	0.1121	0.004
MG07.23	< LOD	0	0.0026	0.0014	< LOD	0.0022	0.0145	0.0039
MG07.25	< LOD	0	< LOD	0	0.0039	0.0022	0.0466	0.0039
MG07.26	< LOD	0	< LOD	0.0014	0.0051	0.0022	0.0141	0.004
MG07.27	< LOD	0.0084	0.002	0.0014	0.0614	0.0022	0.0396	0.004
MG07.28	< LOD	0	< LOD	0	0.0032	0.0022	0.0133	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG06.97	0.0139	0.0062	< LOD	0	0.0106	0.0015	< LOD	0
MG06.98	< LOD	0.0062	< LOD	0	0.0172	0.0014	< LOD	0.0047
M7-1	0.0195	0.0063	< LOD	0.0023	0.008	0.0014	< LOD	0
M7-2	< LOD	0	< LOD	0	0.0075	0.0014	< LOD	0.0043
M7-3	0.0145	0.0062	0.0027	0.0023	0.0171	0.0014	0.0063	0.0041
MG07.104	< LOD	0.0062	0.0032	0.0023	0.0145	0.0015	< LOD	0
MG07.105	< LOD	0	< LOD	0.0023	0.0498	0.0015	0.0078	0.0047
MG07.108	< LOD	0.0062	< LOD	0	0.0238	0.0015	< LOD	0
MG07.109	0.0531	0.0064	< LOD	0	0.0082	0.0015	< LOD	0.0048
MG07.11	< LOD	0.0063	< LOD	0	0.022	0.0015	0.0096	0.0047
MG07.111	0.0194	0.0063	< LOD	0.0023	0.0131	0.0015	< LOD	0
MG07.112	< LOD	0.0062	< LOD	0	0.0043	0.0015	< LOD	0
MG07.113	< LOD	0.0062	< LOD	0	0.0066	0.0015	< LOD	0
MG07.114	< LOD	0	< LOD	0.0023	0.0449	0.0015	< LOD	0.0048
MG07.115	< LOD	0	< LOD	0	0.0153	0.0015	< LOD	0
MG07.116	0.0071	0.0063	< LOD	0.0023	0.217	0.0015	< LOD	0
MG07.119	0.0088	0.0062	0.0037	0.0023	0.0202	0.0015	0.005	0.0047
MG07.12	0.0064	0.0063	< LOD	0	0.0163	0.0015	0.0084	0.0047
MG07.120	0.0161	0.0063	< LOD	0.0023	0.0178	0.0014	< LOD	0
MG07.122	< LOD	0.0062	< LOD	0.0023	0.0135	0.0015	0.0065	0.0047
MG07.123	< LOD	0.0062	< LOD	0	0.0165	0.0015	< LOD	0
MG07.124	0.0109	0.0063	< LOD	0.0023	0.0151	0.0015	< LOD	0.0047
MG07.125	< LOD	0	< LOD	0.0023	0.016	0.0015	< LOD	0
MG07.129	< LOD	0.0062	< LOD	0.0023	0.0137	0.0015	< LOD	0
MG07.13	0.0071	0.0062	< LOD	0.0023	0.0182	0.0015	< LOD	0.0047
MG07.132	< LOD	0	< LOD	0	0.0113	0.0015	0.0066	0.0048
MG07.14	0.0077	0.0062	< LOD	0	0.0077	0.0015	< LOD	0
MG07.15	< LOD	0.0064	< LOD	0	0.019	0.0015	< LOD	0.0049
MG07.16	< LOD	0	< LOD	0	0.0258	0.0015	< LOD	0.0047
MG07.17	0.0079	0.0063	< LOD	0	0.0142	0.0015	< LOD	0
MG07.2	< LOD	0.0062	0.0034	0.0023	0.0218	0.0015	< LOD	0
MG07.20	< LOD	0	< LOD	0	0.0301	0.0015	< LOD	0
MG07.21	< LOD	0.0063	< LOD	0.0023	0.0254	0.0015	< LOD	0
MG07.22	< LOD	0.0062	< LOD	0	0.0163	0.0015	< LOD	0.0047
MG07.23	0.0105	0.0062	< LOD	0.0023	0.0175	0.0015	< LOD	0
MG07.25	0.0118	0.0062	< LOD	0	0.011	0.0015	< LOD	0
MG07.26	0.0066	0.0063	< LOD	0	0.0241	0.0015	< LOD	0
MG07.27	< LOD	0	< LOD	0	0.2751	0.0015	< LOD	0
MG07.28	< LOD	0.0062	< LOD	0.0023	0.0119	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG06.97	0.0244	0.0019	0.2121	0.0054	< LOD	0.0106
MG06.98	0.0781	0.0019	0.0545	0.005	< LOD	0
M7-1	0.0752	0.0017	0.1773	0.0052	0.0158	0.0105
M7-2	0.7364	0.0017	0.6488	0.0055	< LOD	0.0107
M7-3	0.0465	0.0017	0.1082	0.0052	0.0218	0.0104
MG07.104	0.0936	0.0019	0.0129	0.0051	< LOD	0.0105
MG07.105	0.2308	0.0019	< LOD	0.0051	0.0138	0.0105
MG07.108	0.0191	0.0019	0.0126	0.0052	< LOD	0
MG07.109	0.0075	0.0019	0.0859	0.0054	0.021	0.0107
MG07.11	0.0378	0.0019	0.3792	0.005	< LOD	0.0107
MG07.111	0.0373	0.0019	0.3028	0.0055	< LOD	0.0105
MG07.112	0.0048	0.0019	0.2332	0.0052	< LOD	0
MG07.113	0.0348	0.0019	0.0305	0.0054	0.0136	0.0105
MG07.114	0.1335	0.0019	0.5624	0.0053	0.0742	0.0108
MG07.115	0.2223	0.0019	0.0221	0.0051	0.016	0.0105
MG07.116	0.0381	0.0019	0.2685	0.0051	< LOD	0
MG07.119	0.009	0.0019	0.1932	0.0051	0.0154	0.0106
MG07.12	0.1024	0.0019	0.24	0.0052	< LOD	0
MG07.120	0.0681	0.0019	0.3955	0.0051	0.0262	0.0107
MG07.122	0.0939	0.0019	0.0739	0.0049	< LOD	0
MG07.123	0.0567	0.0019	0.2095	0.0053	0.0117	0.0105
MG07.124	0.0292	0.0019	0.1118	0.0049	< LOD	0.0107
MG07.125	0.0239	0.0019	0.1081	0.0052	< LOD	0.0106
MG07.129	0.0595	0.0019	0.2372	0.0053	< LOD	0.0106
MG07.13	0.0436	0.0019	< LOD	0.0053	< LOD	0
MG07.132	0.0053	0.0019	0.1039	0.0054	< LOD	0.0106
MG07.14	0.0534	0.0019	0.2271	0.0053	< LOD	0
MG07.15	0.5806	0.0019	2.0149	0.0055	0.0796	0.0109
MG07.16	0.0315	0.0019	< LOD	0	0.0107	0.0106
MG07.17	0.0096	0.0019	0.2968	0.0052	0.0348	0.0106
MG07.2	0.1299	0.0019	0.0774	0.0053	0.0569	0.0106
MG07.20	0.0409	0.0019	0.0622	0.0051	0.0179	0.0106
MG07.21	0.3369	0.0019	0.5215	0.0052	< LOD	0.0106
MG07.22	0.0269	0.0019	< LOD	0.0054	< LOD	0.0105
MG07.23	0.0306	0.0019	0.0534	0.0053	< LOD	0.0105
MG07.25	0.0409	0.0019	0.2887	0.0052	< LOD	0.0106
MG07.26	0.0152	0.0019	0.0054	0.0051	< LOD	0
MG07.27	0.5828	0.0019	0.007	0.0052	< LOD	0.0106
MG07.28	0.0527	0.0019	0.1262	0.0052	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG07.29	Till sample	Till 07	NA	0.1422	0.0018	< LOD	0	< LOD	0
MG07.3	Till sample	Till 07	NA	0.0526	0.0018	< LOD	0	0.0089	0.0046
MG07.31	Till sample	Till 07	NA	0.018	0.0018	0.0119	0.0015	0.0177	0.0047
MG07.32	Till sample	Till 07	NA	0.0381	0.0018	0.0371	0.0015	< LOD	0
MG07.33	Till sample	Till 07	NA	0.0567	0.0018	0.0019	0.0015	< LOD	0.0048
MG07.34	Till sample	Till 07	NA	0.1326	0.0018	0.0042	0.0015	0.0132	0.0047
MG07.35	Till sample	Till 07	NA	0.0804	0.0018	< LOD	0	< LOD	0.0048
MG07.39	Till sample	Till 07	NA	0.2275	0.0018	0.1797	0.0015	0.0327	0.0049
MG07.4	Till sample	Till 07	NA	0.0647	0.0018	0.0026	0.0015	0.0789	0.005
MG07.41	Till sample	Till 07	NA	0.0995	0.0018	0.0192	0.0015	0.0228	0.0047
MG07.42	Till sample	Till 07	NA	0.0913	0.0018	0.0109	0.0015	0.0323	0.0048
MG07.47	Till sample	Till 07	NA	0.0748	0.0018	< LOD	0	< LOD	0.0048
MG07.48	Till sample	Till 07	NA	0.1384	0.0018	< LOD	0	< LOD	0.0048
MG07.49	Till sample	Till 07	NA	0.2633	0.0018	< LOD	0	0.0474	0.0048
MG07.51	Till sample	Till 07	NA	0.0267	0.0018	< LOD	0.0015	0.0148	0.0047
MG07.52	Till sample	Till 07	NA	0.0532	0.0018	0.0141	0.0015	0.165	0.0048
MG07.53	Till sample	Till 07	NA	0.0044	0.0018	0.0278	0.0015	0.6881	0.0047
MG07.54	Till sample	Till 07	NA	0.0153	0.0018	0.0138	0.0015	0.0402	0.0047
MG07.55	Till sample	Till 07	NA	0.0671	0.0018	0.0018	0.0015	0.0092	0.0047
MG07.56	Till sample	Till 07	NA	0.034	0.0018	< LOD	0.0015	0.0062	0.0047
MG07.58	Till sample	Till 07	NA	0.1254	0.0018	0.0122	0.0015	0.0264	0.0048
MG07.59	Till sample	Till 07	NA	0.0421	0.0018	< LOD	0	< LOD	0
MG07.6	Till sample	Till 07	NA	0.0383	0.0018	< LOD	0.0015	0.0212	0.0048
MG07.60	Till sample	Till 07	NA	0.1143	0.0018	0.0118	0.0015	0.0052	0.0049
MG07.61	Till sample	Till 07	NA	0.079	0.0018	0.0076	0.0015	0.0183	0.0049
MG07.62	Till sample	Till 07	NA	0.0195	0.0018	0.0141	0.0015	0.6024	0.0049
MG07.63	Till sample	Till 07	NA	0.2043	0.0018	0.002	0.0015	0.3645	0.0049
MG07.64	Till sample	Till 07	NA	0.0929	0.0018	< LOD	0.0015	0.0084	0.0048
MG07.66	Till sample	Till 07	NA	0.0883	0.0018	0.0062	0.0015	0.0239	0.0048
MG07.68	Till sample	Till 07	NA	0.0705	0.0018	0.0035	0.0015	0.0105	0.0047
MG07.69	Till sample	Till 07	NA	0.1327	0.0018	0.0027	0.0015	< LOD	0.0047
MG07.7	Till sample	Till 07	NA	0.0277	0.0018	< LOD	0	< LOD	0
MG07.70	Till sample	Till 07	NA	0.0601	0.0018	0.1494	0.0015	0.046	0.0048
MG07.72	Till sample	Till 07	NA	0.0755	0.0018	0.012	0.0015	0.0074	0.0048
MG07.73	Till sample	Till 07	NA	0.003	0.0018	0.0457	0.0015	< LOD	0
MG07.77	Till sample	Till 07	NA	0.167	0.0018	< LOD	0.0015	0.0312	0.0048
MG07.78	Till sample	Till 07	NA	0.0325	0.0018	< LOD	0.0015	< LOD	0.0047
MG07.79	Till sample	Till 07	NA	0.0824	0.0018	0.0435	0.0015	0.0292	0.0048
MG07.8	Till sample	Till 07	NA	0.1064	0.0018	0.0018	0.0015	< LOD	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG07.29	< LOD	0.0083	< LOD	0.0014	0.0073	0.0022	0.0233	0.004
MG07.3	0.0097	0.0083	< LOD	0	0.0061	0.0022	0.0682	0.004
MG07.31	< LOD	0.0083	0.0032	0.0014	< LOD	0	0.0067	0.004
MG07.32	< LOD	0	0.0016	0.0014	0.0048	0.0022	0.0198	0.004
MG07.33	0.0133	0.0083	< LOD	0.0014	< LOD	0.0022	0.0551	0.004
MG07.34	< LOD	0	< LOD	0	0.0118	0.0022	0.3521	0.004
MG07.35	< LOD	0	< LOD	0	0.0055	0.0022	0.0674	0.004
MG07.39	< LOD	0	0.0299	0.0015	0.0459	0.0022	0.0273	0.004
MG07.4	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0652	0.004
MG07.41	< LOD	0.0084	0.0024	0.0014	0.0068	0.0022	0.0284	0.004
MG07.42	< LOD	0.0085	0.0019	0.0015	0.0038	0.0022	0.0272	0.004
MG07.47	< LOD	0.0082	0.0029	0.0014	0.0093	0.0022	0.0153	0.004
MG07.48	0.0148	0.0083	< LOD	0	0.0032	0.0022	0.0102	0.004
MG07.49	< LOD	0	0.0022	0.0014	0.0042	0.0022	0.1295	0.004
MG07.51	< LOD	0.0083	< LOD	0	0.0059	0.0022	0.1072	0.0039
MG07.52	< LOD	0	< LOD	0	< LOD	0.0022	0.016	0.004
MG07.53	< LOD	0	0.0023	0.0015	< LOD	0.0022	0.0334	0.004
MG07.54	< LOD	0.0083	< LOD	0	0.0042	0.0022	0.0117	0.004
MG07.55	< LOD	0.0083	< LOD	0.0014	0.0088	0.0022	0.2199	0.0039
MG07.56	< LOD	0	< LOD	0.0014	0.006	0.0022	0.1058	0.004
MG07.58	< LOD	0.0083	< LOD	0.0014	0.0127	0.0022	0.0345	0.004
MG07.59	< LOD	0.0083	< LOD	0	0.0055	0.0022	0.0936	0.004
MG07.6	< LOD	0.0083	< LOD	0	0.0023	0.0022	0.0793	0.004
MG07.60	0.018	0.0082	< LOD	0.0014	0.0029	0.0021	< LOD	0
MG07.61	< LOD	0	< LOD	0.0014	< LOD	0	0.0248	0.004
MG07.62	< LOD	0	0.0023	0.0014	< LOD	0.0022	0.0305	0.004
MG07.63	< LOD	0.0084	0.1563	0.0015	0.1373	0.0022	0.0589	0.0041
MG07.64	0.0084	0.0083	< LOD	0	< LOD	0	0.0135	0.004
MG07.66	0.013	0.0083	0.0026	0.0014	0.017	0.0022	0.0228	0.004
MG07.68	< LOD	0.0083	< LOD	0	0.0038	0.0022	0.0322	0.0039
MG07.69	< LOD	0.0083	0.0021	0.0014	0.0261	0.0022	0.0412	0.004
MG07.7	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.1128	0.0039
MG07.70	< LOD	0	0.0018	0.0014	0.0041	0.0022	0.0843	0.004
MG07.72	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0288	0.004
MG07.73	< LOD	0	< LOD	0.0014	< LOD	0	0.0203	0.0039
MG07.77	< LOD	0	< LOD	0	0.0083	0.0022	0.0467	0.0039
MG07.78	0.0144	0.0083	0.002	0.0014	0.0043	0.0022	0.0563	0.004
MG07.79	0.0131	0.0084	< LOD	0	< LOD	0	0.0625	0.004
MG07.8	< LOD	0.0083	< LOD	0.0015	0.0186	0.0022	0.0973	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG07.29	< LOD	0	< LOD	0.0023	0.0278	0.0015	< LOD	0
MG07.3	< LOD	0	< LOD	0	0.0176	0.0015	< LOD	0
MG07.31	0.0183	0.0062	< LOD	0	0.0142	0.0015	< LOD	0.0047
MG07.32	< LOD	0.0062	< LOD	0	0.014	0.0015	< LOD	0
MG07.33	< LOD	0	< LOD	0	0.0104	0.0015	< LOD	0
MG07.34	< LOD	0.0063	< LOD	0	0.01	0.0015	< LOD	0
MG07.35	< LOD	0.0062	< LOD	0	0.0048	0.0015	< LOD	0.0048
MG07.39	0.0096	0.0063	< LOD	0.0023	0.3114	0.0015	< LOD	0.0048
MG07.4	0.0167	0.0062	< LOD	0	0.0202	0.0015	< LOD	0
MG07.41	0.0083	0.0062	< LOD	0	0.0188	0.0015	< LOD	0.0048
MG07.42	< LOD	0.0063	< LOD	0	0.0179	0.0015	< LOD	0
MG07.47	< LOD	0	< LOD	0	0.0097	0.0015	< LOD	0
MG07.48	< LOD	0.0062	< LOD	0.0023	0.0265	0.0015	< LOD	0
MG07.49	< LOD	0	< LOD	0	0.0145	0.0015	< LOD	0
MG07.51	< LOD	0	< LOD	0	0.0089	0.0015	< LOD	0
MG07.52	< LOD	0	< LOD	0	0.0122	0.0015	< LOD	0
MG07.53	0.0157	0.0063	< LOD	0.0023	0.0096	0.0015	< LOD	0
MG07.54	< LOD	0	0.0037	0.0023	0.0053	0.0015	< LOD	0.0048
MG07.55	< LOD	0.0062	0.006	0.0023	0.0081	0.0015	< LOD	0
MG07.56	< LOD	0.0062	< LOD	0.0023	0.008	0.0015	0.0066	0.0047
MG07.58	0.0164	0.0062	< LOD	0.0023	0.0104	0.0015	< LOD	0.0047
MG07.59	< LOD	0.0062	< LOD	0	0.012	0.0015	< LOD	0
MG07.6	0.0077	0.0062	< LOD	0	0.0201	0.0015	0.005	0.0047
MG07.60	< LOD	0	< LOD	0	0.0341	0.0015	< LOD	0
MG07.61	< LOD	0	< LOD	0	0.0082	0.0015	< LOD	0
MG07.62	0.0107	0.0063	< LOD	0.0023	0.0081	0.0015	< LOD	0.0047
MG07.63	0.0063	0.0062	< LOD	0	0.326	0.0015	< LOD	0
MG07.64	0.0229	0.0062	< LOD	0	0.0143	0.0015	< LOD	0.0048
MG07.66	0.0147	0.0062	< LOD	0	0.0078	0.0015	< LOD	0
MG07.68	< LOD	0.0062	< LOD	0	0.0135	0.0014	< LOD	0
MG07.69	0.0072	0.0062	< LOD	0	0.0095	0.0015	< LOD	0.0047
MG07.7	< LOD	0.0062	< LOD	0	0.0281	0.0014	< LOD	0
MG07.70	0.0081	0.0063	0.0024	0.0023	0.0235	0.0015	0.0058	0.0047
MG07.72	0.0112	0.0062	< LOD	0	0.0113	0.0015	0.0056	0.0047
MG07.73	< LOD	0	< LOD	0	0.0109	0.0015	0.0065	0.0047
MG07.77	< LOD	0	< LOD	0	0.007	0.0015	< LOD	0
MG07.78	< LOD	0.0062	< LOD	0	0.0101	0.0015	0.0084	0.0047
MG07.79	0.0087	0.0063	< LOD	0.0023	0.0197	0.0015	< LOD	0.0048
MG07.8	0.0065	0.0062	< LOD	0	0.0262	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG07.29	0.0677	0.0019	0.0095	0.0052	< LOD	0
MG07.3	0.0217	0.0019	0.1041	0.0051	0.0136	0.0105
MG07.31	0.0163	0.0019	0.3927	0.0053	< LOD	0
MG07.32	0.0202	0.0019	0.0912	0.0051	0.0278	0.0106
MG07.33	0.0158	0.0019	0.1253	0.0053	< LOD	0.0105
MG07.34	0.1997	0.0019	0.1569	0.0053	0.0542	0.0106
MG07.35	0.0785	0.0019	0.0585	0.0053	0.031	0.0105
MG07.39	0.2079	0.0019	1.0015	0.0052	0.0283	0.0106
MG07.4	0.0309	0.0019	0.1464	0.0055	< LOD	0.0106
MG07.41	0.4985	0.0019	0.494	0.0056	< LOD	0
MG07.42	0.6324	0.0019	0.9237	0.0055	< LOD	0
MG07.47	0.0755	0.0019	< LOD	0.0052	< LOD	0.0106
MG07.48	0.1065	0.0019	0.0555	0.0051	< LOD	0.0105
MG07.49	0.0705	0.0019	0.1263	0.0051	0.2359	0.0106
MG07.51	0.0088	0.0019	0.171	0.0051	0.0218	0.0105
MG07.52	0.2972	0.0019	0.3077	0.0053	< LOD	0
MG07.53	0.0053	0.0019	0.1548	0.0054	< LOD	0
MG07.54	0.0357	0.0019	0.0649	0.0051	< LOD	0.0106
MG07.55	0.0561	0.0019	0.1052	0.0053	0.0119	0.0105
MG07.56	0.023	0.0019	0.079	0.0053	0.0295	0.0105
MG07.58	0.1591	0.0019	0.3709	0.0054	< LOD	0.0106
MG07.59	0.0482	0.0019	0.0241	0.0052	< LOD	0.0106
MG07.6	0.0246	0.0019	0.079	0.0052	0.0114	0.0107
MG07.60	0.1692	0.0019	0.089	0.0051	< LOD	0
MG07.61	0.0493	0.0019	0.2018	0.0054	< LOD	0.0106
MG07.62	0.0134	0.0019	0.2109	0.0054	< LOD	0
MG07.63	0.0287	0.0019	0.0944	0.0054	0.0177	0.0107
MG07.64	0.0418	0.0019	0.256	0.0054	< LOD	0
MG07.66	0.0446	0.0019	0.2099	0.0053	< LOD	0.0106
MG07.68	0.061	0.0019	0.1355	0.0053	< LOD	0
MG07.69	0.0235	0.0019	0.0097	0.0051	< LOD	0
MG07.7	0.0168	0.0019	0.0845	0.005	0.0141	0.0105
MG07.70	0.0356	0.0019	0.4433	0.0055	0.018	0.0106
MG07.72	0.0538	0.0019	0.2508	0.0051	< LOD	0.0106
MG07.73	0.0927	0.0019	0.0793	0.0053	< LOD	0
MG07.77	0.0791	0.0019	0.6009	0.0053	< LOD	0.0106
MG07.78	0.0146	0.0019	0.0936	0.0052	< LOD	0.0106
MG07.79	0.5386	0.0019	0.3987	0.0055	< LOD	0
MG07.8	0.0676	0.0019	0.2632	0.0052	0.0244	0.0105

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
MG07.80	Till sample	Till 07	NA	0.1195	0.0017	0.0021	0.0015	0.0061	0.0047
MG07.82	Till sample	Till 07	NA	0.0726	0.0018	< LOD	0	0.0176	0.0047
MG07.87	Till sample	Till 07	NA	0.045	0.0018	0.0366	0.0015	0.7651	0.0048
MG07.89	Till sample	Till 07	NA	0.1709	0.0018	< LOD	0	0.017	0.0048
MG07.9	Till sample	Till 07	NA	0.0807	0.0018	0.0022	0.0015	0.0285	0.0048
MG07.90	Till sample	Till 07	NA	0.068	0.0018	< LOD	0.0015	0.0123	0.0047
MG07.91	Till sample	Till 07	NA	0.0697	0.0018	< LOD	0	0.0266	0.0048
MG07.93	Till sample	Till 07	NA	0.0776	0.0018	0.0028	0.0015	0.0195	0.0048
MG07.94	Till sample	Till 07	NA	0.0505	0.0018	0.1617	0.0015	0.05	0.0047
MG07.95	Till sample	Till 07	NA	0.0046	0.0018	0.041	0.0015	0.0468	0.0048
MG07.96	Till sample	Till 07	NA	0.057	0.0018	0.0456	0.0015	0.1032	0.0048
MG07.97	Till sample	Till 07	NA	0.0667	0.0018	0.0049	0.0015	0.0159	0.0048
MG07.98	Till sample	Till 07	NA	0.1766	0.0018	0.0019	0.0015	< LOD	0.0048
MG07.99	Till sample	Till 07	NA	0.0321	0.0018	0.0044	0.0015	0.0535	0.0049
A535M	Thin section	F-Zone	BIF	0.0346	0.0017	0.0018	0.0015	< LOD	0.0048
A535M2	Thin section	F-Zone	BIF	0.0447	0.0018	0.0016	0.0015	< LOD	0
A541M	Thin section	Tiriganiaq	Hydro	0.0364	0.0018	0.0067	0.0015	0.0049	0.0048
A541M2	Thin section	Tiriganiaq	Hydro	0.025	0.0018	0.0043	0.0015	0.0103	0.0046
A551M	Thin section	Tiriganiaq	BIF	0.0265	0.0018	0.0132	0.0015	< LOD	0
A555M	Thin section	Tiriganiaq	Hydro	0.0469	0.0017	< LOD	0.0015	< LOD	0.0048
A568M1	Thin section	Tiriganiaq	Hydro	0.0323	0.0018	< LOD	0.0015	< LOD	0
A568M2	Thin section	Tiriganiaq	Hydro	0.0321	0.0018	0.0057	0.0015	< LOD	0
A590M1	Thin section	Tiriganiaq	Hydro	0.0565	0.0018	0.0035	0.0015	0.0246	0.0048
A590M2	Thin section	Tiriganiaq	Hydro	0.0727	0.0018	0.0141	0.0015	< LOD	0
A598M1	Thin section	Pump	BIF	0.0313	0.0018	0.0027	0.0015	< LOD	0
A598M2	Thin section	Pump	BIF	0.0321	0.0017	0.0129	0.0015	< LOD	0.0049
A598M3	Thin section	Pump	BIF	0.0301	0.0018	< LOD	0.0015	< LOD	0.0048
A600M1	Thin section	Pump	BIF	0.0244	0.0018	0.0025	0.0015	< LOD	0
A600M2	Thin section	Pump	BIF	0.0292	0.0018	< LOD	0.0015	< LOD	0.0049
A600M2 inc	Thin section	Pump	BIF	0.0569	0.0018	0.0055	0.0015	< LOD	0.0048
A600M3	Thin section	Pump	BIF	0.0405	0.0017	0.0022	0.0015	< LOD	0
A602M1	Thin section	Tiriganiaq	Magmatic	0.0291	0.0018	0.0158	0.0015	0.0076	0.0049
A602M3	Thin section	Tiriganiaq	Magmatic	0.0268	0.0018	0.0112	0.0015	0.0083	0.0049
A605M1	Thin section	Tiriganiaq	Hydro	0.1162	0.0018	0.0121	0.0015	< LOD	0
A605M2	Thin section	Tiriganiaq	Hydro	0.0381	0.0018	0.009	0.0015	0.0069	0.0048
A613M	Thin section	Tiriganiaq	Magmatic	0.0375	0.0018	0.0261	0.0015	0.0053	0.0048
A635M1	Thin section	Tiriganiaq	Hydro	0.0592	0.0018	0.0118	0.0015	< LOD	0.0047
A635M2	Thin section	Tiriganiaq	Hydro	0.0386	0.0018	0.0135	0.0015	0.0186	0.0047
A635M3	Thin section	Tiriganiaq	Hydro	0.0548	0.0018	0.0065	0.0015	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
MG07.80	< LOD	0.0083	< LOD	0	0.005	0.0022	0.0396	0.004
MG07.82	< LOD	0	< LOD	0.0014	0.0122	0.0022	0.05	0.004
MG07.87	< LOD	0.0084	< LOD	0	< LOD	0.0022	0.0326	0.004
MG07.89	0.0189	0.0083	< LOD	0.0015	0.0094	0.0022	0.0443	0.004
MG07.9	< LOD	0.0084	< LOD	0.0015	0.0117	0.0022	0.2642	0.004
MG07.90	< LOD	0	0.0016	0.0014	0.0041	0.0021	0.0077	0.004
MG07.91	< LOD	0.0082	0.0022	0.0014	0.0051	0.0022	0.0169	0.004
MG07.93	< LOD	0.0082	< LOD	0.0014	< LOD	0.0022	0.0125	0.004
MG07.94	< LOD	0.0083	0.0054	0.0015	0.0084	0.0022	0.0178	0.004
MG07.95	0.0186	0.0083	< LOD	0.0014	< LOD	0.0022	0.0079	0.004
MG07.96	< LOD	0	< LOD	0.0014	0.0023	0.0022	0.0397	0.004
MG07.97	< LOD	0	< LOD	0	0.0052	0.0022	0.0767	0.004
MG07.98	< LOD	0.0084	< LOD	0	0.0094	0.0021	0.1777	0.004
MG07.99	< LOD	0.0083	0.0018	0.0014	0.0057	0.0022	0.1228	0.004
A535M	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0288	0.004
A535M2	< LOD		< LOD	0	< LOD	0.0022	0.0263	0.004
A541M	< LOD	0	< LOD	0.0015	< LOD	0.0022	< LOD	0.004
A541M2	< LOD	0	< LOD	0	< LOD	0.0022	< LOD	0.004
A551M	< LOD	0.0083	0.0016	0.0014	< LOD	0	0.0054	0.004
A555M	0.0372	0.0083	< LOD	0.0014	< LOD	0.0022	0.0041	0.004
A568M1	0.0122	0.0083	< LOD	0.0015	< LOD	0.0022	0.0052	0.004
A568M2	0.01	0.0083	< LOD	0	< LOD	0	0.0043	0.004
A590M1	0.0127	0.0083	< LOD	0.0014	< LOD	0.0022	< LOD	0.004
A590M2	< LOD	0.0084	< LOD	0	0.0036	0.0022	< LOD	0.004
A598M1	< LOD	0.0083	0.0034	0.0014	< LOD	0.0022	< LOD	0.004
A598M2	0.0136	0.0083	< LOD	0.0014	< LOD	0	0.01	0.0039
A598M3	< LOD	0.0083	< LOD	0	0.0033	0.0022	0.0089	0.004
A600M1	< LOD	0	< LOD	0	< LOD	0.0022	0.0137	0.004
A600M2	0.0129	0.0083	< LOD	0	0.0029	0.0022	< LOD	0.004
A600M2 inc	< LOD	0	< LOD	0	0.0465	0.0022	< LOD	0.004
A600M3	0.018	0.0083	< LOD	0	0.0127	0.0022	0.0133	0.004
A602M1	< LOD	0.0084	< LOD	0	0.0175	0.0022	0.0216	0.004
A602M3	< LOD	0	< LOD	0.0014	0.0026	0.0022	0.0285	0.004
A605M1	< LOD	0.0083	< LOD	0.0014	0.0351	0.0022	< LOD	0
A605M2	< LOD	0.0084	< LOD	0	0.0028	0.0022	< LOD	0.004
A613M	< LOD	0.0083	0.0096	0.0014	0.0029	0.0022	0.0068	0.004
A635M1	< LOD	0.0083	< LOD	0.0015	< LOD	0.0022	< LOD	0
A635M2	< LOD	0	< LOD	0.0015	< LOD	0.0022	< LOD	0.004
A635M3	< LOD	0.0084	< LOD	0	< LOD	0.0022	0.0094	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
MG07.80	< LOD	0.0062	< LOD	0.0023	0.0102	0.0015	< LOD	0.0047
MG07.82	0.0125	0.0062	< LOD	0	0.0049	0.0015	< LOD	0
MG07.87	0.0318	0.0063	< LOD	0	0.0133	0.0015	< LOD	0.0048
MG07.89	0.0068	0.0063	< LOD	0.0023	0.0161	0.0015	< LOD	0.0048
MG07.9	< LOD	0.0063	0.0042	0.0023	0.0326	0.0015	< LOD	0
MG07.90	< LOD	0.0062	< LOD	0	0.0175	0.0015	< LOD	0
MG07.91	0.0127	0.0062	< LOD	0	0.0108	0.0015	< LOD	0.0048
MG07.93	< LOD	0.0063	< LOD	0	0.0073	0.0015	< LOD	0
MG07.94	0.0316	0.0063	< LOD	0.0023	0.0309	0.0015	< LOD	0.0048
MG07.95	0.0084	0.0063	< LOD	0	0.0061	0.0015	< LOD	0.0047
MG07.96	0.0254	0.0063	< LOD	0	0.0113	0.0015	< LOD	0
MG07.97	0.027	0.0062	< LOD	0	0.0078	0.0015	< LOD	0
MG07.98	< LOD	0	< LOD	0.0023	0.0069	0.0015	0.0068	0.0047
MG07.99	< LOD	0.0063	0.0045	0.0023	0.0068	0.0015	< LOD	0.0047
A535M	< LOD	0	< LOD	0.0023	0.018	0.0014	< LOD	0.0047
A535M2	0.0066	0.0062	0.0026	0.0023	0.0205	0.0014	< LOD	0
A541M	< LOD	0.0062	< LOD	0.0023	0.0083	0.0014	< LOD	0
A541M2	< LOD	0	< LOD	0	0.0103	0.0014	< LOD	0.0048
A551M	< LOD	0	< LOD	0	0.0133	0.0014	< LOD	0
A555M	< LOD	0	< LOD	0.0023	0.1605	0.0014	< LOD	0.0048
A568M1	< LOD	0.0062	< LOD	0.0023	0.0306	0.0014	< LOD	0
A568M2	< LOD	0	< LOD	0.0023	0.016	0.0014	< LOD	0.0048
A590M1	< LOD	0	< LOD	0	0.0535	0.0014	< LOD	0
A590M2	< LOD	0	< LOD	0	0.1037	0.0014	< LOD	0.0048
A598M1	0.0065	0.0062	< LOD	0	0.0133	0.0014	< LOD	0
A598M2	< LOD	0	< LOD	0	0.0128	0.0014	< LOD	0
A598M3	< LOD	0	0.0036	0.0023	0.0141	0.0014	< LOD	0.0048
A600M1	< LOD	0	< LOD	0	0.0236	0.0014	< LOD	0
A600M2	< LOD	0.0062	< LOD	0.0023	0.0288	0.0014	< LOD	0
A600M2 inc	< LOD	0.0062	< LOD	0.0023	0.1845	0.0014	0.0051	0.0048
A600M3	< LOD	0	< LOD	0.0023	0.0954	0.0014	0.0062	0.0047
A602M1	< LOD	0.0063	< LOD	0.0023	0.039	0.0014	< LOD	0
A602M3	0.0074	0.0063	0.0038	0.0023	0.0142	0.0014	< LOD	0.0048
A605M1	< LOD	0.0063	< LOD	0.0023	0.1731	0.0014	< LOD	0
A605M2	0.0147	0.0062	< LOD	0	0.0346	0.0014	< LOD	0.0048
A613M	< LOD	0.0063	< LOD	0.0023	0.0129	0.0014	< LOD	0
A635M1	< LOD	0	0.0038	0.0023	0.0139	0.0014	< LOD	0.0048
A635M2	0.0101	0.0062	< LOD	0	0.0076	0.0014	0.0065	0.0047
A635M3	0.0064	0.0062	< LOD	0.0023	0.0229	0.0014	< LOD	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
MG07.80	0.0434	0.0019	0.0082	0.0052	< LOD	0.0105
MG07.82	0.0754	0.0019	0.2054	0.0053	< LOD	0
MG07.87	0.0326	0.0019	0.139	0.0052	< LOD	0.0107
MG07.89	0.0681	0.0019	0.251	0.0052	0.011	0.0106
MG07.9	0.1869	0.0019	0.2043	0.0053	0.0132	0.0107
MG07.90	0.0636	0.0019	0.1117	0.0053	< LOD	0.0105
MG07.91	0.0472	0.0019	0.3019	0.0056	< LOD	0
MG07.93	0.0391	0.0019	0.181	0.0052	0.0138	0.0106
MG07.94	0.0835	0.0019	0.2414	0.0052	< LOD	0.0105
MG07.95	0.1886	0.0019	0.2235	0.005	< LOD	0.0106
MG07.96	0.0614	0.0019	0.1847	0.0053	< LOD	0.0106
MG07.97	0.0616	0.0019	0.1372	0.0053	< LOD	0.0106
MG07.98	0.2945	0.0019	0.0605	0.0053	0.1447	0.0107
MG07.99	0.0188	0.0019	0.1282	0.0053	0.0289	0.0105
A535M	0.0162	0.0019	< LOD	0.0052	< LOD	0
A535M2	0.0177	0.0019	0.0078	0.0051	< LOD	0.0106
A541M	0.0402	0.0019	0.1092	0.0053	< LOD	0
A541M2	0.029	0.0019	0.0775	0.0053	< LOD	0
A551M	0.0344	0.0019	0.0204	0.0052	< LOD	0
A555M	0.0771	0.0019	0.0415	0.0052	0.0143	0.0106
A568M1	0.0045	0.0019	0.0063	0.0052	0.0192	0.0105
A568M2	0.0217	0.0019	0.0273	0.0053	< LOD	0.0106
A590M1	0.016	0.0019	0.0217	0.0051	< LOD	0
A590M2	0.0266	0.0019	0.0077	0.0053	0.0145	0.0105
A598M1	0.0095	0.0019	0.0117	0.0052	0.0209	0.0106
A598M2	< LOD	0.0019	0.0167	0.0052	0.0189	0.0105
A598M3	< LOD	0.0019	0.012	0.0052	< LOD	0.0105
A600M1	0.0314	0.0019	0.006	0.0051	0.0134	0.0105
A600M2	< LOD	0	< LOD	0	< LOD	0
A600M2 inc	< LOD	0	< LOD	0.0052	< LOD	0.0105
A600M3	0.0461	0.0019	< LOD	0.0052	< LOD	0.0106
A602M1	0.0259	0.0019	0.3367	0.005	< LOD	0.0106
A602M3	0.0254	0.0019	0.2914	0.0053	< LOD	0.0106
A605M1	0.0703	0.0019	0.0284	0.0051	< LOD	0
A605M2	0.0386	0.0019	0.0274	0.0051	< LOD	0.0105
A613M	0.0344	0.0019	0.1119	0.0052	< LOD	0
A635M1	0.1016	0.0019	0.0606	0.0055	< LOD	0
A635M2	0.0676	0.0019	< LOD	0	< LOD	0
A635M3	0.0706	0.0019	0.0733	0.0052	0.0308	0.0105

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
A650M	Thin section	F-Zone	Hydro	0.0659	0.0018	0.0019	0.0015	0.0149	0.0048
A669M1	Thin section	Discovery	BIF	0.0265	0.0018	< LOD	0	< LOD	0
A669M2	Thin section	Discovery	BIF	0.093	0.0017	0.0028	0.0015	0.0159	0.0047
M472M1	Thin section	Mustang	Magmatic	0.2203	0.0018	0.0121	0.0017	0.0342	0.0049
M472M2	Thin section	Mustang	Magmatic	0.1451	0.0018	0.0195	0.0016	0.0124	0.0048
M472M3	Thin section	Mustang	Magmatic	0.1201	0.0018	0.037	0.0016	0.0424	0.0049
M529M	Thin section	Pump	Hydro	0.0731	0.0018	0.029	0.0015	< LOD	0.0047
M553M	Thin section	Tiriganiaq	Magmatic	0.0787	0.0018	0.002	0.0015	< LOD	0
M582M2	Thin section	Tiriganiaq	BIF	0.0257	0.0018	0.0036	0.0015	< LOD	0
M584M1	Thin section	Tiriganiaq	BIF	0.0227	0.0018	0.0284	0.0015	0.0098	0.0047
M584M2	Thin section	Tiriganiaq	Hydro	0.0641	0.0018	0.0018	0.0015	< LOD	0.0049
M592M	Thin section	Tiriganiaq	Metamorphism	0.0618	0.0018	0.0112	0.0015	0.0106	0.0047
M594M1	Thin section	Pump	Hydro	0.0356	0.0018	0.0215	0.0015	< LOD	0.0049
M594M2	Thin section	Pump	Hydro	0.032	0.0018	0.0214	0.0015	< LOD	0.0048
M595M1a	Thin section	Pump	Hydro	0.068	0.0018	0.0141	0.0015	0.0185	0.0049
M595M1b	Thin section	Pump	Hydro	0.0389	0.0017	0.014	0.0015	< LOD	0.005
M595M2	Thin section	Pump	Hydro	0.0726	0.0018	0.0083	0.0015	0.0121	0.0049
M601M1	Thin section	Tiriganiaq	Hydro	0.0271	0.0018	0.0568	0.0015	0.0262	0.0046
M601M2	Thin section	Tiriganiaq	Hydro	0.0354	0.0018	0.0225	0.0015	0.0066	0.005
M616M1	Thin section	Tiriganiaq	Hydro	0.0486	0.0017	0.0781	0.0015	0.006	0.0049
M616M2	Thin section	Tiriganiaq	BIF	0.0542	0.0018	0.0266	0.0015	< LOD	0
M616M3	Thin section	Tiriganiaq	BIF	0.05	0.0018	< LOD	0.0015	0.0243	0.0047
M616M4	Thin section	Tiriganiaq	BIF	0.0396	0.0018	0.0559	0.0015	< LOD	0
M617M1	Thin section	Tiriganiaq	Magmatic	0.0497	0.0018	0.0041	0.0015	0.0153	0.0049
M617M2	Thin section	Tiriganiaq	Hydro	0.042	0.0018	0.003	0.0015	0.0297	0.0048
M619M2	Thin section	Tiriganiaq	Metamorphism	0.0973	0.0018	0.0032	0.0015	0.035	0.0047
M619M3	Thin section	Tiriganiaq	Metamorphism	0.0669	0.0018	0.0443	0.0015	0.009	0.0048
M623M1	Thin section	Tiriganiaq	BIF	0.0612	0.0018	0.0023	0.0015	< LOD	0.0048
M623M2	Thin section	Tiriganiaq	BIF	0.03	0.0018	0.0163	0.0015	< LOD	0.0047
M626M	Thin section	Tiriganiaq	Hydro	0.044	0.0018	0.0081	0.0015	0.0236	0.0049
M651M	Thin section	F-Zone	Metamorphism	0.0966	0.0018	0.0084	0.0015	0.0084	0.0049
M654M	Thin section	F-Zone	Hydro	0.054	0.0018	0.0044	0.0015	0.0069	0.0046
M657M1	Thin section	Discovery	BIF	0.0838	0.0018	0.0214	0.0015	< LOD	0
M657M2	Thin section	Discovery	BIF	0.1019	0.0018	0.0168	0.0015	< LOD	0.0048
M665M1	Thin section	Discovery	BIF	0.0987	0.0018	0.0029	0.0015	< LOD	0.0048
M665M2	Thin section	Discovery	BIF	0.0939	0.0018	< LOD	0	< LOD	0
M677M1	Thin section	Tiriganiaq	BIF	0.0682	0.0018	0.0033	0.0015	< LOD	0
M677M2	Thin section	Tiriganiaq	BIF	0.0739	0.0018	0.005	0.0015	< LOD	0
T532M	Thin section	F-Zone	Magmatic	0.1012	0.0018	0.0022	0.0015	0.0226	0.0049

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
A650M	0.0131	0.0084	< LOD	0	0.0066	0.0022	0.0202	0.004
A669M1	< LOD	0	< LOD	0.0014	< LOD	0.0022	< LOD	0.004
A669M2	< LOD	0.0083	0.002	0.0014	< LOD	0	0.0061	0.004
M472M1	0.0201	0.0085	0.0103	0.0016	0.0206	0.0022	0.0156	0.0041
M472M2	0.0185	0.0083	< LOD	0.0016	0.0071	0.0022	0.0222	0.004
M472M3	0.0102	0.0085	< LOD	0.0016	< LOD	0.0000	0.0198	0.0041
M529M	< LOD	0.0084	< LOD	0	0.0044	0.0022	< LOD	0.004
M553M	0.0096	0.0083	< LOD	0.0014	0.0066	0.0022	0.0475	0.004
M582M2	< LOD	0	0.0018	0.0014	< LOD	0.0022	< LOD	0.004
M584M1	0.0122	0.0083	< LOD	0	< LOD	0.0022	0.0084	0.004
M584M2	< LOD	0.0084	< LOD	0	0.0079	0.0022	0.0121	0.004
M592M	0.0193	0.0083	< LOD	0	0.0116	0.0022	0.0363	0.004
M594M1	0.0122	0.0083	< LOD	0.0014	< LOD	0.0022	< LOD	0.004
M594M2	0.0136	0.0083	0.0017	0.0014	0.0044	0.0022	0.0064	0.004
M595M1a	< LOD	0.0083	< LOD	0	0.0338	0.0022	0.0204	0.004
M595M1b	0.0133	0.0083	< LOD	0.0014	0.0032	0.0022	0.0041	0.004
M595M2	0.0085	0.0084	< LOD	0.0014	0.0099	0.0022	0.022	0.004
M601M1	0.0094	0.0083	0.0018	0.0014	0.0024	0.0022	0.017	0.004
M601M2	0.0166	0.0083	< LOD	0	0.0069	0.0021	0.0155	0.004
M616M1	< LOD	0	< LOD	0	< LOD	0.0022	0.0045	0.004
M616M2	0.0277	0.0082	0.0033	0.0014	< LOD	0	< LOD	0.004
M616M3	0.0125	0.0083	< LOD	0.0014	< LOD	0	< LOD	0
M616M4	< LOD	0.0083	< LOD	0.0015	< LOD	0	< LOD	0.004
M617M1	0.0114	0.0083	< LOD	0	0.0166	0.0022	0.0371	0.004
M617M2	0.0121	0.0083	< LOD	0	0.009	0.0022	0.0454	0.0039
M619M2	< LOD	0.0084	0.0031	0.0014	0.0073	0.0022	0.031	0.004
M619M3	0.0157	0.0083	0.0038	0.0014	< LOD	0	0.0368	0.004
M623M1	< LOD	0.0083	0.0023	0.0014	0.0042	0.0022	< LOD	0.004
M623M2	< LOD	0	< LOD	0.0014	0.0076	0.0022	< LOD	0
M626M	0.0086	0.0083	0.002	0.0014	0.0047	0.0022	0.0407	0.004
M651M	0.0127	0.0083	< LOD	0.0014	0.0042	0.0022	0.0106	0.004
M654M	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0136	0.004
M657M1	< LOD	0	< LOD	0.0014	0.0115	0.0022	0.0067	0.004
M657M2	< LOD	0.0083	< LOD	0.0014	0.0028	0.0022	0.0064	0.004
M665M1	0.0123	0.0083	0.0015	0.0014	0.0041	0.0022	< LOD	0.004
M665M2	0.0088	0.0083	< LOD	0.0015	0.0076	0.0022	0.007	0.004
M677M1	0.0123	0.0082	< LOD	0	< LOD	0.0022	< LOD	0
M677M2	< LOD	0	< LOD	0.0014	< LOD	0.0022	< LOD	0.0039
T532M	< LOD	0	< LOD	0.0014	0.0089	0.0022	0.0267	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
A650M	0.0071	0.0063	< LOD	0.0023	0.0085	0.0014	< LOD	0
A669M1	< LOD	0	< LOD	0	0.0178	0.0014	< LOD	0.0048
A669M2	< LOD	0	0.0033	0.0023	0.0178	0.0014	< LOD	0
M472M1	< LOD	0.0000	< LOD	0.0000	0.0062	0.0014	< LOD	0.0000
M472M2	< LOD	0	< LOD	0	0.015	0.0014	< LOD	0.0051
M472M3	0.0066	0.0064	< LOD	0.0023	0.0103	0.0015	< LOD	0.0052
M529M	< LOD	0	< LOD	0	0.0237	0.0014	< LOD	0
M553M	< LOD	0.0063	< LOD	0.0023	0.0055	0.0014	< LOD	0.0048
M582M2	< LOD	0	0.0031	0.0023	0.0418	0.0014	< LOD	0.0048
M584M1	< LOD	0.0063	< LOD	0	0.0184	0.0014	< LOD	0
M584M2	< LOD	0.0062	0.0043	0.0023	0.0141	0.0014	< LOD	0.0048
M592M	0.0146	0.0062	< LOD	0.0023	0.0056	0.0014	< LOD	0
M594M1	0.0148	0.0062	< LOD	0	0.0147	0.0014	< LOD	0.0048
M594M2	0.0087	0.0062	< LOD	0	0.0201	0.0014	< LOD	0.0048
M595M1a	0.0114	0.0062	< LOD	0.0023	0.0904	0.0014	0.0055	0.0048
M595M1b	0.0109	0.0062	< LOD	0	0.009	0.0014	0.0091	0.0048
M595M2	< LOD	0.0063	< LOD	0	0.1029	0.0014	< LOD	0.0048
M601M1	< LOD	0	< LOD	0	0.0132	0.0014	< LOD	0
M601M2	< LOD	0.0063	< LOD	0	0.0124	0.0014	< LOD	0
M616M1	< LOD	0	< LOD	0	0.0671	0.0014	< LOD	0.0048
M616M2	< LOD	0.0062	< LOD	0	0.0028	0.0014	< LOD	0
M616M3	< LOD	0	< LOD	0.0023	0.0033	0.0014	< LOD	0
M616M4	0.0076	0.0062	< LOD	0.0023	0.0089	0.0014	< LOD	0
M617M1	< LOD	0.0063	< LOD	0	0.1188	0.0014	0.0059	0.0047
M617M2	< LOD	0.0063	< LOD	0.0023	0.0223	0.0014	< LOD	0
M619M2	0.0128	0.0062	< LOD	0	0.007	0.0014	< LOD	0.0048
M619M3	0.0144	0.0062	< LOD	0	0.0054	0.0014	0.0055	0.0048
M623M1	< LOD	0.0062	< LOD	0	0.0421	0.0014	< LOD	0.0048
M623M2	< LOD	0	< LOD	0	0.0875	0.0014	< LOD	0.0047
M626M	0.0145	0.0062	< LOD	0.0023	0.0017	0.0014	< LOD	0
M651M	< LOD	0.0063	< LOD	0	0.0056	0.0014	< LOD	0
M654M	< LOD	0.0062	0.0042	0.0023	0.0229	0.0014	< LOD	0
M657M1	0.0065	0.0062	0.003	0.0023	0.0708	0.0014	0.0078	0.0048
M657M2	< LOD	0.0062	0.0028	0.0023	0.1189	0.0014	< LOD	0
M665M1	0.0182	0.0062	0.0041	0.0023	0.2521	0.0014	< LOD	0
M665M2	< LOD	0	< LOD	0	0.2031	0.0014	< LOD	0
M677M1	0.0081	0.0062	< LOD	0	0.006	0.0014	< LOD	0
M677M2	< LOD	0	0.0047	0.0023	0.0188	0.0014	< LOD	0.0042
T532M	< LOD	0.0062	< LOD	0	0.0054	0.0014	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
A650M	0.0385	0.0019	0.3615	0.0053	0.0264	0.0105
A669M1	0.0726	0.0019	0.0239	0.0051	< LOD	0
A669M2	0.1065	0.0019	0.0285	0.0052	< LOD	0.0105
M472M1	0.3467	0.0020	0.9513	0.0054	0.0239	0.0107
M472M2	0.1252	0.002	0.2912	0.0054	< LOD	0
M472M3	0.1147	0.0020	1.4993	0.0058	< LOD	0.0000
M529M	0.063	0.0019	0.0367	0.0052	< LOD	0.0107
M553M	0.0232	0.0019	0.0819	0.0051	< LOD	0.0106
M582M2	0.095	0.0019	0.0164	0.005	< LOD	0
M584M1	0.0576	0.0019	0.0123	0.0051	< LOD	0
M584M2	0.1111	0.0019	0.0099	0.0054	< LOD	0
M592M	0.014	0.0019	0.1712	0.0054	0.0113	0.0105
M594M1	0.0844	0.0019	0.0229	0.0051	< LOD	0
M594M2	0.0982	0.0019	0.0338	0.0051	< LOD	0.0107
M595M1a	0.0598	0.0019	0.4532	0.0052	< LOD	0.0106
M595M1b	0.0373	0.0019	0.4471	0.0053	< LOD	0
M595M2	0.0519	0.0019	0.3188	0.0051	< LOD	0.0106
M601M1	0.032	0.0019	0.1377	0.0052	< LOD	0
M601M2	0.0335	0.0019	0.1286	0.0052	< LOD	0
M616M1	0.0515	0.0019	0.1346	0.0051	< LOD	0.0106
M616M2	0.0248	0.0019	0.0554	0.005	< LOD	0
M616M3	0.0421	0.0019	0.2833	0.0055	< LOD	0.0106
M616M4	0.0242	0.0019	0.0559	0.0055	< LOD	0.0106
M617M1	0.0423	0.0019	0.178	0.0054	< LOD	0.0106
M617M2	0.0392	0.0019	0.0963	0.0055	< LOD	0
M619M2	0.0326	0.0019	0.2563	0.0054	0.0138	0.0106
M619M3	0.037	0.0019	0.1676	0.0051	0.0151	0.0105
M623M1	0.1079	0.0019	0.0075	0.0053	0.0142	0.0105
M623M2	0.0304	0.0019	< LOD	0.0052	< LOD	0
M626M	0.0046	0.0017	0.3772	0.0052	< LOD	0
M651M	0.0395	0.0017	0.3573	0.005	0.0109	0.0105
M654M	0.0173	0.0019	0.0097	0.0053	< LOD	0
M657M1	0.0121	0.0019	0.0095	0.0051	< LOD	0
M657M2	0.009	0.0019	< LOD	0	< LOD	0.0106
M665M1	< LOD	0	0.0087	0.0051	0.0122	0.0105
M665M2	0.0045	0.0019	< LOD	0	< LOD	0
M677M1	0.0758	0.0017	0.0197	0.0053	< LOD	0
M677M2	0.036	0.0017	0.014	0.0051	0.0292	0.0104
T532M	0.0448	0.0019	0.1854	0.0055	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
T534M1	Thin section	F-Zone	BIF	0.0271	0.0018	0.0055	0.0015	< LOD	0
T534M2	Thin section	F-Zone	BIF	0.0575	0.0017	< LOD	0	< LOD	0.0047
T564M	Thin section	Tiriganiaq	Magmatic	0.0481	0.0018	0.0033	0.0015	< LOD	0
T569M1	Thin section	Tiriganiaq	BIF	0.0223	0.0018	< LOD	0.0015	0.0089	0.0047
T569M2	Thin section	Tiriganiaq	BIF	0.019	0.0018	0.0025	0.0015	< LOD	0
669D1M10	EPD	Discovery	NA	0.1955	0.0017	0.0343	0.0015	< LOD	0
669D1M11	EPD	Discovery	NA	0.0647	0.0018	0.002	0.0015	< LOD	0
669D1M19	EPD	Discovery	NA	0.0753	0.0018	0.0064	0.0015	< LOD	0
669D1M20	EPD	Discovery	NA	0.0482	0.0018	0.0037	0.0015	< LOD	0
669D1M24	EPD	Discovery	NA	0.0698	0.0018	< LOD	0.0015	< LOD	0.0049
669D1M29	EPD	Discovery	NA	0.0646	0.0018	0.0222	0.0015	< LOD	0
669D1M3	EPD	Discovery	NA	0.0713	0.0018	0.121	0.0015	0.0069	0.0047
669D1M30	EPD	Discovery	NA	0.0412	0.0018	< LOD	0.0015	< LOD	0
669D1M32	EPD	Discovery	NA	0.0705	0.0018	0.017	0.0015	< LOD	0.0048
669D1M33	EPD	Discovery	NA	0.0865	0.0018	0.0083	0.0015	< LOD	0.0047
669D1M36	EPD	Discovery	NA	0.0641	0.0018	< LOD	0	< LOD	0
669D1M45	EPD	Discovery	NA	0.0779	0.0018	0.0295	0.0015	< LOD	0
669D1M51	EPD	Discovery	NA	0.0445	0.0017	0.0262	0.0015	0.0106	0.0047
669D1M58	EPD	Discovery	NA	0.0616	0.0018	0.0084	0.0015	< LOD	0
669D1M64	EPD	Discovery	NA	0.0607	0.0018	0.0034	0.0015	< LOD	0
669D1M68	EPD	Discovery	NA	0.0728	0.0018	0.002	0.0015	< LOD	0
669D1M69	EPD	Discovery	NA	0.0743	0.0018	< LOD	0.0015	0.0052	0.0048
669D1M70	EPD	Discovery	NA	0.0467	0.0018	< LOD	0.0015	< LOD	0
669D1M71	EPD	Discovery	NA	0.0748	0.0017	< LOD	0.0015	< LOD	0.0048
669D1M75	EPD	Discovery	NA	0.0826	0.0018	0.0071	0.0015	< LOD	0.0048
669D1M88	EPD	Discovery	NA	0.0696	0.0018	< LOD	0	0.0094	0.0047
669D1M90	EPD	Discovery	NA	0.0641	0.0018	0.0071	0.0015	0.0113	0.0047
669D2M1	EPD	Discovery	NA	0.0698	0.0018	0.0063	0.0015	0.0091	0.0046
669D2M13	EPD	Discovery	NA	0.0691	0.0018	< LOD	0	< LOD	0
669D2M16	EPD	Discovery	NA	0.083	0.0018	< LOD	0	0.0048	0.0047
669D2M2	EPD	Discovery	NA	0.074	0.0018	0.0036	0.0015	< LOD	0.0046
669D2M22	EPD	Discovery	NA	0.0764	0.0018	0.009	0.0015	< LOD	0
669D2M24	EPD	Discovery	NA	0.0667	0.0018	< LOD	0	< LOD	0
669D2M33	EPD	Discovery	NA	0.0647	0.0018	0.0044	0.0015	< LOD	0.0048
669D2M35	EPD	Discovery	NA	0.0688	0.0018	0.0039	0.0015	< LOD	0
669D2M39	EPD	Discovery	NA	0.062	0.0018	0.0027	0.0015	< LOD	0
669D2M43	EPD	Discovery	NA	0.0707	0.0018	0.0032	0.0015	< LOD	0
669D2M45	EPD	Discovery	NA	0.0536	0.0018	0.0683	0.0015	0.0143	0.0045
669D2M46	EPD	Discovery	NA	0.0801	0.0018	0.0029	0.0015	< LOD	0.0047

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
T534M1	< LOD	0.0083	< LOD	0	0.0032	0.0022	0.0106	0.0039
T534M2	0.027	0.0083	< LOD	0.0014	< LOD	0	0.012	0.004
T564M	< LOD	0.0084	< LOD	0	0.0073	0.0022	0.0402	0.004
T569M1	< LOD	0.0083	< LOD	0	0.0024	0.0022	< LOD	0.004
T569M2	0.0205	0.0083	< LOD	0	0.0073	0.0022	< LOD	0
669D1M10	0.0276	0.0083	0.0339	0.0014	0.1478	0.0022	0.0236	0.004
669D1M11	< LOD	0	< LOD	0	< LOD	0.0022	0.0078	0.0039
669D1M19	< LOD	0	0.0019	0.0014	0.013	0.0022	0.0043	0.004
669D1M20	< LOD	0	0.0018	0.0014	0.0023	0.0022	0.0203	0.0039
669D1M24	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0121	0.004
669D1M29	< LOD	0	< LOD	0	< LOD	0	0.016	0.004
669D1M3	< LOD	0	0.0024	0.0014	< LOD	0	0.0064	0.0039
669D1M30	< LOD	0.0082	< LOD	0	0.0041	0.0022	0.0054	0.004
669D1M32	0.0103	0.0082	0.0026	0.0014	0.0324	0.0022	0.0079	0.004
669D1M33	< LOD	0.0082	< LOD	0.0014	0.0037	0.0021	0.0069	0.004
669D1M36	< LOD	0	< LOD	0	< LOD	0.0022	0.0076	0.004
669D1M45	0.0105	0.0082	< LOD	0	< LOD	0	0.0065	0.004
669D1M51	< LOD	0	< LOD	0	< LOD	0	0.0178	0.0039
669D1M58	< LOD	0.0082	< LOD	0	< LOD	0.0022	0.0078	0.004
669D1M64	0.0108	0.0083	< LOD	0	< LOD	0.0022	< LOD	0.004
669D1M68	< LOD	0.0083	< LOD	0.0014	< LOD	0	0.0126	0.0039
669D1M69	0.019	0.0082	0.0026	0.0014	< LOD	0	< LOD	0.004
669D1M70	0.0113	0.0082	< LOD	0.0014	< LOD	0.0022	0.0081	0.0039
669D1M71	< LOD	0.0083	< LOD	0	< LOD	0	0.0076	0.004
669D1M75	< LOD	0	< LOD	0	0.144	0.0022	0.0197	0.004
669D1M88	< LOD	0.0082	0.0019	0.0014	< LOD	0.0022	0.0091	0.004
669D1M90	< LOD	0.0082	< LOD	0	0.0046	0.0022	0.0079	0.004
669D2M1	0.0137	0.0083	< LOD	0.0014	< LOD	0.0022	0.0119	0.0039
669D2M13	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0117	0.004
669D2M16	< LOD	0.0082	< LOD	0	< LOD	0.0022	0.0079	0.004
669D2M2	< LOD	0.0083	< LOD	0	< LOD	0	0.0052	0.004
669D2M22	< LOD	0.0082	0.0037	0.0014	< LOD	0	0.0094	0.004
669D2M24	< LOD	0	< LOD	0	< LOD	0.0022	0.0055	0.0039
669D2M33	0.0085	0.0083	< LOD	0	0.0023	0.0022	0.0063	0.004
669D2M35	< LOD	0.0083	< LOD	0.0014	< LOD	0	0.0093	0.004
669D2M39	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0061	0.004
669D2M43	0.0088	0.0083	< LOD	0	0.0037	0.0022	< LOD	0.004
669D2M45	< LOD	0.0083	0.0039	0.0014	< LOD	0.0022	0.0081	0.004
669D2M46	0.0116	0.0082	< LOD	0	< LOD	0	0.0046	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
T534M1	< LOD	0	< LOD	0	0.0109	0.0014	< LOD	0
T534M2	< LOD	0	< LOD	0.0023	0.0144	0.0014	< LOD	0.0047
T564M	< LOD	0	< LOD	0.0023	0.0158	0.0014	< LOD	0
T569M1	< LOD	0	< LOD	0.0023	0.03	0.0014	< LOD	0
T569M2	< LOD	0.0062	< LOD	0.0023	0.0316	0.0014	< LOD	0
669D1M10	< LOD	0	< LOD	0.0023	1.0846	0.0014	< LOD	0.0044
669D1M11	< LOD	0	< LOD	0.0023	0.0273	0.0014	< LOD	0.0044
669D1M19	< LOD	0	< LOD	0	0.0969	0.0014	< LOD	0
669D1M20	< LOD	0	< LOD	0	0.0355	0.0014	< LOD	0
669D1M24	< LOD	0	< LOD	0	0.0775	0.0014	< LOD	0.0044
669D1M29	< LOD	0.0062	< LOD	0.0023	0.7113	0.0014	< LOD	0
669D1M3	0.0104	0.0061	< LOD	0	0.0565	0.0014	< LOD	0.0045
669D1M30	< LOD	0.0062	< LOD	0.0023	0.0025	0.0014	< LOD	0
669D1M32	< LOD	0	< LOD	0	0.1585	0.0014	< LOD	0
669D1M33	< LOD	0	< LOD	0	0.0254	0.0014	0.0048	0.0044
669D1M36	0.0117	0.0062	< LOD	0	0.0178	0.0014	< LOD	0
669D1M45	0.0066	0.0062	< LOD	0.0023	0.0148	0.0014	< LOD	0
669D1M51	< LOD	0.0062	< LOD	0	0.0289	0.0014	< LOD	0
669D1M58	< LOD	0	< LOD	0	0.0367	0.0014	< LOD	0
669D1M64	< LOD	0	< LOD	0.0023	0.0219	0.0014	< LOD	0
669D1M68	0.0071	0.0062	< LOD	0	0.014	0.0014	< LOD	0
669D1M69	< LOD	0	< LOD	0.0023	0.0142	0.0014	< LOD	0.0044
669D1M70	< LOD	0	0.0024	0.0023	0.0157	0.0014	< LOD	0.0044
669D1M71	< LOD	0	< LOD	0	0.0173	0.0014	< LOD	0.0044
669D1M75	< LOD	0	< LOD	0.0023	0.7694	0.0014	< LOD	0
669D1M88	< LOD	0.0062	< LOD	0	0.0156	0.0014	< LOD	0
669D1M90	0.0064	0.0062	< LOD	0.0023	0.0448	0.0014	< LOD	0
669D2M1	< LOD	0.0062	< LOD	0.0023	0.0428	0.0014	< LOD	0
669D2M13	< LOD	0	< LOD	0	0.0244	0.0014	< LOD	0.0045
669D2M16	< LOD	0.0062	< LOD	0	0.027	0.0014	< LOD	0
669D2M2	< LOD	0	< LOD	0	0.0191	0.0014	< LOD	0
669D2M22	< LOD	0	0.0034	0.0023	0.0293	0.0014	< LOD	0
669D2M24	< LOD	0.0062	< LOD	0.0023	0.0196	0.0014	< LOD	0
669D2M33	< LOD	0	< LOD	0	0.0263	0.0014	< LOD	0.0045
669D2M35	< LOD	0.0062	< LOD	0	0.1115	0.0014	< LOD	0
669D2M39	< LOD	0.0062	0.0032	0.0023	0.0153	0.0014	< LOD	0
669D2M43	0.0074	0.0062	0.0135	0.0023	0.1972	0.0014	< LOD	0
669D2M45	< LOD	0	0.0027	0.0023	0.0201	0.0014	< LOD	0.0045
669D2M46	< LOD	0	< LOD	0.0023	0.0179	0.0014	0.0066	0.0044

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
T534M1	< LOD	0	< LOD	0.0052	0.0169	0.0104
T534M2	0.0054	0.0019	< LOD	0	0.0186	0.0105
T564M	0.0572	0.0019	0.4242	0.0053	< LOD	0.0106
T569M1	0.0039	0.0019	< LOD	0.0052	0.0132	0.0105
T569M2	< LOD	0.0019	< LOD	0.0052	< LOD	0
669D1M10	0.0049	0.0018	0.0068	0.005	< LOD	0
669D1M11	0.1143	0.0018	0.027	0.0052	< LOD	0
669D1M19	0.0528	0.0018	0.0077	0.0053	0.02	0.0104
669D1M20	0.0434	0.0018	0.0199	0.0053	< LOD	0.0105
669D1M24	0.0814	0.0018	0.0228	0.0052	< LOD	0
669D1M29	0.1011	0.0018	0.0268	0.0053	< LOD	0.0106
669D1M3	0.0624	0.0018	0.011	0.0053	0.0204	0.0104
669D1M30	0.0025	0.0018	< LOD	0	< LOD	0.0105
669D1M32	0.113	0.0018	0.0468	0.0051	< LOD	0.0106
669D1M33	0.1042	0.0018	0.0404	0.0051	< LOD	0
669D1M36	0.0811	0.0018	0.0217	0.0053	< LOD	0
669D1M45	0.0732	0.0018	0.0086	0.0054	< LOD	0.0105
669D1M51	0.0644	0.0018	0.0258	0.0053	0.011	0.0104
669D1M58	0.0553	0.0018	0.0126	0.0052	< LOD	0.0105
669D1M64	0.1339	0.0018	0.1162	0.0052	< LOD	0
669D1M68	0.0545	0.0018	< LOD	0.0053	< LOD	0.0105
669D1M69	0.0386	0.0018	0.0538	0.0051	0.0108	0.0104
669D1M70	0.0285	0.0018	< LOD	0.0051	< LOD	0
669D1M71	0.0388	0.0018	0.041	0.005	< LOD	0.0105
669D1M75	0.0619	0.0018	0.0279	0.0053	< LOD	0
669D1M88	0.051	0.0018	0.0174	0.0052	< LOD	0.0105
669D1M90	0.128	0.0018	0.0282	0.0052	< LOD	0.0105
669D2M1	0.0892	0.0018	0.0237	0.0054	0.0304	0.0104
669D2M13	0.0972	0.0018	0.0292	0.0053	< LOD	0.0105
669D2M16	0.1214	0.0018	0.0175	0.0054	< LOD	0.0105
669D2M2	0.1214	0.0018	0.0214	0.0054	< LOD	0
669D2M22	0.1333	0.0018	0.0386	0.005	< LOD	0
669D2M24	0.0802	0.0018	0.0173	0.0053	< LOD	0
669D2M33	0.0964	0.0018	0.037	0.0052	< LOD	0
669D2M35	0.0744	0.0018	0.0147	0.0051	0.015	0.0105
669D2M39	0.0344	0.0018	0.0215	0.0052	< LOD	0.0104
669D2M43	0.0822	0.0018	0.0203	0.0052	0.0124	0.0105
669D2M45	0.0802	0.0018	0.0288	0.0052	0.0198	0.0106
669D2M46	0.1586	0.0018	0.0467	0.0053	< LOD	0.0105

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
669D2M48	EPD	Discovery	NA	0.072	0.0018	0.0075	0.0015	< LOD	0
669D2M51	EPD	Discovery	NA	0.0609	0.0018	0.0061	0.0015	0.0057	0.0047
669D2M52	EPD	Discovery	NA	0.0866	0.0018	< LOD	0	0.0111	0.0048
669D2M55	EPD	Discovery	NA	0.0651	0.0018	< LOD	0	< LOD	0.0047
669D2M56	EPD	Discovery	NA	0.0798	0.0017	0.0028	0.0015	< LOD	0.0047
669D2M59	EPD	Discovery	NA	0.0609	0.0018	0.0115	0.0015	< LOD	0.0048
669D2M6	EPD	Discovery	NA	0.069	0.0018	0.0034	0.0015	< LOD	0.0048
669D2M60	EPD	Discovery	NA	0.0651	0.0018	< LOD	0.0015	< LOD	0
669D2M61	EPD	Discovery	NA	0.0821	0.0018	0.0034	0.0015	< LOD	0
669D2M63	EPD	Discovery	NA	0.0894	0.0017	0.0062	0.0015	< LOD	0.0046
669D2M64	EPD	Discovery	NA	0.0655	0.0018	0.0096	0.0015	0.0101	0.0046
669D2M80	EPD	Discovery	NA	0.0726	0.0018	0.0043	0.0015	< LOD	0.0048
669D2M81	EPD	Discovery	NA	0.0675	0.0018	0.0073	0.0015	< LOD	0
598D1M11	EPD	Pump	NA	0.028	0.0018	0.0737	0.0015	< LOD	0
598D1M12	EPD	Pump	NA	0.0201	0.0018	0.0022	0.0015	< LOD	0
598D1M13	EPD	Pump	NA	0.0182	0.0018	0.0036	0.0015	< LOD	0.0046
598D1M15	EPD	Pump	NA	0.0105	0.0017	< LOD	0.0015	< LOD	0.0047
598D1M16	EPD	Pump	NA	0.0146	0.0018	0.0508	0.0015	< LOD	0
598D1M17	EPD	Pump	NA	0.0167	0.0017	< LOD	0.0015	0.0054	0.0047
598D1M18	EPD	Pump	NA	0.0216	0.0018	0.028	0.0015	< LOD	0
598D1M19	EPD	Pump	NA	0.0226	0.0018	< LOD	0.0015	< LOD	0
598D1M2	EPD	Pump	NA	0.0175	0.0018	0.0181	0.0015	< LOD	0
598D1M21	EPD	Pump	NA	0.0146	0.0018	0.0659	0.0015	< LOD	0
598D1M22	EPD	Pump	NA	0.025	0.0018	0.003	0.0015	< LOD	0
598D1M23	EPD	Pump	NA	0.0115	0.0018	0.1211	0.0015	< LOD	0
598D1M24	EPD	Pump	NA	0.0226	0.0018	0.0027	0.0015	< LOD	0.0047
598D1M27	EPD	Pump	NA	0.0132	0.0018	0.0026	0.0015	0.0113	0.0046
598D1M28	EPD	Pump	NA	0.0193	0.0017	0.0045	0.0015	< LOD	0.0047
598D1M29	EPD	Pump	NA	0.0187	0.0018	< LOD	0.0015	< LOD	0
598D1M3	EPD	Pump	NA	0.0103	0.0018	0.0079	0.0015	< LOD	0
598D1M30	EPD	Pump	NA	0.0228	0.0018	< LOD	0.0015	< LOD	0
598D1M32	EPD	Pump	NA	0.023	0.0018	0.0312	0.0015	< LOD	0.0047
598D1M33	EPD	Pump	NA	0.0105	0.0018	0.0036	0.0015	< LOD	0
598D1M34	EPD	Pump	NA	0.0176	0.0018	0.0029	0.0015	< LOD	0
598D1M35	EPD	Pump	NA	0.0195	0.0018	0.0038	0.0015	< LOD	0
598D1M36	EPD	Pump	NA	0.0164	0.0018	< LOD	0.0015	< LOD	0.0047
598D1M38	EPD	Pump	NA	0.063	0.0017	0.015	0.0015	< LOD	0
598D1M39	EPD	Pump	NA	0.0181	0.0018	< LOD	0	0.0047	0.0046
598D1M4	EPD	Pump	NA	0.0196	0.0018	0.0025	0.0015	0.0134	0.0046

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
669D2M48	0.0149	0.0082	< LOD	0.0014	0.0124	0.0022	< LOD	0
669D2M51	0.0093	0.0082	< LOD	0.0014	0.006	0.0022	0.0052	0.004
669D2M52	< LOD	0	< LOD	0	< LOD	0	0.005	0.004
669D2M55	0.0219	0.0082	< LOD	0	0.0032	0.0022	0.0073	0.004
669D2M56	0.0111	0.0082	< LOD	0	0.0049	0.0022	0.0137	0.0039
669D2M59	0.013	0.0083	< LOD	0	0.0049	0.0022	0.005	0.004
669D2M6	0.0156	0.0082	< LOD	0	< LOD	0.0022	0.0053	0.0039
669D2M60	< LOD	0.0083	0.0018	0.0014	< LOD	0.0022	0.0156	0.0039
669D2M61	< LOD	0.0082	< LOD	0	0.0032	0.0022	0.0052	0.004
669D2M63	< LOD	0.0083	< LOD	0	0.0302	0.0022	0.0277	0.0039
669D2M64	< LOD	0.0083	< LOD	0.0014	0.1232	0.0022	0.0238	0.004
669D2M80	< LOD	0	< LOD	0	0.0044	0.0022	0.0091	0.004
669D2M81	< LOD	0.0083	0.0015	0.0014	0.004	0.0022	0.0163	0.0039
598D1M11	0.0094	0.0083	0.002	0.0014	< LOD	0.0022	0.01	0.004
598D1M12	< LOD	0.0083	< LOD	0.0014	0.0048	0.0021	< LOD	0.0039
598D1M13	< LOD	0.0082	0.019	0.0014	< LOD	0.0022	0.0084	0.0039
598D1M15	0.0095	0.0082	0.0281	0.0014	< LOD	0.0022	< LOD	0.004
598D1M16	< LOD	0.0083	0.0078	0.0014	0.0023	0.0022	0.0088	0.004
598D1M17	< LOD	0.0082	< LOD	0	< LOD	0.0022	0.0172	0.004
598D1M18	< LOD	0	0.0056	0.0014	0.0025	0.0022	0.0072	0.004
598D1M19	0.0208	0.0082	< LOD	0	< LOD	0.0022	0.0139	0.004
598D1M2	< LOD	0	< LOD	0	< LOD	0.0022	0.0086	0.0039
598D1M21	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0207	0.0039
598D1M22	< LOD	0.0083	< LOD	0.0014	0.0032	0.0022	0.0069	0.0039
598D1M23	< LOD	0.0082	< LOD	0	< LOD	0	0.0181	0.004
598D1M24	< LOD	0.0083	< LOD	0	0.0041	0.0021	0.0117	0.004
598D1M27	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0128	0.0039
598D1M28	0.0156	0.0082	< LOD	0	0.0034	0.0022	0.0041	0.004
598D1M29	< LOD	0.0082	0.0022	0.0014	0.0034	0.0022	0.0189	0.0039
598D1M3	< LOD	0	0.0058	0.0014	< LOD	0.0022	0.0104	0.004
598D1M30	< LOD	0.0083	< LOD	0.0014	0.0054	0.0022	0.0136	0.0039
598D1M32	< LOD	0.0082	0.0053	0.0014	< LOD	0	0.008	0.004
598D1M33	< LOD	0.0082	0.0021	0.0014	< LOD	0.0022	0.0092	0.004
598D1M34	< LOD	0	0.0032	0.0014	0.0079	0.0022	0.0075	0.0039
598D1M35	< LOD	0	< LOD	0	< LOD	0	0.0099	0.004
598D1M36	0.0134	0.0082	< LOD	0.0014	0.0044	0.0022	0.0174	0.0039
598D1M38	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0145	0.0039
598D1M39	< LOD	0	< LOD	0	< LOD	0	0.0149	0.004
598D1M4	0.0142	0.0082	0.0041	0.0014	0.0036	0.0022	0.0121	0.0039

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
669D2M48	< LOD	0	< LOD	0.0023	0.0742	0.0014	< LOD	0
669D2M51	< LOD	0	< LOD	0	0.0628	0.0014	< LOD	0
669D2M52	0.0068	0.0062	< LOD	0.0023	0.0267	0.0014	< LOD	0
669D2M55	< LOD	0	< LOD	0	0.0282	0.0014	< LOD	0.0045
669D2M56	< LOD	0.0062	< LOD	0	0.0273	0.0014	0.0066	0.0044
669D2M59	< LOD	0	0.1784	0.0023	0.0206	0.0014	< LOD	0
669D2M6	< LOD	0.0062	0.003	0.0023	0.089	0.0014	< LOD	0
669D2M60	< LOD	0.0062	< LOD	0	0.0229	0.0014	< LOD	0
669D2M61	< LOD	0	< LOD	0	0.0336	0.0014	< LOD	0.0045
669D2M63	< LOD	0.0062	< LOD	0.0023	0.0882	0.0014	< LOD	0.0045
669D2M64	< LOD	0	< LOD	0	0.6435	0.0014	< LOD	0
669D2M80	< LOD	0.0062	< LOD	0	0.0375	0.0014	0.0114	0.0044
669D2M81	< LOD	0.0062	< LOD	0.0023	0.0306	0.0014	< LOD	0.0045
598D1M11	< LOD	0	0.0033	0.0023	0.0128	0.0014	< LOD	0
598D1M12	< LOD	0.0062	< LOD	0.0023	0.0177	0.0014	0.0084	0.0042
598D1M13	< LOD	0	< LOD	0.0023	0.024	0.0014	0.0073	0.0043
598D1M15	< LOD	0.0062	< LOD	0	0.0258	0.0014	< LOD	0
598D1M16	< LOD	0.0062	0.0034	0.0023	0.0139	0.0014	< LOD	0.0043
598D1M17	< LOD	0.0062	< LOD	0.0023	0.0206	0.0014	< LOD	0
598D1M18	< LOD	0.0062	< LOD	0	0.0209	0.0014	< LOD	0
598D1M19	< LOD	0.0062	< LOD	0	0.0932	0.0014	< LOD	0
598D1M2	0.0068	0.0062	< LOD	0.0023	0.0326	0.0014	< LOD	0
598D1M21	< LOD	0	0.0589	0.0023	0.0126	0.0014	< LOD	0
598D1M22	< LOD	0	< LOD	0.0023	0.0243	0.0014	0.0084	0.0042
598D1M23	< LOD	0.0062	< LOD	0	0.0175	0.0014	< LOD	0
598D1M24	< LOD	0	< LOD	0.0023	0.2953	0.0014	< LOD	0
598D1M27	< LOD	0.0061	< LOD	0.0023	0.0207	0.0014	0.0054	0.0042
598D1M28	< LOD	0	< LOD	0.0023	0.0209	0.0014	0.0053	0.0042
598D1M29	< LOD	0	< LOD	0	0.0385	0.0014	< LOD	0.0042
598D1M3	0.007	0.0062	0.0076	0.0023	0.0192	0.0014	0.0062	0.0043
598D1M30	< LOD	0	< LOD	0	0.0436	0.0014	< LOD	0.0042
598D1M32	< LOD	0.0062	< LOD	0.0023	0.0141	0.0014	< LOD	0
598D1M33	< LOD	0.0062	< LOD	0	0.0317	0.0014	0.0054	0.0044
598D1M34	< LOD	0	0.0026	0.0023	0.0145	0.0014	< LOD	0
598D1M35	< LOD	0	< LOD	0	0.1127	0.0014	< LOD	0
598D1M36	< LOD	0.0062	< LOD	0	0.0312	0.0014	< LOD	0
598D1M38	0.0106	0.0062	< LOD	0	0.0092	0.0014	< LOD	0
598D1M39	< LOD	0.0062	< LOD	0	0.0249	0.0014	< LOD	0
598D1M4	< LOD	0.0062	< LOD	0	0.0192	0.0014	< LOD	0.0043

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
669D2M48	0.0599	0.0018	0.0296	0.0051	< LOD	0.0105
669D2M51	0.0731	0.0018	0.0729	0.0051	< LOD	0
669D2M52	0.0427	0.0018	0.019	0.0052	< LOD	0
669D2M55	0.1429	0.0018	0.0204	0.0054	< LOD	0
669D2M56	0.0697	0.0018	0.0134	0.0052	< LOD	0
669D2M59	0.1077	0.0018	0.019	0.0053	< LOD	0
669D2M6	0.0436	0.0018	0.0246	0.0053	0.0126	0.0105
669D2M60	0.0714	0.0018	0.0138	0.0052	0.0111	0.0105
669D2M61	0.09	0.0018	0.033	0.0052	0.0164	0.0104
669D2M63	0.0685	0.0018	0.0089	0.0054	< LOD	0
669D2M64	0.0727	0.0018	0.0329	0.0054	< LOD	0
669D2M80	0.0558	0.0018	0.011	0.0054	< LOD	0.0105
669D2M81	0.0732	0.0018	0.0728	0.0052	< LOD	0.0106
598D1M11	< LOD	0.0017	0.0111	0.0053	0.0197	0.0104
598D1M12	< LOD	0	0.0091	0.0051	< LOD	0
598D1M13	< LOD	0.0017	0.0175	0.0049	0.0305	0.0103
598D1M15	< LOD	0.0017	0.0118	0.0051	0.0147	0.0104
598D1M16	< LOD	0	0.0128	0.0051	< LOD	0.0105
598D1M17	< LOD	0	0.0077	0.0052	< LOD	0.0105
598D1M18	< LOD	0	< LOD	0.0051	< LOD	0.0105
598D1M19	< LOD	0.0017	0.0063	0.0051	< LOD	0.0105
598D1M2	< LOD	0	< LOD	0.0052	< LOD	0.0105
598D1M21	< LOD	0	0.0146	0.0052	< LOD	0.0105
598D1M22	< LOD	0.0017	0.016	0.005	< LOD	0.0105
598D1M23	0.0035	0.0017	0.0206	0.0051	< LOD	0.0105
598D1M24	< LOD	0	< LOD	0.0053	< LOD	0.0104
598D1M27	< LOD	0	0.0164	0.005	0.0138	0.0105
598D1M28	0.0035	0.0017	0.0078	0.0051	< LOD	0.0105
598D1M29	< LOD	0	0.0063	0.0052	< LOD	0
598D1M3	< LOD	0	0.0137	0.0051	0.2778	0.0105
598D1M30	< LOD	0.0017	0.0058	0.0052	0.0181	0.0105
598D1M32	< LOD	0	0.0179	0.0052	< LOD	0.0105
598D1M33	< LOD	0	< LOD	0.0052	0.03	0.0105
598D1M34	< LOD	0.0018	0.0072	0.0053	< LOD	0
598D1M35	0.0027	0.0018	< LOD	0	< LOD	0.0105
598D1M36	< LOD	0	< LOD	0.0052	< LOD	0
598D1M38	< LOD	0	< LOD	0.0053	0.019	0.0104
598D1M39	< LOD	0.0018	0.0096	0.0051	< LOD	0
598D1M4	< LOD	0.0017	0.0067	0.0052	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
598D1M40	EPD	Pump	NA	0.0173	0.0017	0.0052	0.0015	< LOD	0
598D1M41	EPD	Pump	NA	0.0286	0.0018	0.0249	0.0015	< LOD	0.0047
598D1M42	EPD	Pump	NA	0.0552	0.0018	0.0082	0.0015	< LOD	0.0046
598D1M43	EPD	Pump	NA	0.0154	0.0018	0.0036	0.0015	< LOD	0
598D1M44	EPD	Pump	NA	0.0184	0.0018	0.0998	0.0015	< LOD	0.0047
598D1M45	EPD	Pump	NA	0.0228	0.0018	0.0123	0.0015	< LOD	0.0046
598D1M47	EPD	Pump	NA	0.0159	0.0018	0.0022	0.0015	< LOD	0
598D1M48	EPD	Pump	NA	0.0473	0.0018	0.0073	0.0015	0.0127	0.0046
598D1M49	EPD	Pump	NA	0.0274	0.0018	0.0073	0.0015	< LOD	0
598D1M50	EPD	Pump	NA	0.0186	0.0018	0.0512	0.0015	< LOD	0
598D1M51	EPD	Pump	NA	0.0248	0.0018	0.0289	0.0015	< LOD	0.0048
598D1M52	EPD	Pump	NA	0.0208	0.0018	0.0031	0.0015	0.0079	0.0047
598D1M53	EPD	Pump	NA	0.0189	0.0018	< LOD	0.0015	< LOD	0
598D1M54	EPD	Pump	NA	0.0299	0.0018	0.0665	0.0015	0.0081	0.0048
598D1M55	EPD	Pump	NA	0.0131	0.0018	< LOD	0.0015	< LOD	0
598D1M56	EPD	Pump	NA	0.029	0.0018	0.0058	0.0015	< LOD	0.0048
598D1M57	EPD	Pump	NA	0.0256	0.0018	< LOD	0	< LOD	0
598D1M58	EPD	Pump	NA	0.0286	0.0017	0.0028	0.0015	< LOD	0.0046
598D1M59	EPD	Pump	NA	0.0151	0.0017	0.0168	0.0015	0.0091	0.0049
598D1M6	EPD	Pump	NA	0.0118	0.0017	0.2234	0.0015	< LOD	0
598D1M60	EPD	Pump	NA	0.0141	0.0018	< LOD	0.0015	0.0076	0.0047
598D1M61	EPD	Pump	NA	0.0089	0.0018	0.3914	0.0015	< LOD	0
598D1M63	EPD	Pump	NA	0.0381	0.0018	0.0086	0.0015	< LOD	0.0048
598D1M64	EPD	Pump	NA	0.0057	0.0018	0.0025	0.0015	< LOD	0
598D1M65	EPD	Pump	NA	0.0233	0.0018	0.0023	0.0015	< LOD	0
598D1M66	EPD	Pump	NA	0.0211	0.0018	0.0035	0.0015	< LOD	0
598D1M68	EPD	Pump	NA	0.0199	0.0018	< LOD	0.0015	< LOD	0.0048
598D1M69	EPD	Pump	NA	0.0194	0.0017	0.1187	0.0015	< LOD	0.0048
598D1M7	EPD	Pump	NA	0.0104	0.0018	0.2782	0.0015	< LOD	0.0048
598D1M70	EPD	Pump	NA	0.0205	0.0016	0.0067	0.0015	< LOD	0.0047
598D1M71	EPD	Pump	NA	0.0219	0.0018	0.0027	0.0015	< LOD	0
598D1M72	EPD	Pump	NA	0.0226	0.0018	0.0087	0.0015	< LOD	0.0047
598D1M73	EPD	Pump	NA	0.0332	0.0018	0.002	0.0015	< LOD	0.0047
598D1M74	EPD	Pump	NA	0.0255	0.0018	0.0755	0.0015	< LOD	0
598D1M75	EPD	Pump	NA	0.0394	0.0017	0.8281	0.0015	< LOD	0
598D1M76	EPD	Pump	NA	0.0236	0.0018	0.0023	0.0015	< LOD	0
598D1M77	EPD	Pump	NA	0.0155	0.0018	0.0043	0.0015	< LOD	0
598D1M79	EPD	Pump	NA	0.0231	0.0018	0.0022	0.0015	< LOD	0
598D1M8	EPD	Pump	NA	0.0172	0.0018	< LOD	0	0.0065	0.0046

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
598D1M40	< LOD	0.0082	0.0155	0.0014	< LOD	0.0022	< LOD	0.004
598D1M41	< LOD	0	< LOD	0	0.0029	0.0021	0.0126	0.0039
598D1M42	< LOD	0.0082	< LOD	0	0.0031	0.0022	< LOD	0.004
598D1M43	< LOD	0	< LOD	0.0014	< LOD	0	0.0109	0.004
598D1M44	0.0109	0.0082	0.0025	0.0014	0.0047	0.0022	0.0151	0.0039
598D1M45	< LOD	0	< LOD	0	0.0028	0.0022	0.0085	0.004
598D1M47	0.0103	0.0082	< LOD	0	0.0025	0.0022	0.0106	0.004
598D1M48	< LOD	0	0.0179	0.0014	0.014	0.0021	0.0108	0.004
598D1M49	< LOD	0	< LOD	0	0.0034	0.0021	0.0109	0.0039
598D1M50	0.0093	0.0082	< LOD	0	< LOD	0	0.0251	0.0039
598D1M51	< LOD	0.0083	< LOD	0	< LOD	0.0021	0.0077	0.004
598D1M52	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0177	0.0039
598D1M53	< LOD	0.0082	< LOD	0.0014	< LOD	0.0022	0.0182	0.0039
598D1M54	0.0157	0.0082	0.0015	0.0014	< LOD	0.0022	0.0164	0.004
598D1M55	< LOD	0.0082	< LOD	0.0014	< LOD	0.0021	0.0108	0.004
598D1M56	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0072	0.004
598D1M57	0.0131	0.0082	0.0017	0.0014	0.0076	0.0022	0.0081	0.0039
598D1M58	< LOD	0.0083	< LOD	0	< LOD	0.0021	0.0068	0.0039
598D1M59	< LOD	0.0082	0.0089	0.0014	< LOD	0	< LOD	0.004
598D1M6	0.0101	0.0082	0.0022	0.0014	0.0033	0.0022	0.0183	0.004
598D1M60	0.0103	0.0083	< LOD	0	< LOD	0	0.0053	0.0039
598D1M61	< LOD	0.0083	< LOD	0.0014	< LOD	0	0.0313	0.004
598D1M63	< LOD	0.0083	< LOD	0.0014	0.0046	0.0022	< LOD	0.0039
598D1M64	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0141	0.0039
598D1M65	< LOD	0.0082	< LOD	0	< LOD	0	0.0106	0.0039
598D1M66	< LOD	0	< LOD	0.0014	< LOD	0.0022	0.0106	0.0039
598D1M68	< LOD	0.0083	< LOD	0	0.0051	0.0021	0.0068	0.0039
598D1M69	0.0084	0.0082	0.0228	0.0014	0.0041	0.0021	0.009	0.004
598D1M7	< LOD	0.0083	< LOD	0.0014	0.0038	0.0022	0.032	0.004
598D1M70	0.0111	0.0083	< LOD	0	0.0577	0.0022	0.0152	0.0039
598D1M71	< LOD	0.0082	0.0193	0.0014	< LOD	0	0.0081	0.0039
598D1M72	< LOD	0.0083	< LOD	0.0014	0.0043	0.0022	< LOD	0.004
598D1M73	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	< LOD	0
598D1M74	0.0126	0.0082	0.0156	0.0014	< LOD	0	0.0151	0.004
598D1M75	< LOD	0.0083	< LOD	0	0.1542	0.0022	0.0567	0.004
598D1M76	0.0115	0.0082	0.0029	0.0014	< LOD	0	< LOD	0.004
598D1M77	< LOD	0	< LOD	0	0.3655	0.0023	0.037	0.004
598D1M79	0.0171	0.0082	< LOD	0.0014	< LOD	0	0.0164	0.0039
598D1M8	< LOD	0	< LOD	0	0.0023	0.0022	< LOD	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
598D1M40	< LOD	0.0062	< LOD	0	0.0155	0.0014	< LOD	0
598D1M41	< LOD	0.0062	< LOD	0.0023	0.0118	0.0014	< LOD	0
598D1M42	0.0093	0.0062	< LOD	0.0023	0.0167	0.0014	< LOD	0
598D1M43	< LOD	0	< LOD	0	0.0265	0.0014	< LOD	0
598D1M44	< LOD	0.0062	< LOD	0	0.2863	0.0014	< LOD	0
598D1M45	0.0083	0.0061	< LOD	0	0.0181	0.0014	0.0046	0.0043
598D1M47	< LOD	0.0062	< LOD	0	0.0252	0.0014	< LOD	0
598D1M48	0.0081	0.0062	< LOD	0	0.9759	0.0015	< LOD	0.0044
598D1M49	< LOD	0.0062	< LOD	0	0.0307	0.0014	< LOD	0
598D1M50	< LOD	0	0.0637	0.0023	0.0164	0.0014	< LOD	0.0044
598D1M51	0.0104	0.0061	< LOD	0	0.0139	0.0014	< LOD	0
598D1M52	< LOD	0.0062	< LOD	0.0023	0.048	0.0014	< LOD	0
598D1M53	< LOD	0	< LOD	0.0023	0.0246	0.0014	< LOD	0
598D1M54	0.0103	0.0061	< LOD	0	0.0125	0.0014	< LOD	0
598D1M55	< LOD	0.0062	< LOD	0	0.0234	0.0014	< LOD	0
598D1M56	0.0128	0.0061	< LOD	0.0023	0.0127	0.0014	< LOD	0.0044
598D1M57	0.0112	0.0062	< LOD	0	0.0335	0.0014	< LOD	0
598D1M58	< LOD	0.0062	< LOD	0.0023	0.0159	0.0014	< LOD	0.0044
598D1M59	< LOD	0	< LOD	0	0.0107	0.0014	< LOD	0.0043
598D1M6	0.0105	0.0061	< LOD	0.0023	0.0116	0.0014	< LOD	0
598D1M60	< LOD	0	< LOD	0.0023	0.0236	0.0014	0.005	0.0043
598D1M61	< LOD	0.0062	< LOD	0	0.0102	0.0014	< LOD	0
598D1M63	0.0094	0.0061	< LOD	0.0023	0.0256	0.0014	< LOD	0.0044
598D1M64	< LOD	0	< LOD	0	0.8609	0.0014	< LOD	0.0044
598D1M65	< LOD	0.0062	< LOD	0	0.0371	0.0014	< LOD	0
598D1M66	< LOD	0.0062	< LOD	0	0.018	0.0014	0.0049	0.0044
598D1M68	< LOD	0.0062	< LOD	0.0022	0.0336	0.0014	< LOD	0.0044
598D1M69	< LOD	0	< LOD	0	0.0134	0.0014	< LOD	0
598D1M7	< LOD	0	0.0047	0.0023	0.0187	0.0014	< LOD	0
598D1M70	< LOD	0	< LOD	0.0023	0.4732	0.0014	< LOD	0
598D1M71	0.0087	0.0062	< LOD	0	0.0116	0.0014	0.0045	0.0044
598D1M72	< LOD	0.0062	< LOD	0.0023	0.0664	0.0014	< LOD	0
598D1M73	< LOD	0	< LOD	0	0.0122	0.0014	< LOD	0
598D1M74	0.0093	0.0062	< LOD	0	0.012	0.0014	< LOD	0
598D1M75	< LOD	0	0.0024	0.0023	0.0106	0.0014	< LOD	0
598D1M76	< LOD	0	< LOD	0	0.0201	0.0014	< LOD	0
598D1M77	0.0073	0.0062	< LOD	0	1.4179	0.0015	< LOD	0
598D1M79	< LOD	0	< LOD	0	0.0232	0.0014	< LOD	0.0044
598D1M8	< LOD	0	< LOD	0	0.0192	0.0014	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
598D1M40	< LOD	0.0017	0.0144	0.0051	0.0156	0.0104
598D1M41	0.0022	0.0018	0.0192	0.005	< LOD	0.0105
598D1M42	< LOD	0.0018	< LOD	0	< LOD	0.0104
598D1M43	< LOD	0.0018	0.0104	0.005	0.0232	0.0104
598D1M44	< LOD	0.0018	0.0172	0.0053	< LOD	0
598D1M45	0.0024	0.0018	0.014	0.0053	< LOD	0.0106
598D1M47	0.0108	0.0018	0.0128	0.0052	0.0152	0.0104
598D1M48	< LOD	0.0018	< LOD	0.0053	0.0142	0.0105
598D1M49	< LOD	0.0018	< LOD	0.0052	< LOD	0
598D1M50	< LOD	0	0.0096	0.005	0.0153	0.0105
598D1M51	< LOD	0	< LOD	0.0054	< LOD	0
598D1M52	0.002	0.0018	0.0154	0.005	< LOD	0.0105
598D1M53	< LOD	0	< LOD	0	< LOD	0
598D1M54	0.0025	0.0018	0.0233	0.0048	0.0304	0.0104
598D1M55	< LOD	0.0018	0.0207	0.0051	< LOD	0
598D1M56	0.0032	0.0018	0.0162	0.005	0.0148	0.0104
598D1M57	< LOD	0.0018	0.017	0.0052	< LOD	0
598D1M58	0.002	0.0018	0.0072	0.0052	< LOD	0.0104
598D1M59	0.0106	0.0018	0.0307	0.005	< LOD	0.0105
598D1M6	< LOD	0	< LOD	0.0053	< LOD	0
598D1M60	< LOD	0	0.0162	0.005	< LOD	0
598D1M61	< LOD	0.0018	0.0095	0.0052	< LOD	0
598D1M63	< LOD	0	0.008	0.0053	< LOD	0
598D1M64	0.0038	0.0018	0.0078	0.0054	< LOD	0.0105
598D1M65	< LOD	0.0018	0.0114	0.005	0.0159	0.0105
598D1M66	< LOD	0	< LOD	0.0053	< LOD	0
598D1M68	0.0021	0.0018	0.015	0.005	< LOD	0.0105
598D1M69	0.0166	0.0018	0.0367	0.0053	< LOD	0.0105
598D1M7	< LOD	0.0017	0.0258	0.0051	0.0156	0.0105
598D1M70	< LOD	0	0.0056	0.0051	< LOD	0.0105
598D1M71	< LOD	0.0018	0.0128	0.0052	< LOD	0.0105
598D1M72	< LOD	0	0.0083	0.0053	< LOD	0
598D1M73	< LOD	0	0.0214	0.0051	0.0134	0.0105
598D1M74	< LOD	0	0.0182	0.005	< LOD	0
598D1M75	0.0241	0.0018	0.0922	0.0054	< LOD	0.0106
598D1M76	< LOD	0.0018	0.0191	0.0052	< LOD	0
598D1M77	< LOD	0	0.0133	0.005	< LOD	0.0106
598D1M79	0.0029	0.0018	< LOD	0.0052	< LOD	0.0106
598D1M8	< LOD	0	0.012	0.0051	< LOD	0.0105

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
598D1M81	EPD	Pump	NA	0.0208	0.0018	0.0018	0.0015	< LOD	0
598D1M82	EPD	Pump	NA	0.0142	0.0018	0.009	0.0015	0.0073	0.0046
598D1M83	EPD	Pump	NA	0.0172	0.0018	0.0497	0.0015	< LOD	0
598D1M84	EPD	Pump	NA	0.0141	0.0018	0.0024	0.0015	< LOD	0
598D1M85	EPD	Pump	NA	0.0159	0.0018	0.2572	0.0015	0.0056	0.0048
598D1M86	EPD	Pump	NA	0.0211	0.0018	0.2395	0.0015	< LOD	0
598D1M87	EPD	Pump	NA	0.006	0.0018	0.002	0.0015	< LOD	0
598D1M89	EPD	Pump	NA	0.0275	0.0018	< LOD	0.0015	< LOD	0
598D1M9	EPD	Pump	NA	0.0163	0.0018	0.0967	0.0015	< LOD	0.0047
598D1M90	EPD	Pump	NA	0.0223	0.0018	0.0043	0.0015	0.0057	0.0047
598D1M93	EPD	Pump	NA	0.0233	0.0018	0.0362	0.0015	< LOD	0
598D1M94	EPD	Pump	NA	0.0056	0.0018	< LOD	0	< LOD	0.0047
598D1M95	EPD	Pump	NA	0.0097	0.0017	0.0084	0.0015	0.0068	0.0046
598D1M96	EPD	Pump	NA	0.0211	0.0018	< LOD	0	< LOD	0
598D1M97	EPD	Pump	NA	0.0194	0.0018	0.093	0.0015	< LOD	0
598D1M98	EPD	Pump	NA	0.0135	0.0018	0.2884	0.0015	< LOD	0
598D2M1	EPD	Pump	NA	0.0224	0.0018	< LOD	0.0017	< LOD	0.0047
598D2M10	EPD	Pump	NA	0.0196	0.0018	0.0018	0.0017	< LOD	0.0047
598D2M11	EPD	Pump	NA	0.0967	0.0018	0.2543	0.0017	< LOD	0.0048
598D2M12	EPD	Pump	NA	0.0175	0.0018	0.062	0.0017	< LOD	0
598D2M13	EPD	Pump	NA	0.0343	0.0018	< LOD	0.0017	< LOD	0.0047
598D2M14	EPD	Pump	NA	0.0143	0.0017	< LOD	0.0017	0.0088	0.0046
598D2M15	EPD	Pump	NA	0.0206	0.0018	0.0393	0.0017	< LOD	0
598D2M17	EPD	Pump	NA	0.011	0.0017	0.0025	0.0017	< LOD	0.0047
598D2M18	EPD	Pump	NA	0.0201	0.0018	0.0749	0.0017	< LOD	0.0048
598D2M19	EPD	Pump	NA	0.0267	0.0018	0.0028	0.0017	< LOD	0
598D2M20	EPD	Pump	NA	0.0202	0.0017	< LOD	0.0017	0.0058	0.0046
598D2M22	EPD	Pump	NA	0.0294	0.0018	0.032	0.0017	< LOD	0.0047
598D2M23	EPD	Pump	NA	0.0154	0.0018	< LOD	0.0017	< LOD	0
598D2M24	EPD	Pump	NA	0.0291	0.0018	0.0112	0.0017	< LOD	0.0047
598D2M25	EPD	Pump	NA	0.0196	0.0018	0.0092	0.0017	0.006	0.0047
598D2M26	EPD	Pump	NA	0.0129	0.0018	< LOD	0.0017	< LOD	0
598D2M27	EPD	Pump	NA	0.0229	0.0018	< LOD	0.0017	< LOD	0
598D2M28	EPD	Pump	NA	0.0106	0.0018	< LOD	0	< LOD	0.0046
598D2M3	EPD	Pump	NA	0.0173	0.0018	< LOD	0	< LOD	0
598D2M30	EPD	Pump	NA	0.0231	0.0018	0.0043	0.0017	< LOD	0.0047
598D2M32	EPD	Pump	NA	0.0283	0.0018	< LOD	0.0017	< LOD	0.0047
598D2M33	EPD	Pump	NA	0.0241	0.0018	< LOD	0	< LOD	0
598D2M34	EPD	Pump	NA	0.019	0.0018	0.0023	0.0017	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
598D1M81	0.0106	0.0082	< LOD	0.0014	< LOD	0	< LOD	0.004
598D1M82	< LOD	0.0083	0.0024	0.0014	0.0089	0.0022	0.0077	0.004
598D1M83	< LOD	0	0.0071	0.0014	< LOD	0.0022	0.0089	0.0039
598D1M84	< LOD	0.0083	< LOD	0	0.0025	0.0021	0.0059	0.004
598D1M85	0.0097	0.0083	< LOD	0	< LOD	0	0.0262	0.004
598D1M86	< LOD	0	< LOD	0.0014	< LOD	0.0021	0.0432	0.0039
598D1M87	< LOD	0.0082	< LOD	0	< LOD	0.0022	0.0144	0.0039
598D1M89	< LOD	0.0083	< LOD	0.0014	0.0053	0.0022	< LOD	0.004
598D1M9	< LOD	0	< LOD	0.0014	< LOD	0	0.0313	0.0039
598D1M90	< LOD	0.0082	0.0069	0.0014	0.0028	0.0022	0.0114	0.0039
598D1M93	< LOD	0.0083	< LOD	0.0014	0.0032	0.0022	0.0172	0.0039
598D1M94	< LOD	0	< LOD	0.0014	< LOD	0	0.0158	0.004
598D1M95	< LOD	0	0.0035	0.0014	< LOD	0.0022	0.012	0.0039
598D1M96	0.0136	0.0082	< LOD	0.0014	< LOD	0.0022	0.0074	0.004
598D1M97	0.0104	0.0082	< LOD	0.0014	< LOD	0.0022	0.0157	0.004
598D1M98	< LOD	0	0.002	0.0014	0.004	0.0021	0.0202	0.004
598D2M1	< LOD	0.0083	0.0021	0.0017	0.0059	0.0022	0.0058	0.004
598D2M10	0.0131	0.0082	0.0018	0.0017	< LOD	0.0022	0.0108	0.004
598D2M11	0.0137	0.0083	< LOD	0	< LOD	0	0.0085	0.004
598D2M12	< LOD	0.0083	0.0035	0.0017	< LOD	0.0022	0.0152	0.004
598D2M13	< LOD	0	< LOD	0.0017	< LOD	0	0.0087	0.004
598D2M14	< LOD	0	0.0021	0.0017	< LOD	0.0022	0.0182	0.0039
598D2M15	< LOD	0.0082	< LOD	0	< LOD	0	0.0126	0.004
598D2M17	0.0124	0.0082	< LOD	0	< LOD	0.0022	0.013	0.0039
598D2M18	< LOD	0.0083	0.0024	0.0017	0.0065	0.0021	0.0173	0.004
598D2M19	< LOD	0.0083	< LOD	0	0.0031	0.0022	0.0125	0.0039
598D2M20	< LOD	0	< LOD	0	0.0034	0.0022	0.0125	0.004
598D2M22	< LOD	0	< LOD	0	0.0039	0.0022	0.0157	0.004
598D2M23	< LOD	0.0082	0.0058	0.0017	< LOD	0	0.0141	0.0039
598D2M24	< LOD	0.0082	< LOD	0.0017	0.003	0.0021	0.0086	0.004
598D2M25	0.0107	0.0082	0.0025	0.0017	< LOD	0.0022	0.0056	0.004
598D2M26	< LOD	0.0082	< LOD	0	< LOD	0.0022	0.0069	0.004
598D2M27	< LOD	0.0083	0.0025	0.0017	< LOD	0.0022	0.0147	0.0039
598D2M28	0.0087	0.0082	< LOD	0	< LOD	0	< LOD	0.0039
598D2M3	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0232	0.0039
598D2M30	< LOD	0.0083	0.0093	0.0017	< LOD	0	0.0054	0.0039
598D2M32	< LOD	0	< LOD	0	< LOD	0.0022	0.0095	0.0039
598D2M33	< LOD	0	< LOD	0	< LOD	0.0022	0.0099	0.004
598D2M34	< LOD	0.0083	< LOD	0.0017	0.004	0.0021	0.0136	0.0039

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
598D1M81	< LOD	0.0062	< LOD	0	0.017	0.0014	0.0076	0.0044
598D1M82	< LOD	0.0062	< LOD	0	0.0551	0.0014	< LOD	0.0044
598D1M83	< LOD	0.0062	< LOD	0.0023	0.0144	0.0014	< LOD	0
598D1M84	< LOD	0	< LOD	0	0.1065	0.0014	< LOD	0.0044
598D1M85	< LOD	0.0063	< LOD	0	0.0158	0.0014	< LOD	0
598D1M86	< LOD	0	< LOD	0.0023	0.0144	0.0014	< LOD	0
598D1M87	0.0109	0.0062	< LOD	0	0.0166	0.0014	< LOD	0
598D1M89	< LOD	0	< LOD	0	0.06	0.0014	< LOD	0.0044
598D1M9	< LOD	0.0062	0.0043	0.0022	0.0217	0.0014	< LOD	0
598D1M90	< LOD	0.0062	< LOD	0	0.0313	0.0014	< LOD	0
598D1M93	< LOD	0	< LOD	0	0.0186	0.0014	0.0048	0.0044
598D1M94	< LOD	0	< LOD	0.0022	0.0245	0.0014	< LOD	0
598D1M95	< LOD	0	< LOD	0.0022	0.0324	0.0014	< LOD	0
598D1M96	< LOD	0	< LOD	0	0.0698	0.0014	< LOD	0
598D1M97	< LOD	0	< LOD	0	0.2864	0.0014	< LOD	0.0045
598D1M98	< LOD	0	< LOD	0.0023	0.0484	0.0014	0.0065	0.0045
598D2M1	< LOD	0.0062	< LOD	0	0.0723	0.0014	< LOD	0.0054
598D2M10	< LOD	0.0062	< LOD	0	0.0218	0.0014	< LOD	0.0054
598D2M11	< LOD	0	< LOD	0	0.0146	0.0014	< LOD	0
598D2M12	< LOD	0.0062	< LOD	0	0.0177	0.0014	< LOD	0
598D2M13	< LOD	0	< LOD	0.0023	0.0142	0.0014	< LOD	0
598D2M14	< LOD	0	< LOD	0.0023	0.0487	0.0014	< LOD	0
598D2M15	< LOD	0.0062	< LOD	0	0.0396	0.0014	< LOD	0.0054
598D2M17	< LOD	0.0062	0.003	0.0023	0.1248	0.0014	< LOD	0
598D2M18	< LOD	0.0062	< LOD	0.0023	0.0154	0.0014	< LOD	0.0054
598D2M19	< LOD	0.0062	0.0036	0.0023	0.0333	0.0014	< LOD	0
598D2M20	0.0064	0.0062	< LOD	0.0023	0.0215	0.0014	< LOD	0.0054
598D2M22	< LOD	0.0061	< LOD	0.0023	0.1883	0.0014	< LOD	0
598D2M23	0.0072	0.0062	< LOD	0	0.0204	0.0014	< LOD	0
598D2M24	< LOD	0.0062	< LOD	0.0023	0.0613	0.0014	< LOD	0
598D2M25	< LOD	0	< LOD	0	0.0181	0.0014	< LOD	0.0054
598D2M26	< LOD	0.0062	< LOD	0	0.0211	0.0014	< LOD	0
598D2M27	0.0072	0.0062	< LOD	0.0023	0.0187	0.0014	0.0079	0.0054
598D2M28	< LOD	0	< LOD	0	0.0139	0.0014	< LOD	0
598D2M3	< LOD	0	< LOD	0.0023	0.1043	0.0014	< LOD	0
598D2M30	0.0096	0.0061	< LOD	0.0023	0.0167	0.0014	< LOD	0
598D2M32	< LOD	0	< LOD	0.0023	0.2397	0.0014	< LOD	0
598D2M33	< LOD	0.0062	0.0028	0.0023	0.1055	0.0014	< LOD	0
598D2M34	< LOD	0	< LOD	0	0.1078	0.0014	< LOD	0.0054

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
598D1M81	0.0048	0.0018	0.013	0.0051	< LOD	0.0105
598D1M82	< LOD	0	0.0078	0.0053	< LOD	0
598D1M83	0.0034	0.0018	0.0108	0.0053	< LOD	0
598D1M84	< LOD	0	< LOD	0.0054	< LOD	0.0105
598D1M85	< LOD	0.0018	0.018	0.0053	0.0185	0.0104
598D1M86	0.0059	0.0018	0.0074	0.0052	< LOD	0.0105
598D1M87	0.0067	0.0018	0.0142	0.0053	< LOD	0.0105
598D1M89	0.0024	0.0018	0.0183	0.0051	< LOD	0
598D1M9	< LOD	0	< LOD	0	0.0249	0.0104
598D1M90	< LOD	0.0018	< LOD	0.0052	< LOD	0
598D1M93	< LOD	0	0.009	0.0052	0.0165	0.0105
598D1M94	< LOD	0	< LOD	0.0052	< LOD	0.0105
598D1M95	< LOD	0	0.0086	0.0051	< LOD	0
598D1M96	0.004	0.0018	0.0126	0.005	< LOD	0
598D1M97	0.0024	0.0018	< LOD	0.0054	< LOD	0
598D1M98	< LOD	0	< LOD	0.0052	< LOD	0
598D2M1	0.0045	0.002	< LOD	0	< LOD	0.0105
598D2M10	< LOD	0	< LOD	0.0053	0.0115	0.0105
598D2M11	0.0244	0.002	0.0415	0.0053	< LOD	0
598D2M12	< LOD	0	0.0058	0.0053	< LOD	0
598D2M13	< LOD	0	< LOD	0.0052	< LOD	0
598D2M14	< LOD	0	0.007	0.0051	0.013	0.0105
598D2M15	< LOD	0	< LOD	0.0051	< LOD	0
598D2M17	< LOD	0.002	0.0153	0.0051	< LOD	0.0105
598D2M18	< LOD	0	< LOD	0	< LOD	0.0105
598D2M19	< LOD	0.002	< LOD	0.0053	< LOD	0.0105
598D2M20	0.0036	0.002	0.0103	0.0052	< LOD	0.0105
598D2M22	< LOD	0	0.0129	0.0051	0.0137	0.0105
598D2M23	< LOD	0	0.0187	0.0052	< LOD	0
598D2M24	< LOD	0	0.0154	0.005	< LOD	0.0106
598D2M25	< LOD	0.002	0.021	0.0052	< LOD	0.0105
598D2M26	< LOD	0	< LOD	0.0053	< LOD	0.0105
598D2M27	< LOD	0	0.0125	0.0051	< LOD	0.0105
598D2M28	< LOD	0	0.0118	0.0051	< LOD	0
598D2M3	< LOD	0.002	0.0055	0.0053	0.0106	0.0105
598D2M30	< LOD	0.002	0.0076	0.0052	< LOD	0.0105
598D2M32	< LOD	0	0.0128	0.005	< LOD	0.0106
598D2M33	< LOD	0.002	< LOD	0.0052	0.0161	0.0105
598D2M34	0.0032	0.002	0.0099	0.0052	< LOD	0.0106

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
598D2M35	EPD	Pump	NA	0.0197	0.0018	< LOD	0.0017	0.0065	0.0047
598D2M36	EPD	Pump	NA	0.0213	0.0018	< LOD	0.0017	< LOD	0
598D2M37	EPD	Pump	NA	0.0443	0.0018	0.01	0.0017	< LOD	0.0047
598D2M39	EPD	Pump	NA	0.0296	0.0018	0.0055	0.0017	< LOD	0
598D2M4	EPD	Pump	NA	0.0275	0.0018	< LOD	0.0017	0.0333	0.0046
598D2M40	EPD	Pump	NA	0.0193	0.0018	0.0105	0.0017	< LOD	0
598D2M41	EPD	Pump	NA	0.0207	0.0018	< LOD	0	< LOD	0
598D2M42	EPD	Pump	NA	0.0226	0.0018	0.0125	0.0017	0.0062	0.0046
598D2M44	EPD	Pump	NA	0.0151	0.0018	0.0033	0.0015	< LOD	0
598D2M45	EPD	Pump	NA	0.016	0.0017	< LOD	0	0.0083	0.0046
598D2M46	EPD	Pump	NA	0.0159	0.0018	< LOD	0.0015	< LOD	0
598D2M47	EPD	Pump	NA	0.0722	0.0018	0.002	0.0015	< LOD	0.0047
598D2M48	EPD	Pump	NA	0.02	0.0018	0.1793	0.0015	< LOD	0
598D2M49	EPD	Pump	NA	0.0145	0.0018	< LOD	0	< LOD	0
598D2M5	EPD	Pump	NA	0.0215	0.0017	< LOD	0	< LOD	0.0046
598D2M50	EPD	Pump	NA	0.0191	0.0018	0.0018	0.0015	< LOD	0.0047
598D2M51	EPD	Pump	NA	0.0186	0.0018	< LOD	0.0015	< LOD	0
598D2M52	EPD	Pump	NA	0.0214	0.0018	0.0034	0.0015	0.0072	0.0046
598D2M53	EPD	Pump	NA	0.0277	0.0018	0.0098	0.0015	< LOD	0.0047
598D2M54	EPD	Pump	NA	0.0211	0.0018	< LOD	0.0015	< LOD	0.0046
598D2M55	EPD	Pump	NA	0.0205	0.0018	< LOD	0	< LOD	0
598D2M56	EPD	Pump	NA	0.0247	0.0018	0.0079	0.0015	< LOD	0
598D2M57	EPD	Pump	NA	0.0237	0.0018	< LOD	0.0015	< LOD	0
598D2M58	EPD	Pump	NA	0.0129	0.0018	0.0036	0.0015	< LOD	0
598D2M59	EPD	Pump	NA	0.02	0.0018	0.0026	0.0015	< LOD	0.0046
598D2M6	EPD	Pump	NA	0.026	0.0018	0.0074	0.0017	< LOD	0.0047
598D2M61	EPD	Pump	NA	0.0441	0.0017	0.1803	0.0015	0.0103	0.0046
598D2M62	EPD	Pump	NA	0.0292	0.0018	0.1028	0.0015	< LOD	0
598D2M63	EPD	Pump	NA	0.0172	0.0017	0.0094	0.0015	< LOD	0
598D2M64	EPD	Pump	NA	0.0145	0.0018	< LOD	0.0015	< LOD	0
598D2M65	EPD	Pump	NA	0.0257	0.0018	< LOD	0.0015	< LOD	0
598D2M66	EPD	Pump	NA	0.016	0.0018	< LOD	0.0015	< LOD	0
598D2M67	EPD	Pump	NA	0.0231	0.0018	< LOD	0.0015	< LOD	0.0047
598D2M68	EPD	Pump	NA	0.0292	0.0018	< LOD	0	< LOD	0.0047
598D2M7	EPD	Pump	NA	0.0193	0.0018	0.2679	0.0017	0.006	0.0047
598D2M71	EPD	Pump	NA	0.0236	0.0018	< LOD	0	< LOD	0
598D2M72	EPD	Pump	NA	0.0283	0.0018	< LOD	0.0015	< LOD	0.0048
598D2M73	EPD	Pump	NA	0.0254	0.0018	0.039	0.0015	< LOD	0
598D2M74	EPD	Pump	NA	0.0083	0.0018	< LOD	0	< LOD	0.0048

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
598D2M35	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0146	0.0039
598D2M36	< LOD	0.0083	< LOD	0.0017	< LOD	0	0.0156	0.0039
598D2M37	< LOD	0.0082	< LOD	0	< LOD	0	< LOD	0.004
598D2M39	< LOD	0	< LOD	0	0.011	0.0021	0.0127	0.004
598D2M4	0.0197	0.0082	< LOD	0	< LOD	0	0.0043	0.004
598D2M40	0.0141	0.0082	0.0065	0.0017	0.0048	0.0021	0.008	0.004
598D2M41	< LOD	0.0083	< LOD	0	< LOD	0	0.0096	0.004
598D2M42	0.0129	0.0083	0.0074	0.0017	0.0032	0.0022	0.0124	0.0039
598D2M44	< LOD	0	0.0015	0.0014	0.0023	0.0022	< LOD	0
598D2M45	< LOD	0.0083	< LOD	0.0014	0.0023	0.0021	0.0091	0.004
598D2M46	< LOD	0	0.0016	0.0014	0.0023	0.0022	0.0196	0.004
598D2M47	0.0179	0.0082	< LOD	0.0014	< LOD	0.0022	< LOD	0.004
598D2M48	< LOD	0.0083	0.0037	0.0014	0.0028	0.0022	0.0211	0.004
598D2M49	0.0239	0.0082	< LOD	0	0.0032	0.0022	0.0093	0.004
598D2M5	< LOD	0.0083	< LOD	0.0017	< LOD	0.0022	< LOD	0.004
598D2M50	< LOD	0	< LOD	0	< LOD	0.0022	0.006	0.004
598D2M51	0.0153	0.0082	< LOD	0.0014	< LOD	0.0022	0.0079	0.004
598D2M52	0.0152	0.0082	< LOD	0.0014	< LOD	0.0022	0.012	0.0039
598D2M53	0.016	0.0082	0.0017	0.0014	< LOD	0.0022	0.0108	0.0039
598D2M54	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	0.0151	0.0039
598D2M55	0.0185	0.0082	< LOD	0	< LOD	0	0.0065	0.004
598D2M56	< LOD	0.0083	0.0037	0.0014	< LOD	0	0.0094	0.004
598D2M57	< LOD	0.0082	< LOD	0.0014	< LOD	0	0.0077	0.0039
598D2M58	< LOD	0.0083	0.0016	0.0014	< LOD	0	0.0208	0.0039
598D2M59	0.0178	0.0082	0.0018	0.0014	< LOD	0	0.0102	0.0039
598D2M6	0.0134	0.0082	0.0028	0.0017	0.0025	0.0022	< LOD	0.004
598D2M61	0.0116	0.0083	< LOD	0.0014	< LOD	0.0022	0.0212	0.004
598D2M62	< LOD	0.0082	< LOD	0	< LOD	0.0022	0.0172	0.004
598D2M63	< LOD	0.0082	0.0042	0.0014	< LOD	0.0021	0.0204	0.0039
598D2M64	< LOD	0.0083	< LOD	0	< LOD	0.0022	0.0097	0.004
598D2M65	0.0218	0.0082	< LOD	0.0014	< LOD	0.0022	0.0097	0.0039
598D2M66	< LOD	0	0.0017	0.0014	< LOD	0	0.0049	0.004
598D2M67	< LOD	0.0083	< LOD	0	< LOD	0	0.0151	0.0039
598D2M68	< LOD	0.0083	< LOD	0	< LOD	0.0022	< LOD	0.004
598D2M7	< LOD	0.0083	< LOD	0.0017	0.0024	0.0022	0.0343	0.004
598D2M71	0.0118	0.0082	< LOD	0.0014	< LOD	0.0022	0.0125	0.0039
598D2M72	< LOD	0.0082	0.0059	0.0014	0.0023	0.0022	0.0045	0.0039
598D2M73	0.0168	0.0082	< LOD	0.0014	< LOD	0	0.019	0.004
598D2M74	0.0098	0.0082	0.0122	0.0014	< LOD	0.0022	0.0077	0.004

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
598D2M35	< LOD	0	< LOD	0	0.0793	0.0014	< LOD	0
598D2M36	< LOD	0	< LOD	0.0023	0.1045	0.0014	< LOD	0.0054
598D2M37	< LOD	0	< LOD	0	0.0245	0.0014	< LOD	0
598D2M39	< LOD	0.0062	< LOD	0	0.2861	0.0014	< LOD	0
598D2M4	< LOD	0	< LOD	0	0.0133	0.0014	< LOD	0
598D2M40	0.0067	0.0061	< LOD	0	0.0146	0.0014	0.0106	0.0054
598D2M41	< LOD	0.0062	< LOD	0	0.0179	0.0014	< LOD	0.0054
598D2M42	< LOD	0.0062	< LOD	0	0.1567	0.0014	< LOD	0
598D2M44	< LOD	0	< LOD	0	0.0189	0.0014	< LOD	0
598D2M45	< LOD	0	< LOD	0.0023	0.0304	0.0014	< LOD	0
598D2M46	< LOD	0.0062	< LOD	0	0.0195	0.0014	< LOD	0
598D2M47	< LOD	0	< LOD	0	0.0191	0.0014	< LOD	0.0044
598D2M48	< LOD	0	< LOD	0	0.014	0.0014	< LOD	0.0044
598D2M49	< LOD	0	< LOD	0	0.0204	0.0014	< LOD	0
598D2M5	< LOD	0	< LOD	0.0023	0.0242	0.0014	0.0074	0.0054
598D2M50	< LOD	0.0062	< LOD	0.0023	0.0221	0.0014	< LOD	0.0045
598D2M51	0.0082	0.0062	< LOD	0	0.0347	0.0014	< LOD	0
598D2M52	< LOD	0.0062	< LOD	0.0023	0.0363	0.0014	0.0053	0.0045
598D2M53	< LOD	0	< LOD	0	0.0444	0.0014	< LOD	0
598D2M54	< LOD	0	< LOD	0.0023	0.0226	0.0014	< LOD	0
598D2M55	< LOD	0.0062	< LOD	0.0023	0.1407	0.0014	< LOD	0
598D2M56	< LOD	0	0.0027	0.0023	0.0221	0.0014	< LOD	0
598D2M57	< LOD	0	< LOD	0.0023	0.014	0.0014	< LOD	0
598D2M58	< LOD	0	0.0039	0.0023	0.0231	0.0014	< LOD	0.0045
598D2M59	< LOD	0	0.0389	0.0023	0.0169	0.0014	< LOD	0
598D2M6	< LOD	0.0062	< LOD	0	0.0195	0.0014	< LOD	0
598D2M61	< LOD	0	< LOD	0.0023	0.0103	0.0014	< LOD	0
598D2M62	< LOD	0	< LOD	0.0023	0.0143	0.0014	< LOD	0.0044
598D2M63	< LOD	0	< LOD	0.0023	0.0169	0.0014	< LOD	0
598D2M64	0.0062	0.0061	< LOD	0	0.0225	0.0014	< LOD	0
598D2M65	< LOD	0	< LOD	0	0.0182	0.0014	< LOD	0
598D2M66	0.0085	0.0062	< LOD	0	0.0223	0.0014	< LOD	0
598D2M67	< LOD	0.0062	< LOD	0	0.023	0.0014	0.0055	0.0044
598D2M68	< LOD	0	< LOD	0	0.0173	0.0014	< LOD	0
598D2M7	< LOD	0.0063	< LOD	0.0023	0.0144	0.0014	< LOD	0
598D2M71	< LOD	0	< LOD	0	0.1426	0.0014	< LOD	0
598D2M72	< LOD	0	< LOD	0.0023	0.0109	0.0014	0.0062	0.0045
598D2M73	< LOD	0	< LOD	0	0.0153	0.0014	0.0049	0.0045
598D2M74	< LOD	0.0062	< LOD	0	0.0335	0.0014	< LOD	0.0045

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
598D2M35	< LOD	0	< LOD	0	< LOD	0.0105
598D2M36	< LOD	0	0.0084	0.0052	< LOD	0.0105
598D2M37	< LOD	0	< LOD	0.0051	< LOD	0.0106
598D2M39	0.0026	0.002	< LOD	0.0054	0.0263	0.0105
598D2M4	< LOD	0.002	0.065	0.0051	< LOD	0
598D2M40	< LOD	0	0.0117	0.005	< LOD	0
598D2M41	< LOD	0	< LOD	0.0053	< LOD	0.0105
598D2M42	< LOD	0	< LOD	0.0052	< LOD	0
598D2M44	< LOD	0	0.0115	0.0051	< LOD	0
598D2M45	< LOD	0	0.0138	0.0049	< LOD	0
598D2M46	< LOD	0.0018	0.007	0.0051	< LOD	0.0105
598D2M47	< LOD	0	0.0168	0.0053	< LOD	0
598D2M48	< LOD	0	0.0153	0.0051	< LOD	0.0106
598D2M49	< LOD	0	0.0087	0.0051	0.0196	0.0104
598D2M5	< LOD	0.002	0.0141	0.0049	< LOD	0
598D2M50	< LOD	0.0018	< LOD	0.0052	< LOD	0.0105
598D2M51	0.0019	0.0018	< LOD	0	< LOD	0
598D2M52	0.0023	0.0018	< LOD	0	< LOD	0
598D2M53	0.002	0.0018	0.0081	0.0055	< LOD	0
598D2M54	< LOD	0.0018	< LOD	0.0052	< LOD	0.0106
598D2M55	< LOD	0.0018	0.0177	0.0051	0.0229	0.0104
598D2M56	< LOD	0.0018	0.0221	0.0051	0.0217	0.0104
598D2M57	< LOD	0	0.0097	0.0052	0.017	0.0104
598D2M58	< LOD	0	0.0081	0.0051	< LOD	0.0106
598D2M59	0.002	0.0018	0.0053	0.0052	< LOD	0.0105
598D2M6	0.0046	0.002	0.0147	0.0053	< LOD	0.0105
598D2M61	0.0024	0.0018	0.0141	0.0053	< LOD	0.0105
598D2M62	0.0029	0.0018	< LOD	0.0053	0.0112	0.0105
598D2M63	< LOD	0	< LOD	0.0051	< LOD	0.0105
598D2M64	< LOD	0.0018	< LOD	0	< LOD	0
598D2M65	0.0026	0.0018	0.0243	0.0052	< LOD	0.0104
598D2M66	< LOD	0.0018	0.0085	0.0052	< LOD	0
598D2M67	< LOD	0	< LOD	0.0051	0.0239	0.0104
598D2M68	0.0036	0.0018	0.0197	0.0052	0.024	0.0103
598D2M7	< LOD	0	0.0178	0.0052	< LOD	0.0105
598D2M71	< LOD	0.0018	0.0097	0.0052	0.0486	0.0104
598D2M72	0.0031	0.0018	0.0132	0.0053	0.0346	0.0104
598D2M73	< LOD	0	0.0112	0.0051	< LOD	0.0106
598D2M74	< LOD	0.0018	0.0098	0.0053	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Origin	Site	Type	Al	Al LOD	Ca	Ca LOD	Cr	Cr LOD
598D2M75	EPD	Pump	NA	0.0212	0.0018	< LOD	0.0015	< LOD	0.0048
598D2M76	EPD	Pump	NA	0.0266	0.0018	< LOD	0	< LOD	0.0048
598D2M77	EPD	Pump	NA	0.0166	0.0018	< LOD	0.0015	< LOD	0
598D2M78	EPD	Pump	NA	0.0085	0.0018	< LOD	0.0015	< LOD	0.0045
598D2M79	EPD	Pump	NA	0.0296	0.0018	0.0373	0.0015	< LOD	0.0047
598D2M8	EPD	Pump	NA	0.0286	0.0018	0.0075	0.0017	< LOD	0
598D2M80	EPD	Pump	NA	0.0217	0.0018	< LOD	0.0015	0.0161	0.0046
598D2M9	EPD	Pump	NA	0.0249	0.0018	< LOD	0	< LOD	0
603D1M14	EPD	Tiriganiaq	NA	0.0286	0.0018	0.0104	0.0015	< LOD	0
603D1M29	EPD	Tiriganiaq	NA	0.032	0.0018	0.0072	0.0015	< LOD	0.0048
603D1M39	EPD	Tiriganiaq	NA	0.0349	0.0018	0.0027	0.0015	0.0195	0.0049
603D1M46	EPD	Tiriganiaq	NA	0.0315	0.0018	< LOD	0.0015	0.0074	0.0048
603D1M69	EPD	Tiriganiaq	NA	0.0334	0.0018	0.0041	0.0015	< LOD	0.0047
603D1M87	EPD	Tiriganiaq	NA	0.038	0.0018	0.0901	0.0015	< LOD	0.0048
603D1M90	EPD	Tiriganiaq	NA	0.0337	0.0018	0.0036	0.0015	0.0105	0.0048
603D1M93	EPD	Tiriganiaq	NA	0.0332	0.0018	0.0038	0.0015	0.1418	0.0049

Sample	Cu	Cu LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
598D2M75	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	< LOD	0.004
598D2M76	0.0185	0.0082	< LOD	0.0014	0.0027	0.0022	0.011	0.004
598D2M77	< LOD	0	< LOD	0.0014	< LOD	0	0.0135	0.004
598D2M78	0.0088	0.0083	< LOD	0.0014	0.0026	0.0022	0.0177	0.0039
598D2M79	< LOD	0.0082	< LOD	0	< LOD	0.0022	0.006	0.004
598D2M8	0.0119	0.0082	0.003	0.0017	< LOD	0.0022	0.0145	0.004
598D2M80	0.0099	0.0082	< LOD	0.0014	< LOD	0	0.0041	0.0039
598D2M9	0.0104	0.0082	< LOD	0	< LOD	0	0.0099	0.0039
603D1M14	< LOD	0.0082	0.0017	0.0014	0.0062	0.0021	< LOD	0
603D1M29	< LOD	0.0083	< LOD	0.0014	< LOD	0.0022	< LOD	0.004
603D1M39	< LOD	0.0083	< LOD	0.0014	< LOD	0	< LOD	0.004
603D1M46	< LOD	0.0083	0.0093	0.0014	< LOD	0.0021	< LOD	0
603D1M69	< LOD	0	0.004	0.0015	< LOD	0	< LOD	0
603D1M87	0.0148	0.0082	0.0019	0.0014	< LOD	0	< LOD	0
603D1M90	< LOD	0.0082	0.0144	0.0014	< LOD	0.0022	< LOD	0.0039
603D1M93	0.0195	0.0082	0.0119	0.0014	< LOD	0.0022	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-6 EPMA magnetite data (continued).

Sample	Ni	Ni LOD	P	P LOD	Si	Si LOD	Sn	Sn LOD
598D2M75	< LOD	0	0.1797	0.0023	0.0496	0.0014	< LOD	0.0045
598D2M76	< LOD	0	< LOD	0	0.0111	0.0014	< LOD	0
598D2M77	< LOD	0	< LOD	0	0.0229	0.0014	< LOD	0
598D2M78	< LOD	0	< LOD	0	0.1552	0.0014	< LOD	0.0045
598D2M79	< LOD	0	< LOD	0	0.0226	0.0014	0.0047	0.0044
598D2M8	< LOD	0.0062	< LOD	0	0.1734	0.0014	< LOD	0
598D2M80	< LOD	0.0062	< LOD	0.0023	0.0139	0.0014	< LOD	0
598D2M9	< LOD	0	< LOD	0	0.0658	0.0014	< LOD	0.0054
603D1M14	< LOD	0	< LOD	0.0023	0.0093	0.0014	< LOD	0.0041
603D1M29	0.0106	0.0062	< LOD	0	0.0036	0.0014	< LOD	0
603D1M39	0.0075	0.0062	< LOD	0	0.0094	0.0014	< LOD	0
603D1M46	< LOD	0.0062	< LOD	0	0.0251	0.0014	< LOD	0.0041
603D1M69	< LOD	0	0.0037	0.0023	0.0082	0.0014	< LOD	0
603D1M87	< LOD	0.0062	0.0489	0.0023	0.0065	0.0014	< LOD	0.0041
603D1M90	< LOD	0	< LOD	0	0.0081	0.0014	< LOD	0
603D1M93	< LOD	0.0062	< LOD	0	0.0114	0.0014	< LOD	0

Sample	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
598D2M75	0.0024	0.0018	0.012	0.0051	0.0138	0.0105
598D2M76	< LOD	0.0018	0.011	0.0053	< LOD	0.0105
598D2M77	< LOD	0.0018	0.0164	0.005	< LOD	0.0105
598D2M78	< LOD	0	0.0086	0.0051	< LOD	0.0105
598D2M79	< LOD	0	0.0085	0.0051	< LOD	0.0105
598D2M8	0.0022	0.002	0.0052	0.0051	0.0277	0.0104
598D2M80	< LOD	0	0.0263	0.0049	< LOD	0.0105
598D2M9	< LOD	0.002	0.0112	0.0051	< LOD	0
603D1M14	0.0291	0.0017	0.0308	0.0053	< LOD	0
603D1M29	0.023	0.0017	0.0874	0.0052	< LOD	0
603D1M39	0.028	0.0017	0.0618	0.0052	< LOD	0.0104
603D1M46	0.0287	0.0017	0.0769	0.0052	< LOD	0
603D1M69	0.026	0.0017	0.091	0.005	< LOD	0.0106
603D1M87	0.0229	0.0017	0.0495	0.0054	< LOD	0
603D1M90	0.031	0.0017	0.048	0.0052	< LOD	0.0105
603D1M93	0.0311	0.0017	0.0595	0.0052	< LOD	0

All data are in wt%. NA: Not Applicable. LOD: Limit Of Detection.

Table C-7 EPMA tourmaline data.

Sample	Origin	Site	Al	Al LOD	Ca	Ca LOD	Cl	Cl LOD
T537T	Thin section	F-Zone	17.1935	0.0147	0.1784	0.0115	< LOD	0
T646T1	Thin section	F-Zone	17.8233	0.0148	0.0736	0.0115	< LOD	0
T646T2	Thin section	F-Zone	16.8589	0.0144	0.3675	0.0118	0.003	0.001
MU03T1a	Thin section	Showing 503	14.0828	0.0141	0.5269	0.0118	0.0024	0.001
MU03T1b	Thin section	Showing 503	15.3935	0.0138	0.2148	0.012	< LOD	0
TD2a	EPD	Mustang Host rock	16.4094	0.014	1.2397	0.0118	< LOD	0
TD2b	EPD	Mustang Host rock	16.0179	0.0139	1.2958	0.0119	< LOD	0
T526Ta	Thin section	Pump	16.8575	0.0136	0.0444	0.0118	< LOD	0
T526Tb	Thin section	Pump	16.8166	0.0148	0.1861	0.0115	< LOD	0
T593Ta	Thin section	Pump	16.8032	0.0141	0.0528	0.011	< LOD	0
T593Tb	Thin section	Pump	17.356	0.0139	0.0419	0.0116	< LOD	0.001
TD7a	EPD	Showing 503	14.9127	0.0142	0.4872	0.0117	< LOD	0.001
TD7b	EPD	Showing 503	14.7675	0.0138	0.4862	0.0121	< LOD	0.001
1TU103a	Till	Till 01	16.2996	0.0139	0.8505	0.0111	< LOD	0
1TU103b	Till	Till 01	16.1681	0.0143	1.0605	0.012	< LOD	0
1TU15a	Till	Till 01	18.189	0.0148	0.197	0.0113	< LOD	0.001
1TU15b	Till	Till 01	17.7713	0.0143	0.5793	0.0115	0.0012	0.001
1TU47a	Till	Till 01	16.542	0.0144	1.6037	0.0125	< LOD	0
1TU47b	Till	Till 01	16.378	0.0143	1.5655	0.012	< LOD	0.0009
1TU59	Till	Till 01	16.9751	0.0147	0.7153	0.0118	0.0017	0.0009
1TU79a	Till	Till 01	17.7336	0.0145	0.4532	0.0117	< LOD	0
1TU79b	Till	Till 01	17.927	0.0141	0.5673	0.011	< LOD	0
1TU81	Till	Till 01	17.0764	0.0145	0.4976	0.0115	< LOD	0.001
1TU98	Till	Till 01	18.3186	0.0138	0.6739	0.0114	< LOD	0.0009
T1-1	Till	Till 01	17.9837	0.0146	0.5009	0.0116	< LOD	0
2TU104a	Till	Till 02	16.5912	0.0139	0.2616	0.011	< LOD	0
2TU104b	Till	Till 02	15.7593	0.0139	0.8071	0.0114	0.002	0.001
2TU18a	Till	Till 02	16.5138	0.0145	0.8878	0.0117	0.002	0.001
2TU18b	Till	Till 02	15.9449	0.0142	0.9857	0.0119	0.0033	0.001
2TU46	Till	Till 02	16.5159	0.0145	0.2159	0.0116	< LOD	0.001
2TU74	Till	Till 02	17.733	0.0141	0.5188	0.0116	0.001	0.0009
2TU86	Till	Till 02	15.1795	0.0136	1.3925	0.012	0.0018	0.001
2TU89	Till	Till 02	17.9271	0.0153	0.537	0.0117	0.0011	0.0009
2TU97a	Till	Till 02	17.737	0.0147	0.4862	0.0119	< LOD	0
2TU97b	Till	Till 02	17.7245	0.0145	0.4873	0.0118	0.0012	0.001
T2-1a	Till	Till 02	16.91	0.0149	0.7911	0.0119	< LOD	0.001
T2-1b	Till	Till 02	16.8205	0.0141	0.7614	0.0117	< LOD	0.001
T2-2a	Till	Till 02	16.5071	0.0336	0.3409	0.012	< LOD	0.001
T2-2b	Till	Till 02	16.7811	0.0142	0.3382	0.0118	< LOD	0
T2-3a	Till	Till 02	17.6944	0.0134	0.6602	0.0114	< LOD	0
T2-3b	Till	Till 02	18.0544	0.0155	0.6182	0.012	< LOD	0
T2-4a	Till	Till 02	17.9964	0.0147	0.6351	0.0116	< LOD	0
T2-4b	Till	Till 02	17.8513	0.0142	0.6426	0.0112	< LOD	0.0009
T2-5a	Till	Till 02	16.7827	0.0146	0.8076	0.0116	< LOD	0
T2-5b	Till	Till 02	16.5782	0.0146	0.8341	0.0116	< LOD	0.001

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Co	Co LOD	Cr	Cr LOD	Cu	Cu LOD	F	F LOD
T537T	0.0028	0.0016	0.0308	0.0253	< LOD	0.0019	< LOD	0
T646T1	0.0018	0.0016	< LOD	0.0255	< LOD	0.0019	< LOD	0.0105
T646T2	0.0022	0.0016	< LOD	0.0244	< LOD	0.0019	0.0366	0.0117
MU03T1a	0.0021	0.0017	< LOD	0.0267	0.0032	0.002	< LOD	0
MU03T1b	0.005	0.0017	< LOD	0.0253	< LOD	0.002	0.0182	0.0107
TD2a	< LOD	0	< LOD	0	< LOD	0	< LOD	0.0096
TD2b	0.0022	0.0016	< LOD	0	< LOD	0	0.0202	0.0098
T526Ta	0.0103	0.0016	< LOD	0	< LOD	0.0019	< LOD	0.0104
T526Tb	0.0056	0.0016	< LOD	0	< LOD	0	< LOD	0
T593Ta	0.0103	0.0016	< LOD	0	0.0033	0.0019	< LOD	0
T593Tb	0.0108	0.0016	< LOD	0.0246	0.003	0.0019	< LOD	0
TD7a	0.0068	0.0017	< LOD	0	< LOD	0	< LOD	0
TD7b	0.0035	0.0017	< LOD	0.0239	< LOD	0	< LOD	0
1TU103a	0.0031	0.0016	< LOD	0.0256	< LOD	0.0019	< LOD	0
1TU103b	< LOD	0.0016	< LOD	0.0257	< LOD	0	< LOD	0.0098
1TU15a	0.004	0.0016	< LOD	0.0227	0.0022	0.0019	< LOD	0
1TU15b	< LOD	0.0016	< LOD	0	< LOD	0.0019	0.036	0.0115
1TU47a	0.0024	0.0016	0.0246	0.0236	0.0026	0.0019	0.0207	0.0102
1TU47b	< LOD	0.0016	< LOD	0.0254	< LOD	0	0.0119	0.0099
1TU59	0.0071	0.0016	< LOD	0	< LOD	0	0.0294	0.0114
1TU79a	0.0036	0.0016	0.0438	0.0252	0.0024	0.0019	0.0192	0.0104
1TU79b	0.006	0.0016	0.0705	0.0264	< LOD	0.0019	< LOD	0.0105
1TU81	< LOD	0	< LOD	0.0231	< LOD	0	0.0405	0.0115
1TU98	< LOD	0.0016	0.1062	0.0232	< LOD	0	0.0171	0.0099
T1-1	0.0028	0.0016	0.074	0.025	< LOD	0	0.0146	0.0102
2TU104a	0.0044	0.0016	< LOD	0.0252	0.0027	0.0019	< LOD	0
2TU104b	0.0063	0.0016	< LOD	0.026	< LOD	0	< LOD	0
2TU18a	0.002	0.0016	< LOD	0.0255	< LOD	0.0019	0.0244	0.0104
2TU18b	0.002	0.0016	< LOD	0	0.0024	0.0019	0.0155	0.0108
2TU46	0.0029	0.0017	< LOD	0	< LOD	0.002	< LOD	0.0108
2TU74	0.0031	0.0016	0.0324	0.0256	< LOD	0.0019	0.022	0.0103
2TU86	0.0058	0.0016	0.0268	0.0262	< LOD	0.002	0.0115	0.01
2TU89	0.0017	0.0016	0.0856	0.0233	< LOD	0.0019	< LOD	0.0102
2TU97a	0.0033	0.0016	< LOD	0.024	< LOD	0.0019	0.0128	0.0102
2TU97b	0.0021	0.0016	< LOD	0.024	< LOD	0.0019	0.0153	0.0103
T2-1a	0.0044	0.0017	< LOD	0	< LOD	0.002	< LOD	0.011
T2-1b	0.0026	0.0017	< LOD	0.0246	< LOD	0.002	0.015	0.011
T2-2a	0.0041	0.0017	< LOD	0	< LOD	0	0.076	0.0147
T2-2b	0.0047	0.0017	< LOD	0.0252	0.0033	0.002	0.084	0.0145
T2-3a	< LOD	0.0016	0.1868	0.0252	< LOD	0.0019	< LOD	0
T2-3b	0.0026	0.0016	0.0345	0.0249	< LOD	0.0019	< LOD	0.0101
T2-4a	0.0042	0.0016	0.1315	0.0243	0.0034	0.0019	0.0275	0.0099
T2-4b	0.0047	0.0016	0.0995	0.0257	< LOD	0	0.0108	0.0101
T2-5a	0.0029	0.0016	0.027	0.0254	< LOD	0.0019	0.0122	0.0105
T2-5b	0.0048	0.0016	0.0428	0.0255	< LOD	0	0.0192	0.0104

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Fe	Fe LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
T537T	6.0245	0.0713	0.004	0.0008	3.4328	0.0123	0.0058	0.0048
T646T1	6.5795	0.0714	0.0031	0.0008	2.8165	0.0126	< LOD	0.0047
T646T2	5.1489	0.0851	0.0073	0.0008	4.1194	0.0124	0.0174	0.0048
MU03T1a	10.7727	0.0852	0.0241	0.0008	3.1463	0.0124	0.0178	0.0051
MU03T1b	9.6864	0.0833	0.0194	0.0008	3.0861	0.0133	0.0216	0.0049
TD2a	5.1556	0.0713	0.0046	0.0008	4.9416	0.0132	0.0119	0.0048
TD2b	5.1649	0.0749	0.0059	0.0008	4.8989	0.0127	0.0169	0.0047
T526Ta	6.9004	0.0804	0.0056	0.0008	3.2025	0.0121	0.0168	0.0049
T526Tb	6.0011	0.0772	0.007	0.0008	3.5027	0.0128	0.0211	0.0046
T593Ta	7.09	0.0809	0.0024	0.0008	3.2138	0.0126	< LOD	0.0049
T593Tb	6.9973	0.0877	0.0032	0.0008	3.1285	0.0132	< LOD	0
TD7a	9.9969	0.0897	0.0184	0.0008	3.3278	0.0129	0.0351	0.0048
TD7b	10.2472	0.0808	0.0193	0.0008	3.1328	0.0118	0.0251	0.005
1TU103a	6.066	0.0736	0.0091	0.0008	4.5424	0.0139	0.0221	0.0047
1TU103b	5.7885	0.0771	0.0105	0.0008	4.6877	0.0126	0.0181	0.005
1TU15a	5.465	0.0856	0.0052	0.0008	3.4367	0.0129	0.0342	0.0048
1TU15b	6.2572	0.0844	0.0067	0.0008	3.5838	0.0127	0.0407	0.0047
1TU47a	4.5218	0.0847	0.0109	0.0008	4.9796	0.0133	0.0174	0.0049
1TU47b	4.6748	0.0795	0.0103	0.0008	5.017	0.0134	0.0212	0.0048
1TU59	4.8247	0.0896	0.0172	0.0008	4.2536	0.013	0.0203	0.0049
1TU79a	4.9451	0.0826	0.0201	0.0008	3.9384	0.0121	< LOD	0.0049
1TU79b	4.8192	0.075	0.0205	0.0008	3.8632	0.0124	0.005	0.0048
1TU81	8.0775	0.0842	0.0393	0.0008	2.7635	0.0125	0.058	0.0049
1TU98	3.2503	0.0716	0.0349	0.0008	4.3898	0.0125	0.022	0.0049
T1-1	4.0808	0.0793	0.0323	0.0008	4.1155	0.0123	0.0176	0.0047
2TU104a	5.4416	0.0866	0.0087	0.0008	4.6563	0.0126	0.0132	0.0048
2TU104b	6.0391	0.0825	0.0156	0.0008	4.6683	0.0114	0.0169	0.0049
2TU18a	5.8964	0.0748	0.029	0.0008	4.4097	0.0127	0.0307	0.0049
2TU18b	5.8578	0.0913	0.0307	0.0008	4.6869	0.0132	0.0293	0.0048
2TU46	10.0728	0.0828	0.0464	0.0008	2.1055	0.0121	0.0912	0.0049
2TU74	3.8889	0.0763	0.019	0.0008	4.4769	0.0131	< LOD	0.0048
2TU86	6.6381	0.0892	0.0105	0.0008	4.7617	0.0131	0.0159	0.0048
2TU89	4.6726	0.0816	0.029	0.0008	3.8797	0.0134	0.0147	0.0048
2TU97a	5.7183	0.0903	0.0384	0.0008	3.4777	0.0122	0.0411	0.0049
2TU97b	5.7466	0.0855	0.0404	0.0008	3.3836	0.012	0.0428	0.0049
T2-1a	9.1593	0.0857	0.0461	0.0008	2.1402	0.0128	0.0536	0.0049
T2-1b	9.169	0.0785	0.0469	0.0008	2.2241	0.0118	0.033	0.0052
T2-2a	7.3982	0.0831	0.0384	0.0008	2.6826	0.0126	0.364	0.0051
T2-2b	7.6231	0.083	0.0413	0.0008	2.6577	0.0123	0.3675	0.0051
T2-3a	4.1906	0.0782	0.0175	0.0008	4.1714	0.0124	0.0054	0.0048
T2-3b	4.0481	0.0712	0.0175	0.0008	4.2826	0.0121	0.009	0.0049
T2-4a	3.9959	0.0815	0.0347	0.0008	4.1456	0.013	0.0149	0.0049
T2-4b	4.1088	0.0865	0.0356	0.0008	3.9911	0.0124	0.0113	0.0049
T2-5a	5.3962	0.0883	0.037	0.0008	4.3255	0.0134	0.0268	0.0049
T2-5b	5.2241	0.0747	0.0384	0.0008	4.3253	0.0132	0.0295	0.0049

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Na	Na LOD	Ni	Ni LOD	Sc	Sc LOD	Si	Si LOD
T537T	1.4919	0.017	0.0189	0.0016	0.0056	0.0006	16.6139	0.0143
T646T1	1.0331	0.0171	0.0188	0.0016	0.0051	0.0006	16.867	0.0135
T646T2	1.581	0.0154	0.0084	0.0016	0.0045	0.0006	16.8067	0.0138
MU03T1a	1.7578	0.0177	< LOD	0.0017	0.0536	0.0006	16.3261	0.0141
MU03T1b	1.8671	0.0176	0.0062	0.0016	0.0244	0.0006	16.5559	0.0139
TD2a	1.3163	0.0161	< LOD	0.0016	< LOD	0.0006	16.7069	0.0144
TD2b	1.2858	0.0157	0.0028	0.0016	< LOD	0	16.3348	0.0139
T526Ta	1.4044	0.0178	0.0083	0.0016	0.0187	0.0006	16.6446	0.0136
T526Tb	1.8845	0.016	0.0078	0.0016	0.0088	0.0006	16.6765	0.014
T593Ta	1.4217	0.0151	0.0337	0.0016	0.0017	0.0006	16.8887	0.0133
T593Tb	1.2247	0.0152	0.031	0.0016	0.0037	0.0006	16.8785	0.0144
TD7a	1.836	0.0176	< LOD	0.0017	0.0202	0.0006	16.4508	0.0141
TD7b	1.6883	0.0189	0.0025	0.0017	0.0079	0.0006	16.3811	0.014
1TU103a	1.3736	0.0164	0.0044	0.0016	0.0009	0.0006	16.5348	0.0147
1TU103b	1.3786	0.0161	< LOD	0.0016	0.0032	0.0006	16.411	0.0143
1TU15a	1.0599	0.0147	0.0065	0.0016	0.0071	0.0005	17.0274	0.0141
1TU15b	1.2225	0.0165	0.0047	0.0016	0.0049	0.0005	16.8378	0.0136
1TU47a	1.173	0.0157	0.0075	0.0016	0.0066	0.0005	16.1413	0.0135
1TU47b	1.1849	0.0158	0.0052	0.0016	0.0056	0.0005	16.0038	0.014
1TU59	1.3139	0.0177	0.0155	0.0016	0.0023	0.0005	16.534	0.0139
1TU79a	1.3123	0.0166	0.0139	0.0016	0.0032	0.0005	16.6477	0.0136
1TU79b	1.3443	0.0146	0.0133	0.0016	0.0032	0.0005	16.5972	0.0142
1TU81	1.4941	0.0152	< LOD	0.0016	0.0066	0.0006	16.1379	0.0135
1TU98	1.2773	0.0153	< LOD	0.0016	0.0048	0.0005	16.6512	0.0139
T1-1	1.4548	0.0167	0.0113	0.0016	0.0055	0.0006	16.5781	0.0141
2TU104a	1.844	0.0153	0.02	0.0016	0.0054	0.0006	16.8589	0.0143
2TU104b	1.5876	0.0164	0.0169	0.0016	0.0021	0.0006	16.8245	0.0143
2TU18a	1.5083	0.0163	< LOD	0	0.0014	0.0006	16.5603	0.0141
2TU18b	1.5561	0.0156	< LOD	0.0016	0.003	0.0006	16.5875	0.0145
2TU46	1.7292	0.0191	< LOD	0	0.0027	0.0006	15.9102	0.0144
2TU74	1.4265	0.0168	< LOD	0.0016	0.0008	0.0005	16.707	0.0142
2TU86	1.241	0.0162	0.0124	0.0016	0.0015	0.0006	16.6003	0.0138
2TU89	1.3693	0.0175	0.0032	0.0016	0.0039	0.0006	16.4149	0.014
2TU97a	1.4488	0.0162	0.0081	0.0016	0.0036	0.0006	16.3466	0.0135
2TU97b	1.409	0.0175	0.0061	0.0016	0.0051	0.0006	16.5134	0.014
T2-1a	1.3424	0.0175	0.0025	0.0016	0.0016	0.0006	15.8574	0.0127
T2-1b	1.2949	0.0172	< LOD	0.0017	0.0042	0.0006	15.8515	0.0136
T2-2a	1.7016	0.0183	0.0063	0.0016	0.0038	0.0006	16.069	0.0139
T2-2b	1.6846	0.0182	0.006	0.0016	0.005	0.0006	15.904	0.0143
T2-3a	1.3569	0.0164	0.0097	0.0016	0.0035	0.0006	16.5673	0.0138
T2-3b	1.4089	0.0166	0.0084	0.0016	0.0036	0.0006	16.6785	0.0138
T2-4a	1.3554	0.0155	0.005	0.0016	0.003	0.0006	16.6004	0.0129
T2-4b	1.2775	0.016	0.0056	0.0016	0.0034	0.0006	16.5957	0.0141
T2-5a	1.4761	0.0157	0.0061	0.0016	0.0045	0.0005	16.4788	0.0135
T2-5b	1.4324	0.018	0.0071	0.0016	0.0033	0.0005	16.2833	0.0141

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Sr	Sr LOD	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
T537T	< LOD	0	0.1945	0.0045	0.0586	0.0021	0.021	0.0022
T646T1	< LOD	0	0.0351	0.0047	0.1162	0.0021	0.0201	0.0022
T646T2	< LOD	0	0.1366	0.0047	0.1312	0.0021	0.0152	0.0022
MU03T1a	< LOD	0.0046	0.4876	0.0054	0.3659	0.0024	0.0091	0.0023
MU03T1b	< LOD	0	0.4058	0.0051	0.255	0.0023	0.0113	0.0023
TD2a	< LOD	0	0.2447	0.0048	0.011	0.0021	0.0102	0.0022
TD2b	< LOD	0	0.54	0.005	0.0204	0.0021	0.0132	0.0022
T526Ta	< LOD	0	0.0247	0.0047	0.0582	0.0021	0.0067	0.0022
T526Tb	< LOD	0.0045	0.0996	0.0048	0.0594	0.0021	0.0115	0.0022
T593Ta	< LOD	0	0.0295	0.0045	0.026	0.0021	0.0215	0.0022
T593Tb	< LOD	0	0.0252	0.0047	0.0259	0.0021	0.0222	0.0022
TD7a	< LOD	0	0.2329	0.005	0.1698	0.0022	0.0091	0.0023
TD7b	< LOD	0.0046	0.2445	0.0051	0.1617	0.0022	0.0136	0.0023
1TU103a	< LOD	0.0048	0.0763	0.0046	0.0377	0.0021	0.0091	0.0023
1TU103b	0.0145	0.0049	0.2586	0.0048	0.0813	0.0022	0.0115	0.0022
1TU15a	< LOD	0	0.0355	0.0045	0.0276	0.0021	0.0274	0.0022
1TU15b	< LOD	0	0.1282	0.0047	0.0162	0.0021	0.0263	0.0022
1TU47a	< LOD	0	0.5346	0.0049	0.0823	0.0022	0.0126	0.0022
1TU47b	< LOD	0	0.5082	0.0049	0.0741	0.0021	0.0082	0.0022
1TU59	< LOD	0	0.536	0.0052	0.0421	0.0021	0.019	0.0022
1TU79a	< LOD	0	0.2783	0.0048	0.0428	0.0021	0.0112	0.0022
1TU79b	< LOD	0	0.4009	0.0051	0.0432	0.0021	0.0074	0.0022
1TU81	< LOD	0	0.4027	0.0052	0.0115	0.0021	0.0382	0.0023
1TU98	< LOD	0	0.3884	0.0048	0.0471	0.0021	0.0259	0.0022
T1-1	< LOD	0	0.3071	0.0048	0.0525	0.002	0.0109	0.0022
2TU104a	< LOD	0	0.0613	0.0047	0.0388	0.0021	0.0215	0.0022
2TU104b	< LOD	0.0045	0.4311	0.0047	0.1208	0.0022	0.027	0.0023
2TU18a	< LOD	0	0.3784	0.0051	0.0128	0.0021	0.0131	0.0022
2TU18b	< LOD	0	0.5066	0.0051	0.0193	0.0021	0.0117	0.0022
2TU46	< LOD	0	0.1959	0.0048	< LOD	0.0021	0.1389	0.0023
2TU74	< LOD	0	0.4746	0.0048	0.041	0.0021	0.0154	0.0022
2TU86	< LOD	0	0.7095	0.0051	0.054	0.0022	0.0092	0.0023
2TU89	< LOD	0	0.5364	0.005	0.0365	0.0021	0.0161	0.0022
2TU97a	< LOD	0	0.3975	0.005	0.0181	0.0021	0.0244	0.0023
2TU97b	< LOD	0	0.4034	0.0048	0.018	0.0021	0.0278	0.0022
T2-1a	< LOD	0	0.7249	0.0054	0.0098	0.0022	0.0359	0.0023
T2-1b	< LOD	0	0.692	0.0051	0.0127	0.0022	0.0397	0.0023
T2-2a	< LOD	0	0.5049	0.0055	0.0311	0.0022	0.1275	0.0023
T2-2b	< LOD	0	0.5464	0.005	0.0321	0.0021	0.1147	0.0023
T2-3a	< LOD	0	0.5249	0.0049	0.0583	0.0021	0.0159	0.0022
T2-3b	< LOD	0	0.4718	0.0049	0.0492	0.0021	0.0158	0.0022
T2-4a	< LOD	0	0.3185	0.005	0.0525	0.0021	0.0081	0.0022
T2-4b	< LOD	0	0.3241	0.005	0.0527	0.0021	0.0135	0.0022
T2-5a	< LOD	0	0.475	0.005	0.0323	0.0021	0.0167	0.0022
T2-5b	< LOD	0	0.5059	0.0051	0.0296	0.0021	0.018	0.0022

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Origin	Site	Al	Al LOD	Ca	Ca LOD	Cl	Cl LOD
3TU03	Till	Till 03	16.5203	0.0144	0.8056	0.0117	< LOD	0.001
3TU09a	Till	Till 03	17.273	0.0149	0.3452	0.0114	< LOD	0
3TU09b	Till	Till 03	16.6372	0.0144	0.5284	0.0116	0.0015	0.001
3TU11a	Till	Till 03	15.4115	0.0142	1.4958	0.0117	< LOD	0
3TU11b	Till	Till 03	15.2153	0.014	1.2984	0.0117	< LOD	0.001
3TU24	Till	Till 03	17.7274	0.0143	0.2963	0.0116	< LOD	0
3TU35	Till	Till 03	17.4795	0.0143	0.7356	0.0122	0.0013	0.0009
3TU48	Till	Till 03	18.0718	0.014	0.4596	0.0116	< LOD	0
3TU50a	Till	Till 03	15.5879	0.0147	0.8449	0.0117	< LOD	0
3TU50b	Till	Till 03	15.206	0.0141	0.8523	0.0118	< LOD	0
3TU60	Till	Till 03	17.0349	0.0134	0.6601	0.0118	< LOD	0.001
3TU61	Till	Till 03	17.4409	0.0144	0.4122	0.0117	< LOD	0
3TU74	Till	Till 03	18.0108	0.0142	0.5354	0.0115	< LOD	0.0009
4TU01	Till	Till 04	15.7545	0.0138	1.0593	0.012	< LOD	0
4TU05	Till	Till 04	16.2779	0.014	1.1214	0.0116	0.0018	0.0009
4TU36	Till	Till 04	15.9992	0.0143	0.9702	0.0121	0.0014	0.001
4TU48a	Till	Till 04	25.3459	0.0152	0.4795	0.0114	< LOD	0
4TU48b	Till	Till 04	18.1316	0.0151	0.8423	0.0116	0.0015	0.001
4TU51	Till	Till 04	17.7721	0.0144	0.6186	0.0116	< LOD	0
4TU66a	Till	Till 04	15.7013	0.0147	1.0458	0.0112	< LOD	0.001
4TU66b	Till	Till 04	15.7427	0.0149	1.0083	0.0119	0.0017	0.001
4TU67	Till	Till 04	17.7471	0.0138	0.5871	0.0114	0.0011	0.001
4TU77a	Till	Till 04	16.9636	0.0145	0.4269	0.0117	< LOD	0
4TU77b	Till	Till 04	16.772	0.0141	0.4637	0.011	< LOD	0
4TU89	Till	Till 04	17.9214	0.0149	0.6408	0.0114	0.0021	0.0009
4TU94a	Till	Till 04	15.8883	0.0141	1.0218	0.0113	0.0015	0.001
4TU94b	Till	Till 04	16.0285	0.0138	0.9736	0.0118	< LOD	0
T4-1	Till	Till 04	18.2823	0.0145	0.9921	0.0115	< LOD	0
5TU04	Till	Till 05	17.9282	0.0144	0.7127	0.0113	< LOD	0
5TU103	Till	Till 05	15.7207	0.0142	0.9564	0.0116	< LOD	0
5TU20	Till	Till 05	16.2768	0.0142	0.964	0.0115	< LOD	0.001
5TU22	Till	Till 05	18.0591	0.0141	0.6885	0.0118	< LOD	0.0009
5TU23a	Till	Till 05	18.045	0.0148	0.7122	0.0118	< LOD	0
5TU23b	Till	Till 05	16.9284	0.0146	0.6467	0.0115	0.0017	0.0009
5TU50	Till	Till 05	18.0487	0.0148	0.6327	0.0112	< LOD	0
5TU56	Till	Till 05	17.7546	0.014	0.5138	0.0112	< LOD	0.0009
5TU63	Till	Till 05	17.6749	0.0142	0.5822	0.0112	< LOD	0.0009
5TU78	Till	Till 05	17.9643	0.0146	0.7094	0.0113	< LOD	0.001
T5-1	Till	Till 05	15.8964	0.0141	1.2023	0.0122	0.05	0.001
T5-2a	Till	Till 05	16.8418	0.0136	0.6023	0.0113	< LOD	0
T5-2b	Till	Till 05	16.3603	0.014	0.9095	0.0117	< LOD	0
6TU03a	Till	Till 06	16.6635	0.0142	0.4894	0.0115	< LOD	0.001
6TU03b	Till	Till 06	16.9396	0.0141	0.5323	0.0111	0.002	0.001
6TU12	Till	Till 06	18.1577	0.0144	0.374	0.0112	< LOD	0
6TU24a	Till	Till 06	15.7217	0.0151	1.0599	0.0119	< LOD	0.001
6TU24b	Till	Till 06	16.4055	0.0143	1.0298	0.0117	0.0018	0.001

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Co	Co LOD	Cr	Cr LOD	Cu	Cu LOD	F	F LOD
3TU03	0.0026	0.0016	0.05	0.0249	< LOD	0	0.0581	0.0126
3TU09a	0.0047	0.0017	< LOD	0	< LOD	0	< LOD	0
3TU09b	0.0041	0.0016	< LOD	0.0234	< LOD	0.0019	0.0114	0.0102
3TU11a	0.0044	0.0016	< LOD	0.0246	< LOD	0	0.0124	0.01
3TU11b	0.0036	0.0016	0.0955	0.0246	< LOD	0	< LOD	0.01
3TU24	0.0031	0.0017	< LOD	0.0238	< LOD	0	0.0178	0.0109
3TU35	0.0039	0.0016	0.0423	0.0256	< LOD	0.0019	0.0111	0.0102
3TU48	0.0036	0.0016	0.0323	0.0273	0.0021	0.0019	0.0263	0.0103
3TU50a	0.0034	0.0017	< LOD	0.0248	< LOD	0	0.0273	0.0109
3TU50b	< LOD	0.0017	< LOD	0.025	< LOD	0	0.0279	0.0106
3TU60	0.0037	0.0016	< LOD	0	< LOD	0	0.0198	0.0105
3TU61	0.0037	0.0016	< LOD	0.0264	< LOD	0.0019	0.05	0.0117
3TU74	0.0064	0.0016	< LOD	0.0243	< LOD	0	0.0227	0.0102
4TU01	0.0041	0.0016	0.0267	0.0223	< LOD	0.0019	< LOD	0
4TU05	< LOD	0	< LOD	0.0248	< LOD	0.0019	0.0171	0.0112
4TU36	0.004	0.0016	< LOD	0.024	< LOD	0.0019	0.031	0.0103
4TU48a	0.0038	0.0016	0.0616	0.0238	< LOD	0	0.0161	0.0099
4TU48b	0.0036	0.0016	0.0655	0.0264	0.0049	0.0019	< LOD	0.0103
4TU51	0.0043	0.0016	0.2046	0.0233	< LOD	0.0019	< LOD	0.0105
4TU66a	0.0029	0.0017	< LOD	0	< LOD	0.002	0.0365	0.0105
4TU66b	0.0025	0.0016	< LOD	0	< LOD	0	0.028	0.0104
4TU67	0.0058	0.0016	0.102	0.0255	< LOD	0	0.0171	0.0104
4TU77a	0.0029	0.0016	< LOD	0.0238	< LOD	0	< LOD	0
4TU77b	0.003	0.0016	< LOD	0	< LOD	0	< LOD	0.0092
4TU89	0.0035	0.0016	0.0676	0.0243	< LOD	0	0.0231	0.0104
4TU94a	0.0064	0.0016	0.0685	0.0243	0.0024	0.0019	0.0137	0.0101
4TU94b	< LOD	0	0.0306	0.0237	< LOD	0.002	0.0131	0.0102
T4-1	< LOD	0.0015	0.0322	0.0236	< LOD	0	0.0352	0.0105
5TU04	0.0037	0.0016	0.0946	0.0257	< LOD	0.0019	0.0133	0.0103
5TU103	0.0018	0.0016	< LOD	0.0245	< LOD	0	< LOD	0.0101
5TU20	0.0052	0.0016	< LOD	0.0258	< LOD	0	< LOD	0
5TU22	0.0064	0.0016	0.0717	0.0255	< LOD	0	< LOD	0.0102
5TU23a	0.0033	0.0016	0.0492	0.025	< LOD	0.0019	0.036	0.0103
5TU23b	0.0034	0.0015	0.0517	0.0228	< LOD	0	< LOD	0.0104
5TU50	0.0074	0.0016	0.0706	0.0247	< LOD	0	0.0243	0.0101
5TU56	0.003	0.0016	0.1357	0.0247	< LOD	0	< LOD	0.0102
5TU63	0.0034	0.0016	0.0815	0.0238	< LOD	0	< LOD	0
5TU78	0.0032	0.0016	0.0777	0.0258	0.0034	0.0019	0.0199	0.0107
T5-1	< LOD	0.0016	< LOD	0	< LOD	0	0.0132	0.0095
T5-2a	0.0025	0.0016	< LOD	0.0238	< LOD	0.0019	< LOD	0.0093
T5-2b	0.0018	0.0016	< LOD	0.0248	0.0024	0.0019	< LOD	0
6TU03a	0.0022	0.0016	0.0706	0.0253	< LOD	0.0019	0.0258	0.0106
6TU03b	0.0034	0.0016	0.0554	0.0258	< LOD	0.0019	< LOD	0
6TU12	< LOD	0.0016	0.0608	0.0221	< LOD	0	0.02	0.0103
6TU24a	0.0018	0.0016	< LOD	0.024	< LOD	0.002	0.0195	0.0103
6TU24b	0.0021	0.0016	< LOD	0.0248	< LOD	0	0.014	0.0103

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Fe	Fe LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
3TU03	5.6219	0.0746	0.0294	0.0008	4.4004	0.0122	0.057	0.0048
3TU09a	6.1713	0.0852	0.004	0.0008	3.5895	0.013	< LOD	0.005
3TU09b	5.9023	0.0863	0.0062	0.0007	3.8199	0.0126	< LOD	0.0048
3TU11a	6.5164	0.0852	0.021	0.0008	5.0835	0.0135	0.0115	0.0049
3TU11b	6.3229	0.0891	0.0152	0.0008	5.1372	0.0127	0.0178	0.0048
3TU24	11.6159	0.0833	0.0305	0.0008	0.3	0.0111	0.2094	0.0053
3TU35	3.7316	0.0714	0.0233	0.0008	4.4738	0.0134	< LOD	0.0048
3TU48	4.0582	0.0804	0.0183	0.0008	4.1442	0.0122	0.0185	0.0049
3TU50a	8.0449	0.0819	0.0299	0.0008	3.9886	0.0124	0.0496	0.005
3TU50b	7.963	0.0859	0.029	0.0008	4.2656	0.013	0.048	0.0048
3TU60	5.6275	0.0873	0.0168	0.0008	4.0328	0.0126	0.0223	0.0048
3TU61	4.379	0.0793	0.0208	0.0008	4.2694	0.0128	0.0225	0.0049
3TU74	4.7781	0.077	0.013	0.0008	3.8187	0.0126	0.0155	0.0048
4TU01	7.1897	0.0709	0.0071	0.0008	4.3579	0.0129	0.0183	0.0048
4TU05	5.8953	0.0812	0.0072	0.0008	4.7368	0.0127	0.0211	0.0048
4TU36	6.2908	0.0862	0.0091	0.0008	4.3414	0.013	0.0113	0.005
4TU48a	2.7136	0.0623	0.0328	0.0008	2.3923	0.0105	< LOD	0
4TU48b	4.0713	0.0771	0.0485	0.0008	3.965	0.0123	< LOD	0.0049
4TU51	4.1006	0.0782	0.0249	0.0008	4.3052	0.0129	0.0137	0.0049
4TU66a	7.8165	0.0755	0.0086	0.0008	3.8983	0.0128	0.0157	0.005
4TU66b	7.4213	0.0799	0.0091	0.0008	4.0388	0.0139	0.0156	0.0049
4TU67	4.3362	0.0875	0.0301	0.0008	4.0527	0.0128	0.0116	0.0048
4TU77a	4.2263	0.0836	0.0061	0.0007	4.5888	0.0127	0.0115	0.0048
4TU77b	4.7181	0.094	0.0072	0.0008	4.8455	0.0131	< LOD	0.0049
4TU89	4.3073	0.0737	0.0221	0.0008	4.142	0.0123	0.0085	0.0048
4TU94a	6.5244	0.0722	0.0082	0.0008	4.3432	0.0125	0.0189	0.0048
4TU94b	6.8473	0.0778	0.0069	0.0008	4.1608	0.0128	0.0187	0.0049
T4-1	2.3369	0.0774	0.0341	0.0008	4.8313	0.0127	0.0152	0.0048
5TU04	3.862	0.0896	0.0377	0.0008	4.4075	0.013	< LOD	0.0049
5TU103	6.8808	0.0791	0.0086	0.0008	4.3496	0.0134	0.0172	0.0049
5TU20	6.1058	0.0711	0.0228	0.0008	4.8446	0.014	0.0056	0.0049
5TU22	4.0071	0.0762	0.0308	0.0008	4.1275	0.0126	0.0203	0.0048
5TU23a	3.9639	0.0662	0.044	0.0008	4.4361	0.0124	0.0081	0.0048
5TU23b	4.481	0.0847	0.0466	0.0008	4.6013	0.0129	0.0104	0.0048
5TU50	4.467	0.0773	0.0312	0.0008	3.8701	0.0128	0.0143	0.0048
5TU56	4.3132	0.0714	0.0193	0.0008	4.3155	0.0123	< LOD	0.0049
5TU63	4.1727	0.0726	0.021	0.0008	4.2685	0.0131	< LOD	0.0049
5TU78	4.0892	0.0762	0.0206	0.0008	4.2722	0.0118	0.0086	0.0049
T5-1	6.3509	0.0709	0.0104	0.0008	4.7887	0.0127	0.0227	0.0048
T5-2a	4.6578	0.0835	0.0078	0.0008	4.6236	0.0132	0.0061	0.0049
T5-2b	4.8535	0.0824	0.0084	0.0008	4.819	0.0128	0.0106	0.0049
6TU03a	5.3819	0.077	0.0266	0.0008	4.4724	0.0127	0.0069	0.0048
6TU03b	6.064	0.079	0.0331	0.0008	4.2153	0.0127	0.0278	0.0048
6TU12	5.2493	0.0781	0.0317	0.0008	3.5712	0.0124	0.0238	0.0049
6TU24a	5.543	0.0735	0.0122	0.0008	5.1528	0.0136	0.0203	0.0047
6TU24b	5.2963	0.0813	0.0088	0.0008	4.9436	0.0131	0.0222	0.0047

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Na	Na LOD	Ni	Ni LOD	Sc	Sc LOD	Si	Si LOD
3TU03	1.4497	0.0176	0.0046	0.0016	0.0036	0.0005	16.6261	0.0143
3TU09a	1.3323	0.0178	0.0077	0.0017	0.0028	0.0005	16.6501	0.0143
3TU09b	1.3358	0.0154	0.0074	0.0016	0.0016	0.0005	16.6828	0.0138
3TU11a	1.3241	0.0178	0.0078	0.0016	0.0018	0.0005	16.4747	0.0141
3TU11b	1.3893	0.0164	0.0066	0.0016	0.0033	0.0005	16.5488	0.0135
3TU24	1.2245	0.0177	< LOD	0	0.0077	0.0005	15.9786	0.0151
3TU35	1.2466	0.0168	0.0094	0.0016	< LOD	0.0005	16.6395	0.0143
3TU48	1.4028	0.0162	0.0042	0.0016	0.0029	0.0005	16.687	0.0139
3TU50a	1.5369	0.0159	0.0035	0.0016	0.0023	0.0005	16.6082	0.0137
3TU50b	1.6691	0.0166	0.0042	0.0016	0.002	0.0005	16.42	0.014
3TU60	1.4264	0.0156	0.0039	0.0016	0.0019	0.0005	16.389	0.0138
3TU61	1.5495	0.0147	0.0096	0.0016	0.0014	0.0005	16.7956	0.0136
3TU74	1.3618	0.016	0.0156	0.0016	0.0044	0.0005	16.4887	0.0147
4TU01	1.4653	0.0169	< LOD	0.0016	0.002	0.0005	16.6859	0.0139
4TU05	1.3925	0.0169	< LOD	0.0016	< LOD	0	16.8269	0.0139
4TU36	1.4386	0.0162	0.01	0.0016	0.0041	0.0005	16.6046	0.0141
4TU48a	0.7724	0.0133	0.0074	0.0016	< LOD	0.0005	16.915	0.0138
4TU48b	1.2461	0.0161	0.0093	0.0016	0.0028	0.0005	16.6757	0.0138
4TU51	1.4534	0.0154	0.006	0.0016	0.0042	0.0005	16.7143	0.0138
4TU66a	1.42	0.0159	0.0039	0.0016	0.0013	0.0005	16.4921	0.014
4TU66b	1.4713	0.0169	0.0024	0.0016	0.0014	0.0005	16.504	0.0139
4TU67	1.4357	0.0165	0.0128	0.0016	0.003	0.0005	16.7436	0.0134
4TU77a	1.3272	0.0154	0.0092	0.0016	0.0232	0.0005	16.9402	0.0142
4TU77b	1.3946	0.0171	0.008	0.0016	0.0172	0.0005	16.8348	0.0139
4TU89	1.3885	0.0151	0.0123	0.0016	0.0044	0.0005	16.6315	0.014
4TU94a	1.4429	0.0173	0.0045	0.0016	0.005	0.0005	16.6433	0.0143
4TU94b	1.3869	0.0164	0.0021	0.0016	0.0035	0.0005	16.5447	0.0136
T4-1	1.1068	0.016	0.0026	0.0016	0.0017	0.0005	16.567	0.0135
5TU04	1.346	0.0166	0.0138	0.0016	0.0067	0.0007	16.8029	0.0141
5TU103	1.5011	0.0179	< LOD	0.0016	0.0017	0.0006	16.6272	0.014
5TU20	1.4565	0.0157	< LOD	0.0016	< LOD	0	16.8081	0.0142
5TU22	1.3236	0.016	0.0132	0.0016	0.0041	0.0006	16.6698	0.0143
5TU23a	1.3825	0.0165	0.003	0.0016	0.0024	0.0005	16.6615	0.0142
5TU23b	1.5304	0.018	0.0046	0.0016	0.0028	0.0005	16.8278	0.0137
5TU50	1.3662	0.0146	0.0193	0.0016	0.0039	0.0005	16.6713	0.0145
5TU56	1.4901	0.0166	0.0082	0.0016	0.0016	0.0005	16.7133	0.0143
5TU63	1.4896	0.0158	0.012	0.0016	0.0021	0.0005	16.6646	0.0144
5TU78	1.3125	0.0156	0.0116	0.0016	0.0023	0.0005	16.587	0.0137
T5-1	1.283	0.0167	0.0047	0.0016	< LOD	0	16.5476	0.0134
T5-2a	1.4503	0.0168	0.0049	0.0016	0.0066	0.0005	16.6369	0.0141
T5-2b	1.3979	0.0172	0.0078	0.0016	0.0072	0.0005	16.5952	0.0137
6TU03a	1.7061	0.0167	0.0115	0.0016	0.0031	0.0005	16.796	0.0139
6TU03b	1.6788	0.0171	0.0137	0.0016	0.0024	0.0005	16.6358	0.0131
6TU12	1.4878	0.018	0.0044	0.0016	0.0029	0.0005	16.663	0.0133
6TU24a	1.4668	0.0159	0.0108	0.0016	0.0033	0.0005	16.5537	0.0139
6TU24b	1.3837	0.0175	0.0126	0.0016	0.0017	0.0005	16.7975	0.0135

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Sr	Sr LOD	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
3TU03	< LOD	0	0.598	0.0054	0.0487	0.0022	0.017	0.0022
3TU09a	< LOD	0	2.1235	0.0067	0.0245	0.0023	0.0216	0.0023
3TU09b	< LOD	0	0.2417	0.0049	0.0196	0.002	0.0185	0.0022
3TU11a	< LOD	0	0.2657	0.0047	0.0564	0.0022	0.0113	0.0023
3TU11b	< LOD	0	0.2663	0.0048	0.0556	0.0021	0.012	0.0023
3TU24	< LOD	0	0.1274	0.0048	< LOD	0	0.136	0.0024
3TU35	< LOD	0	0.5466	0.0052	0.0499	0.0021	0.0211	0.0022
3TU48	< LOD	0	0.368	0.0049	0.0332	0.0021	0.0147	0.0022
3TU50a	< LOD	0.0046	0.2497	0.0048	0.0291	0.0021	0.0335	0.0023
3TU50b	< LOD	0.0047	0.2271	0.0049	0.0228	0.0021	0.0233	0.0023
3TU60	< LOD	0	0.4024	0.0048	0.0146	0.0022	0.0155	0.0022
3TU61	< LOD	0	0.4295	0.0048	0.0371	0.0021	0.0141	0.0022
3TU74	< LOD	0	0.3731	0.0046	0.0353	0.0021	0.0048	0.0022
4TU01	< LOD	0	0.3325	0.0051	0.0196	0.0021	0.0135	0.0023
4TU05	0.0047	0.0046	0.0204	0.0047	0.0136	0.0021	0.0091	0.0022
4TU36	< LOD	0	0.2179	0.005	0.0332	0.002	0.0125	0.0022
4TU48a	< LOD	0	0.3505	0.0048	0.0469	0.002	0.0131	0.0022
4TU48b	< LOD	0	0.3623	0.0051	0.0463	0.0021	0.0163	0.0022
4TU51	< LOD	0	0.3757	0.005	0.0524	0.0021	0.0098	0.0022
4TU66a	< LOD	0.0047	0.5431	0.0053	0.0288	0.0022	0.0123	0.0023
4TU66b	< LOD	0.0048	0.363	0.0051	0.024	0.0021	0.0124	0.0023
4TU67	< LOD	0	0.4652	0.005	0.0659	0.0021	0.0166	0.0022
4TU77a	< LOD	0	0.0441	0.0049	0.0973	0.0021	0.0072	0.0022
4TU77b	< LOD	0	0.0836	0.0046	0.0923	0.002	0.0109	0.0022
4TU89	< LOD	0	0.4352	0.0045	0.0455	0.0022	0.0156	0.0022
4TU94a	< LOD	0.0047	0.3985	0.005	0.0464	0.0021	0.0118	0.0023
4TU94b	0.0102	0.0047	0.369	0.0047	0.03	0.0021	0.0164	0.0023
T4-1	< LOD	0	0.3166	0.0046	0.0515	0.0021	0.0639	0.0022
5TU04	< LOD	0	0.376	0.005	0.0654	0.0021	0.0129	0.0022
5TU103	< LOD	0	0.3292	0.0051	0.0225	0.0022	0.0135	0.0022
5TU20	< LOD	0	0.0153	0.0046	0.0055	0.0021	0.0038	0.0023
5TU22	< LOD	0	0.2919	0.0049	0.0525	0.0021	0.0171	0.0022
5TU23a	< LOD	0	0.2328	0.0049	0.0412	0.0021	0.0235	0.0022
5TU23b	< LOD	0	0.2558	0.0047	0.0466	0.0021	0.0301	0.0022
5TU50	< LOD	0	0.3088	0.0049	0.0459	0.0021	0.0077	0.0022
5TU56	< LOD	0	0.3535	0.0049	0.0359	0.0021	0.0135	0.0022
5TU63	< LOD	0	0.3945	0.005	0.0469	0.0021	0.0142	0.0022
5TU78	< LOD	0	0.4416	0.005	0.0568	0.0021	0.015	0.0022
T5-1	< LOD	0	0.4405	0.0052	0.0484	0.0021	0.0122	0.0023
T5-2a	< LOD	0	0.1822	0.0048	0.066	0.0021	0.0104	0.0022
T5-2b	< LOD	0	0.3845	0.0049	0.1079	0.0022	0.0071	0.0022
6TU03a	< LOD	0	0.3311	0.005	0.0419	0.0021	0.0129	0.0022
6TU03b	< LOD	0	0.2583	0.0052	0.0356	0.0021	0.0129	0.0022
6TU12	< LOD	0	0.2322	0.0048	0.0224	0.002	0.0397	0.0022
6TU24a	< LOD	0.0047	0.2571	0.0048	0.0708	0.0021	0.0171	0.0022
6TU24b	< LOD	0	0.1371	0.0049	0.0541	0.0022	0.0164	0.0022

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Origin	Site	Al	Al LOD	Ca	Ca LOD	Cl	Cl LOD
6TU28	Till	Till 06	16.6161	0.0148	0.9145	0.0118	< LOD	0.001
6TU50	Till	Till 06	14.2418	0.0143	1.2058	0.0118	< LOD	0.001
6TU77	Till	Till 06	17.7924	0.0144	0.6932	0.0109	0.0014	0.0009
6TU90a	Till	Till 06	16.5683	0.0142	0.4431	0.0113	< LOD	0.001
6TU90b	Till	Till 06	16.4812	0.0146	0.8132	0.0118	0.0021	0.001
6TU92a	Till	Till 06	16.0407	0.0146	0.7844	0.0117	< LOD	0.001
6TU92b	Till	Till 06	16.0663	0.0136	0.8192	0.0114	< LOD	0.001
T6-1	Till	Till 06	17.7463	0.0143	0.5619	0.0115	< LOD	0.001
7TU1	Till	Till 07	17.6085	0.0146	0.6514	0.0109	< LOD	0.0009
7TU14	Till	Till 07	17.0758	0.0144	0.5745	0.0117	< LOD	0
7TU27a	Till	Till 07	17.0139	0.0146	0.4966	0.0117	< LOD	0
7TU27b	Till	Till 07	15.8617	0.0141	1.0406	0.0117	< LOD	0.001
7TU47	Till	Till 07	16.6438	0.0142	0.671	0.0114	< LOD	0
7TU5	Till	Till 07	17.5861	0.0145	0.6186	0.0117	< LOD	0.001
7TU50	Till	Till 07	18.1671	0.0143	0.614	0.0113	0.0017	0.0009
7TU55	Till	Till 07	17.743	0.0145	0.5771	0.0118	< LOD	0
7TU63	Till	Till 07	16.9311	0.014	0.5831	0.0114	0.0017	0.001
7TU73	Till	Till 07	15.9239	0.0146	0.5997	0.0118	< LOD	0
7TU90a	Till	Till 07	17.1134	0.0138	0.522	0.0116	< LOD	0.001
7TU90b	Till	Till 07	16.7179	0.0135	0.717	0.012	0.0029	0.0009
A608T2a	Thin section	Tiriganiaq	16.7573	0.0143	0.2279	0.0118	< LOD	0
A608T2b	Thin section	Tiriganiaq	16.817	0.014	0.5343	0.0117	0.0011	0.001
A620Ta	Thin section	Tiriganiaq	16.545	0.0142	0.0668	0.0112	< LOD	0
A620Tb	Thin section	Tiriganiaq	16.8227	0.0143	0.6522	0.0119	< LOD	0
M626Ta	Thin section	Tiriganiaq	14.1639	0.0138	0.6077	0.0117	0.0014	0.001
M626Tb	Thin section	Tiriganiaq	15.7916	0.0141	0.3468	0.0117	< LOD	0
T538T1a	Thin section	Tiriganiaq	17.6955	0.0149	0.1132	0.0111	< LOD	0.001
T538T1b	Thin section	Tiriganiaq	16.8426	0.0141	0.5369	0.0113	0.0018	0.0009
T538T2a	Thin section	Tiriganiaq	15.9743	0.0139	0.2875	0.0116	< LOD	0.001
T538T2b	Thin section	Tiriganiaq	17.3855	0.0145	0.4991	0.0114	< LOD	0
T559T2a	Thin section	Tiriganiaq	16.7194	0.0148	0.0907	0.0114	< LOD	0.001
T559T2b	Thin section	Tiriganiaq	15.6404	0.0137	0.306	0.0111	< LOD	0
T606Ta	Thin section	Tiriganiaq	17.0599	0.0146	0.217	0.0115	< LOD	0
T606Tb	Thin section	Tiriganiaq	16.6129	0.0136	0.5619	0.0113	< LOD	0
T610T1a	Thin section	Tiriganiaq	16.5801	0.0144	0.6698	0.0117	< LOD	0.001
T610T1b	Thin section	Tiriganiaq	16.9468	0.0143	0.5067	0.0118	< LOD	0.001
T610T2a	Thin section	Tiriganiaq	17.0115	0.0141	0.4607	0.0119	< LOD	0
T610T2b	Thin section	Tiriganiaq	16.5669	0.0148	0.5549	0.0121	0.0017	0.001
T611T1a	Thin section	Tiriganiaq	16.156	0.014	0.6396	0.0116	< LOD	0
T611T1b	Thin section	Tiriganiaq	15.8393	0.0138	0.251	0.011	< LOD	0
T611T2a	Thin section	Tiriganiaq	15.2514	0.0149	0.6071	0.0119	< LOD	0
T611T2b	Thin section	Tiriganiaq	16.3055	0.0147	0.5473	0.0117	< LOD	0
T611T2c	Thin section	Tiriganiaq	15.9232	0.014	0.5902	0.0122	< LOD	0
T625Ta	Thin section	Tiriganiaq	16.1604	0.0142	0.5561	0.0114	< LOD	0
T625Tb	Thin section	Tiriganiaq	16.4463	0.0145	0.3788	0.0111	< LOD	0.001
T644Ta	Thin section	Tiriganiaq	16.5916	0.0141	0.6824	0.0117	< LOD	0.001

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Co	Co LOD	Cr	Cr LOD	Cu	Cu LOD	F	F LOD
6TU28	0.0028	0.0016	0.0378	0.0248	0.0026	0.0019	< LOD	0
6TU50	0.007	0.0017	< LOD	0.0234	0.0051	0.002	0.0154	0.0116
6TU77	0.0026	0.0016	0.0888	0.0248	< LOD	0.0019	0.0163	0.0099
6TU90a	0.0054	0.0016	< LOD	0	< LOD	0.0019	< LOD	0.0097
6TU90b	0.0022	0.0016	< LOD	0.0246	< LOD	0	0.0113	0.01
6TU92a	0.0033	0.0016	0.1801	0.0265	< LOD	0.0019	< LOD	0
6TU92b	0.0026	0.0016	0.0696	0.0242	< LOD	0	< LOD	0.0098
T6-1	< LOD	0	< LOD	0.0246	< LOD	0.0019	0.02	0.0103
7TU1	0.0026	0.0015	0.0991	0.0231	0.0027	0.0019	0.0157	0.0102
7TU14	0.0059	0.0016	0.0764	0.0257	0.0022	0.0019	0.0427	0.0117
7TU27a	0.0036	0.0016	0.0287	0.0241	< LOD	0.0019	< LOD	0.0094
7TU27b	0.0034	0.0016	0.067	0.0227	< LOD	0	< LOD	0
7TU47	0.0037	0.0016	0.0972	0.0258	< LOD	0	0.0266	0.0103
7TU5	0.0046	0.0016	0.0708	0.0248	< LOD	0	< LOD	0
7TU50	0.0056	0.0016	< LOD	0.0257	< LOD	0	< LOD	0.0102
7TU55	0.0043	0.0016	< LOD	0	< LOD	0.0019	< LOD	0.01
7TU63	< LOD	0	< LOD	0	< LOD	0	< LOD	0.0108
7TU73	0.0067	0.0016	< LOD	0.0239	0.0023	0.0019	< LOD	0
7TU90a	0.005	0.0016	< LOD	0.0252	< LOD	0.0019	0.0471	0.0114
7TU90b	0.0042	0.0016	0.0671	0.0253	< LOD	0.0019	0.0202	0.0118
A608T2a	0.0018	0.0015	< LOD	0.0233	< LOD	0.0019	0.0116	0.01
A608T2b	< LOD	0.0016	< LOD	0	< LOD	0.0019	< LOD	0.0109
A620Ta	0.0022	0.0016	0.1115	0.024	0.0026	0.002	0.0163	0.0108
A620Tb	< LOD	0	0.0772	0.0238	< LOD	0.0019	0.0191	0.0118
M626Ta	0.0032	0.0017	< LOD	0.0248	0.0021	0.002	< LOD	0
M626Tb	0.0048	0.0016	< LOD	0.0245	< LOD	0	< LOD	0.0114
T538T1a	0.0095	0.0016	0.0927	0.0265	< LOD	0	0.0198	0.0108
T538T1b	0.0064	0.0016	0.1603	0.0251	0.0021	0.0019	< LOD	0
T538T2a	0.0066	0.0016	0.131	0.0249	< LOD	0.0019	0.0176	0.0111
T538T2b	0.0067	0.0016	0.0474	0.024	0.0022	0.0019	< LOD	0.0108
T559T2a	< LOD	0.0016	< LOD	0.0253	0.0028	0.0019	< LOD	0
T559T2b	< LOD	0.0016	0.0452	0.023	0.0054	0.002	0.0212	0.0119
T606Ta	0.0037	0.0016	0.1326	0.0243	< LOD	0	< LOD	0.0101
T606Tb	< LOD	0.0016	0.0399	0.0243	< LOD	0.0019	< LOD	0.0115
T610T1a	0.0048	0.0016	0.0579	0.0247	< LOD	0.002	0.0281	0.0115
T610T1b	0.0064	0.0016	< LOD	0.0255	0.0046	0.0019	0.0123	0.011
T610T2a	0.0057	0.0016	0.0542	0.0249	0.0026	0.0019	0.0168	0.0098
T610T2b	0.0048	0.0016	0.0687	0.0245	0.0025	0.0019	0.0236	0.0106
T611T1a	< LOD	0.0016	< LOD	0.0254	0.0023	0.0019	< LOD	0.0106
T611T1b	0.0044	0.0016	0.0484	0.0239	< LOD	0	< LOD	0
T611T2a	0.0041	0.0016	0.1233	0.0255	0.0031	0.0019	< LOD	0
T611T2b	0.0069	0.0016	0.0402	0.0237	< LOD	0.0019	< LOD	0
T611T2c	0.0044	0.0016	0.0265	0.0247	< LOD	0.0019	< LOD	0
T625Ta	0.0066	0.0016	0.1015	0.0255	0.0035	0.0019	< LOD	0.0107
T625Tb	0.0028	0.0016	0.0678	0.0229	< LOD	0.0019	< LOD	0.0099
T644Ta	0.0031	0.0016	0.0372	0.0228	0.002	0.0019	0.0152	0.0112

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Fe	Fe LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
6TU28	4.5605	0.0771	0.0074	0.0008	4.824	0.0132	0.0118	0.0047
6TU50	8.4515	0.0924	0.0285	0.0008	4.7004	0.0137	0.0219	0.0051
6TU77	3.907	0.0737	0.0397	0.0008	4.1584	0.0123	0.0055	0.0049
6TU90a	6.1824	0.0842	0.0082	0.0008	4.4283	0.0137	0.0202	0.0048
6TU90b	6.1703	0.0801	0.0069	0.0008	4.2924	0.0128	0.0156	0.0048
6TU92a	6.3789	0.0822	0.0081	0.0008	4.1713	0.0129	0.01	0.005
6TU92b	5.8154	0.0669	0.0083	0.0008	4.2151	0.0109	0.0123	0.0049
T6-1	4.9984	0.0736	0.0274	0.0008	3.7743	0.0119	0.0113	0.0048
7TU1	3.6079	0.0763	0.0145	0.0008	4.6208	0.013	0.0168	0.0047
7TU14	6.0495	0.0814	0.0355	0.0008	3.8509	0.0129	0.0715	0.0049
7TU27a	5.264	0.0805	0.0031	0.0008	4.374	0.0123	0.0112	0.0048
7TU27b	6.3429	0.0699	0.0048	0.0008	4.4195	0.0132	0.0167	0.0049
7TU47	5.5857	0.076	0.0465	0.0008	4.3144	0.0133	0.0198	0.0048
7TU5	5.1649	0.07	0.0102	0.0008	4.0675	0.0121	0.0078	0.005
7TU50	4.411	0.0762	0.0302	0.0008	4.1102	0.0133	0.0209	0.0045
7TU55	4.9485	0.0784	0.0491	0.0008	3.8878	0.0124	0.0062	0.0047
7TU63	7.3572	0.0791	0.0321	0.0008	3.2439	0.0124	0.0163	0.0049
7TU73	5.9898	0.0782	0.004	0.0008	4.674	0.0122	0.0187	0.0047
7TU90a	4.8009	0.0738	0.0099	0.0008	4.3885	0.0126	0.0207	0.0048
7TU90b	4.8039	0.0726	0.0217	0.0008	4.5267	0.0135	< LOD	0.005
A608T2a	3.926	0.0755	0.0091	0.0008	5.1838	0.013	< LOD	0.0048
A608T2b	5.6999	0.0809	0.0108	0.0008	4.0879	0.0122	0.0049	0.0048
A620Ta	8.4506	0.0793	0.0072	0.0008	2.4038	0.0119	< LOD	0
A620Tb	5.8131	0.0849	0.0132	0.0008	3.7326	0.0125	0.0097	0.0047
M626Ta	9.3433	0.0789	0.0058	0.0008	3.9781	0.0123	0.0348	0.0047
M626Tb	7.1976	0.0814	0.0081	0.0008	3.7887	0.012	0.0057	0.0049
T538T1a	5.7493	0.087	0.0086	0.0008	3.2987	0.0124	0.0095	0.0048
T538T1b	6.429	0.0763	0.0092	0.0008	3.5795	0.0121	< LOD	0
T538T2a	7.2325	0.0817	0.005	0.0008	3.5044	0.0124	0.0144	0.0048
T538T2b	6.646	0.0785	0.0079	0.0008	3.242	0.0123	0.0062	0.0049
T559T2a	6.2981	0.0859	0.0083	0.0008	3.4955	0.0127	< LOD	0.0049
T559T2b	6.9351	0.0838	0.0128	0.0008	3.6322	0.0119	< LOD	0.0049
T606Ta	5.1985	0.0726	0.0051	0.0008	3.9572	0.0124	0.0053	0.0048
T606Tb	5.5412	0.0706	0.0076	0.0008	4.0182	0.0127	< LOD	0.0048
T610T1a	7.0083	0.0701	0.0085	0.0008	3.4537	0.0123	< LOD	0
T610T1b	6.6652	0.0877	0.0059	0.0008	3.595	0.0124	< LOD	0.0049
T610T2a	6.6081	0.0785	0.0062	0.0008	3.5079	0.0126	0.0077	0.0047
T610T2b	6.5839	0.0848	0.0099	0.0008	3.6806	0.0121	0.0078	0.0048
T611T1a	6.498	0.0728	0.0157	0.0008	3.9971	0.0133	0.0142	0.0048
T611T1b	5.9202	0.084	0.0127	0.0008	4.5395	0.0132	0.0051	0.0048
T611T2a	7.3892	0.0714	0.014	0.0008	3.9357	0.0124	< LOD	0.005
T611T2b	6.2588	0.0859	0.0125	0.0008	3.9392	0.0131	0.0087	0.0048
T611T2c	6.339	0.0774	0.0109	0.0008	4.0736	0.0126	0.0098	0.0049
T625Ta	6.937	0.0727	0.0075	0.0008	3.5741	0.0118	< LOD	0.0048
T625Tb	5.6802	0.0762	0.0088	0.0008	3.7555	0.0126	< LOD	0
T644Ta	6.6403	0.0849	0.0071	0.0008	3.2617	0.0123	0.0055	0.0048

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Na	Na LOD	Ni	Ni LOD	Sc	Sc LOD	Si	Si LOD
6TU28	1.372	0.0169	0.0086	0.0016	0.0089	0.0005	16.9466	0.0133
6TU50	1.4473	0.0176	0.0056	0.0017	0.0008	0.0005	16.285	0.0134
6TU77	1.4236	0.0149	0.0072	0.0016	0.002	0.0005	16.4016	0.014
6TU90a	1.5678	0.016	0.0053	0.0016	0.0149	0.0005	16.9144	0.0138
6TU90b	1.4792	0.0153	0.0037	0.0016	0.0019	0.0005	16.8032	0.0145
6TU92a	1.4382	0.0159	0.0118	0.0016	0.0044	0.0005	16.35	0.0145
6TU92b	1.4433	0.0154	0.0146	0.0016	0.0023	0.0005	16.3213	0.0128
T6-1	1.3116	0.0167	0.0053	0.0016	0.0017	0.0005	16.5425	0.0146
7TU1	1.4279	0.016	0.0039	0.0016	0.0062	0.0006	16.7826	0.0136
7TU14	1.5426	0.0164	0.019	0.0016	0.0038	0.0006	16.4695	0.0139
7TU27a	1.4521	0.0167	0.0072	0.0016	0.0018	0.0006	16.9568	0.0136
7TU27b	1.3281	0.0162	0.0078	0.0016	0.0021	0.0006	16.6077	0.014
7TU47	1.5801	0.015	0.0121	0.0016	0.004	0.0006	16.4515	0.0133
7TU5	1.254	0.0161	0.0183	0.0016	0.0036	0.0006	16.6485	0.0137
7TU50	1.4343	0.0157	0.0124	0.0016	0.0035	0.0006	16.5947	0.0135
7TU55	1.4769	0.017	0.0039	0.0016	0.0016	0.0006	16.5408	0.0132
7TU63	1.4897	0.0158	0.0032	0.0016	0.0028	0.0006	16.4236	0.0135
7TU73	1.5626	0.017	0.0018	0.0016	0.0056	0.0006	16.78	0.014
7TU90a	1.4888	0.0173	0.0152	0.0016	0.0019	0.0006	16.6974	0.0142
7TU90b	1.4627	0.0144	0.0207	0.0016	0.002	0.0006	16.5531	0.0141
A608T2a	1.37	0.0161	< LOD	0.0016	0.0109	0.0006	17.091	0.0135
A608T2b	1.5006	0.0149	< LOD	0	0.0035	0.0006	16.777	0.0138
A620Ta	1.5689	0.0171	0.0082	0.0016	0.0051	0.0006	16.4126	0.014
A620Tb	1.2875	0.0167	0.0064	0.0016	0.0027	0.0006	16.6452	0.0141
M626Ta	1.7209	0.0174	0.008	0.0016	0.0026	0.0006	16.3223	0.0142
M626Tb	1.639	0.017	0.0175	0.0016	0.0141	0.0006	16.8002	0.0135
T538T1a	1.1095	0.0155	0.0294	0.0016	0.0067	0.0006	16.8274	0.0143
T538T1b	1.3397	0.0162	0.0232	0.0016	0.0071	0.0006	16.285	0.0136
T538T2a	1.5193	0.0163	0.0227	0.0016	0.0094	0.0006	16.6335	0.0128
T538T2b	1.2076	0.0153	0.0252	0.0016	0.0061	0.0006	16.4523	0.0151
T559T2a	1.4506	0.0166	0.0192	0.0016	0.0011	0.0006	16.7521	0.0128
T559T2b	1.6223	0.0156	0.0176	0.0016	0.0018	0.0006	16.5074	0.0129
T606Ta	1.2544	0.0157	0.0214	0.0016	0.027	0.0006	16.8285	0.0137
T606Tb	1.4706	0.0146	0.022	0.0016	0.0166	0.0006	16.5634	0.0137
T610T1a	1.242	0.0172	0.0148	0.0016	0.0094	0.0006	16.4056	0.014
T610T1b	1.3026	0.0173	0.0125	0.0016	0.0081	0.0006	16.5582	0.0142
T610T2a	1.3165	0.0166	0.0171	0.0016	0.0077	0.0006	16.594	0.0136
T610T2b	1.4533	0.0156	0.0161	0.0016	0.009	0.0006	16.4282	0.0145
T611T1a	1.5435	0.0156	0.013	0.0016	0.0156	0.0006	16.5834	0.014
T611T1b	1.5002	0.0163	0.0096	0.0016	0.0298	0.0006	16.8945	0.0144
T611T2a	1.4828	0.017	0.0104	0.0016	0.0818	0.0006	16.471	0.0139
T611T2b	1.4498	0.0169	0.0111	0.0016	0.0101	0.0006	16.4475	0.014
T611T2c	1.5415	0.0163	0.0148	0.0016	0.0243	0.0006	16.5887	0.0141
T625Ta	1.3698	0.0164	0.0126	0.0016	0.0135	0.0006	16.6044	0.0136
T625Tb	1.2525	0.0164	0.0112	0.0016	0.0386	0.0006	16.5892	0.0134
T644Ta	1.3287	0.0156	0.0149	0.0016	0.02	0.0006	16.308	0.0135

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Sr	Sr LOD	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
6TU28	< LOD	0	0.4003	0.0048	0.0847	0.0022	0.0057	0.0022
6TU50	0.0384	0.0052	0.5216	0.0049	0.0362	0.0022	0.017	0.0023
6TU77	< LOD	0	0.449	0.0051	0.0469	0.0021	0.0169	0.0022
6TU90a	< LOD	0	0.0399	0.0045	0.0271	0.0021	0.0142	0.0022
6TU90b	< LOD	0	0.1597	0.0045	0.0288	0.0021	0.0103	0.0023
6TU92a	< LOD	0	0.298	0.005	0.0672	0.0021	0.0131	0.0022
6TU92b	< LOD	0	0.3085	0.0049	0.0514	0.0022	0.012	0.0022
T6-1	< LOD	0	0.3481	0.0048	0.0296	0.002	0.016	0.0022
7TU1	< LOD	0	0.2712	0.0048	0.0319	0.002	0.0145	0.0022
7TU14	< LOD	0	0.4418	0.0051	0.0266	0.0021	0.0281	0.0022
7TU27a	< LOD	0	0.0654	0.0047	0.029	0.0021	0.0095	0.0022
7TU27b	< LOD	0	0.4363	0.0049	0.0329	0.0022	0.0066	0.0023
7TU47	< LOD	0	0.2764	0.0047	0.0475	0.0021	0.0085	0.0022
7TU5	< LOD	0	0.4418	0.0049	0.0461	0.0021	0.016	0.0022
7TU50	< LOD	0	0.2886	0.0045	0.0457	0.0021	0.0125	0.0022
7TU55	< LOD	0	0.4581	0.005	0.0141	0.0021	0.0252	0.0022
7TU63	< LOD	0	0.3789	0.0049	0.0148	0.0021	0.0204	0.0023
7TU73	< LOD	0	0.1529	0.0047	0.046	0.0021	0.0094	0.0022
7TU90a	< LOD	0	0.4929	0.0053	0.048	0.0021	0.0213	0.0022
7TU90b	< LOD	0	0.4589	0.0051	0.0435	0.0021	0.017	0.0022
A608T2a	< LOD	0.0046	0.0843	0.0047	0.0297	0.002	0.0297	0.0022
A608T2b	0.0132	0.0047	0.2336	0.0045	0.0546	0.0021	0.0143	0.0022
A620Ta	< LOD	0	0.4215	0.0049	0.1096	0.0021	0.0254	0.0023
A620Tb	< LOD	0.0046	0.3564	0.0048	0.0808	0.0021	0.0082	0.0022
M626Ta	< LOD	0	0.3461	0.0048	0.0495	0.0021	0.0073	0.0023
M626Tb	0.0165	0.0048	0.4365	0.0053	0.2767	0.0023	0.0056	0.0022
T538T1a	< LOD	0	0.0664	0.0045	0.0879	0.0021	0.0042	0.0022
T538T1b	< LOD	0	0.2844	0.0047	0.1604	0.0022	0.0076	0.0022
T538T2a	< LOD	0	0.4667	0.0051	0.1888	0.0022	0.0039	0.0023
T538T2b	< LOD	0	0.2643	0.0047	0.1532	0.0022	0.008	0.0022
T559T2a	0.0072	0.0046	0.0398	0.0047	0.1391	0.0021	0.0084	0.0022
T559T2b	0.0511	0.0051	0.5811	0.0052	0.2651	0.0023	0.0131	0.0023
T606Ta	< LOD	0	0.0533	0.0044	0.241	0.0022	0.0128	0.0022
T606Tb	< LOD	0	0.267	0.0048	0.1752	0.0022	0.0135	0.0022
T610T1a	< LOD	0	0.3582	0.0051	0.1956	0.0023	0.0123	0.0023
T610T1b	< LOD	0	0.2437	0.0048	0.1593	0.0021	0.0128	0.0022
T610T2a	< LOD	0	0.071	0.0045	0.069	0.0021	0.0121	0.0022
T610T2b	< LOD	0	0.2249	0.0048	0.0967	0.0022	0.0105	0.0022
T611T1a	0.0167	0.0048	0.3009	0.0046	0.1571	0.0022	0.0118	0.0022
T611T1b	< LOD	0.0046	0.055	0.0045	0.1344	0.0021	0.0083	0.0022
T611T2a	0.006	0.0048	0.446	0.0051	0.2635	0.0023	0.0066	0.0023
T611T2b	0.0157	0.0047	0.2514	0.0049	0.1467	0.0022	0.0134	0.0022
T611T2c	< LOD	0	0.2952	0.0049	0.1944	0.0022	0.0096	0.0022
T625Ta	< LOD	0	0.223	0.0048	0.115	0.0022	0.0051	0.0022
T625Tb	< LOD	0	0.1814	0.0048	0.1112	0.0021	0.009	0.0022
T644Ta	< LOD	0	0.236	0.005	0.2817	0.0023	0.0096	0.0022

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-7 EPMA tourmaline data (continued).

Sample	Origin	Site	Al	Al LOD	Ca	Ca LOD	Cl	Cl LOD
T644Tb	Thin section	Tiriganiaq	17.2833	0.0144	0.194	0.0118	< LOD	0.001
TD12a	EPD	Tiriganiaq	17.1548	0.0149	0.3607	0.0115	< LOD	0
TD12b	EPD	Tiriganiaq	16.9042	0.0144	0.4566	0.0114	0.0038	0.0009
TD14a	EPD	Tiriganiaq	17.6263	0.0151	0.1754	0.0109	< LOD	0
TD14b	EPD	Tiriganiaq	18.1771	0.0143	0.1258	0.0114	< LOD	0.001
TD18a	EPD	Tiriganiaq	17.4411	0.0142	0.1451	0.011	< LOD	0.001
TD18b	EPD	Tiriganiaq	17.5412	0.0147	0.1035	0.011	0.0019	0.001

Sample	Co	Co LOD	Cr	Cr LOD	Cu	Cu LOD	F	F LOD
T644Tb	0.0044	0.0016	0.0595	0.0239	0.0036	0.0019	< LOD	0.0101
TD12a	0.0072	0.0016	< LOD	0.025	< LOD	0	< LOD	0
TD12b	0.0066	0.0016	< LOD	0.0243	< LOD	0.002	0.0203	0.0104
TD14a	0.0075	0.0016	< LOD	0.0249	< LOD	0	< LOD	0.0096
TD14b	0.0064	0.0016	< LOD	0.0258	< LOD	0	0.0143	0.0098
TD18a	0.0035	0.0016	< LOD	0	0.0025	0.0019	< LOD	0
TD18b	0.0069	0.0016	< LOD	0.0235	< LOD	0.0019	< LOD	0

Sample	Fe	Fe LOD	K	K LOD	Mg	Mg LOD	Mn	Mn LOD
T644Tb	6.1685	0.0786	0.0048	0.0008	3.219	0.0126	0.0064	0.0048
TD12a	7.0605	0.0813	0.0038	0.0008	3.3309	0.014	0.0092	0.0047
TD12b	7.2111	0.0891	0.0048	0.0008	3.2671	0.0118	< LOD	0.0049
TD14a	5.8898	0.0804	0.0053	0.0008	3.558	0.012	0.0058	0.0049
TD14b	5.6832	0.0804	0.0024	0.0008	3.4375	0.0119	0.0065	0.0048
TD18a	6.1965	0.0699	0.0042	0.0008	3.6648	0.0127	0.0176	0.0047
TD18b	6.1381	0.0803	0.0021	0.0008	3.5881	0.0127	0.0123	0.0048

Sample	Na	Na LOD	Ni	Ni LOD	Sc	Sc LOD	Si	Si LOD
T644Tb	1.098	0.0167	0.0207	0.0016	0.0354	0.0006	16.6055	0.0145
TD12a	1.2741	0.016	0.0165	0.0016	0.0072	0.0006	16.6683	0.0141
TD12b	1.2417	0.0161	0.0207	0.0016	0.0121	0.0006	16.7804	0.0144
TD14a	1.1004	0.0159	0.0199	0.0016	0.0043	0.0006	17.0751	0.0139
TD14b	1.0195	0.0162	0.0203	0.0016	0.0065	0.0006	17.4919	0.0143
TD18a	1.664	0.0161	0.0083	0.0016	0.0211	0.0006	16.7913	0.0141
TD18b	1.6193	0.0185	0.0099	0.0016	0.0313	0.0006	17.1433	0.0137

Sample	Sr	Sr LOD	Ti	Ti LOD	V	V LOD	Zn	Zn LOD
T644Tb	< LOD	0	0.0407	0.0047	0.2473	0.0022	0.0135	0.0022
TD12a	< LOD	0	0.0604	0.0045	0.0824	0.0021	0.0091	0.0022
TD12b	< LOD	0	0.3219	0.0048	0.1517	0.0022	0.0056	0.0023
TD14a	< LOD	0	0.0487	0.0048	0.079	0.0021	0.0088	0.0022
TD14b	< LOD	0	0.024	0.0046	0.0757	0.0021	0.0089	0.0022
TD18a	< LOD	0	0.0679	0.0047	0.1004	0.0021	0.0045	0.0022
TD18b	< LOD	0	0.1665	0.0049	0.1523	0.0022	0.0037	0.0023

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-8 EPMA scheelite data.

Sample	Origin	Site	Ca	Ca LOD	Fe	Fe LOD	Mo	Mo LOD
SCD10	EPD	Showing 506	13.9666	0.0198	<LOD	0	<LOD	0
SCD11	EPD	Showing 506	14.0664	0.0202	<LOD	0	<LOD	0
SCD12	EPD	Showing 506	14.1015	0.0199	<LOD	0	<LOD	0
SCD13	EPD	Showing 506	13.9808	0.0081	0.0165	0.0031	<LOD	0
SCD8	EPD	Showing 506	13.9121	0.0201	0.028	0.0031	<LOD	0
SCD9	EPD	Showing 506	14.1056	0.02	0.1815	0.0031	<LOD	0
SCH1	Till	Till 01	14.0822	0.0198	0.006	0.0031	0.0405	0.0054
SCH13	Till	Till 05	14.0664	0.02	<LOD	0.0031	0.006	0.0053
SCH14	Till	Till 06	14.1441	0.0202	0.0036	0.0031	0.4042	0.0064
SCH15	Till	Till 06	14.0008	0.0081	0.0067	0.0031	0.0217	0.0053
SCH2	Till	Till 02	14.058	0.0199	0.0122	0.0031	0.0545	0.0054
SCH3	Till	Till 01	14.3055	0.02	<LOD	0	0.1297	0.0056
SCH4	Till	Till 01	13.8865	0.0199	<LOD	0	0.0336	0.0054
SCH5	Till	Till 01	14.0606	0.02	<LOD	0.0031	0.04	0.0054
SCH6	Till	Till 01	14.1646	0.0203	<LOD	0	0.0227	0.0054
SCH8	Till	Till 02	14.0372	0.0202	<LOD	0	0.0102	0.0053
SCH9	Till	Till 02	13.7688	0.0199	<LOD	0.0031	0.0895	0.0056

Sample	Na	Na LOD	Sr	Sr LOD	W	W LOD	Y	Y LOD
SCD10	0.0052	0.0013	<LOD	0.0087	63.5841	0.2486	<LOD	0
SCD11	0.0094	0.0013	0.0292	0.0088	63.4233	0.252	<LOD	0
SCD12	0.0087	0.0013	<LOD	0	63.4333	0.2465	<LOD	0
SCD13	0.0449	0.0013	<LOD	0.0086	63.8686	0.0992	0.0277	0.0044
SCD8	0.0055	0.0013	<LOD	0	63.1087	0.2533	<LOD	0
SCD9	0.0116	0.0014	<LOD	0	63.5907	0.2553	<LOD	0
SCH1	0.0052	0.0013	<LOD	0	63.5675	0.2533	<LOD	0
SCH13	0.0059	0.0013	<LOD	0	63.8213	0.2509	<LOD	0
SCH14	0.0051	0.0013	<LOD	0	62.9598	0.2538	<LOD	0
SCH15	0.0024	0.0013	<LOD	0	63.0829	0.0986	<LOD	0
SCH2	0.0034	0.0013	<LOD	0	63.8611	0.2502	<LOD	0
SCH3	0.0077	0.0013	<LOD	0	63.5958	0.2545	<LOD	0
SCH4	0.0203	0.0013	<LOD	0	62.8849	0.2533	0.0225	0.0043
SCH5	0.02	0.0013	<LOD	0	63.1126	0.25	0.0275	0.0043
SCH6	0.0049	0.0013	<LOD	0	63.5275	0.2569	<LOD	0
SCH8	0.0048	0.0013	<LOD	0	63.5816	0.2502	<LOD	0
SCH9	0.0441	0.0013	<LOD	0	63.2158	0.2474	0.0429	0.0043

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-9 EPMA galena data.

Sample	Origin	Site	Ag	Ag LOD	Au	Au LOD	Bi	Bi LOD
A602G	Thin section	Tiriganiaq	0.7563	0.0074	< LOD	0	< LOD	0
A608G1	Thin section	Tiriganiaq	0.0662	0.0065	< LOD	0	0.1002	0.0136
A608G2	Thin section	Tiriganiaq	0.0581	0.0066	< LOD	0	0.0963	0.0137
G042G1	Thin section	Tiriganiaq	0.2156	0.0067	< LOD	0.01	0.2663	0.0143
G042G2	Thin section	Tiriganiaq	0.2253	0.0067	< LOD	0	0.2774	0.0143
G622G	Thin section	Tiriganiaq	0.1619	0.0066	< LOD	0.01	0.1989	0.0141
G629G	Thin section	Tiriganiaq	0.1525	0.0067	< LOD	0	0.2266	0.0142
G634G	Thin section	Tiriganiaq	0.208	0.0067	< LOD	0	0.2678	0.0144
G640G1	Thin section	Tiriganiaq	0.0677	0.0065	< LOD	0	0.0691	0.0135
G648G	Thin section	F-Zone	0.2721	0.0066	< LOD	0	0.5278	0.0147
G680G	Thin section	Tiriganiaq	0.4663	0.007	< LOD	0	0.6244	0.0155
M604G1	Thin section	Tiriganiaq	0.0421	0.0065	< LOD	0	< LOD	0.0133
T559G	Thin section	Tiriganiaq	0.0474	0.0063	< LOD	0	< LOD	0
603D1G44	EPD	Tiriganiaq	< LOD	0	0.0031	0	< LOD	0
603D1G72	EPD	Tiriganiaq	< LOD	0	< LOD	0.0093	0.0146	0
629D1G1	EPD	Tiriganiaq	0.0596	0.0065	0.0153	0.01	< LOD	0.0136
629D1G23	EPD	Tiriganiaq	< LOD	0	< LOD	0.01	0.0037	0
603D2G14	EPD	Tiriganiaq	0.0204	0.0062	0.0151	0.0097	< LOD	0.0131

Sample	Co	Co LOD	Cu	Cu LOD	Fe	Fe LOD	Mn	Mn LOD
A602G	0.0075	0.0019	0.0084	0.0023	0.3104	0.0027	0.0038	0.0027
A608G1	< LOD	0	0.0243	0.0023	0.0077	0.0026	< LOD	0.0026
A608G2	< LOD	0	0.0289	0.0023	0.0118	0.0026	< LOD	0.0026
G042G1	0.004	0.0019	0.0122	0.0023	0.0055	0.0026	< LOD	0
G042G2	0.0045	0.0019	0.0074	0.0023	< LOD	0	< LOD	0.0026
G622G	0.003	0.0019	0.0102	0.0023	0.0138	0.0026	< LOD	0
G629G	0.0047	0.0019	0.0261	0.0023	< LOD	0.0026	< LOD	0.0026
G634G	0.0095	0.0019	0.0253	0.0023	0.0354	0.0026	< LOD	0.0026
G640G1	0.0039	0.0019	0.018	0.0023	0.0047	0.0026	< LOD	0
G648G	< LOD	0.0019	0.0101	0.0022	0.0468	0.0026	< LOD	0.0026
G680G	0.0023	0.0019	0.0152	0.0023	0.0058	0.0026	< LOD	0
M604G1	< LOD	0	0.0155	0.0023	0.0123	0.0026	< LOD	0
T559G	0.0031	0.0019	0.0201	0.0022	0.0535	0.0026	0.0238	0.0026
603D1G44	0.0057	0.0019	0.007	0.0023	0.5083	0.0028	< LOD	n.d
603D1G72	< LOD	0	0.0138	0.0021	0.9399	0.0027	< LOD	n.d
629D1G1	< LOD	0	0.0091	0.0023	2.3313	0.0033	< LOD	n.d
629D1G23	0.0022	0.0019	0.0191	0.0023	0.6094	0.0028	< LOD	n.d
603D2G14	< LOD	0	0.042	0.0023	1.0624	0.0029	< LOD	n.d

All data are in wt%. n.d: not determined. LOD: Limit Of Detection.

Table C-9 EPMA galena data (continued).

Sample	Ni	Ni LOD	Pb	Pb LOD	Pd	Pd LOD	S	S LOD
A602G	0.0061	0.002	< LOD		0.0069	0.0066	< LOD	
A608G1	< LOD	0.0019	85.878352	0.1733	< LOD	0	13.7204	0.0313
A608G2	< LOD	0.0019	84.883036	0.1666	< LOD	0	13.4788	0.0313
G042G1	< LOD	0	86.853004	0.1741	< LOD	0	13.6815	0.0324
G042G2	< LOD	0.0019	86.647512	0.1685	< LOD	0.0066	13.6666	0.0313
G622G	< LOD	0	85.870316	0.1669	< LOD	0.0066	13.5015	0.0306
G629G	< LOD	0	84.314	0.1764	< LOD	0	13.3951	0.0311
G634G	< LOD	0.0019	84.844	0.1788	< LOD	0	13.7433	0.0317
G640G1	0.0031	0.0019	< LOD		< LOD	0	< LOD	
G648G	0.0045	0.0019	< LOD		< LOD	0	< LOD	
G680G	< LOD	0.002	83.797	0.1771	< LOD	0	13.5703	0.0307
M604G1	< LOD	0	85.132	0.1797	< LOD	0	13.83	0.0304
T559G	< LOD	0	85.541	0.1752	0.0082	0.0065	13.683	0.0313
603D1G44	< LOD	0	85.0665	0.18	< LOD	n.d	13.7097	0.0305
603D1G72	0.0048	0.0018	86.4343	0.1779	< LOD	n.d	13.7885	0.0314
629D1G1	0.026	0.002	86.2939	0.1774	< LOD	n.d	13.8269	0.0307
629D1G23	0.0039	0.0019	86.9274	0.1786	< LOD	n.d	13.6847	0.0319
603D2G14	< LOD	0	86.8225	0.1265	< LOD	n.d	13.9206	0.0217

Sample	Sb	Sb LOD	Se	Se LOD	Sn	Sn LOD	Te	Te LOD
A602G	0.8011	0.0054	0.0101	0.0057	< LOD	0	0.0468	0.0053
A608G1	0.0109	0.005	0.0913	0.0057	< LOD	0	0.0634	0.0053
A608G2	< LOD	0	0.0767	0.0058	< LOD	0	0.0568	0.0052
G042G1	0.0144	0.005	0.0707	0.0057	< LOD	0.0057	0.0694	0.0054
G042G2	0.0078	0.0049	0.0545	0.0057	< LOD	0.0057	0.0632	0.0052
G622G	0.0069	0.0048	0.1278	0.0057	< LOD	0.0056	0.1022	0.0051
G629G	< LOD	0.0045	0.1329	0.0058	< LOD	0	0.1264	0.0048
G634G	0.02	0.0041	0.0227	0.0058	< LOD	0	0.0648	0.0045
G640G1	< LOD	0.0041	0.0297	0.0058	< LOD	0	0.0551	0.0044
G648G	< LOD	0	0.316	0.0058	< LOD	0.0056	0.1022	0.005
G680G	< LOD	0.0039	0.0818	0.0058	< LOD	0.0057	0.1288	0.0042
M604G1	0.0268	0.0043	0.0218	0.0057	< LOD	0	0.1013	0.0047
T559G	0.0421	0.0043	0.0123	0.0053	< LOD	0	< LOD	0
603D1G44	< LOD	0.0051	< LOD	0.0057	< LOD	n.d	< LOD	0.056
603D1G72	< LOD	0.0047	< LOD	0.0054	< LOD	n.d	< LOD	0.0513
629D1G1	0.0301	0.004	0.0784	0.0057	< LOD	n.d	0.0588	0.021
629D1G23	< LOD	0.0038	< LOD	0.0058	< LOD	n.d	0.0609	0.0072
603D2G14	0.0116	0	0.0085	0.0057	< LOD	n.d	0.0371	0

All data are in wt%. n.d: not determined. LOD: Limit Of Detection.

Table C-10 EPMA arsenopyrite data

Sample	Site	As	As LOD	Co	Co LOD	Cu	Cu LOD	Fe	Fe LOD
A036Aa	Mustang	47.144	0.0543	0.7604	0.1178	0.008	0.0028	33.552	0.0408
A036Ab	Mustang	47.144	0.0529	0.7137	0.0027	0.0114	0.0028	33.552	0.0398
A036Ac	Mustang	46.9044	0.0572	0.5316	0.109	0.0131	0.0027	33.0378	0.0413
A037Aa	Mustang	48.256	0.0566	1.651	0.0028	0.0158	0.0028	32.242	0.0417
A037Ab	Mustang	48.3978	0.0568	1.0319	0.0778	0.0239	0.0028	30.4607	0.0431
A039A	Mustang	46.0736	0.0585	0.3376	0.0026	0.0145	0.0027	33.1799	0.0426
A040A	Mustang	45.0847	0.0545	0.34	0.0026	0.016	0.0027	34.128	0.0408
A535A1a	F-Zone	44.174	0.0377	0.0304	0.0025	0.0125	0.0027	35.157	0.0285
A535A1b	F-Zone	44.0587	0.0538	0.122	0.1189	0.0091	0.0027	34.587	0.0423
A541Aa	Tiriganiaq	42.1015	0.0537	< LOD	0.1109	0.0121	0.0027	35.3492	0.0418
A541Ab	Tiriganiaq	43.02	0.0556	0.0026	0.0025	0.0144	0.0027	35.266	0.0416
A541Ac	Tiriganiaq	42.2475	0.0551	< LOD	0.1143	0.0163	0.0027	35.333	0.0417
A551A2	Mustang	43.8667	0.0549	< LOD	0	0.0152	0.0027	34.9097	0.0443
A574A1a	Tiriganiaq	43.342	0.0554	< LOD	0.1168	0.0126	0.0027	35.2778	0.0405
A574A1b	Tiriganiaq	44.227	0.0541	0.0032	0.0025	0.0132	0.0027	34.875	0.0413
A574A1c	Tiriganiaq	44.3156	0.0558	< LOD	0.1184	0.0118	0.0027	35.1053	0.0422
A590A2a	Tiriganiaq	44.396	0.0531	0.0059	0.0025	0.0144	0.0027	35.009	0.0418
A590A2b	Tiriganiaq	42.1695	0.0543	< LOD	0	0.0166	0.0027	35.0926	0.0427
A590A2c	Tiriganiaq	43.1849	0.0553	< LOD	0.1067	0.0121	0.0027	35.3898	0.0427
A590A2d	Tiriganiaq	43.2563	0.0549	< LOD	0.1145	0.0123	0.0027	35.1049	0.0419
A590A2e	Tiriganiaq	44.3442	0.038	< LOD	0	0.0056	0.0027	35.0739	0.0292
A596A1a	Pump	44.793	0.0383	< LOD	0.0025	0.008	0.0027	34.937	0.029
A596A1b	Pump	43.8102	0.0553	< LOD	0	0.0035	0.0027	34.9346	0.0429
A596A1c	Pump	46.5277	0.0538	< LOD	0	0.0092	0.0027	33.9946	0.0416
A598A1a	Pump	43.2357	0.037	< LOD	0	0.0147	0.0027	34.466	0.0286
A598A1b	Pump	44.0676	0.0549	< LOD	0	0.0153	0.0027	34.5949	0.0409
A598A1c	Pump	44.135	0.0556	0.0099	0.0025	0.0067	0.0027	35.365	0.0405
A598A2	Pump	44.086	0.0393	< LOD	0	0.0174	0.0027	34.9524	0.0303
A600A1	Pump	46.6649	0.0547	0.0987	0.0026	0.0251	0.0027	34.2503	0.0407
A600A2a	Pump	46.6279	0.055	0.4827	0.1154	0.0224	0.0027	33.8198	0.0428
A600A2b	Pump	46.1769	0.0376	0.0981	0.0026	0.0241	0.0027	34.1328	0.029
A600A2c	Pump	46.0964	0.0547	< LOD	0.1206	0.0159	0.0027	34.3092	0.0416
A612A1	Tiriganiaq	41.9215	0.0528	< LOD	0.0025	0.0131	0.0027	34.9307	0.0424
A613Aa	Tiriganiaq	43.3957	0.0394	< LOD	0	0.0123	0.0027	34.7735	0.0309
A613Ab	Tiriganiaq	43.3402	0.0558	0.0365	0.0025	0.0159	0.0027	35.0284	0.0433

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-10 EPMA arsenopyrite data (continued).

Sample	Ni	Ni LOD	S	S LOD	Sb	Sb LOD	Si	Si LOD
A036Aa	0.033	0.0024	18.816	0.0376	0.0129	0.0042	< LOD	0.0019
A036Ab	0.0336	0.0024	18.816	0.0321	< LOD	0	0.0109	0.002
A036Ac	0.0272	0.0024	18.9216	0.0363	< LOD	0	< LOD	0.0019
A037Aa	0.389	0.0025	18.116	0.0314	< LOD	0.0038	< LOD	0.002
A037Ab	0.1742	0.0025	16.5549	0.0343	< LOD	0.0048	0.0047	0.0019
A039A	0.0174	0.0024	19.4508	0.0318	< LOD	0	0.0022	0.002
A040A	0.0509	0.0024	20.2134	0.0337	< LOD	0.0037	0.0051	0.002
A535A1a	< LOD	0.0024	21.409	0.0235	< LOD	0	0.0028	0.002
A535A1b	0.0064	0.0024	19.9285	0.0364	< LOD	0	0.0052	0.0019
A541Aa	0.1532	0.0024	23.0791	0.0413	< LOD	0.0048	0.002	0.0019
A541Ab	< LOD	0	22.111	0.0338	0.0053	0.0037	0.011	0.002
A541Ac	< LOD	0.0023	23.0687	0.0401	0.0106	0.0046	0.0096	0.0019
A551A2	0.004	0.0024	21.3179	0.0337	< LOD	0.0037	0.0088	0.002
A574A1a	< LOD	0	20.3575	0.0359	0.022	0.0048	< LOD	0.0019
A574A1b	< LOD	0	21.167	0.0356	< LOD	0.0037	< LOD	0
A574A1c	0.0029	0.0024	20.0857	0.0372	0.01	0.0049	< LOD	0.0019
A590A2a	< LOD	0	21.135	0.0355	< LOD	0.0037	< LOD	0.002
A590A2b	< LOD	0.0023	21.0343	0.0375	< LOD	0	0.0046	0.0019
A590A2c	< LOD	0.0024	21.9315	0.0405	< LOD	0	0.0027	0.0019
A590A2d	< LOD	0	22.399	0.0406	0.0132	0.0044	0.0026	0.0019
A590A2e	< LOD	0.0024	21.435	0.0273	0.0077	0.0046	0.0064	0.0019
A596A1a	0.0034	0.0024	20.683	0.0243	0.0112	0.0037	0.0052	0.002
A596A1b	0.0042	0.0023	21.7961	0.0395	< LOD	0	< LOD	0.0019
A596A1c	0.0199	0.0024	18.0565	0.0353	0.0142	0.0045	< LOD	0.0019
A598A1a	< LOD	0.0024	21.4617	0.0274	0.0207	0.0038	0.0025	0.0019
A598A1b	0.0033	0.0024	21.0699	0.039	0.0111	0.0039	0.0053	0.0019
A598A1c	< LOD	0.0024	21.184	0.0344	0.0113	0.0037	0.0105	0.002
A598A2	0.0045	0.0024	21.5045	0.0238	0.0039	0.0037	0.0136	0.002
A600A1	0.0175	0.0024	19.2408	0.0317	0.0108	0.0037	< LOD	0.002
A600A2a	0.0214	0.0024	19.6843	0.0392	0.0179	0.0044	0.0155	0.0019
A600A2b	0.0226	0.0024	19.6013	0.0221	0.0126	0.0038	0.0251	0.002
A600A2c	0.0192	0.0024	19.8037	0.0391	< LOD	0.0045	0.0023	0.0019
A612A1	0.0778	0.0024	22.6611	0.0351	0.0057	0.0037	0.0028	0.002
A613Aa	< LOD	0.0024	21.8814	0.0276	0.0067	0.0043	< LOD	0.0019
A613Ab	0.0062	0.0024	20.1683	0.0367	< LOD	0.0037	0.0108	0.002

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-10 EPMA arsenopyrite data (continued).

Sample	Te	Te LOD	Tl	Tl LOD	Zn	Zn LOD
A036Aa	0.0341	0.0045	0.0444	0.0188	< LOD	0.0031
A036Ab	< LOD	0.004	0.0312	0.0127	< LOD	0.0031
A036Ac	0.0489	0.0044	0.0381	0.0188	< LOD	0
A037Aa	0.0051	0.004	< LOD	0.0129	< LOD	0
A037Ab	0.0211	0.005	0.0508	0.0184	< LOD	0.0031
A039A	< LOD	0.0039	0.0397	0.0126	< LOD	0
A040A	< LOD	0.0039	0.0259	0.0126	< LOD	0
A535A1a	< LOD	0	0.037	0.0128	< LOD	0
A535A1b	< LOD	0.005	0.0321	0.0188	< LOD	0.0031
A541Aa	< LOD	0.0049	0.0911	0.0189	< LOD	0.0031
A541Ab	0.0066	0.0039	0.0142	0.0134	< LOD	0
A541Ac	0.0313	0.0047	0.1165	0.019	< LOD	0
A551A2	< LOD	0	0.0222	0.0129	< LOD	0
A574A1a	0.0061	0.005	0.0609	0.019	< LOD	0
A574A1b	< LOD	0.0039	0.0201	0.0131	< LOD	0.0031
A574A1c	< LOD	0.0051	0.0458	0.0196	< LOD	0.0031
A590A2a	< LOD	0.0039	0.0449	0.0127	< LOD	0
A590A2b	0.0249	0.0048	0.1131	0.0191	< LOD	0
A590A2c	0.0269	0.0047	0.0827	0.019	< LOD	0
A590A2d	0.0234	0.0047	0.0588	0.0194	< LOD	0
A590A2e	0.0178	0.0049	0.0386	0.0189	< LOD	0
A596A1a	< LOD	0.0039	0.0343	0.013	0.0045	0.0031
A596A1b	0.0227	0.0048	0.02	0.0193	< LOD	0
A596A1c	< LOD	0.0049	0.0256	0.0192	0.0942	0.0031
A598A1a	0.0378	0.004	0.0456	0.019	< LOD	0
A598A1b	0.0311	0.0042	0.0812	0.0188	< LOD	0
A598A1c	< LOD	0	0.0237	0.0131	< LOD	0.0031
A598A2	0.007	0.0039	0.0144	0.0128	0.0259	0.0031
A600A1	0.0056	0.0039	0.0331	0.0124	< LOD	0
A600A2a	0.0249	0.0046	0.0461	0.0188	< LOD	0
A600A2b	< LOD	0.0039	0.0419	0.0126	< LOD	0.0031
A600A2c	0.0386	0.0047	0.0661	0.0187	0.0062	0.0031
A612A1	0.0068	0.0038	< LOD	0.0132	< LOD	0
A613Aa	0.0284	0.0045	0.0329	0.0193	< LOD	0
A613Ab	< LOD	0	< LOD	0	< LOD	0

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-10 EPMA arsenopyrite data (continued).

Sample	Site	As	As LOD	Co	Co LOD	Cu	Cu LOD	Fe	Fe LOD
A613Ac	Tiriganiaq	44.1691	0.0547	0.1248	0.1106	0.0105	0.0027	34.7725	0.0431
A628Aa	Tiriganiaq	42.2921	0.055	0.0373	0.0025	0.0144	0.0027	35.3975	0.0417
A628Ab	Tiriganiaq	41.098	0.0537	< LOD	0	0.0107	0.0027	35.8356	0.0411
A635A1	Tiriganiaq	44.4955	0.0544	< LOD	0.0025	0.0209	0.0027	34.1151	0.0423
A650A1	F-Zone	43.9643	0.0386	0.0153	0.0025	0.0157	0.0027	35.3622	0.0284
A653Aa	F-Zone	44.397	0.0559	0.0033	0.0025	0.0112	0.0027	34.8625	0.0434
A653Ab	F-Zone	42.6104	0.0548	< LOD	0.1142	0.0121	0.0027	35.017	0.0424
A653Ac	F-Zone	43.8383	0.0542	< LOD	0.1155	0.0127	0.0027	34.5451	0.0443
A660Aa	Discovery	45.843	0.0541	0.0408	0.0025	0.0033	0.0027	34.1113	0.0426
A660Ab	Discovery	47.1456	0.0572	0.1349	0.1081	0.0091	0.0027	34.0826	0.0406
A669A1	Discovery	45.7537	0.0557	0.027	0.0026	0.0118	0.0027	34.9738	0.0426
A669A2	Discovery	45.822	0.0564	0.3458	0.0026	0.0185	0.0027	34.3513	0.0424
A670A	Discovery	46.0564	0.0549	0.0929	0.0026	0.0141	0.0027	34.705	0.0413
A674Aa	Discovery	46.1175	0.0548	0.2189	0.0026	0.0217	0.0028	34.152	0.0422
A674Ab	Discovery	45.5042	0.0547	0.4686	0.1209	0.0131	0.0027	33.5714	0.0427
A674Ac	Discovery	46.2874	0.0577	1.9012	0.1156	0.0172	0.0028	31.0391	0.043
A681A	Tiriganiaq	44.3542	0.0545	0.284	0.0027	0.0317	0.0028	32.1771	0.0425
G042A1	Tiriganiaq	45.6034	0.0391	0.0053	0.0025	0.0082	0.0027	34.2966	0.0291
G042A2	Tiriganiaq	44.61	0.0388	0.0295	0.0025	0.0126	0.0027	34.6513	0.0296
G042A3a	Tiriganiaq	44.2683	0.0561	0.144	0.1072	0.0116	0.0027	34.2706	0.0438
G042A3b	Tiriganiaq	45.5414	0.0541	< LOD	0.1152	0.01	0.0027	33.7643	0.0431
G629A	Tiriganiaq	44.0108	0.0567	0.0177	0.0025	0.0161	0.0027	34.7506	0.043
G640Aa	Tiriganiaq	45.1428	0.056	< LOD	0.115	0.0099	0.0027	34.2383	0.0419
G640Ab	Tiriganiaq	45.2163	0.0531	0.03	0.0026	0.0149	0.0027	34.6071	0.0434
G640Ac	Tiriganiaq	46.0599	0.054	< LOD	0	0.0081	0.0027	34.0147	0.043
M623A	Tiriganiaq	46.9428	0.0394	2.1718	0.0029	0.0148	0.0028	31.8154	0.0289
MU02AAa	Mustang	44.2666	0.0543	0.1191	0.0026	0.0253	0.0027	35.2773	0.0435
MU02AAb	Mustang	43.2118	0.054	0.2586	0.1103	0.0151	0.0027	34.3765	0.0417
MU02AAc	Mustang	44.2207	0.0565	0.1623	0.1202	0.0147	0.0027	34.2817	0.0428
MU02AAd	Mustang	46.6883	0.0552	0.4109	0.1132	0.0119	0.0027	33.2937	0.0434
MU06AA	Mustang	43.7806	0.0545	0.1973	0.0026	0.0208	0.0027	34.6579	0.0413
T534A	F-Zone	45.2487	0.0553	0.2978	0.0026	0.0201	0.0027	35.1667	0.0425
T577Aa	Tiriganiaq	43.2399	0.0547	< LOD	0.1131	0.014	0.0027	34.7002	0.0431
T577Ab	Tiriganiaq	44.3836	0.0384	0.0126	0.0026	0.0215	0.0027	34.8746	0.0297
T577Ac	Tiriganiaq	44.0489	0.037	< LOD	0.0756	0.0189	0.0027	34.4081	0.0293
T580A	Tiriganiaq	43.3425	0.0526	0.0364	0.0025	0.0169	0.0027	34.8409	0.0429

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-10 EPMA arsenopyrite data (continued).

Sample	Ni	Ni LOD	S	S LOD	Sb	Sb LOD	Si	Si LOD
A613Ac	0.0151	0.0024	21.6445	0.0395	0.0047	0.0044	< LOD	0.0019
A628Aa	0.0231	0.0024	22.401	0.0348	0.0065	0.0037	< LOD	0.002
A628Ab	0.0205	0.0024	22.2024	0.0385	0.0121	0.0048	< LOD	0.0019
A635A1	< LOD	0.0024	20.5551	0.0326	< LOD	0	0.0036	0.002
A650A1	0.0226	0.0024	21.5564	0.0221	0.0342	0.0038	< LOD	0
A653Aa	< LOD	0.0024	21.0996	0.0326	0.0155	0.0037	< LOD	0.002
A653Ab	0.0035	0.0023	22.796	0.0404	< LOD	0.0044	< LOD	0
A653Ac	< LOD	0.0023	21.4747	0.0381	0.0076	0.0046	< LOD	0
A660Aa	0.0064	0.0024	19.9711	0.0293	< LOD	0.0037	< LOD	0
A660Ab	0.1325	0.0024	18.5179	0.0358	< LOD	0.0048	0.0027	0.0019
A669A1	< LOD	0	20.3463	0.032	< LOD	0	0.0052	0.0019
A669A2	< LOD	0	20.126	0.0321	< LOD	0	0.0033	0.002
A670A	0.042	0.0024	20.1064	0.0339	< LOD	0.0037	< LOD	0.002
A674Aa	0.1706	0.0024	19.9569	0.0327	< LOD	0	0.0039	0.002
A674Ab	0.1177	0.0024	20.0918	0.0384	0.0134	0.0043	< LOD	0.0019
A674Ac	1.0414	0.0027	19.347	0.037	< LOD	0.004	< LOD	0
A681A	2.6971	0.0029	21.1929	0.0317	0.0068	0.0038	0.0022	0.002
G042A1	0.045	0.0024	20.2372	0.0226	0.0054	0.0038	0.004	0.002
G042A2	0.025	0.0024	21.12	0.0231	< LOD	0.003	0.0044	0.002
G042A3a	0.0364	0.0024	21.2198	0.0395	< LOD	0	< LOD	0.0019
G042A3b	0.0713	0.0024	19.7214	0.0375	0.008	0.0043	0.006	0.0019
G629A	0.0638	0.0024	20.9364	0.033	< LOD	0	< LOD	0.002
G640Aa	0.0897	0.0024	20.2501	0.0384	< LOD	0	0.0022	0.0019
G640Ab	0.095	0.0024	20.303	0.0341	< LOD	0.0037	< LOD	0.0019
G640Ac	0.0614	0.0024	19.7095	0.0376	0.0092	0.0044	< LOD	0.0019
M623A	0.0973	0.0025	18.8797	0.0219	< LOD	0	0.0052	0.0019
MU02AAa	0.0213	0.0024	21.2073	0.0322	0.0053	0.0037	0.002	0.0019
MU02AAb	0.0243	0.0024	21.5743	0.0386	0.0158	0.0041	< LOD	0.0019
MU02AAc	0.0178	0.0024	20.855	0.0391	0.0116	0.004	< LOD	0
MU02AAAd	0.1759	0.0024	18.9927	0.0384	< LOD	0.0045	< LOD	0.0019
MU06AA	0.0084	0.0024	20.8128	0.0332	< LOD	0.003	0.0036	0.0019
T534A	< LOD	0	20.4829	0.0314	< LOD	0.0037	0.0039	0.0019
T577Aa	0.0038	0.0024	21.5778	0.0388	< LOD	0.0042	< LOD	0.0019
T577Ab	0.0046	0.0024	21.1075	0.0235	0.0038	0.0037	0.0034	0.002
T577Ac	< LOD	0.0024	21.4607	0.0277	0.0082	0.0041	0.0021	0.0019
T580A	< LOD	0	20.7864	0.0338	0.0092	0.003	< LOD	0.002

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Table C-10 EPMA arsenopyrite data (continued).

Sample	Te	Te LOD	TI	TI LOD	Zn	Zn LOD
A613Ac	0.0284	0.0046	0.0722	0.019	< LOD	0
A628Aa	< LOD	0	0.0421	0.0128	0.0039	0.0031
A628Ab	0.009	0.0049	0.0621	0.0189	0.0054	0.0031
A635A1	< LOD	0	< LOD	0.0131	< LOD	0.0031
A650A1	< LOD	0	< LOD	0.0131	< LOD	0
A653Aa	< LOD	0	0.0222	0.0128	< LOD	0.0031
A653Ab	0.0179	0.0046	0.0952	0.019	< LOD	0
A653Ac	0.0064	0.0048	0.0826	0.019	0.0035	0.003
A660Aa	< LOD	0.0039	0.0471	0.0123	< LOD	0.0031
A660Ab	0.0147	0.005	< LOD	0.0191	< LOD	0
A669A1	0.0153	0.0032	0.051	0.0121	0.004	0.0031
A669A2	0.005	0.0039	0.0227	0.0126	< LOD	0.0031
A670A	< LOD	0	0.0418	0.0123	< LOD	0.0031
A674Aa	< LOD	0.0039	0.0319	0.0126	< LOD	0.0031
A674Ab	0.0462	0.0046	0.0698	0.0191	< LOD	0
A674Ac	0.0416	0.0042	0.0609	0.0189	< LOD	0.0032
A681A	0.0075	0.004	0.0307	0.013	0.0162	0.0032
G042A1	< LOD	0.0039	0.0221	0.0129	< LOD	0
G042A2	0.0072	0.0032	0.0366	0.0123	0.0053	0.0031
G042A3a	0.0442	0.0043	0.04	0.0193	< LOD	0.0031
G042A3b	0.0378	0.0045	0.0593	0.0185	< LOD	0.0031
G629A	0.0106	0.0032	0.0342	0.0125	< LOD	0
G640Aa	0.0232	0.0044	0.0441	0.0191	< LOD	0.0031
G640Ab	< LOD	0	0.0263	0.0125	< LOD	0
G640Ac	0.0282	0.0046	0.0278	0.0187	< LOD	0.0031
M623A	0.0116	0.0033	0.0177	0.0125	< LOD	0
MU02AAa	< LOD	0.0039	< LOD	0.0131	< LOD	0
MU02AAb	0.0232	0.0044	0.0541	0.0192	< LOD	0
MU02AAc	0.0394	0.0043	0.0623	0.0191	< LOD	0
MU02AAAd	0.0189	0.0047	0.0686	0.0185	< LOD	0
MU06AA	0.0076	0.0032	0.0174	0.0126	< LOD	0.0031
T534A	0.0075	0.0039	0.0237	0.0127	< LOD	0
T577Aa	0.0845	0.0044	0.0688	0.019	< LOD	0
T577Ab	0.0475	0.0039	0.045	0.0125	< LOD	0
T577Ac	0.0362	0.0043	0.0948	0.019	< LOD	0.0031
T580A	0.0109	0.0032	0.0283	0.0127	< LOD	0.0031

All data are in wt%, LOD: Limit Of Detection, NA: Not Applicable.

Appendix D - LA-ICP-MS parameters, composition maps and data

Table D-1 LA-ICP-MS parameters.

Mineral	Beam diameter (µm)	Hz	Scan speed (µm/s)	Fluence (mJ/cm ²)	Energy (mJ)	Reference materials
Tourmaline	19-25-55-75	15	5	4 - 6	2	GSD-1g / GSE-1g / G-Probe-6 / G_NIST610 / G_NIST612
Scheelite	44	15	5	4 - 6	2	GSD-1g / GSE-1g / G-Probe-6 / G_NIST610 / G_NIST612
Magnetite	33-55	5 - 15	5	2 - 6	1 - 2	GSD-1g / GSE-1g / G-Probe-6 / BC-28

Table D-2 LA-ICP-MS recovery for magnetite.

Element	Reference materials used for calibration			Monitor reference materials					BC-28	
	Material	Working value	Stdev	Material	n	Working value	Stdev	Average	Working value	Average (n= 20)
24Mg	G-Probe-6	51318	6935	GSE-1g	21	21106	181	21793.81	11618	10257.5
27Al	G-Probe-6	92145	12438	GSE-1g	21	68804	2117	71584.762	20787	17611
29Si	GSE-1g	250994	7011	GSD-1g	20	248656	3739	251953	220	738.85
31P	GSD-1g	860	160	GSE-1g	21	70	20	28.585714	n.d	n.d
39K	GSE-1g	21800	200	GSD-1g	20	25300	300	25653.55	n.d	n.d
44Ca	G-Probe-6	86787	4643	GSE-1g	21	52858	2143	54558.571	24	159.52
45Sc	GSE-1g	530	20	GSD-1g	20	52	2	58.8795	31	26.368
47Ti	GSD-1g	7431	359	GSE-1g	21	450	42	452.12381	87615	65719
51V	GSE-1g	440	20	GSD-1g	20	44	2	43.8865	9603	8631.15
53Cr	GSE-1g	400	80	GSD-1g	20	42	3	70.31	1172	1391.3
55Mn	G-Probe-6	1255	93	GSE-1g	21	590	20	618.8619	2125	1974.6
59Co	GSE-1g	380	20	GSD-1g	20	40	2	38.8675	241	264.045
60Ni	GSE-1g	440	30	GSD-1g	20	58	4	77.6235	573	548.76
65Cu	GSE-1g	380	40	GSD-1g	20	42	2	51.0275	33	28.947
66Zn	GSE-1g	410	30	GSD-1g	20	54	2	72.18	588	377.265
69Ga	GSE-1g	490	70	GSD-1g	20	54	7	55.9085	40.125	36.989
74Ge	GSE-1g	320	80	GSD-1g	20	32	8	32.2895	0.856	0.79195

All values are in ppm, n.d: not determined, Stdev: standard deviation.

Table D-2 LA-ICP-MS recovery for magnetite (continued).

Element	Reference materials used for calibration			Monitor reference materials					BC-28	
	Material	Working value	Stdev	Material	n	Working value	Stdev	Average	Working value	Average (n= 20)
75As	GSE-1g	260	90	GSD-1g	20	27	8	26.33	n.d	n.d
89Y	GSE-1g	410	30	GSD-1g	20	42	2	40.3395	0.08025	0.019305
90Zr	GSE-1g	410	30	GSD-1g	20	42	2	42.607	27.499	17.7065
93Nb	GSE-1g	420	40	GSD-1g	20	42	3	41.2095	1.7227	1.26555
95Mo	GSE-1g	390	30	GSD-1g	20	39	3	39.6735	0.7597	0.4647
107Ag	GSE-1g	200	20	GSD-1g	20	23	3	22.199	0.082925	0.05272
11Cd	GSE-1g	160	50	GSD-1g	20	18	4	17.3085	0.4922	0.18765
115In	GSE-1g	370	60	GSD-1g	20	38	5	36.8685	0.11235	0.10316
118Sn	GSE-1g	280	50	GSD-1g	20	29	6	30.772	2.19885	1.87985
121Sb	GSE-1g	450	110	GSD-1g	20	43	7	45.301	0.015	0.3245
151Eu	GSE-1g	410	20	GSD-1g	20	41	2	40.159	n.d	n.d
172Yb	GSE-1g	520	5	GSD-1g	20	50,9	0.5	51.171	n.d	n.d
178Hf	GSE-1g	395	7	GSD-1g	20	39	2	39.621	0.583	0.70445
181Ta	GSE-1g	390	40	GSD-1g	20	40	4	37.7055	0.07	0.09743
182W	GSE-1g	430	50	GSD-1g	20	43	4	43.1425	0.50825	0.32435
208Pb	GSE-1g	378	12	GSD-1g	20	50	2	47.708	1.98485	0.39325
209Bi	GSE-1g	320	30	GSD-1g	20	35	4	32.234	0.0535	0.00535

All values are in ppm, n.d: not determined, Stdev: standard deviation.

Table D-3 LA-ICP-MS recovery for tourmaline.

Element	Reference materials used for calibration			Monitor reference materials					G-Probe-6	
	Material	Working value	Stdev	Material	n	Working value	Stdev	Average	Working value	Average (n= 12)
7Li	G_NIST610	485	44	G_NIST612	19	42	6	43.92	6	6.26
9Be	G_NIST610	466	38	G_NIST612	19	38	6	38.07	0.4	0.41
11B	GSE-1g	330	120	GSD-1g	19	50	20	54.7	n-d	n-d
23Na	G_NIST612	103858	n-d	G_NIST610	12	99415	n-d	102850.8	15506	14795
24Mg	GSD-1g	21709	241.2	GSE-1g	12	21106	181	21576	51318	51657.50
27Al	GSD-1g	70921.5	1587.8	GSE-1g	12	68804	2117	69565	92145	90916.25
39K	GSD-1g	25300	300	GSE-1g	12	21800	200	22076.67	1577	1462.25
44Ca	G_NIST612	85002	n-d	G_NIST610	12	82144	n-d	82955	86787	82381.25
45Sc	GSE-1g	530	20	GSD-1g	19	52	2	50.13	36.75	36.57
47Ti	GSD-1g	7431.7	359.6	GSE-1g	12	450	42	427.22	7012	6737
51V	GSE-1g	440	20	GSD-1g	19	44	2	42.92	238	252.49
53Cr	G_NIST610	405	64	G_NIST612	19	36	6	36.01	300.2	315.06

Table D-3 LA-ICP-MS recovery for tourmaline (continued).

Element	Reference materials used for calibration			Monitor reference materials					G-Probe-6	
	Material	Working value	Stdev	Material	n	Working value	Stdev	Average	Working value	Average (n= 12)
55Mn	GSE-1g	590	20	GSD-1g	19	220	20	215.01	1255	1297.86
57Fe	GSD-1g	103380.6	777.3	GSE-1g	12	98717	2332	101640.83	72598	74631.25
59Co	G_NIST610	405	46	G_NIST612	19	35	4	34.83	46.9	45.82
60Ni	G_NIST610	458.7	4	G_NIST612	19	38.8	0.2	269.81	145.7	158.82
65Cu	G_NIST610	430	48	G_NIST612	19	37	6	49.08	89.5	75.91
66Zn	G_NIST610	456	38	G_NIST612	19	38	8	62.71	70.8	96.06
71Ga	GSE-1g	490	70	GSD-1g	19	54	7	50.91	16.02	13.65
85Rb	G_NIST610	425.7	0.8	G_NIST612	19	31.4	0.4	31.22	n-d	n-d
88Sr	G_NIST610	515.5	0.5	G_NIST612	19	78.4	0.2	77.08	166.6	159.45
89Y	GSE-1g	410	30	GSD-1g	19	42	2	38.58	19.33	17.58
90Zr	GSE-1g	410	30	GSD-1g	19	42	2	40.83	55.1	51.94
93Nb	GSE-1g	420	40	GSD-1g	19	42	3	40.39	4.16	3.79
95Mo	G_NIST610	410	58	G_NIST612	19	38	4	36.02	n-d	n-d
118Sn	G_NIST610	396	36	G_NIST612	19	38	4	41.18	1.33	3.66
133Cs	G_NIST610	361	136	G_NIST612	19	42	6	40.39	0.04	0.05
137Ba	G_NIST610	435	46	G_NIST612	19	39.7	0.8	37.98	173	158.61
139La	G_NIST610	457	144	G_NIST612	19	35.8	0.8	35.92	5.2	4.94
140Ce	G_NIST610	448	34	G_NIST612	19	38.7	0.8	36.72	12	11.18
141Pr	GSE-1g	460	10	GSD-1g	19	45	1	43.02	1.69	1.61
146Nd	GSE-1g	453	5	GSD-1g	19	44.7	0.5	43.14	8.4	7.93
152Sm	GSE-1g	488	5	GSD-1g	19	47.8	0.5	45.62	2.36	2.40
153Eu	G_NIST610	461	104	G_NIST612	19	35	2	35.22	0.98	0.93
158Gd	GSE-1g	514	6	GSD-1g	19	50.7	0.5	46.89	2.87	2.86
159Tb	GSE-1g	480	20	GSD-1g	19	47	2	43.19	0.51	0.47
163Dy	GSE-1g	524	6	GSD-1g	19	51.2	0.5	48.54	3.3	3.12
165Ho	GSE-1g	501	8	GSD-1g	19	49	2	45.11	0.72	0.68
166Er	GSE-1g	595	6	GSD-1g	19	40.1	0.4	37.35	2.1	1.98
169Tm	GSE-1g	500	20	GSD-1g	19	49	2	44.69	0.31	0.28
172Yb	GSE-1g	520	5	GSD-1g	19	50.9	0.5	47.89	2.06	2.01
175Lu	GSE-1g	518	6	GSD-1g	19	51.5	0.5	47.34	0.32	0.30
178Hf	G_NIST610	432	30	G_NIST612	19	35	8	34.91	1.52	1.35
181Ta	G_NIST610	452	78	G_NIST612	19	40	4	34.89	0.28	0.24
208Pb	G_NIST610	426	1	G_NIST612	19	38.57	0.2	38.50	3.28	3.735
232Th	G_NIST610	457.2	1.2	G_NIST612	19	37.79	0.08	34.84	0.33	0.31
238U	G_NIST610	461.5	1.1	G_NIST612	19	37.38	0.08	35.51	0.29	0.35

All values are in ppm, n.d.: not determined, Stdev: standard deviation.

Table D-4 LA-ICP-MS recovery for scheelite.

Element	Reference materials used for calibration			Values for monitor reference materials				G-Probe-6	
	Material	Working value	Stdev	Material	Working value	Stdev	Average (n= 2)	Working value	Average (n= 2)
7Li	GSE-1g	430	60	GSD-1g	43	6	45.415	6	6.28
11B	GSE-1g	330	120	GSD-1g	50	20	53.3	n-d	n-d
23Na	G_NIST612	103 858	n-d	G_NIST610	99415	n-d	102405	15506	16030
24Mg	G-Probe-6	51318	6935	GSE-1g	21 106	181	20 745	n-d	n-d
29Si	G_NIST612	336 061	n-d	G_NIST610	327180	n-d	325800	224259	238150
39K	GSD-1g	25300	300	GSE-1g	21800	200	22 085	1577	1599
43Ca	G_NIST612	85 002	n-d	G_NIST610	82144	n-d	82255	86787	88100
47Ti	GSD-1g	7431.7	359.6	GSE-1g	450	42	423.05	7012	6746
51V	G_NIST610	442	86	G_NIST612	39	8	37.93	238	259.25
53Cr	G_NIST610	405	64	G_NIST612	36	6	36.15	300.2	333.55
55Mn	G-Probe-6	1225	93	GSE-1g	590	20	550.15	n-d	n-d
57Fe	GSD-1g	103380	777	GSE-1g	98717	2332	93 460	72598	76550
59Co	G_NIST610	405	46	G_NIST612	35	4	35.72	46.9	50.06
63Cu	G_NIST610	430	48	G_NIST612	37	6	45.90	89.5	80.7
66Zn	G_NIST610	456	38	G_NIST612	38	8	49.60	70.8	90.25
75As	G_NIST610	317	24	G_NIST612	37	14	34.13	n-d	n-d
88Sr	G_NIST610	515.5	0.5	G_NIST612	78.40	0.20	78.56	166.6	167.2
89Y	G_NIST610	450	38	G_NIST612	38	4	36.83	19.33	17.58
93Nb	GSE-1g	420	40	GSD-1g	42	3	42.09	4.16	3.92
95Mo	G_NIST610	410	58	G_NIST612	38	4	36.95	n-d	n-d
107Ag	G_NIST610	239	38	G_NIST612	22	0.30	21.38	n-d	n-d
118Sn	GSE-1g	280	50	GSD-1g	29	6	29.745	1.33	2.02
137Ba	G_NIST610	435	46	G_NIST612	39.70	0.80	38.57	173	165.65
139La	G_NIST610	457	144	G_NIST612	35.80	0.80	37.08	5.2	5.30
140Ce	G_NIST610	448	34	G_NIST612	38.70	0.80	37.65	12	12.08
141Pr	GSE-1g	460	10	GSD-1g	45	1	45.185	1.69	1.66
146Nd	GSE-1g	453	5	GSD-1g	44.70	0.50	45.05	8.4	8.42
147Sm	GSE-1g	488	5	GSD-1g	47.80	0.50	47.745	2.36	2.37
153Eu	G_NIST610	461	104	G_NIST612	35	2	36.32	0.98	0.99
157Gd	GSE-1g	514	6	GSD-1g	50.7	0.50	49.84	2.87	2.92
159Tb	GSE-1g	480	20	GSD-1g	47	2	46.375	0.51	0.48
163Dy	GSE-1g	524	6	GSD-1g	51.20	0.50	51.315	3.3	3.21
165Ho	GSE-1g	501	8	GSD-1g	49	2	48.42	0.72	0.69
166Er	GSE-1g	595	6	GSD-1g	40.10	0.40	39.02	2.1	2.18
169Tm	GSE-1g	500	20	GSD-1g	49	2	48.145	0.31	0.29

All values are in ppm, n.d: not determined, Stdev: standard deviation.

Table D-4 LA-ICP-MS recovery for scheelite (continued).

Element	Reference materials used for calibration			Values for monitor reference materials				G-Probe-6	
	Material	Working value	Stdev	Material	Working value	Stdev	Average (n= 2)	Working value	Average (n= 2)
172Yb	GSE-1g	520	5	GSD-1g	50.90	0.50	50.65	2.06	2.04
175Lu	GSE-1g	518	6	GSD-1g	51.50	0.50	51.105	0.32	0.29
181Ta	G_NIST610	452	78	G_NIST612	40	4	37.17	0.28	0.27
182W	G_NIST610	445	50	G_NIST612	40	2	40.75	n-d	n-d
208Pb	G_NIST610	426	1	G_NIST612	38.57	0.20	39.79	3.28	3.815
232Th	G_NIST610	457.2	1.20	G_NIST612	37.79	0.08	37.25	0.33	0.342
238U	G_NIST610	461.5	1.10	G_NIST612	37.38	0.08	37.45	0.29	0.4125

All values are in ppm, n.d: not determined, Stdev: standard deviation.

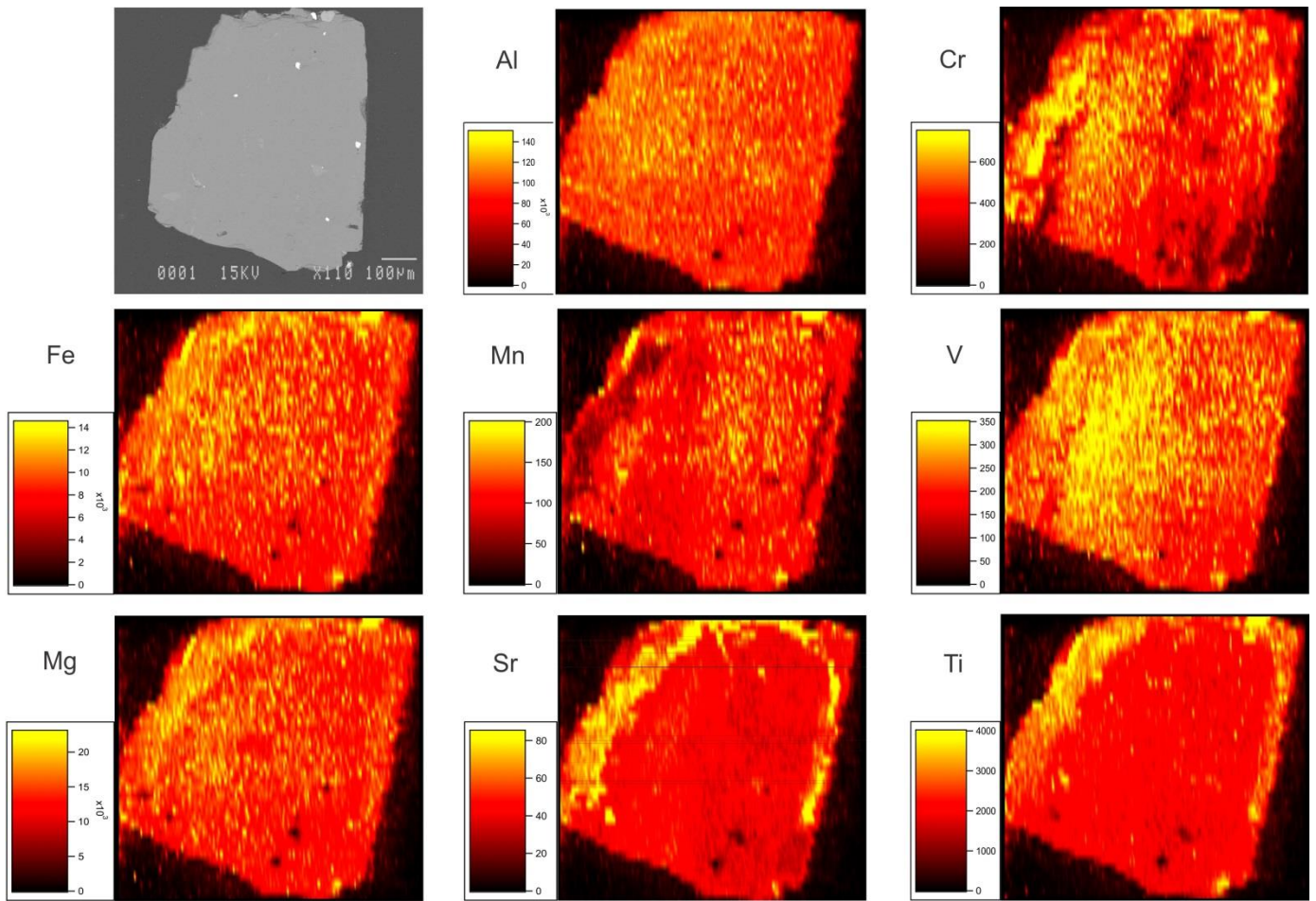


Fig. D-1 Composition map (in ppm) of T1-1, a regional tourmaline grain from till sample 01 (0.5 to 1 mm sized fraction).

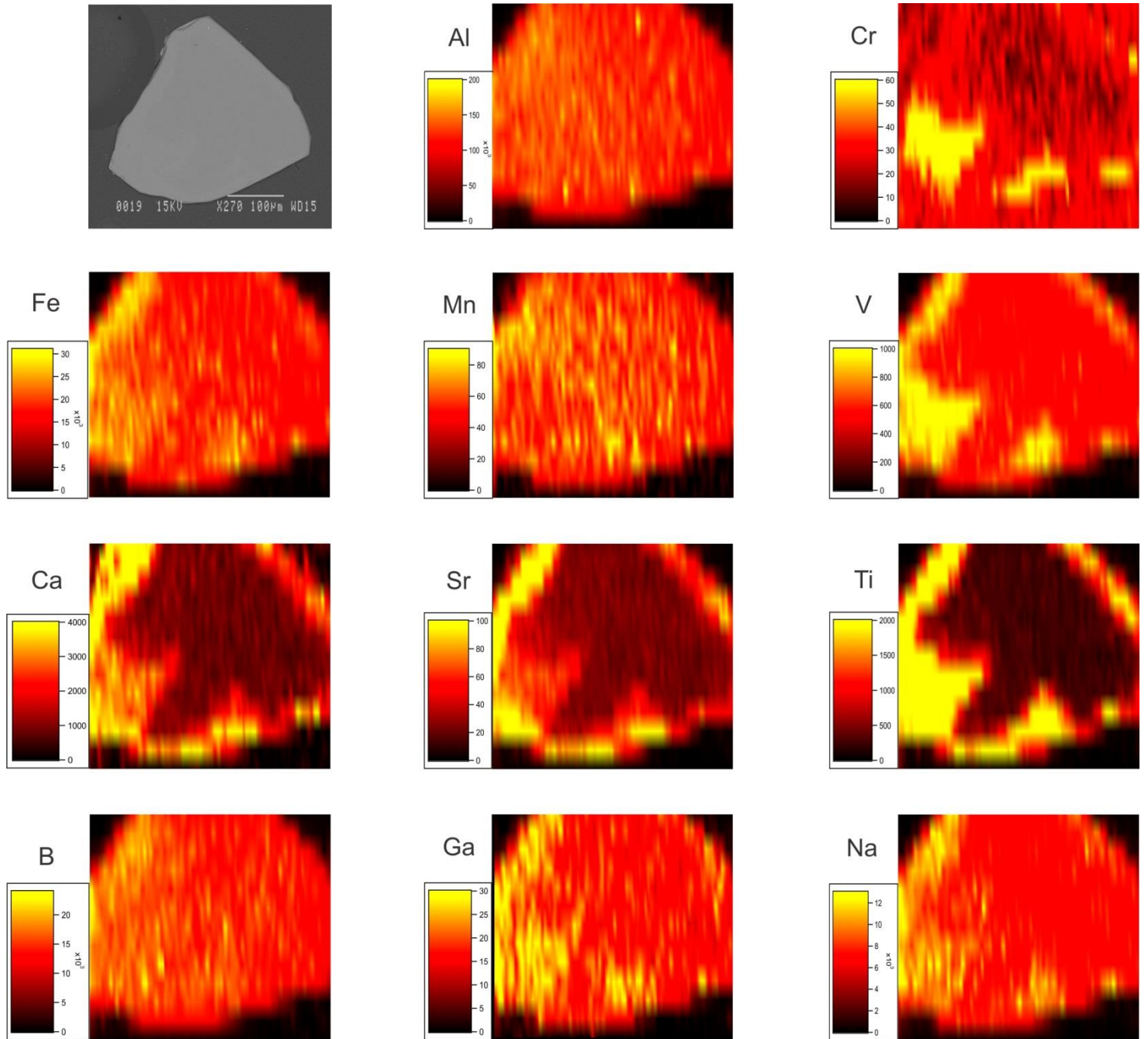


Fig. D-2 Composition map (in ppm) of TD14, a tourmaline grain from sample 538 (Tiriganiaq deposit) recovered using EPD.

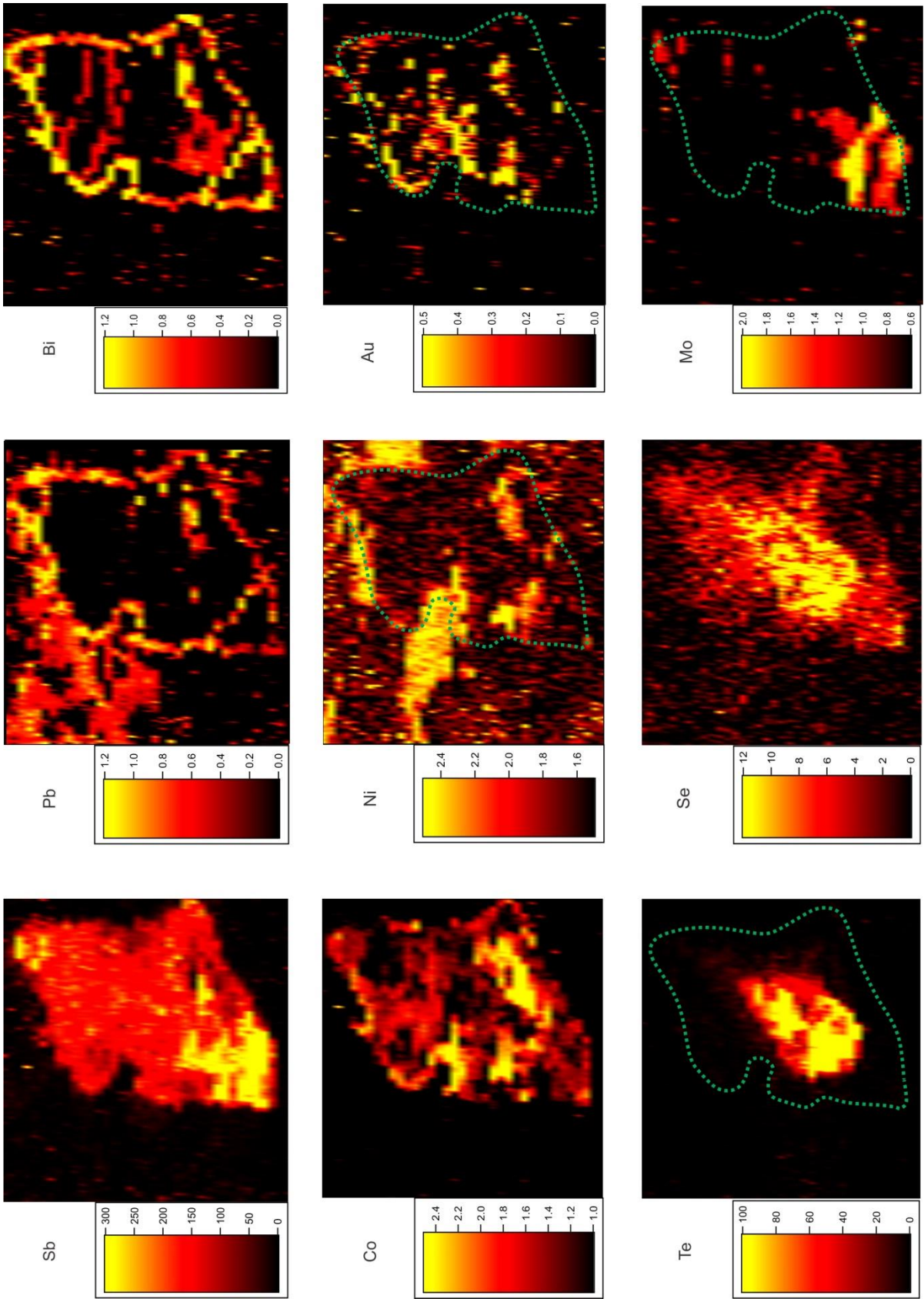


Fig. D-3 Composition map of an arsenopyrite grain from Tiriganiaq deposit (A590).

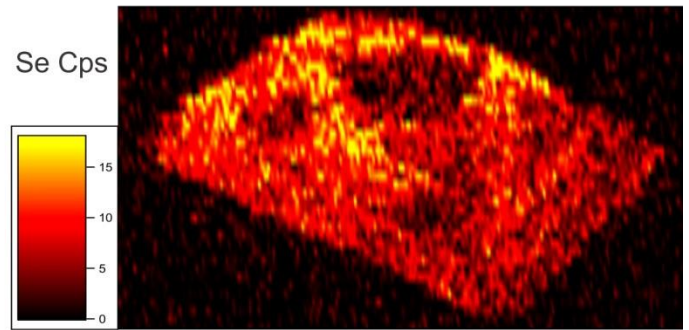
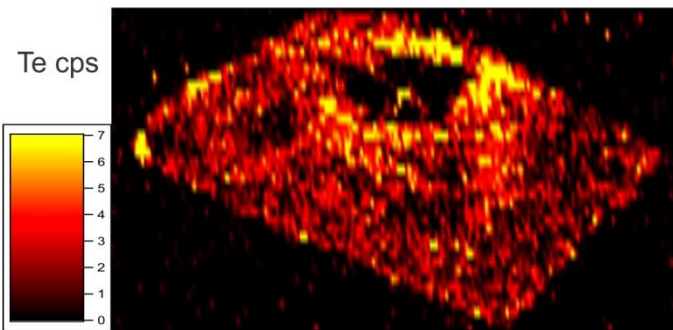
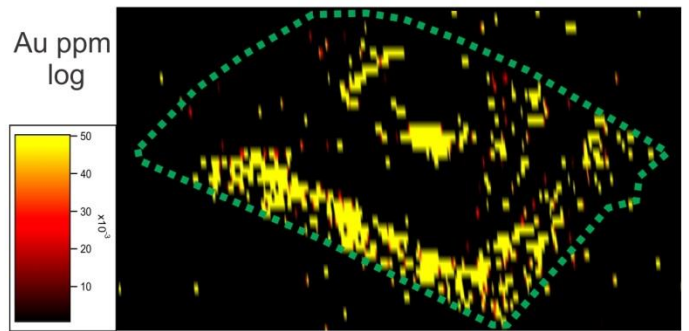
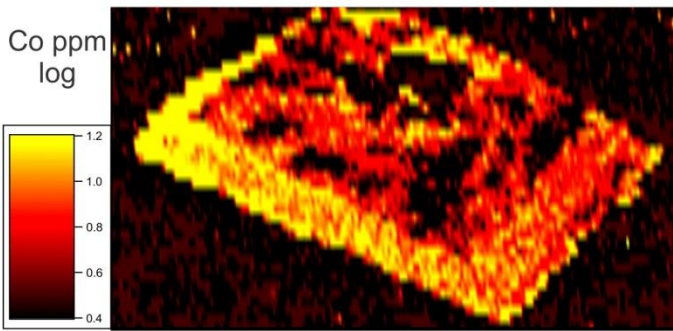
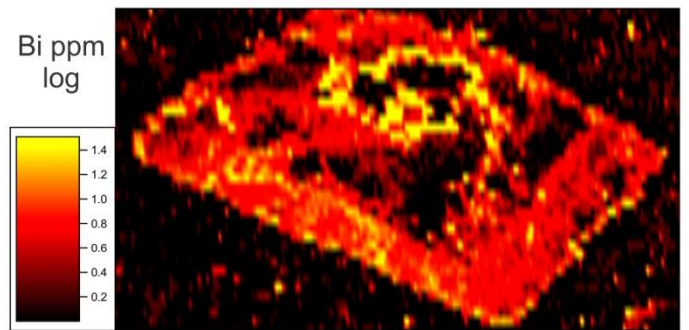
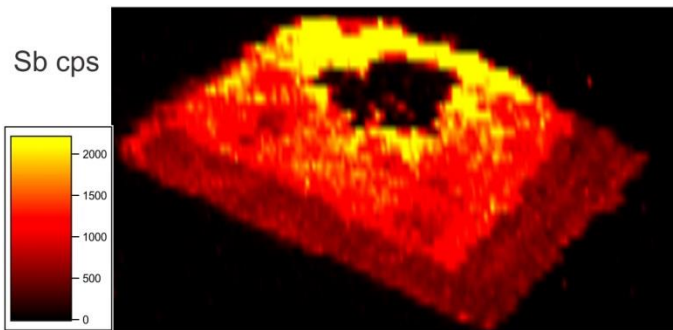
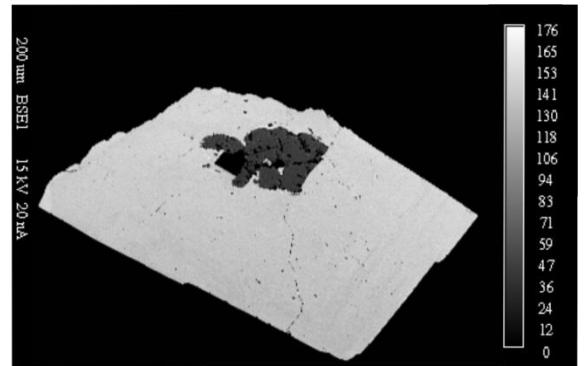
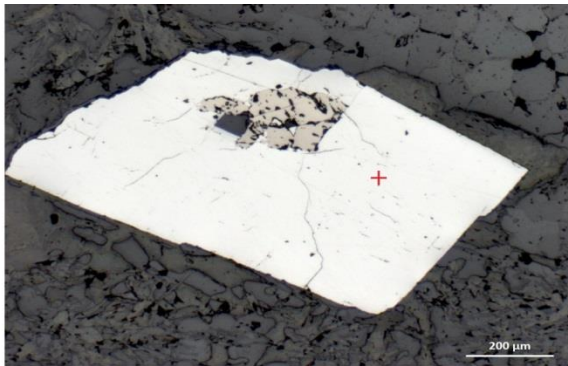


Fig. D-4 Composition map of an arsenopyrite grain from F-Zone deposit (A653).

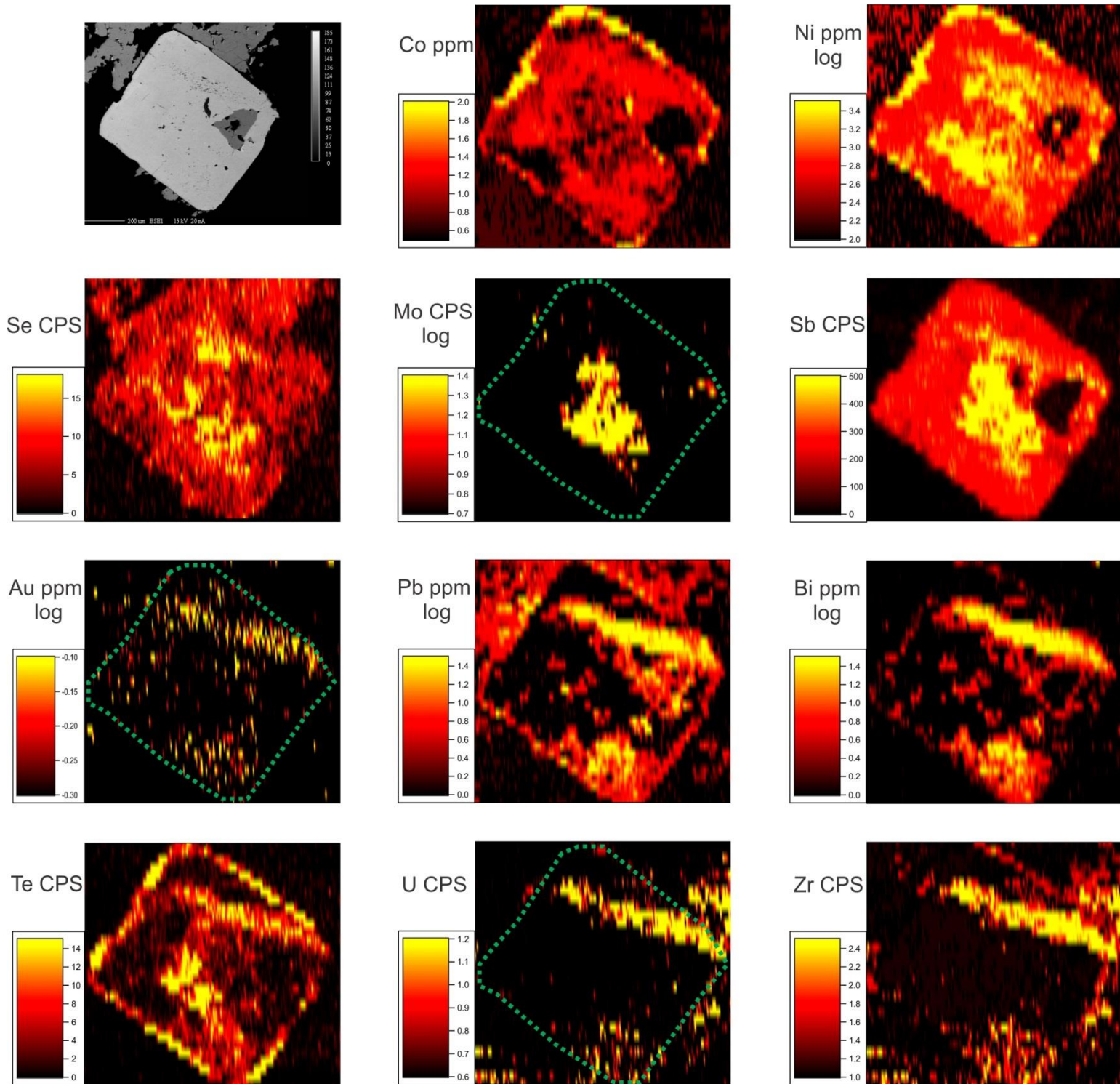


Fig. D-5 Composition map of an arsenopyrite grain from Pump deposit (A596).

Table D-5 LA-ICP-MS magnetite data.

Sample	Site	Type	In	In Stdev	In LOD	Ag	Ag Stdev	Ag LOD
1M026-A	Till 01	Till	0.0049	0.0062	0.0037465	< LOD	0.0059	0.017317
1M032-A	Till 01	Till	< LOD	0.0018	0.0045578	< LOD	0.0033	0.0093927
1M032-B	Till 01	Till	0.0035	0.0021	0.0027594	< LOD	0.0047	0.0069458
1M034	Till 01	Till	< LOD	0.0042	0.0041207	0.034	0.052	0.011926
1M042-A	Till 01	Till	< LOD	0.0031	0.0060748	< LOD	0.0053	0.016592
1M042-B	Till 01	Till	< LOD	0.0027	0.0059004	< LOD	0.0048	0.016116
1M043-B	Till 01	Till	0.0082	0.0051	0.0042505	< LOD	0.0098	0.015452
1M058-A	Till 01	Till	0.0054	0.0024	0.0032923	0.039	0.014	0.01207
1M062-B	Till 01	Till	0.051	0.011	0.0064763	< LOD	0.0095	0.016967
1M066-B	Till 01	Till	0.0077	0.0034	0.003181	0.0166	0.008	0.008198
1M068-B	Till 01	Till	0.0187	0.0063	0.0034304	0.0139	0.0096	0.010477
1M069	Till 01	Till	< LOD	0.0018	0.0055068	< LOD	0.0062	0.02317
1M071-A	Till 01	Till	0.0183	0.0083	0.0060297	< LOD	0.014	0.013193
1M071-B	Till 01	Till	0.023	0.012	0.0064361	< LOD	0.0087	0.014082
1M073-A	Till 01	Till	0.0092	0.0036	0.0033778	0.009	0.0073	0.0078169
1M073-B	Till 01	Till	0.0041	0.0026	0.0032519	< LOD	0.0047	0.0075253
1M074-A	Till 01	Till	< LOD	0.003	0.0031542	< LOD	0.0061	0.015771
1M078-A	Till 01	Till	0.0276	0.0065	0.0058005	< LOD	0.0074	0.010887
1M078-B	Till 01	Till	0.051	0.01	0.0045368	0.01	0.018	0.0085155
1M079	Till 01	Till	0.0056	0.0068	0	0.004	0.015	0
1M097	Till 01	Till	0.007	0.004	0.0049449	< LOD	0.01	0.013409
2M036-A	Till 02	Till	0.0059	0.0022	0.0029962	0.012	0.014	0.0091506
2M036-B	Till 02	Till	0.0058	0.0026	0.0029105	< LOD	0.0046	0.0088888
2M042-A	Till 02	Till	0.0202	0.0052	0.0034384	0.0098	0.0087	0.0086208
2M042-B	Till 02	Till	0.0169	0.0038	0.0032974	0.065	0.033	0.0082672
2M045	Till 02	Till	0.074	0.023	0	0.022	0.015	0
2M053-A	Till 02	Till	0.0277	0.0078	0.0053045	< LOD	0.01	0.012416
2M069-A	Till 02	Till	0.0141	0.0054	0.003416	0.0123	0.0076	0.011912
2M070	Till 02	Till	< LOD	0.004	0.0035074	0.032	0.016	0.019338
2M080-A	Till 02	Till	0.0154	0.004	0.0061755	< LOD	0.0055	0.0083624
2M087-A	Till 02	Till	< LOD	0.0023	0.0046583	0.0095	0.0055	0.0080178
2M091-A	Till 02	Till	0.0286	0.005	0.003526	< LOD	0.005	0.012483
2M091-B	Till 02	Till	0.0346	0.0057	0.0030806	< LOD	0.0084	0.010906
2M093-A	Till 02	Till	0.0055	0.0035	0.0045419	< LOD	0.0045	0.012585
2M094-A	Till 02	Till	< LOD	0.0014	0.0040098	< LOD	0.0074	0.0093691
2M094-B	Till 02	Till	< LOD	0.0021	0.0039092	< LOD	0.0065	0.009134
2M095-A	Till 02	Till	0.0051	0.0023	0.0033272	< LOD	0.0055	0.010817
2M095-B	Till 02	Till	0.0064	0.0026	0.0039603	< LOD	0.0047	0.009033
2M096-A	Till 02	Till	0.032	0.0057	0.0029161	0.04	0.014	0.0098792

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Al	Al Stdev	Al LOD	As	As Stdev	As LOD	Bi	Bi Stdev	Bi LOD
1M026-A	833	50	0.19485	0.278	0.089	0.10203	< LOD	0.017	0.039325
1M032-A	725	16	0.16009	0.068	0.029	0.050436	< LOD	0.011	0.037054
1M032-B	720	16	0.16341	0.152	0.043	0.061595	< LOD	0.014	0.033394
1M034	841	47	0.1801	< LOD	0.036	0.064219	< LOD	0.017	0.03767
1M042-A	540	37	0.21575	< LOD	0.04	0.079513	< LOD	0.033	0.044063
1M042-B	475.1	9.8	0.20956	< LOD	0.037	0.077231	< LOD	0.018	0.042798
1M043-B	1450	140	0.21199	1	1.1	0.098965	< LOD	0.017	0.052108
1M058-A	1080	120	0.17591	0.221	0.048	0.068181	< LOD	0.015	0.036872
1M062-B	7880	380	0.19585	1.58	0.17	0.10061	< LOD	0.023	0.046013
1M066-B	3130	350	0.16211	3.34	0.63	0.060047	< LOD	0.015	0.041428
1M068-B	3330	480	0.1985	0.278	0.083	0.071003	0.09	0.14	0.044713
1M069	461.3	7.9	0.26826	0.141	0.056	0.082213	< LOD	0.027	0.059082
1M071-A	2922	74	0.23256	< LOD	0.071	0.11368	< LOD	0.038	0.061764
1M071-B	2895	77	0.24823	0.26	0.12	0.12134	< LOD	0.026	0.065927
1M073-A	886	46	0.16715	0.154	0.049	0.075973	< LOD	0.018	0.043875
1M073-B	1300	110	0.16092	0.23	0.054	0.07314	< LOD	0.017	0.042238
1M074-A	899	12	0.2419	< LOD	0.049	0.086656	< LOD	0.028	0.039974
1M078-A	1390	100	0.2135	< LOD	0.045	0.10482	< LOD	0.016	0.035747
1M078-B	1430	130	0.16699	< LOD	0.033	0.081982	< LOD	0.011	0.027959
1M079	774	22	0	0.164	0.097	0	< LOD	0.05	0
1M097	870	120	0.22508	0.31	0.15	0.079444	< LOD	0.025	0.043922
2M036-A	689	37	0.14729	0.066	0.028	0.049052	< LOD	0.012	0.028847
2M036-B	836	79	0.14308	0.205	0.05	0.047648	< LOD	0.012	0.028022
2M042-A	2443	37	0.1696	0.103	0.038	0.067427	< LOD	0.014	0.031824
2M042-B	2376	55	0.16264	< LOD	0.036	0.064662	< LOD	0.016	0.030519
2M045	15000	5.30E+03	0	2.08	0.55	0	0.028	0.028	0
2M053-A	2810	150	0.18517	0.122	0.074	0.087533	< LOD	0.02	0.041332
2M069-A	5680	220	0.18043	0.236	0.056	0.07242	< LOD	0.065	0.041329
2M070	707	31	0.25339	0.3	0.078	0.10185	0.054	0.028	0.048672
2M080-A	3905	79	0.17027	0.241	0.062	0.065911	< LOD	0.015	0.040789
2M087-A	700	120	0.1743	0.88	0.21	0.087872	< LOD	0.015	0.033579
2M091-A	1180	24	0.16287	0.105	0.039	0.05488	< LOD	0.016	0.039723
2M091-B	1208	29	0.14229	0.066	0.03	0.047947	< LOD	0.014	0.034705
2M093-A	1600	230	0.15301	0.314	0.079	0.057373	< LOD	0.014	0.034654
2M094-A	277.7	4.1	0.16887	0.076	0.034	0.058044	< LOD	0.017	0.032865
2M094-B	285	8.2	0.16463	0.095	0.039	0.056588	< LOD	0.017	0.03204
2M095-A	636	19	0.18793	< LOD	0.032	0.084097	< LOD	0.014	0.033189
2M095-B	640	10	0.161	< LOD	0.028	0.062405	< LOD	0.013	0.035941
2M096-A	2257	96	0.1659	0.148	0.042	0.050918	< LOD	0.019	0.039022

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ca	Ca Stdev	Ca LOD	Cd	Cd Stdev	Cd LOD	Co	Co Stdev	Co LOD
1M026-A	19.9	6.7	6.0065	< LOD	0.022	0.043931	31.73	0.61	0.011512
1M032-A	< LOD	3.4	8.4242	< LOD	0.0096	0.026326	9.29	0.13	0.012105
1M032-B	41	30	7.7923	< LOD	0.013	0.022697	9.38	0.19	0.0089388
1M034	< LOD	5.9	9.514	< LOD	0.015	0.036893	67.1	1.5	0.013073
1M042-A	17.1	5.7	6.8065	< LOD	0.019	0.022882	21.63	0.51	0.0095498
1M042-B	< LOD	2.9	6.6112	< LOD	0.019	0.022225	20.97	0.43	0.0092757
1M043-B	510	140	7.5939	< LOD	0.044	0.042616	64.47	0.94	0.010295
1M058-A	310	110	8.1882	0.027	0.018	0.020075	38.79	0.56	0.017594
1M062-B	5190	350	8.1415	0.25	0.068	0.02695	49.01	0.93	0.011237
1M066-B	368	52	9.5819	< LOD	0.01	0.029516	77.08	0.95	0.014017
1M068-B	890	300	10.671	< LOD	0.019	0.032315	31.74	0.88	0.014537
1M069	25	27	14.294	< LOD	0.021	0.055285	39.97	0.7	0.025876
1M071-A	20	28	9.6933	< LOD	0.037	0.036115	6.69	0.19	0.014211
1M071-B	41	27	10.347	< LOD	0.014	0.038549	6.55	0.42	0.015169
1M073-A	16.1	5.4	9.8734	< LOD	0.016	0.020826	22.01	0.28	0.018136
1M073-B	62	11	9.5052	< LOD	0.016	0.020049	21.1	0.52	0.017459
1M074-A	< LOD	4.3	7.1403	< LOD	0.025	0.049463	33.51	0.66	0.0078126
1M078-A	< LOD	4.5	8.7431	< LOD	0.012	0.035224	53.58	0.99	0.012941
1M078-B	7	13	6.8383	< LOD	0.011	0.02755	53.86	0.63	0.010122
1M079	1.3	6.9	0	0.034	0.052	0	22	2.2	0
1M097	42	17	10.43	< LOD	0.019	0.05616	26.51	0.96	0.020054
2M036-A	< LOD	4.9	8.0348	< LOD	0.0092	0.029824	59.26	0.67	0.011209
2M036-B	12	5.7	7.8049	< LOD	0.012	0.028971	61.4	1	0.010888
2M042-A	44	33	8.8696	0.011	0.012	0.0081757	39.26	0.44	0.011462
2M042-B	36	12	8.5059	< LOD	0.0095	0.0078405	39.59	0.5	0.010992
2M045	1180	280	0	0.013	0.021	0	13.39	0.71	0
2M053-A	203	54	6.593	< LOD	0.023	0.030672	39.57	0.64	0.012033
2M069-A	67	11	9.0132	< LOD	0.01	0.014478	7.09	0.12	0.013082
2M070	17	4.5	8.4626	0.029	0.025	0.02817	11.03	0.41	0.008496
2M080-A	< LOD	3.7	9.3619	< LOD	0.011	0.035329	10.2	0.23	0.013754
2M087-A	152	56	5.9241	< LOD	0.041	0.031471	16.07	0.26	0.0086365
2M091-A	< LOD	4	8.4451	< LOD	0.014	0.02678	19.13	0.33	0.013235
2M091-B	< LOD	3.7	7.3783	< LOD	0.023	0.023397	19.52	0.41	0.011563
2M093-A	121	32	8.6284	< LOD	0.01	0.021536	41.67	0.61	0.0099282
2M094-A	< LOD	6.1	9.2941	0.08	0.14	0.038748	2.398	0.091	0.015008
2M094-B	70	120	9.0609	< LOD	0.014	0.037776	2.41	0.1	0.014631
2M095-A	< LOD	2.3	5.036	< LOD	0.0093	0.0426	30.82	0.43	0.0096567
2M095-B	< LOD	2.2	5.7684	< LOD	0.012	0.024554	31.22	0.45	0.0062215
2M096-A	27.7	6.7	9.7023	< LOD	0.02	0.020497	42.88	0.79	0.01732

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Cr	Cr Stdev	Cr LOD	Cu	Cu Stdev	Cu LOD	Eu	Eu Stdev	Eu LOD
1M026-A	313.8	5.6	0.99842	3.28	0.87	0.081677	< LOD	0.0023	0.0024011
1M032-A	208.2	2.8	0.90716	0.202	0.06	0.087976	< LOD	0.0011	0.0019605
1M032-B	288.5	8.2	0.9448	0.355	0.096	0.10799	< LOD	0.0021	0.0037352
1M034	249.6	7.8	1.0712	1.38	0.53	0.11261	< LOD	0.0026	0.0047355
1M042-A	238.5	3.9	1.083	0.237	0.06	0.070336	< LOD	0.002	0.0033782
1M042-B	250.2	5.1	1.0519	0.173	0.049	0.068317	< LOD	0.0023	0.0032813
1M043-B	339	6.3	1.2184	0.49	0.15	0.072654	0.048	0.018	0.001613
1M058-A	181.8	3.2	1.1882	0.377	0.066	0.11715	0.062	0.027	0.0025968
1M062-B	547	30	1.159	21.6	1.5	0.067883	0.252	0.031	0.0036499
1M066-B	359.1	6.5	0.97528	39.5	7.7	0.11123	0.036	0.01	0.004686
1M068-B	908	21	1.2075	14	3.3	0.12889	0.134	0.066	0.0046321
1M069	199.8	5.8	1.7998	1.15	0.21	0.14978	< LOD	0.002	0.005187
1M071-A	209.9	4.3	1.6442	0.37	0.35	0.09408	< LOD	0.000025	0.0077992
1M071-B	213	7.9	1.755	0.65	0.24	0.10042	< LOD	0.0059	0.0083248
1M073-A	183.5	3.3	1.1471	2.34	0.43	0.13239	0.016	0.007	0.0035632
1M073-B	175.1	3	1.1043	9.4	1.7	0.12746	0.0071	0.0039	0.0034304
1M074-A	213	4.5	1.1822	0.212	0.087	0.076696	< LOD	0.0022	0.0027899
1M078-A	262.7	3.6	1.1999	1.04	0.45	0.074627	< LOD	0.0017	0.0015205
1M078-B	266.6	3.5	0.93845	1.25	0.58	0.058369	< LOD	0.00089	0.0011893
1M079	608	22	0	1.33	0.27	0	0.0052	0.0059	0
1M097	167.7	3.3	1.221	2.01	0.73	0.13889	0.0086	0.0059	0.0036296
2M036-A	376.6	3.5	0.81359	0.686	0.088	0.085008	< LOD	0.0024	0.0047451
2M036-B	390.8	6.8	0.79031	1.24	0.2	0.082576	0.0107	0.0072	0.0046093
2M042-A	5182	82	0.87563	1.71	0.28	0.1062	< LOD	0.002	0.0021978
2M042-B	5212	94	0.83972	1.05	0.16	0.10185	< LOD	0.0025	0.0021077
2M045	460	17	0	19.4	5.9	0	0.098	0.03	0
2M053-A	1115	21	1.0659	6.2	1.2	0.074226	0.075	0.022	0.0054117
2M069-A	574.3	5.9	0.94714	4.54	0.8	0.11313	0.0069	0.0033	0.0035143
2M070	277.6	5.8	1.4166	9.2	1.7	0.083461	0.072	0.028	0
2M080-A	302	3.5	0.97012	2.99	0.87	0.12691	0.0029	0.002	0.0028115
2M087-A	328.4	4.5	1.0187	2.35	0.87	0.05368	0.0179	0.0066	0.0021097
2M091-A	178.6	2.3	1.0503	0.284	0.078	0.12934	< LOD	0.0018	0.0028249
2M091-B	187.1	2.8	0.91765	0.297	0.069	0.113	< LOD	0.0012	0.0024681
2M093-A	280.6	5.3	0.9966	5	1.2	0.092628	0.0077	0.0037	0.0039584
2M094-A	192.6	2.8	1.1056	0.318	0.082	0.084765	< LOD	0.00059	0.003462
2M094-B	194.6	2.4	1.0778	0.375	0.078	0.082638	< LOD	0.00082	0.0033751
2M095-A	326	4.1	0.98011	0.74	0.15	0.051394	< LOD	0.0013	0.0026339
2M095-B	330.6	3.6	0.98673	0.69	0.12	0.065833	< LOD	0.00096	0.0019317
2M096-A	1975	41	1.1002	5.3	1.1	0.10525	0.032	0.018	0

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Ge	Ge Stdev	Ge LOD	Hf	Hf Stdev	Hf LOD
1M026-A	17.06	0.4	0.028731	0.778	0.077	0.052815	0.43	0.2	0.0057802
1M032-A	11.81	0.34	0.020683	2.38	0.096	0.062603	< LOD	0.0017	0.0055617
1M032-B	11.3	0.32	0.019272	2.36	0.12	0.054654	0.0051	0.0036	0.0018781
1M034	22.91	0.64	0.018198	1.27	0.1	0.053231	0.0062	0.0054	0.0034426
1M042-A	35.27	0.81	0.029356	0.587	0.067	0.056993	< LOD	0.0035	0.0070286
1M042-B	34.7	1.2	0.028513	0.566	0.079	0.055357	< LOD	0.003	0.0068269
1M043-B	25.56	0.55	0.041274	1.03	0.1	0.061324	< LOD	0.002	0.0081727
1M058-A	36.14	0.85	0.026856	2.16	0.18	0.052214	10.3	2	0.0042402
1M062-B	149.3	5.5	0.036844	1.94	0.16	0.079768	0.79	0.24	0.0060102
1M066-B	30.09	0.67	0.017848	0.44	0.057	0.052369	0.044	0.013	0.002063
1M068-B	46.9	1.6	0.031679	1.24	0.12	0.070463	0.52	0.2	0
1M069	15.37	0.71	0.035423	0.444	0.074	0.10061	< LOD	0.0038	0.0036683
1M071-A	14.01	0.58	0.048994	2.37	0.25	0.085336	< LOD	0.000018	0.0080541
1M071-B	14.34	0.53	0.052296	2.33	0.33	0.091087	< LOD	0.0038	0.0085969
1M073-A	39.9	1.1	0.02195	1.2	0.11	0.056932	0.69	0.33	0.0053373
1M073-B	42.2	1.7	0.021132	1.303	0.092	0.054809	0.147	0.033	0.0051382
1M074-A	7.58	0.35	0.033562	0.235	0.058	0.080679	0.0031	0.0038	0
1M078-A	80.9	1.6	0.027789	0.827	0.066	0.068123	< LOD	0.0000068	0.0025834
1M078-B	83.1	1.5	0.021735	0.848	0.058	0.053281	< LOD	0.0017	0.0020206
1M079	27.15	0.88	0	1.3	0.2	0	0.025	0.023	0
1M097	26.22	0.88	0.028361	1.48	0.15	0.091446	0.0141	0.009	0.0070518
2M036-A	61.7	1.1	0.015244	0.701	0.053	0.055524	< LOD	0.0021	0.0051603
2M036-B	64.2	1.4	0.014808	0.753	0.051	0.053935	< LOD	0.0026	0.0050126
2M042-A	68.84	0.97	0.024294	1.58	0.11	0.05689	0.0047	0.0032	0
2M042-B	70.2	1.2	0.023298	1.65	0.1	0.054557	0.0024	0.0019	0
2M045	35.97	0.95	0	1.51	0.16	0	0.5	0.29	0
2M053-A	109.6	2.7	0.027882	1.22	0.1	0.053132	1.87	0.95	0.0074566
2M069-A	9.34	0.31	0.023421	4.69	0.22	0.058953	0.052	0.022	0.004625
2M070	32.19	0.95	0.032965	1.21	0.14	0.068106	3.2	1.5	0.0027643
2M080-A	17.25	0.45	0.021427	3.53	0.15	0.045436	0.0057	0.0038	0.001947
2M087-A	15.84	0.49	0.022645	1.195	0.067	0.049129	0.0113	0.0081	0.0041857
2M091-A	214	11	0.02503	1.98	0.12	0.061522	< LOD	0.0011	0.0021103
2M091-B	210.3	3.5	0.021868	1.98	0.096	0.05375	< LOD	0.000015	0.0018437
2M093-A	22.23	0.45	0.017681	1.338	0.075	0.051263	0.029	0.017	0
2M094-A	31.9	1.1	0.017104	0.666	0.071	0.049331	< LOD	0.002	0.005072
2M094-B	32.09	0.57	0.016674	0.694	0.078	0.048093	< LOD	0.0022	0.0049447
2M095-A	87.5	1	0.021048	0.792	0.056	0.041941	< LOD	0.0022	0.0027054
2M095-B	91.7	1.3	0.021804	0.85	0.11	0.049428	0.0035	0.0026	0
2M096-A	102.2	2.6	0.016635	1.2	0.085	0.050991	2.4	1.3	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	K	K Stdev	K LOD	Mg	Mg Stdev	Mg LOD	Mn	Mn Stdev	Mn LOD
1M026-A	< LOD	4.7	5.9789	175	25	0.011474	857	13	0.24134
1M032-A	16.8	2.8	6.6087	60.01	0.71	0.0093413	949	11	0.28168
1M032-B	54.9	3.9	5.3964	64.8	4.2	0.0068398	942	14	0.3189
1M034	< LOD	2.8	6.7621	128.9	2.8	0.01016	682.4	6.9	0.34421
1M042-A	< LOD	2.4	5.9631	93.9	2.6	0.0096089	869	19	0.26287
1M042-B	11.3	4.5	5.792	82.6	1.9	0.0093332	839	23	0.25533
1M043-B	< LOD	3.6	7.8004	251	27	0.014438	616	13	0.298
1M058-A	< LOD	7.1	6.2747	79	6.7	0.011724	666.1	9.1	0.29889
1M062-B	163	10	7.9006	840	47	0.009889	632	12	0.26191
1M066-B	323	48	5.8455	1160	130	0.01064	937	11	0.26838
1M068-B	231	58	6.4048	770	170	0.011908	630.5	9.5	0.39725
1M069	54.9	4.4	10.398	19.88	0.64	0.017896	514.6	6.7	0.59645
1M071-A	< LOD	6.9	9.2199	164	13	0.014693	325.8	5	0.40196
1M071-B	< LOD	6.8	9.8413	97.8	7.5	0.015684	339	15	0.42905
1M073-A	35.6	2.9	5.8602	258	40	0.013074	952.3	8	0.3782
1M073-B	42.4	4.4	5.6417	516	63	0.012587	825	17	0.36409
1M074-A	< LOD	3.2	6.3022	244	4.6	0.010074	788.6	9	0.29533
1M078-A	< LOD	2.3	6.6183	120.9	2.7	0.01237	2159	27	0.28557
1M078-B	< LOD	1.9	5.1765	116.1	1.7	0.0096748	2338	40	0.22336
1M079	< LOD	5.1	0	38	13	0	360.1	6.6	0
1M097	< LOD	6	9.0429	440	110	0.011737	721	12	0.43473
2M036-A	< LOD	2.4	4.1363	50	18	0.0099654	794	10	0.2883
2M036-B	< LOD	2.7	4.0179	54.6	1.2	0.0096803	918	17	0.28006
2M042-A	< LOD	2.3	6.083	184	9.9	0.012157	585	11	0.31495
2M042-B	< LOD	3.6	5.8335	192.3	9.1	0.011658	543	10	0.30204
2M045	43	20	0	1020	280	0	590	24	0
2M053-A	17.7	7.1	6.5808	714	71	0.0094351	918	21	0.26069
2M069-A	< LOD	3	7.8122	520	33	0.011074	580.8	6.9	0.31371
2M070	< LOD	3.5	6.3608	94	14	0.009867	536.6	8.4	0.32372
2M080-A	< LOD	2.1	6.409	183.2	7.4	0.0079746	839.7	8.1	0.33514
2M087-A	< LOD	5.7	4.9774	288	8.8	0.0090216	1069	13	0.24221
2M091-A	< LOD	3	7.8002	82.2	3.4	0.025806	1017	29	0.34989
2M091-B	< LOD	2.4	6.8148	102	4.8	0.022546	1334	28	0.30569
2M093-A	55	12	5.1373	286	56	0.0093775	592.4	7.9	0.26476
2M094-A	12.8	2.9	5.8049	20.85	0.35	0.0085479	2094	16	0.35453
2M094-B	9.3	2.4	5.6593	21.43	0.76	0.0083334	2119	30	0.34563
2M095-A	< LOD	2.3	5.119	7.26	0.75	0.0086874	1729	36	0.24726
2M095-B	< LOD	1.8	5.1695	7.45	0.3	0.0083451	1689	23	0.22547
2M096-A	< LOD	3	7.2075	429	33	0.013023	988	28	0.31778

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Mo	Mo Stdev	Mo LOD	Nb	Nb Stdev	Nb LOD	Ni	Ni Stdev	Ni LOD
1M026-A	< LOD	0.032	0.062156	0.0139	0.0061	0.0067469	167.1	2.8	0.052435
1M032-A	0.057	0.094	0.045572	< LOD	0.0018	0.0043953	38.7	1.6	0.070786
1M032-B	< LOD	0.023	0.055574	0.0158	0.0055	0.0035401	110	140	0.0642
1M034	< LOD	0.029	0.053103	< LOD	0.004	0.0074318	153.5	3	0.58092
1M042-A	< LOD	0.029	0.070736	< LOD	0.0037	0.0049193	31.03	0.8	0.05382
1M042-B	< LOD	0.023	0.068706	< LOD	0.0023	0.0047781	29.29	0.87	0.052275
1M043-B	< LOD	0.034	0.042483	0.0132	0.0059	0.0085769	165.7	5.9	0.061341
1M058-A	0.044	0.026	0.042736	0.314	0.077	0.00443	46.7	8.7	0.071733
1M062-B	< LOD	0.044	0.069215	0.314	0.055	0.007781	88.4	3.6	0.051924
1M066-B	0.161	0.055	0.042244	0.097	0.023	0.0051214	19.6	2.7	0.072757
1M068-B	0.068	0.044	0.049627	0.063	0.017	0.0077489	73.7	4.2	0.10222
1M069	< LOD	0.033	0.070591	< LOD	0.0043	0.0077108	62.6	1.3	0.10796
1M071-A	0.069	0.054	0.067134	0.0087	0.0075	0.0083431	18.68	0.8	0.084935
1M071-B	< LOD	0.046	0.071659	0.0156	0.0085	0.0089054	22.7	2.9	0.090659
1M073-A	0.051	0.031	0.047158	0.0156	0.0052	0.0045163	17.7	2.6	0.09274
1M073-B	< LOD	0.026	0.045399	0.0276	0.0081	0.0043478	19.67	0.83	0.089282
1M074-A	< LOD	0.04	0.06572	< LOD	0.0059	0.0073309	608.9	9.5	0.064961
1M078-A	0.182	0.056	0.057478	< LOD	0.0069	0.0066074	26.09	0.87	0.070128
1M078-B	0.165	0.037	0.044956	< LOD	0.0023	0.0051679	29	1.8	0.05485
1M079	< LOD	0.059	0	< LOD	0.0078	0	135	3.2	0
1M097	< LOD	0.038	0.07889	0.017	0.015	0.0082163	50.3	2.5	0.10188
2M036-A	0.077	0.029	0.037417	< LOD	0.0024	0.0071416	58.9	1.4	0.064771
2M036-B	0.081	0.028	0.036346	< LOD	0.0032	0.0069373	59.7	1	0.062918
2M042-A	0.166	0.045	0.066405	0.0152	0.0049	0.0036685	103.5	2.4	0.067512
2M042-B	0.132	0.04	0.063681	0.0051	0.0036	0.003518	103.5	2.1	0.064744
2M045	0.109	0.05	0	1.63	0.43	0	35.3	2.2	0
2M053-A	< LOD	0.038	0.059275	0.0309	0.0097	0.0053365	215.6	4.6	0.049088
2M069-A	0.201	0.041	0.058131	0.097	0.029	0.0045142	19.78	0.62	0.079737
2M070	0.118	0.05	0.051383	0.023	0.008	0.0090403	58.2	1.1	0.081311
2M080-A	0.077	0.03	0.05293	0.0197	0.0047	0.0043164	24.44	0.48	0.078592
2M087-A	1.31	0.33	0.045914	0.027	0.011	0.0070901	54.1	2.1	0.0542
2M091-A	< LOD	0.026	0.063032	0.0295	0.0072	0.0068955	10.8	0.33	0.074301
2M091-B	< LOD	0.025	0.055069	0.0152	0.0045	0.0060244	11.02	0.36	0.064915
2M093-A	0.061	0.031	0.048001	0.046	0.014	0.0060455	84.5	1.9	0.055764
2M094-A	< LOD	0.024	0.048142	< LOD	0.0027	0.0058269	106.7	1.5	0.066132
2M094-B	0.058	0.036	0.046934	< LOD	0.002	0.0056807	109.2	3.1	0.064472
2M095-A	< LOD	0.022	0.059779	< LOD	0.0019	0.0041669	16.2	0.41	0.046478
2M095-B	< LOD	0.022	0.04625	< LOD	0.0021	0.0053043	16.56	0.43	0.036355
2M096-A	< LOD	0.027	0.051327	0.044	0.013	0.0058029	112	4.3	0.06389

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	P	P Stdev	P LOD	Pb	Pb Stdev	Pb LOD	Sb	Sb Stdev	Sb LOD
1M026-A	< LOD	1.5	2.642	8.7	1.7	0.0046021	0.25	0.19	0.043537
1M032-A	< LOD	1.3	2.6718	7.9	1.6	0.0076054	0.043	0.03	0.037575
1M032-B	< LOD	2.5	2.9159	7.06	0.3	0.0043547	< LOD	0.02	0.036161
1M034	4.1	1.6	3.1132	13.6	1.8	0.0056621	< LOD	0.024	0.037216
1M042-A	< LOD	1.8	2.7186	6.8	1.2	0.0071894	< LOD	0.018	0.038708
1M042-B	< LOD	3.2	2.6406	6.3	0.81	0.0069831	< LOD	0.03	0.037597
1M043-B	< LOD	2.1	3.1028	7.3	1.5	0.0093382	< LOD	0.03	0.054702
1M058-A	11.7	8.1	2.8889	8.3	1	0.0050975	< LOD	0.019	0.04788
1M062-B	< LOD	1.8	3.1467	22.7	2.4	0.0080586	0.067	0.029	0.048696
1M066-B	< LOD	2.8	3.5386	23.9	3.7	0.00453	0.046	0.021	0.034307
1M068-B	3.2	2.1	3.195	24	8.2	0.0058663	0.071	0.036	0.04215
1M069	< LOD	2.3	4.731	10.6	1.4	0.0068029	< LOD	0.026	0.068505
1M071-A	< LOD	2.3	3.3783	4.4	1	0.0043757	< LOD	0.034	0.06031
1M071-B	< LOD	2.4	3.606	2.5	1.4	0.0046706	< LOD	0.038	0.064375
1M073-A	< LOD	1.6	3.3169	6.6	1.1	0.0024927	< LOD	0.018	0.046948
1M073-B	< LOD	1.9	3.1932	10.7	1.5	0.0023997	< LOD	0.02	0.045197
1M074-A	< LOD	2	3.3597	5.9	1.8	0.0052323	< LOD	0.029	0.065312
1M078-A	< LOD	1.6	3.0426	8.9	1.7	0.0045143	< LOD	0.019	0.04561
1M078-B	< LOD	1.2	2.3798	7.07	0.63	0.0035308	< LOD	0.022	0.035673
1M079	< LOD	4.2	0	11.6	1.7	0	0.023	0.068	0
1M097	< LOD	2	4.1563	1.4	1.3	0.0066915	< LOD	0.04	0.045772
2M036-A	6.6	1.2	2.397	20.1	3.5	0.0058513	0.039	0.022	0.029721
2M036-B	6.9	1.3	2.3284	19.6	2.6	0.0056839	0.08	0.024	0.02887
2M042-A	9.9	1.5	3.2355	16.2	2.9	0.0071209	0.114	0.03	0.037578
2M042-B	10.1	1.6	3.1028	13.3	2.2	0.0068289	0.081	0.027	0.036037
2M045	10.6	2.3	0	4.7	2.5	0	0.28	0.093	0
2M053-A	9.3	3.1	2.4796	9.5	2.7	0.0057656	< LOD	0.024	0.043852
2M069-A	7.1	1.7	3.0869	10.9	1.4	0.0055703	0.055	0.031	0.039945
2M070	14.9	1.8	4.1254	22.5	2.8	0.0083362	0.082	0.03	0.065079
2M080-A	5	1.6	2.7292	10.93	0.88	0.0067844	< LOD	0.017	0.042082
2M087-A	79	27	2.7185	21	19	0.0039173	0.095	0.033	0.042483
2M091-A	13.9	1.6	3.7282	7.2	1.9	0.0065242	< LOD	0.021	0.043379
2M091-B	8.6	1.4	3.2572	6.9	0.47	0.0057	< LOD	0.052	0.037899
2M093-A	< LOD	1.5	2.916	10.1	1.2	0.0052689	0.048	0.02	0.02837
2M094-A	< LOD	1.5	3.0316	8.1	2.7	0.0045576	< LOD	0.019	0.042131
2M094-B	< LOD	1.6	2.9555	9.5	2.1	0.0044432	< LOD	0.021	0.041073
2M095-A	7.8	1.4	3.0362	10.3	1.5	0.0051734	< LOD	0.016	0.038841
2M095-B	4.8	1.2	2.4974	12.9	2.3	0.0051527	0.143	0.086	0.036988
2M096-A	6.9	1.9	3.2382	13.5	2.5	0.0052046	< LOD	0.019	0.048874

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Si	Si Stdev	Si LOD	Sn	Sn Stdev	Sn LOD
1M026-A	0.463	0.042	0.035023	300	130	81.177	0.069	0.034	0.0218
1M032-A	0.825	0.033	0.032683	< LOD	86	76.052	0.11	0.027	0.020552
1M032-B	0.794	0.043	0.034443	< LOD	93	101.93	0.31	0.29	0.02991
1M034	1.034	0.05	0.026935	518	55	87.3	0.072	0.023	0.021946
1M042-A	0.607	0.054	0.030036	< LOD	68	64.463	0.181	0.04	0.026873
1M042-B	0.49	0.043	0.029174	< LOD	35	62.613	0.12	0.025	0.026102
1M043-B	4.6	1.3	0.03308	1920	300	93.19	0.216	0.096	0.025793
1M058-A	2.7	0.36	0.036988	1560	200	90.046	0.369	0.046	0.02192
1M062-B	3.7	0.14	0.032208	8850	590	79.726	1.13	0.18	0.02264
1M066-B	0.343	0.041	0.038096	3580	750	80.986	0.73	0.32	0.018855
1M068-B	1.59	0.27	0.037312	5800	1.30E+03	98.49	0.85	0.23	0.027911
1M069	0.216	0.036	0.052241	< LOD	67	148.37	0.05	0.029	0.025748
1M071-A	0.636	0.073	0.048244	140	77	97.529	0.9	0.15	0.0362
1M071-B	0.456	0.072	0.051495	200	400	104.1	1.64	0.52	0.038639
1M073-A	2.33	0.12	0.034687	< LOD	110	101.41	0.23	0.16	0.025921
1M073-B	2.43	0.12	0.033393	500	220	97.625	0.29	0.13	0.024955
1M074-A	0.35	0.041	0.034628	270	42	80.02	0.132	0.076	0.025055
1M078-A	2.661	0.079	0.037163	< LOD	42	80.631	1.07	0.62	0.023645
1M078-B	2.527	0.062	0.029067	< LOD	38	63.065	4.3	2.7	0.018493
1M079	1.53	0.11	0	< LOD	120	0	0.032	0.036	0
1M097	0.94	0.068	0.049809	1210	400	113.41	0.113	0.029	0.031696
2M036-A	0.276	0.024	0.028361	862	86	79.449	0.285	0.059	0.01901
2M036-B	0.243	0.023	0.027549	837	54	77.176	0.253	0.054	0.018466
2M042-A	1.602	0.063	0.035919	1383	60	84.871	2.4	0.26	0.021102
2M042-B	1.577	0.063	0.034446	1576	46	81.39	2.76	0.26	0.020237
2M045	1.92	0.32	0	6000	1.60E+03	0	2.6	1.6	0
2M053-A	6.19	0.2	0.027974	2560	270	91.234	0.453	0.07	0.024233
2M069-A	2.183	0.063	0.032776	2300	150	101.11	0.3	0.035	0.023277
2M070	0.44	0.12	0.040961	1677	75	146.49	0.39	0.36	0.041248
2M080-A	2.954	0.075	0.03862	1347	95	121.42	0.267	0.03	0.026348
2M087-A	0.769	0.038	0.030318	543	44	97.307	0.049	0.018	0.028079
2M091-A	6.74	0.16	0.038085	1920	110	101.38	3.2	0.14	0.028516
2M091-B	7.03	0.17	0.033273	1282	59	88.573	3.72	0.17	0.024913
2M093-A	1.11	0.16	0.032048	1870	570	99.235	0.083	0.029	0.021227
2M094-A	< LOD	0.02	0.035408	< LOD	51	100.22	0.024	0.015	0.023049
2M094-B	< LOD	0.018	0.034519	< LOD	49	97.709	< LOD	0.014	0.022471
2M095-A	0.184	0.017	0.030633	928	55	89.356	0.129	0.018	0.019353
2M095-B	0.185	0.017	0.026442	594	44	76.263	0.138	0.019	0.021988
2M096-A	5.08	0.18	0.031106	2220	280	86.212	0.252	0.035	0.024426

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ta	Ta Stdev	Ta LOD	Ti	Ti Stdev	Ti LOD	V	V Stdev	V LOD
1M026-A	< LOD	0.00055	0.0014308	475	11	0.076115	3014	42	0.031994
1M032-A	< LOD	0.00057	0.0011393	229.3	2.5	0.1077	99.98	0.94	0.030369
1M032-B	< LOD	0.00084	0.0013218	345	49	0.12906	101	2.6	0.031197
1M034	< LOD	0.00069	0.0006541	345.7	5.4	0.15209	2480	52	0.035744
1M042-A	0.0016	0.0013	0	284.1	6.5	0.096509	858	14	0.028742
1M042-B	0.00059	0.00076	0	262.3	6.3	0.09374	819	15	0.027917
1M043-B	< LOD	0.0012	0.0027264	343	16	0.14642	3075	39	0.033292
1M058-A	0.065	0.019	0.00058422	537	27	0.13791	1856	22	0.047602
1M062-B	0.0093	0.0038	0.0007352	1134	69	0.075862	4271	76	0.028324
1M066-B	0.0034	0.0016	0.0013795	975	63	0.12966	3471	33	0.032231
1M068-B	0.0052	0.0023	0.0014034	368.6	8.7	0.15776	2278	27	0.040991
1M069	< LOD	0.00034	0.002182	353.9	6	0.20181	1681	26	0.059426
1M071-A	< LOD	0.0026	0.0021932	812	30	0.11021	68.6	2.9	0.039164
1M071-B	< LOD	0.0014	0.002341	699	28	0.11764	66.4	1.3	0.041803
1M073-A	< LOD	0.0013	0.0019624	477.9	5.4	0.10903	1889	27	0.036342
1M073-B	< LOD	0.0019	0.0018892	425.9	6.9	0.10496	1920	29	0.034987
1M074-A	< LOD	0.00082	0.00072003	109.9	1.9	0.13653	14.34	0.32	0.030639
1M078-A	< LOD	0.00038	0.00069711	643	17	0.508	1883	25	0.027562
1M078-B	< LOD	0.00063	0.00054524	698	18	0.39732	1883	25	0.021558
1M079	0.0019	0.0029	0	273	13	0	3789	66	0
1M097	< LOD	0.0014	0.0028607	319.7	5.9	0.2168	1525	28	0.052846
2M036-A	< LOD	0.00056	0.0010657	708	37	0.084822	1855	12	0.031282
2M036-B	< LOD	0.00039	0.0010352	649	49	0.082395	1876	21	0.030387
2M042-A	0.0011	0.0011	0.00057738	2060	130	0.173	4493	39	0.033621
2M042-B	0.00065	0.00066	0.00055371	1291	86	0.16591	4561	45	0.032243
2M045	0.058	0.015	0	1330	230	0	1731	25	0
2M053-A	0.0039	0.002	0.0013672	487	24	0.11366	3130	43	0.025984
2M069-A	0.0043	0.0017	0.0025783	1153	12	0.11812	98	2.6	0.041072
2M070	0.0016	0.0013	0	362	20	0.11843	1690	22	0.028812
2M080-A	0.0018	0.001	0.0007941	764.5	8.4	0.10002	100.8	1	0.041663
2M087-A	< LOD	0.00085	0.0013704	29.2	5.5	0.090502	70.3	0.71	0.024262
2M091-A	0.0013	0.0011	0.0012945	811	24	0.12476	239.4	3.2	0.038373
2M091-B	< LOD	0.00077	0.001131	939	30	0.109	238.3	3.3	0.033525
2M093-A	0.0021	0.0014	0.0013559	554	15	0.10973	4025	48	0.038866
2M094-A	0.0032	0.0049	0.0017124	153.6	3.5	0.1096	1044	18	0.039173
2M094-B	< LOD	0.00098	0.0016694	154.1	3	0.10685	1047	16	0.03819
2M095-A	< LOD	0.00051	0.0017915	855	26	0.11072	1066.7	9.7	0.02557
2M095-B	< LOD	0.0003	0	839	11	0.096201	1068	11	0.025717
2M096-A	< LOD	0.0011	0.0015554	541	27	0.11381	2864	35	0.039227

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	W	W Stdev	W LOD	Y	Y Stdev	Y LOD	Yb	Yb Stdev	Yb LOD
1M026-A	0.48	0.15	0.009608	0.05	0.016	0.0043972	0.041	0.02	0
1M032-A	0.0023	0.0023	0	< LOD	0.0012	0.0026346	< LOD	0.0024	0.0067418
1M032-B	0.019	0.011	0.005435	0.01	0.0039	0.002804	< LOD	0.0044	0.0051022
1M034	< LOD	0.0042	0.0067393	0.0078	0.0042	0.0027368	< LOD	0.0039	0.0097609
1M042-A	0.0024	0.0039	0	0.027	0.01	0.0041315	< LOD	0.0035	0.006788
1M042-B	0.0009	0.0032	0	< LOD	0.0026	0.004013	< LOD	0.0037	0.0065932
1M043-B	0.0082	0.008	0	0.88	0.29	0.0047792	0.052	0.022	0
1M058-A	0.0297	0.0098	0.0059898	2.14	0.5	0.0037043	1.62	0.27	0.006813
1M062-B	0.88	0.15	0.0038361	3.43	0.24	0.0057168	0.381	0.052	0.003667
1M066-B	0.157	0.034	0.0029143	0.281	0.05	0.0037591	0.0173	0.0094	0.0066295
1M068-B	0.064	0.023	0.0035971	0.88	0.31	0.0029446	0.121	0.036	0.003372
1M069	< LOD	0.0049	0.014202	< LOD	0.0029	0.0067272	< LOD	0.0063	0.0046937
1M071-A	0.0037	0.0062	0	< LOD	0.0042	0.0099492	< LOD	0.0000081	0.004914
1M071-B	0.02	0.016	0	< LOD	0.0069	0.01062	< LOD	0.0096	0.0052452
1M073-A	0.035	0.024	0.0033869	0.73	0.29	0.0043153	0.125	0.047	0.004465
1M073-B	0.022	0.01	0.0032606	0.328	0.053	0.0041544	0.032	0.013	0.0042985
1M074-A	< LOD	0.0046	0.0038338	< LOD	0.0025	0.00476	< LOD	0.0023	0.011145
1M078-A	0.0023	0.0035	0	< LOD	0.0028	0.0062675	0.004	0.0038	0
1M078-B	0.052	0.052	0	< LOD	0.0015	0.0049021	0.0009	0.0017	0
1M079	< LOD	0.000068	0	0.0017	0.0096	0	0.002	0.011	0
1M097	0.02	0.01	0	0.229	0.03	0.0081083	0.041	0.018	0
2M036-A	< LOD	0.0034	0.0054633	0.0147	0.0097	0.0026092	0.0003	0.0015	0
2M036-B	< LOD	0.0022	0.005307	0.074	0.022	0.0025345	0.0037	0.0027	0
2M042-A	0.0093	0.0094	0.0029599	0.013	0.0041	0.0044528	0.0049	0.004	0
2M042-B	0.0055	0.0046	0.0028385	0.0165	0.0054	0.0042702	0.0034	0.0035	0
2M045	2.36	0.59	0	2.24	0.55	0	0.267	0.092	0
2M053-A	0.0074	0.0077	0.0071338	9.4	6	0.0058927	1.32	0.73	0
2M069-A	0.066	0.017	0.0030061	0.087	0.018	0.0031663	0.0092	0.0049	0.0028221
2M070	0.042	0.018	0	0.79	0.29	0.0066202	0.25	0.12	0.0037327
2M080-A	0.0101	0.0052	0	0.0205	0.0068	0.0029068	0.0045	0.0031	0.0026447
2M087-A	0.021	0.01	0.006327	0.37	0.12	0.0040901	0.03	0.013	0.0037465
2M091-A	< LOD	0.0044	0.0092896	0.0057	0.003	0.0033985	< LOD	0.0029	0.0055889
2M091-B	< LOD	0.0022	0.0081161	0.0031	0.0022	0.0029692	< LOD	0.0027	0.0048829
2M093-A	0.43	0.15	0	0.115	0.028	0.0031463	0.0118	0.0059	0.0042795
2M094-A	0.0032	0.0043	0.0031363	< LOD	0.0015	0.0038489	< LOD	0.000034	0.0096005
2M094-B	< LOD	0.0038	0.0030576	< LOD	0.0035	0.0037523	< LOD	0.0031	0.0093596
2M095-A	0.0028	0.0023	0	< LOD	0.0012	0.0030394	< LOD	0.0019	0.0051953
2M095-B	< LOD	0.0025	0.0026545	< LOD	0.0013	0.0045935	< LOD	0.0026	0.0087897
2M096-A	0.01	0.0066	0.0090823	0.91	0.57	0.0025031	0.25	0.14	0.006956

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
1M026-A	69.7	4.1	0.14473	14.1	6.3	0.0036571
1M032-A	23.8	1.1	0.13649	0.0056	0.0034	0.004454
1M032-B	42.6	6.7	0.15569	0.049	0.015	0.0057778
1M034	92.5	5	0.15812	0.2	0.14	0.006622
1M042-A	238.1	6	0.1185	0.067	0.04	0.0069064
1M042-B	197	10	0.1151	0.4	0.78	0.0067082
1M043-B	93.2	9.8	0.14862	0.059	0.018	0.0082943
1M058-A	77.7	3	0.15139	404	80	0.003438
1M062-B	71.4	2.8	0.15294	24.3	7.6	0.0043568
1M066-B	115.5	3.5	0.13757	0.86	0.17	0
1M068-B	98	24	0.13874	19.5	7.9	0.004822
1M069	45.6	2.4	0.24526	0.048	0.031	0
1M071-A	11.3	5.4	0.17256	< LOD	0.0042	0.009866
1M071-B	6.7	1.6	0.18419	0.038	0.021	0.010531
1M073-A	99.9	2	0.17551	24	11	0.0050534
1M073-B	95.7	3.9	0.16897	2.79	0.45	0.004865
1M074-A	66.5	3.3	0.15199	< LOD	0.0036	0.0096558
1M078-A	557	52	0.15384	0.03	0.039	0.00562
1M078-B	780	57	0.12032	0.011	0.0054	0.0043956
1M079	38.9	4.6	0	0.34	0.51	0
1M097	78.4	2.7	0.20718	0.38	0.12	0.0098825
2M036-A	1266	62	0.12785	0.0191	0.0058	0.0016449
2M036-B	1359	59	0.12419	0.056	0.016	0.0015979
2M042-A	227	29	0.15685	0.05	0.015	0.0078968
2M042-B	434	32	0.15042	0.0244	0.0088	0.007573
2M045	123.4	7.7	0	17	10	0
2M053-A	181	37	0.12862	66	37	0.0060164
2M069-A	27.1	2.4	0.18549	1.47	0.51	0.0026596
2M070	21.2	2.1	0.1314	130	65	0.0070819
2M080-A	50.9	4.8	0.17804	0.131	0.043	0.0043008
2M087-A	58.5	4.6	0.10321	0.36	0.33	0.0037523
2M091-A	575	17	0.14895	< LOD	0.0042	0.0084455
2M091-B	640	27	0.13014	< LOD	0.0022	0.0073786
2M093-A	99.2	2.9	0.14255	0.89	0.63	0.0025125
2M094-A	207.1	6.4	0.1465	< LOD	0.0048	0.0067489
2M094-B	202.8	6.6	0.14282	< LOD	0.004	0.0065795
2M095-A	899	32	0.10278	< LOD	0.0023	0.0058898
2M095-B	899	31	0.095338	0.008	0.014	0.0038383
2M096-A	99	15	0.12711	84	45	0.0053445

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Site	Type	In	In Stdev	In LOD	Ag	Ag Stdev	Ag LOD
2M096-B	Till 02	Till	0.0314	0.0052	0.0025249	0.0133	0.007	0.0085538
2M097	Till 02	Till	0.0005	0.0024	0	0.14	0.28	0
2M098-A	Till 02	Till	0.075	0.011	0.0019224	< LOD	0.0043	0.0073861
2M098-B	Till 02	Till	0.095	0.016	0.0019005	0.0078	0.0054	0.0073019
2M101-A	Till 02	Till	< LOD	0.0014	0.0049979	< LOD	0.0046	0.012482
2M101-B	Till 02	Till	< LOD	0.0013	0.0045898	< LOD	0.0043	0.011463
2M104-A	Till 02	Till	0.0057	0.0028	0.003328	< LOD	0.0059	0.011946
3M012-B	Till 03	Till	< LOD	0.0024	0.0045157	< LOD	0.007	0.012578
3M022-A	Till 03	Till	0.0107	0.0034	0.0041804	< LOD	0.0042	0.0066175
3M022-B	Till 03	Till	0.0145	0.0036	0.0039479	< LOD	0.004	0.0062495
3M023	Till 03	Till	< LOD	0.0039	0.0080962	< LOD	0.012	0.021009
3M024-A	Till 03	Till	0.0077	0.0051	0.0049729	< LOD	0.0098	0.020143
3M026-A	Till 03	Till	< LOD	0.0023	0.0047749	< LOD	0.004	0.010143
3M026-B	Till 03	Till	< LOD	0.0024	0.0044457	< LOD	0.0074	0.0094437
3M032-A	Till 03	Till	0.0517	0.0085	0.005479	< LOD	0.0057	0.011123
3M032-B	Till 03	Till	0.0315	0.0068	0.0052112	< LOD	0.0058	0.01058
3M033	Till 03	Till	0.0088	0.0052	0.0058813	0.024	0.02	0.019871
3M044-A	Till 03	Till	0.0171	0.0045	0.0040128	< LOD	0.0035	0.0086622
3M044-B	Till 03	Till	0.0108	0.0028	0.0035806	< LOD	0.0033	0.0077292
3M057	Till 03	Till	< LOD	0.0068	0.0087051	0.021	0.025	0.020958
3M064-A	Till 03	Till	0.022	0.027	0.0043388	0.018	0.012	0.0084608
3M066	Till 03	Till	0.015	0.0056	0.00395	< LOD	0.0094	0.020659
3M072-B	Till 03	Till	0.179	0.014	0.0043828	< LOD	0.0069	0.012208
4M024-A	Till 04	Till	0.0049	0.0023	0.0036611	< LOD	0.0049	0.0099367
4M024-B	Till 04	Till	0.0045	0.0023	0.0031657	< LOD	0.0059	0.0094347
4M028	Till 04	Till	0.0091	0.0085	0	0.006	0.017	0
4M030	Till 04	Till	< LOD	0.0035	0.0037755	< LOD	0.0047	0.011105
4M034-A	Till 04	Till	0.0181	0.0046	0.0040845	< LOD	0.0058	0.013682
4M034-B	Till 04	Till	0.0182	0.0049	0.0039311	< LOD	0.0076	0.013168
4M040-A	Till 04	Till	0.0053	0.0026	0.0041717	< LOD	0.0062	0.010945
4M040-B	Till 04	Till	0.0051	0.0023	0.0036352	0.0114	0.0062	0.0095375
4M041-A	Till 04	Till	0.012	0.0039	0.0028552	< LOD	0.011	0.010026
4M041-B	Till 04	Till	0.01	0.0031	0.0025514	0.0104	0.0087	0.0089593
4M044-B	Till 04	Till	< LOD	0.0022	0.0040631	< LOD	0.0065	0.011903
4M047-B	Till 04	Till	< LOD	0.0046	0.0037628	< LOD	0.0044	0.013018
4M065-B	Till 04	Till	< LOD	0.0033	0.0041308	0.018	0.012	0.016514
4M070-B	Till 04	Till	0.006	0.0035	0.0034882	< LOD	0.0044	0.011255
4M074-A	Till 04	Till	0.012	0.014	0.0036277	< LOD	0.01	0.0090837
4M074-B	Till 04	Till	< LOD	0.002	0.0054568	0.019	0.027	0.013719

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Al	Al Stdev	Al LOD	As	As Stdev	As LOD	Bi	Bi Stdev	Bi LOD
2M096-B	2670	230	0.14364	0.408	0.088	0.044087	< LOD	0.013	0.033787
2M097	1531	19	0	0.056	0.058	0	0.018	0.028	0
2M098-A	793	41	0.12979	< LOD	0.027	0.065231	< LOD	0.014	0.035785
2M098-B	906	72	0.12831	< LOD	0.024	0.064488	< LOD	0.015	0.035378
2M101-A	352	10	0.14914	< LOD	0.031	0.07179	< LOD	0.016	0.043224
2M101-B	358	12	0.13696	0.089	0.076	0.065928	< LOD	0.052	0.039695
2M104-A	498	55	0.16359	0.232	0.073	0.064808	< LOD	0.015	0.030963
3M012-B	1080	180	0.18571	0.096	0.045	0.079364	< LOD	0.018	0.037873
3M022-A	850	48	0.15678	0.066	0.027	0.061936	< LOD	0.017	0.034946
3M022-B	967	53	0.14806	0.067	0.028	0.058492	< LOD	0.014	0.033003
3M023	336	18	0.28088	0.73	0.17	0.11267	< LOD	0.027	0.063707
3M024-A	3070	470	0.26409	1.48	0.39	0.10809	< LOD	0.029	0.059592
3M026-A	2044	49	0.16065	< LOD	0.039	0.088951	< LOD	0.017	0.039875
3M026-B	1930	36	0.14957	< LOD	0.041	0.082818	< LOD	0.017	0.037125
3M032-A	1387	62	0.1977	< LOD	0.044	0.094964	< LOD	0.019	0.046046
3M032-B	1067	58	0.18804	< LOD	0.04	0.090324	< LOD	0.019	0.043796
3M033	901	68	0.25985	0.43	0.17	0.10713	< LOD	0.029	0.052583
3M044-A	1759	30	0.15335	0.07	0.03	0.049445	< LOD	0.026	0.037874
3M044-B	1435	43	0.13683	< LOD	0.025	0.044119	< LOD	0.014	0.033794
3M057	94	21	0.57517	< LOD	0.12	0.17779	< LOD	0.068	0.15553
3M064-A	970	190	0.19296	0.75	0.26	0.083356	< LOD	0.022	0.034356
3M066	6170	230	0.23827	1.08	0.11	0.093943	< LOD	0.022	0.047398
3M072-B	5090	130	0.18024	0.79	0.14	0.077029	< LOD	0.018	0.036759
4M024-A	869	98	0.15547	0.093	0.031	0.054924	< LOD	0.016	0.043262
4M024-B	816	12	0.15491	0.171	0.044	0.061761	< LOD	0.013	0.032725
4M028	4020	630	0	3.12	0.37	0	< LOD	0.052	0
4M030	1190	190	0.21754	0.71	0.23	0.057516	< LOD	0.025	0.038856
4M034-A	1545	14	0.21207	0.099	0.046	0.072477	< LOD	0.018	0.049165
4M034-B	1571	22	0.2041	< LOD	0.046	0.069755	< LOD	0.017	0.047318
4M040-A	605	16	0.18675	0.083	0.044	0.068939	< LOD	0.015	0.03219
4M040-B	653	20	0.16273	0.111	0.042	0.060074	< LOD	0.015	0.028051
4M041-A	625	27	0.18198	0.099	0.049	0.082957	< LOD	0.019	0.039896
4M041-B	534	13	0.16262	< LOD	0.032	0.074131	< LOD	0.015	0.035652
4M044-B	912	60	0.17665	0.308	0.085	0.079724	< LOD	0.017	0.043685
4M047-B	1120	52	0.16275	0.367	0.059	0.060137	< LOD	0.013	0.034394
4M065-B	1690	200	0.16487	2.47	0.65	0.061035	< LOD	0.02	0.043141
4M070-B	709	86	0.17431	0.46	0.1	0.077915	< LOD	0.017	0.040714
4M074-A	1719	81	0.18048	< LOD	0.05	0.11166	< LOD	0.02	0.033538
4M074-B	1572	67	0.17267	0.107	0.098	0.088803	< LOD	0.014	0.030968

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ca	Ca Stdev	Ca LOD	Cd	Cd Stdev	Cd LOD	Co	Co Stdev	Co LOD
2M096-B	53	12	8.4007	< LOD	0.013	0.017747	44.3	1	0.014997
2M097	5.6	3.9	0	0.002	0.027	0	10.78	0.26	0
2M098-A	< LOD	3.5	6.587	< LOD	0.012	0.020399	37.54	0.68	0.011979
2M098-B	< LOD	3.2	6.512	< LOD	0.019	0.020167	38.52	0.65	0.011842
2M101-A	< LOD	4.1	8.2692	0.032	0.03	0.021764	33.17	0.71	0.015136
2M101-B	< LOD	3.6	7.5939	< LOD	0.023	0.019987	33.88	0.68	0.0139
2M104-A	10.3	3.8	6.4175	< LOD	0.018	0.04815	25.52	0.32	0.0066358
3M012-B	46.9	6.5	7.4137	< LOD	0.016	0.030336	28.27	0.69	0.0094287
3M022-A	< LOD	3.4	8.1486	< LOD	0.014	0.032569	31.63	0.48	0.015485
3M022-B	< LOD	4	7.6954	< LOD	0.039	0.030758	31.59	0.65	0.014624
3M023	16.7	4.2	8.9749	< LOD	0.027	0.032965	25.7	0.86	0.010582
3M024-A	52	15	14.525	0.26	0.52	0.047933	11.37	0.33	0.020912
3M026-A	30.9	5.7	6.0842	< LOD	0.011	0.049518	4.791	0.098	0.0072445
3M026-B	37.1	5.7	5.6647	< LOD	0.059	0.046103	4.81	0.11	0.006745
3M032-A	< LOD	2.9	6.1936	< LOD	0.017	0.046311	35.83	0.52	0.0076331
3M032-B	< LOD	3	5.891	< LOD	0.018	0.044048	35.62	0.77	0.0072601
3M033	< LOD	7.9	12.134	< LOD	0.017	0.050452	40.19	0.77	0.022209
3M044-A	< LOD	3.7	9.4731	< LOD	0.0097	0.030122	7.17	0.14	0.012614
3M044-B	< LOD	3.3	8.4527	< LOD	0.011	0.026877	6.93	0.12	0.011255
3M057	< LOD	16	34.44	< LOD	0.063	0.090276	24.8	1.2	0.060834
3M064-A	35	11	6.998	< LOD	0.026	0.037345	29.23	0.52	0.014094
3M066	32.6	7.7	11.467	0.038	0.049	0.035272	38.16	0.89	0.016344
3M072-B	1490	260	7.1956	< LOD	0.02	0.029443	28.85	0.53	0.0091513
4M024-A	< LOD	3.4	7.9464	< LOD	0.01	0.01317	8.87	0.15	0.011834
4M024-B	< LOD	3	7.4289	< LOD	0.012	0.03209	8.94	0.17	0.012031
4M028	8300	1.00E+03	0	0.022	0.044	0	23.25	0.61	0
4M030	25.5	9	11.458	< LOD	0.0093	0.037458	46.7	2	0.01615
4M034-A	< LOD	2.9	7.5153	< LOD	0.023	0.043003	37.02	0.51	0.013131
4M034-B	< LOD	3	7.233	< LOD	0.019	0.041387	37.19	0.48	0.012637
4M040-A	16	13	7.3201	0.12	0.2	0.026846	20.65	0.49	0.010479
4M040-B	6.4	4.6	6.3788	< LOD	0.012	0.023394	20.36	0.29	0.0091318
4M041-A	< LOD	2.9	6.6135	0.012	0.014	0.0097586	22.61	0.31	0.010183
4M041-B	< LOD	2.5	5.9098	0.013	0.019	0.0087203	22.78	0.29	0.0091
4M044-B	8.2	4	5.4189	< LOD	0.013	0.036297	0.23	0.022	0.008356
4M047-B	36.7	6.3	8.013	< LOD	0.012	0.018475	1.91	0.22	0.015174
4M065-B	78	21	8.2516	< LOD	0.011	0.042222	0.96	0.24	0.015885
4M070-B	18	5.3	6.5716	< LOD	0.012	0.032348	49.13	0.85	0.0084822
4M074-A	< LOD	3.5	7.7196	< LOD	0.015	0.027003	37.66	0.48	0.010676
4M074-B	< LOD	2.5	6.4146	< LOD	0.015	0.035982	39.2	0.82	0.010945

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Cr	Cr Stdev	Cr LOD	Cu	Cu Stdev	Cu LOD	Eu	Eu Stdev	Eu LOD
2M096-B	2501	38	0.95265	8	1.3	0.091132	0.0137	0.0046	0
2M097	263.6	4.8	0	0.166	0.065	0	0.003	0.0035	0
2M098-A	175.4	2.1	0.96585	1.13	0.26	0.097767	< LOD	0.00085	0.002534
2M098-B	186.1	2.5	0.95485	1.26	0.29	0.096654	< LOD	0.00093	0.0025052
2M101-A	189.9	3.7	0.91233	0.317	0.092	0.10755	< LOD	0.0013	0.0024489
2M101-B	190.4	3.1	0.83783	1.5	2.3	0.098771	< LOD	0.0018	0.0022489
2M104-A	602	24	0.91949	1.88	0.59	0.057385	0.0119	0.0055	0.0027467
3M012-B	261.8	5.1	1.0944	0.45	0.15	0.068834	0.0029	0.0025	0.0027444
3M022-A	179.9	2.3	0.90236	0.28	0.071	0.12874	< LOD	0.0011	0.0027171
3M022-B	184.8	2.7	0.85218	0.431	0.084	0.12158	< LOD	0.0013	0.002566
3M023	216.5	5.3	1.5755	0.97	0.21	0.0892	0.0076	0.0046	0.004718
3M024-A	1940	130	1.7676	5	1.4	0.21666	< LOD	0.0066	0.0089603
3M026-A	245	3.1	0.91265	0.207	0.071	0.055387	0.03	0.0084	0.001854
3M026-B	292	6.2	0.84972	0.134	0.045	0.051568	0.023	0.007	0.0017262
3M032-A	219.4	3.1	1.2544	0.615	0.084	0.063715	< LOD	0.0014	0.0029746
3M032-B	224.9	4	1.1931	0.43	0.066	0.060601	< LOD	0.0012	0.0028292
3M033	220.8	4.6	1.4641	3.2	1.5	0.16918	0.0023	0.0033	0.0020152
3M044-A	186.3	2.7	0.92099	0.228	0.064	0.11313	< LOD	0.0012	0.0025788
3M044-B	261.1	7.5	0.82179	0.202	0.069	0.10095	< LOD	0.00078	0.002301
3M057	1323	33	4.0662	< LOD	0.2	0.39084	0.011	0.011	0.0049071
3M064-A	230.3	4	1.1441	2.31	0.89	0.068363	0.0042	0.0033	0
3M066	3707	76	1.362	5.9	5.9	0.12564	0.0075	0.005	0.0038384
3M072-B	230.8	4	1.0622	3.13	0.68	0.066809	0.199	0.036	0.0026637
4M024-A	249.8	2.9	0.91028	1.75	0.49	0.10868	0.0024	0.0019	0.001226
4M024-B	255.5	4.5	0.78968	1.72	0.23	0.088318	0.0011	0.001	0
4M028	350	13	0	6.24	0.59	0	0.056	0.026	0
4M030	1319	18	1.1731	26.6	6.6	0.15104	0.0103	0.0084	0.0016242
4M034-A	1153	12	1.2684	0.95	0.21	0.078557	< LOD	0.0017	0.0045617
4M034-B	1218	20	1.2207	1.14	0.52	0.075606	< LOD	0.0015	0.0043904
4M040-A	225.2	3.5	0.96503	5.3	1.6	0.067425	< LOD	0.0015	0.00513
4M040-B	223.1	3.2	0.84093	3	0.82	0.058754	< LOD	0.002	0.0044703
4M041-A	206.9	3.1	1.0162	2.5	1	0.060276	< LOD	0.002	0.0047445
4M041-B	238.8	4.5	0.90807	2.91	0.89	0.053863	< LOD	0.0016	0.0042397
4M044-B	206.4	3.4	1.2048	3.08	0.56	0.050321	< LOD	0.0021	0.0028739
4M047-B	177.8	3.4	0.92473	9.8	1.4	0.12795	< LOD	0.003	0.0042416
4M065-B	171.7	3.6	1.1424	12.3	3.6	0.11963	0.0041	0.0032	0.0033676
4M070-B	293.2	6.9	1.0748	3.67	0.94	0.057648	< LOD	0.0023	0.0031457
4M074-A	1649	35	1.1616	1.18	0.92	0.068295	< LOD	0.0014	0.0058166
4M074-B	1840	30	0.96994	1.06	0.72	0.06191	< LOD	0.0011	0.002093

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Ge	Ge Stdev	Ge LOD	Hf	Hf Stdev	Hf LOD
2M096-B	112	3.1	0.014403	1.185	0.073	0.04415	0.089	0.021	0
2M097	18.12	0.65	0	2.22	0.14	0	0.0052	0.0049	0
2M098-A	125.7	2.7	0.013545	0.783	0.068	0.052608	< LOD	0.0011	0.0052279
2M098-B	129.7	2.7	0.013391	0.811	0.061	0.052009	< LOD	0.0021	0.0051684
2M101-A	41.4	1.2	0.018091	0.627	0.056	0.066128	< LOD	0.0017	0.004907
2M101-B	43.17	0.9	0.016614	0.561	0.055	0.060728	< LOD	0.0074	0.0045063
2M104-A	29.06	0.64	0.021916	1.129	0.078	0.049649	0.078	0.032	0.0020061
3M012-B	28.6	1.2	0.025605	0.574	0.068	0.056145	0.008	0.0054	0.0031376
3M022-A	68.9	1.6	0.018136	1.909	0.093	0.052601	< LOD	0.0023	0.0060288
3M022-B	71.2	1.6	0.017127	1.93	0.11	0.049675	< LOD	0.0019	0.0056935
3M023	6.72	0.22	0.044575	0.402	0.064	0.090098	0.0061	0.0056	0.0060222
3M024-A	32.7	1.6	0.045112	0.99	0.11	0.10724	0.079	0.034	0.0040214
3M026-A	4.4	0.14	0.022734	2.53	0.17	0.067456	0.0035	0.003	0
3M026-B	4.52	0.15	0.021167	2.2	0.12	0.062805	0.0008	0.0019	0
3M032-A	80	1.3	0.029154	1.09	0.089	0.069361	0.0022	0.0029	0
3M032-B	80	2.4	0.027729	1.25	0.11	0.065971	0.0023	0.0035	0
3M033	59.8	2.1	0.032246	0.84	0.1	0.084699	0.02	0.01	0.0069169
3M044-A	29.88	0.42	0.022613	7.5	0.27	0.056835	0.0043	0.0035	0
3M044-B	29.33	0.48	0.020177	7.5	0.21	0.050714	0.001	0.0018	0
3M057	2.4	0.25	0.097637	0.46	0.14	0.20125	< LOD	0.000034	0
3M064-A	28.1	1	0.02251	1.3	0.12	0.061242	2.8	1.6	0
3M066	18.15	0.5	0.027007	1.66	0.15	0.084861	0.062	0.016	0
3M072-B	9.7	0.37	0.024852	1.653	0.099	0.054494	0.057	0.013	0.0030453
4M024-A	20.02	0.39	0.017862	4.55	0.16	0.048741	< LOD	0.0026	0.002658
4M024-B	20.39	0.37	0.018712	4.69	0.17	0.05695	0.0018	0.0017	0
4M028	25.6	1.1	0	0.45	0.14	0	0.058	0.03	0
4M030	34.87	0.81	0.029394	0.98	0.15	0.077849	0.28	0.12	0.0027875
4M034-A	70	1.3	0.037156	1.11	0.1	0.064738	< LOD	0.002	0.0083282
4M034-B	75.4	3.1	0.03576	1.049	0.089	0.062305	< LOD	0.0025	0.0080153
4M040-A	77.7	1.5	0.019311	0.8	0.067	0.058556	0.0021	0.0021	0
4M040-B	78.6	1.8	0.016827	0.821	0.064	0.051026	0.0034	0.0029	0
4M041-A	90.6	1.2	0.031801	0.792	0.074	0.065986	< LOD	0.0012	0.0047448
4M041-B	93.4	2.2	0.028417	0.739	0.068	0.058965	< LOD	0.0021	0.00424
4M044-B	10.3	0.29	0.03171	0.238	0.05	0.05204	0.0053	0.0048	0
4M047-B	14.49	0.42	0.021213	0.281	0.034	0.050719	0.0297	0.0087	0.0019511
4M065-B	10.21	0.36	0.024175	0.249	0.047	0.07187	0.02	0.011	0.0023816
4M070-B	46.7	1.3	0.022335	0.666	0.063	0.054883	0.0207	0.0091	0
4M074-A	36.15	0.72	0.020616	0.787	0.065	0.055596	< LOD	0.0022	0.0059719
4M074-B	37.55	0.82	0.017074	0.838	0.058	0.048491	< LOD	0.0042	0.0054143

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	K	K Stdev	K LOD	Mg	Mg Stdev	Mg LOD	Mn	Mn Stdev	Mn LOD
2M096-B	< LOD	8.6	6.2406	558	53	0.011276	996	18	0.27515
2M097	< LOD	3.2	0	83.1	9	0	625	18	0
2M098-A	26.6	1.9	3.9787	100.2	1.4	0.008306	1372	24	0.2777
2M098-B	21.5	1.8	3.9334	93.9	2	0.0082114	1287	29	0.27453
2M101-A	< LOD	5.7	5.8314	56.5	1.6	0.010451	1073	18	0.38728
2M101-B	< LOD	2.4	5.3552	62.6	1.1	0.0095974	1119	21	0.35565
2M104-A	< LOD	4.8	5.5392	119	30	0.010886	903	10	0.22808
3M012-B	660	160	6.1705	510	110	0.011658	897	16	0.25208
3M022-A	< LOD	2.9	6.0851	32.6	1.9	0.012555	2120	100	0.34672
3M022-B	< LOD	2.1	5.7467	34.2	1.9	0.011857	2115	75	0.32744
3M023	< LOD	4	10.042	30.2	1.1	0.014874	729	14	0.40441
3M024-A	< LOD	5.7	10.336	1350	250	0.018803	566	10	0.57402
3M026-A	< LOD	1.9	5.7066	222.9	5.8	0.012619	852	13	0.25419
3M026-B	< LOD	1.8	5.3132	212.7	9.7	0.011749	843	13	0.23666
3M032-A	< LOD	3.2	6.8073	28.1	1.4	0.014463	3828	94	0.25224
3M032-B	< LOD	2.1	6.4747	26.52	0.74	0.013756	3450	89	0.23991
3M033	50.3	4	8.6772	28.7	3.4	0.021075	964	21	0.54743
3M044-A	< LOD	2.5	5.383	71.4	2.1	0.010053	711	15	0.29344
3M044-B	< LOD	2.4	4.8032	62.8	1.4	0.0089698	690	17	0.26183
3M057	< LOD	12	26.127	46	18	0.045023	368	10	1.0641
3M064-A	< LOD	2.6	5.7737	193	43	0.007642	1306	29	0.24409
3M066	< LOD	3.5	9.065	536	27	0.017281	2132	93	0.41159
3M072-B	15.4	2.4	5.989	798	78	0.011315	963	33	0.24467
4M024-A	< LOD	3	6.5074	203.3	3.1	0.0069931	1213	19	0.27679
4M024-B	< LOD	3	5.9052	209.4	3.8	0.0085505	1210	22	0.2593
4M028	770	220	0	560	150	0	373.8	5.5	0
4M030	< LOD	3.7	7.4724	294	65	0.012549	640.9	8.8	0.40223
4M034-A	< LOD	2.9	8.1775	275.4	3.3	0.0098269	891	14	0.25892
4M034-B	< LOD	2.4	7.8703	271.8	5.1	0.0094577	859.9	9.5	0.24919
4M040-A	< LOD	2	5.2734	85.4	1.8	0.0091347	1298	13	0.21135
4M040-B	< LOD	1.6	4.5953	88.9	1.4	0.00796	1290	19	0.18417
4M041-A	19	21	5.6213	74.3	1	0.010769	1066	18	0.2641
4M041-B	< LOD	1.8	5.0232	66.6	1.7	0.0096231	859	14	0.236
4M044-B	< LOD	2.6	6.0168	66.8	1.7	0.0094917	665	13	0.23089
4M047-B	< LOD	2	5.9884	277	33	0.010273	702	12	0.34261
4M065-B	< LOD	4.2	8.3362	223	42	0.0098845	689	14	0.31659
4M070-B	< LOD	2.1	6.3353	151	17	0.010944	1538	17	0.19991
4M074-A	< LOD	10	5.4449	66.7	3.1	0.011637	578.9	8.8	0.27767
4M074-B	< LOD	1.7	5.3354	72.1	2.9	0.010723	593.5	7.7	0.2389

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Mo	Mo Stdev	Mo LOD	Nb	Nb Stdev	Nb LOD	Ni	Ni Stdev	Ni LOD
2M096-B	< LOD	0.02	0.044442	0.0333	0.0074	0.0050245	113.5	1.8	0.055319
2M097	0.096	0.051	0	0.118	0.019	0	26.91	0.83	0
2M098-A	< LOD	0.022	0.038895	< LOD	0.0022	0.0076913	8.85	0.29	0.073326
2M098-B	< LOD	0.023	0.038452	< LOD	0.0029	0.0076037	8.84	0.25	0.072491
2M101-A	< LOD	0.022	0.049593	< LOD	0.0028	0.006503	28.04	0.68	0.0974
2M101-B	< LOD	0.029	0.045543	< LOD	0.0021	0.0059719	28.6	2.2	0.089446
2M104-A	0.053	0.03	0.037305	0.118	0.04	0.0026676	38.09	0.72	0.039733
3M012-B	< LOD	0.025	0.048764	0.027	0.011	0.0069179	31.4	1.7	0.047313
3M022-A	0.07	0.028	0.036486	< LOD	0.0016	0.0057954	13.24	0.34	0.077045
3M022-B	0.077	0.031	0.034457	< LOD	0.0022	0.0054731	12.65	0.43	0.072761
3M023	0.098	0.047	0.062504	0.041	0.012	0.0057002	58.67	0.94	0.076117
3M024-A	< LOD	0.039	0.090685	0.099	0.03	0.010981	38.7	1.8	0.13868
3M026-A	0.117	0.047	0.040524	0.0476	0.0096	0.0043506	16.3	0.41	0.055498
3M026-B	0.1	0.036	0.03773	0.071	0.014	0.0040507	16.17	0.51	0.051671
3M032-A	< LOD	0.039	0.064083	< LOD	0.0024	0.0046303	27.73	0.44	0.058786
3M032-B	< LOD	0.03	0.060951	< LOD	0.0032	0.004404	28.39	0.68	0.055914
3M033	6.9	2.2	0.039671	0.033	0.014	0.0053501	27.7	0.88	0.094391
3M044-A	1.55	0.12	0.070495	0.0161	0.0051	0.0067411	30.51	0.88	0.084439
3M044-B	1.106	0.091	0.062902	0.0277	0.0065	0.0060151	28.53	0.63	0.075344
3M057	< LOD	0.076	0.20219	< LOD	0.013	0.019929	28.2	1.7	0.25931
3M064-A	0.065	0.038	0.049756	0.0127	0.0065	0.0075294	10.73	0.6	0.047581
3M066	2.76	0.21	0.054014	0.0224	0.0078	0.0080805	120.8	2.3	0.10115
3M072-B	2.61	0.15	0.047329	0.311	0.052	0.0067144	178.2	3.2	0.045921
4M024-A	< LOD	0.021	0.039963	0.0148	0.0044	0.0072468	19.69	0.45	0.068207
4M024-B	< LOD	0.02	0.046914	0.0097	0.0036	0.0046974	20.21	0.56	0.07366
4M028	0.3	0.14	0	6.5	1	0	49.4	2.1	0
4M030	0.48	0.96	0.056577	0.0152	0.0078	0.0067125	114.9	4.5	0.094984
4M034-A	< LOD	0.025	0.058224	< LOD	0.0025	0.0063284	101.6	1.9	0.045149
4M034-B	< LOD	0.024	0.056037	< LOD	0.0024	0.0060906	100.5	1.8	0.043453
4M040-A	< LOD	0.026	0.064069	< LOD	0.0022	0.0053679	26.37	0.79	0.059521
4M040-B	< LOD	0.025	0.05583	< LOD	0.0023	0.0046776	26.05	0.58	0.051867
4M041-A	< LOD	0.029	0.048896	< LOD	0.0032	0.0051348	23.12	0.44	0.039525
4M041-B	< LOD	0.024	0.043693	< LOD	0.0028	0.0045885	24.7	0.88	0.03532
4M044-B	< LOD	0.032	0.065714	0.009	0.0044	0.0049394	83.5	1.6	0.059731
4M047-B	0.105	0.038	0.045528	0.0191	0.0057	0.0063019	187.5	6	0.10061
4M065-B	< LOD	0.043	0.072485	0.0198	0.008	0.0062405	73.2	3.3	0.084877
4M070-B	0.084	0.039	0.041918	0.057	0.037	0.0049463	41.06	0.85	0.048214
4M074-A	0.388	0.079	0.071234	< LOD	0.0028	0.004233	83	1.3	0.05549
4M074-B	0.29	0.054	0.046476	< LOD	0.0027	0.0061435	84.3	1.5	0.051438

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	P	P Stdev	P LOD	Pb	Pb Stdev	Pb LOD	Sb	Sb Stdev	Sb LOD
2M096-B	10	1.4	2.8038	14	2.5	0.0045064	< LOD	0.019	0.042317
2M097	0.7	1.9	0	0.77	0.95	0	0.042	0.03	0
2M098-A	< LOD	1.3	2.7891	14.4	2.2	0.0051901	< LOD	0.018	0.03786
2M098-B	< LOD	1.2	2.7573	15.4	1.9	0.005131	< LOD	0.017	0.037429
2M101-A	8.6	1.6	2.8725	6.59	0.93	0.0074035	< LOD	0.019	0.046728
2M101-B	17	12	2.6379	6.82	0.8	0.0067989	< LOD	0.016	0.042912
2M104-A	7.3	1.5	2.7415	13.6	2.3	0.0026031	< LOD	0.018	0.039178
3M012-B	< LOD	1.9	2.9678	11.4	1.8	0.0057125	0.078	0.034	0.04985
3M022-A	3.7	1.5	3.1091	9.4	1.8	0.0049413	0.046	0.02	0.03943
3M022-B	4.9	1.6	2.9362	10.2	1	0.0046665	0.053	0.019	0.037237
3M023	< LOD	2.3	4.3297	17.1	1.9	0.0099302	< LOD	0.032	0.070871
3M024-A	< LOD	3.1	5.7616	7.3	1.1	0.006808	0.135	0.039	0.051138
3M026-A	< LOD	1.6	3.0104	11	1.8	0.006464	0.054	0.037	0.05132
3M026-B	4.6	1.5	2.8028	12.4	2.1	0.0060183	< LOD	0.021	0.047782
3M032-A	4	1.4	2.9222	9.4	2.2	0.0056246	0.094	0.027	0.035237
3M032-B	4.8	1.6	2.7794	9.2	1.6	0.0053498	0.099	0.034	0.033516
3M033	< LOD	2.4	4.7349	11.4	2.7	0.005855	0.115	0.074	0.053856
3M044-A	9.3	1.5	2.8637	9.5	1.5	0.0043158	0.132	0.028	0.034849
3M044-B	11.2	1.3	2.5552	11	1.7	0.003851	0.109	0.024	0.031096
3M057	< LOD	6.6	11.215	0.075	0.029	0.017518	< LOD	0.1	0.14632
3M064-A	7.4	3	3.2727	7.4	1.6	0.0063224	0.089	0.031	0.040829
3M066	5.2	2	3.877	0.76	0.38	0.0065581	0.059	0.071	0.053106
3M072-B	5.3	1.5	2.8804	14.8	1.6	0.0055444	0.122	0.067	0.048384
4M024-A	6.5	1.4	2.4023	11.7	2.3	0.0072113	0.035	0.015	0.034047
4M024-B	8.2	1.6	2.7852	12.7	2.1	0.007064	< LOD	0.016	0.043793
4M028	23.6	4.1	0	5.6	4.4	0	0.113	0.08	0
4M030	13.3	3.8	3.6323	23.7	6.4	0.007569	0.08	0.049	0.050025
4M034-A	6.3	1.7	3.1262	8	1.6	0.0055651	< LOD	0.021	0.049926
4M034-B	< LOD	1.5	3.0087	7.65	0.86	0.005356	< LOD	0.018	0.04805
4M040-A	< LOD	1.5	2.9334	25.6	9.6	0.0073524	0.085	0.045	0.051383
4M040-B	< LOD	1.2	2.5562	16.9	3.2	0.0064069	< LOD	0.025	0.044775
4M041-A	< LOD	1.4	2.604	23	4.8	0.0061426	0.31	0.1	0.043479
4M041-B	< LOD	1.2	2.3269	14.6	2.7	0.0054891	0.108	0.041	0.038853
4M044-B	< LOD	1.5	3.0938	11.8	1.6	0.0075788	0.044	0.026	0.03811
4M047-B	3.9	1.5	3.18	10.6	1.5	0.0050473	0.077	0.024	0.036459
4M065-B	8.9	2.1	3.2677	7.8	1.2	0.0046965	0.183	0.044	0.031062
4M070-B	< LOD	1.5	2.8365	18.4	5.8	0.0023108	< LOD	0.023	0.045254
4M074-A	< LOD	1.4	3.3996	12.4	2.5	0.0061002	< LOD	0.018	0.043715
4M074-B	< LOD	1.4	2.9108	10.3	1.3	0.0042555	0.14	0.18	0.040081

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Si	Si Stdev	Si LOD	Sn	Sn Stdev	Sn LOD
2M096-B	4.6	0.15	0.026933	2920	270	74.646	0.28	0.031	0.021149
2M097	0.138	0.024	0	705	50	0	0.082	0.027	0
2M098-A	1.206	0.06	0.028788	< LOD	47	89.808	2.56	0.14	0.016587
2M098-B	1.295	0.068	0.02846	< LOD	49	88.785	2.92	0.2	0.016398
2M101-A	0.081	0.017	0.033842	1299	79	124.7	0.052	0.022	0.023287
2M101-B	0.081	0.016	0.031078	1447	96	114.52	0.05	0.021	0.021385
2M104-A	0.1	0.026	0.0304	1060	100	72.383	0.096	0.02	0.024981
3M012-B	0.115	0.027	0.032324	2540	360	79.872	0.116	0.027	0.024885
3M022-A	0.751	0.038	0.029581	819	47	94.764	0.183	0.034	0.026567
3M022-B	0.876	0.046	0.027936	707	45	89.494	0.198	0.032	0.02509
3M023	0.059	0.023	0.049621	346	78	101.75	0.044	0.024	0.039413
3M024-A	1.15	0.15	0.05961	4430	760	148.88	0.41	0.1	0.03651
3M026-A	0.156	0.02	0.029065	601	43	82.667	0.115	0.023	0.026343
3M026-B	0.149	0.021	0.027061	676	48	76.967	0.093	0.02	0.024527
3M032-A	3.8	0.14	0.029616	563	37	85.048	0.612	0.062	0.030322
3M032-B	3.66	0.12	0.028169	690	37	80.892	0.58	0.11	0.02884
3M033	1.015	0.079	0.054658	< LOD	150	150.76	0.159	0.043	0.031978
3M044-A	0.992	0.049	0.030357	1368	62	90.271	1.92	0.15	0.02066
3M044-B	0.835	0.043	0.027087	1497	60	80.548	1.4	0.1	0.018435
3M057	< LOD	0.072	0.13311	< LOD	150	292.69	< LOD	0.04	0.067083
3M064-A	2.12	0.16	0.031143	1350	300	89.172	0.25	0.1	0.026813
3M066	1.346	0.07	0.038302	1840	79	132.65	3.52	0.25	0.023784
3M072-B	10.75	0.84	0.031373	3330	270	77.522	13.2	0.32	0.024153
4M024-A	0.128	0.019	0.03141	798	57	83.301	0.71	0.32	0.020535
4M024-B	0.114	0.018	0.033596	1009	67	80.747	0.285	0.036	0.014229
4M028	0.88	0.13	0	16600	2.10E+03	0	1	0.15	0
4M030	0.384	0.056	0.040665	1860	320	118.42	0.19	0.044	0.026902
4M034-A	3.29	0.084	0.031599	756	66	76.003	0.352	0.046	0.027602
4M034-B	3.085	0.09	0.030411	278	35	73.147	0.495	0.075	0.026565
4M040-A	0.366	0.025	0.030018	514	38	71.842	0.275	0.039	0.022146
4M040-B	0.382	0.025	0.026158	455	32	62.604	0.305	0.032	0.019298
4M041-A	0.59	0.035	0.028419	518	87	71.018	0.66	0.15	0.028043
4M041-B	0.588	0.037	0.025396	301	27	63.462	0.601	0.073	0.025059
4M044-B	< LOD	0.018	0.034516	< LOD	34	74.467	0.157	0.042	0.034567
4M047-B	0.07	0.018	0.033446	1030	130	79.336	0.12	0.1	0.01563
4M065-B	0.058	0.023	0.037092	1180	120	89.149	0.57	0.14	0.025149
4M070-B	0.452	0.037	0.029291	348	89	81.927	0.308	0.083	0.023876
4M074-A	0.433	0.03	0.031332	280	52	101.41	1.08	0.39	0.031155
4M074-B	0.385	0.023	0.03204	< LOD	41	84.273	0.18	0.031	0.025696

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ta	Ta Stdev	Ta LOD	Ti	Ti Stdev	Ti LOD	V	V Stdev	V LOD
2M096-B	0.0036	0.0016	0.0013468	499	17	0.098543	2927	43	0.033965
2M097	0.0057	0.0027	0	2080	140	0	96.4	1.2	0
2M098-A	< LOD	0.00024	0.0010244	619	31	0.11043	366.4	3.7	0.032983
2M098-B	< LOD	0.00052	0.0010127	564	38	0.10917	377.4	4.8	0.032607
2M101-A	< LOD	0.00059	0.0027946	341.3	7.8	0.1356	783	11	0.041238
2M101-B	< LOD	0.00056	0.0025664	319.4	7.5	0.12453	790	12	0.03787
2M104-A	0.005	0.0027	0.00162	162.7	6.7	0.10607	627.5	7	0.023386
3M012-B	0.004	0.0025	0.0014719	300	22	0.087826	858	14	0.023567
3M022-A	< LOD	0.00038	0.0012451	740	100	0.12215	467.2	4.8	0.034751
3M022-B	< LOD	0.00045	0.0011758	716	70	0.11535	460.5	7.5	0.032818
3M023	< LOD	0.0006	0.0028308	141.5	4.2	0.1686	1159	15	0.038622
3M024-A	0.0231	0.0074	0.0033867	253	4.9	0.23799	668.3	8.2	0.059618
3M026-A	0.0036	0.0016	0.0012972	808	11	0.11336	30.78	0.39	0.02589
3M026-B	0.0054	0.0022	0.0012078	781	13	0.10554	30.53	0.45	0.024104
3M032-A	0.0009	0.0011	0.0006669	1443	69	0.092706	1340	13	0.027385
3M032-B	< LOD	0.00068	0.00063432	1052	50	0.088176	1330	20	0.026047
3M033	< LOD	0.0015	0.0035337	264	41	0.16017	1110	12	0.061276
3M044-A	0.0042	0.0015	0.0012915	1840	110	0.12537	324.2	2.6	0.030319
3M044-B	0.0039	0.0015	0.0011524	1690	140	0.11186	309.6	3	0.027053
3M057	< LOD	0.0013	0.0044249	115	20	0.47717	1478	32	0.14531
3M064-A	< LOD	0.0012	0.0013786	336.6	5.8	0.12532	2072	41	0.027799
3M066	0.0015	0.0013	0.001112	13780	360	0.11256	9240	150	0.052112
3M072-B	0.0018	0.0014	0.0014286	10650	240	0.085242	1948	35	0.022873
4M024-A	0.002	0.0011	0	535	12	0.13212	22.67	0.63	0.035861
4M024-B	0.0023	0.0012	0.0019619	553	23	0.089086	21.42	0.38	0.030175
4M028	0.48	0.12	0	8600	1.00E+03	0	2257	46	0
4M030	0.0025	0.002	0	370.1	6.7	0.13623	1723	21	0.046614
4M034-A	< LOD	0.00075	0.00068866	580.4	9.1	0.15867	2681	21	0.026676
4M034-B	0.0017	0.0016	0.00066279	557.5	8.3	0.15271	2744	31	0.025674
4M040-A	< LOD	0.00073	0.0019053	434.6	7.9	0.088127	816.3	7.7	0.027907
4M040-B	< LOD	0.00056	0.0016603	462	13	0.076795	819	11	0.024318
4M041-A	< LOD	0.00079	0.00090853	505	15	0.1087	771	12	0.02754
4M041-B	< LOD	0.00062	0.00081186	393	11	0.097138	749.3	6.3	0.02461
4M044-B	< LOD	0.00066	0.0019465	478.4	6.6	0.11039	13.5	0.29	0.024455
4M047-B	< LOD	0.00072	0.0011969	597.5	9.2	0.13318	28.5	0.48	0.033511
4M065-B	< LOD	0.0014	0.0016595	508	8.5	0.11253	17.6	1.1	0.035473
4M070-B	0.0014	0.0011	0.00089109	244.3	4.7	0.15148	1568	19	0.029331
4M074-A	< LOD	0.00076	0.0013756	876	73	0.083415	3882	44	0.032702
4M074-B	0.0032	0.0047	0	740	49	0.069968	3926	47	0.025178

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	W	W Stdev	W LOD	Y	Y Stdev	Y LOD	Yb	Yb Stdev	Yb LOD
2M096-B	0.0079	0.0053	0.0078639	0.136	0.027	0.0021673	0.0147	0.0082	0.0060228
2M097	0.022	0.012	0	0.024	0.0092	0	0.0051	0.0061	0
2M098-A	< LOD	0.0024	0.0052513	< LOD	0.0012	0.0040951	< LOD	0.0021	0.0024613
2M098-B	< LOD	0.0028	0.0051915	< LOD	0.0019	0.0040485	< LOD	0.0015	0.0024333
2M101-A	< LOD	0.0035	0.0031894	< LOD	0.0019	0.0028058	0.0007	0.0012	0
2M101-B	< LOD	0.0021	0.0029289	0.0042	0.0049	0.0025766	0.0011	0.0018	0
2M104-A	0.44	0.15	0.002904	0.092	0.032	0.0050252	0.0117	0.0065	0.0054179
3M012-B	0.027	0.011	0.0032296	< LOD	0.0046	0.0049442	< LOD	1	0
3M022-A	0.0083	0.0061	0	< LOD	0.0017	0.0032688	< LOD	0.0011	0.0026878
3M022-B	0.0034	0.0035	0	< LOD	0.0021	0.003087	< LOD	0.0013	0.0025383
3M023	1.43	0.53	0.0048594	0.077	0.022	0.006733	0.008	0.0063	0
3M024-A	0.011	0.011	0	0.29	0.076	0.0072863	0.032	0.016	0
3M026-A	0.072	0.019	0	0.113	0.022	0.0044021	0.0057	0.0044	0
3M026-B	0.1	0.02	0	0.12	0.02	0.0040986	0.0125	0.0069	0
3M032-A	< LOD	0.0036	0.0084443	< LOD	0.0036	0.0054052	< LOD	0.0023	0.010366
3M032-B	< LOD	0.0028	0.0080317	< LOD	0.0027	0.0051411	< LOD	0.004	0.0098593
3M033	0.018	0.013	0.010598	0.078	0.026	0.0034828	< LOD	0.0049	0.013144
3M044-A	< LOD	0.0038	0.0066207	0.0048	0.0025	0.0014109	< LOD	0.002	0.0062063
3M044-B	< LOD	0.0034	0.0059075	0.0021	0.0021	0.0012589	< LOD	0.0018	0.0055379
3M057	< LOD	0.00018	0.023184	< LOD	0.0044	0.012091	< LOD	0.012	0.021551
3M064-A	0.0076	0.0068	0.0031167	0.3	0.12	0.0050606	0.23	0.12	0
3M066	0.016	0.01	0.0057284	0.096	0.022	0.0035551	0.029	0.012	0.0084289
3M072-B	0.027	0.011	0.0031346	2.75	0.4	0.0047987	0.76	0.12	0
4M024-A	0.02	0.024	0.0027346	0.0053	0.0026	0.0031812	0.0022	0.002	0
4M024-B	0.0082	0.0048	0.0027288	< LOD	0.0019	0.004251	0.001	0.0015	0
4M028	0.045	0.024	0	0.208	0.056	0	0.012	0.014	0
4M030	0.0069	0.0066	0	0.19	0.1	0.004002	0.051	0.029	0.0079399
4M034-A	< LOD	0.0025	0.007999	< LOD	0.0018	0.0035393	< LOD	0.0000085	0.0034349
4M034-B	< LOD	0.0027	0.0076985	0.0047	0.0045	0.0034064	< LOD	0.003	0.0033058
4M040-A	< LOD	0.0036	0.0045783	< LOD	0.0022	0.0038354	0.0007	0.0015	0
4M040-B	< LOD	0.0036	0.0039895	0.0055	0.0025	0.0033422	0.011	0.018	0
4M041-A	< LOD	0.0058	0.011546	< LOD	0.0027	0.0055665	< LOD	0.0013	0.0032222
4M041-B	< LOD	0.0034	0.010318	< LOD	0.0024	0.0049743	< LOD	0.0024	0.0028794
4M044-B	0.0089	0.0071	0.0034194	< LOD	0.0031	0.0066662	< LOD	0.0052	0.0072764
4M047-B	0.029	0.01	0	0.039	0.011	0.0042741	0.0039	0.0028	0.0025837
4M065-B	0.024	0.013	0	0.041	0.011	0.0046379	0.0062	0.0059	0
4M070-B	0.042	0.017	0.0098199	0.033	0.01	0.0055331	0.0043	0.0044	0.0031604
4M074-A	0.0098	0.0081	0.0043738	< LOD	0.0023	0.0050524	< LOD	0.0013	0.010348
4M074-B	< LOD	0.002	0.0056394	< LOD	0.0016	0.0031699	0.0002	0.0026	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
2M096-B	93.6	7.2	0.11005	2.43	0.4	0.0046275
2M097	34.1	7	0	0.104	0.023	0
2M098-A	1443	61	0.14924	< LOD	0.0017	0.0039176
2M098-B	1591	94	0.14754	0.0104	0.0089	0.003873
2M101-A	303	12	0.15802	< LOD	0.0025	0.0052321
2M101-B	246.9	8	0.14512	0.0058	0.0064	0.0048049
2M104-A	65.5	2.8	0.12752	3.2	1.1	0.0053052
3M012-B	122.7	3.4	0.11219	0.134	0.038	0.0067337
3M022-A	467	37	0.14953	0.0083	0.0041	0.0038436
3M022-B	621	68	0.14121	0.0054	0.0034	0.0036298
3M023	60.4	4.1	0.18035	0.236	0.055	0
3M024-A	68.9	3.6	0.24082	1.5	0.51	0.010988
3M026-A	15.5	1.1	0.12093	0.0081	0.0043	0.0063329
3M026-B	14.8	1.3	0.11259	0.017	0.0078	0.0058962
3M032-A	1670	110	0.11946	< LOD	0.0018	0.0043989
3M032-B	1144	82	0.11362	0.0077	0.0045	0.004184
3M033	522	66	0.21638	0.67	0.22	0
3M044-A	200	15	0.15549	0.0182	0.0062	0.0055275
3M044-B	108	11	0.13874	0.0142	0.0054	0.0049321
3M057	21.1	1.6	0.5357	< LOD	0.01	0.024173
3M064-A	71.6	3.4	0.12681	102	59	0.0045798
3M066	6410	580	0.16005	1.07	0.067	0.0075803
3M072-B	287	36	0.10889	0.81	0.12	0.0065356
4M024-A	113.7	7.9	0.13474	0.0263	0.0076	0.0038297
4M024-B	156.4	8	0.14833	0.035	0.012	0.0047601
4M028	61	3.9	0	0.95	0.16	0
4M030	102.9	7.5	0.1982	11.7	5.4	0.0074257
4M034-A	58	10	0.16177	< LOD	0.0036	0.0063588
4M034-B	44.4	7	0.15569	< LOD	0.0044	0.0061199
4M040-A	422	31	0.13218	0.057	0.017	0.0068854
4M040-B	486	28	0.11518	0.061	0.019	0.006
4M041-A	512	37	0.10604	< LOD	0.0032	0.0038284
4M041-B	461	14	0.094753	0.09	0.17	0.003421
4M044-B	156	6.5	0.11838	0.088	0.021	0.0047121
4M047-B	197.3	4.6	0.12065	0.99	0.18	0.0054871
4M065-B	124.6	4.7	0.13146	0.56	0.14	0.0070545
4M070-B	222	5.7	0.10826	0.51	0.11	0.0032155
4M074-A	540	50	0.13557	0.018	0.014	0.0069383
4M074-B	426	33	0.12439	< LOD	0.0072	0.0060536

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Site	Type	In	In Stdev	In LOD	Ag	Ag Stdev	Ag LOD
4M078-A	Till 04	Till	< LOD	0.0013	0.0039531	< LOD	0.0047	0.012699
4M078-B	Till 04	Till	0.036	0.066	0.003496	< LOD	0.0041	0.011231
4M079-A	Till 04	Till	0.0112	0.0045	0.003836	< LOD	0.0042	0.012167
4M079-B	Till 04	Till	0.0046	0.0029	0.0045125	< LOD	0.0054	0.012504
4M080-B	Till 04	Till	0.0127	0.0055	0.0042252	< LOD	0.0066	0.011239
4M087-B	Till 04	Till	< LOD	0.0042	0.0051554	< LOD	0.005	0.018957
4M095-A	Till 04	Till	0.0024	0.0013	0.0019551	< LOD	0.0046	0.0082782
4M095-B	Till 04	Till	0.0025	0.0013	0.0017229	< LOD	0.004	0.0072951
4M106-B	Till 04	Till	0.0216	0.0059	0.0026237	0.014	0.015	0.0060535
598D1M35	Pump	EPD	0.221	0.067	0.076231	< LOD	0.043	0.076448
598D1M38	Pump	EPD	1.49	0.31	0.024749	0.12	0.12	0.037792
598D1M41	Pump	EPD	0.055	0.012	0.017847	< LOD	0.0071	0.021011
598D1M42	Pump	EPD	0.0204	0.0097	0.017639	< LOD	0.007	0.019562
598D1M56	Pump	EPD	0.07	0.037	0.041801	< LOD	0.032	0.042188
598D1M57	Pump	EPD	0.153	0.054	0.047712	< LOD	0.059	0.063157
598D1M63	Pump	EPD	< LOD	0.021	0.0393	< LOD	0.029	0.04248
598D1M89	Pump	EPD	0.05	0.03	0.026143	< LOD	0.017	0.061456
598D2M24	Pump	EPD	0.036	0.017	0.011287	< LOD	0.015	0.02135
598D2M47	Pump	EPD	< LOD	0.0095	0.010648	< LOD	0.018	0.029095
598D2M76	Pump	EPD	< LOD	0.0061	0.0072611	< LOD	0.027	0.032098
5M013-B	Till 05	Till	0.0153	0.004	0.0026753	0.033	0.044	0.0097267
5M041	Till 05	Till	0.0114	0.0065	0.0037602	0.17	0.21	0.017339
5M044-A	Till 05	Till	0.0085	0.0031	0.0046124	< LOD	0.006	0.011114
5M044-B	Till 05	Till	0.008	0.0032	0.0029498	< LOD	0.0099	0.0088427
5M045-A	Till 05	Till	0.0317	0.0097	0.0036049	< LOD	0.0061	0.011048
5M045-B	Till 05	Till	0.031	0.013	0.0032964	0.014	0.01	0.010103
5M051-A	Till 05	Till	0.0105	0.0039	0.0065273	< LOD	0.0079	0.01641
5M058-A	Till 05	Till	0.0144	0.0058	0.0034759	< LOD	0.0058	0.0091647
5M062	Till 05	Till	0.0114	0.0035	0.0041496	0.0058	0.0047	0.0055052
5M068-A	Till 05	Till	< LOD	0.005	0.0047565	0.0139	0.0084	0.010144
5M068-B	Till 05	Till	< LOD	0.0046	0.0049978	< LOD	0.01	0.010659
5M084-A	Till 05	Till	0.261	0.018	0.0044546	< LOD	0.011	0.011805
5M084-B	Till 05	Till	0.273	0.018	0.0040374	< LOD	0.0043	0.0107
5M089-B	Till 05	Till	0.0109	0.0046	0.0055037	0.019	0.01	0.014758
5M091-A	Till 05	Till	0.019	0.0052	0.0056123	< LOD	0.0069	0.013662
5M103	Till 05	Till	0.056	0.017	0.0083747	< LOD	0.015	0.039979
5M105	Till 05	Till	0.0101	0.0091	0.0081041	< LOD	0.012	0.018775
5M107-A	Till 05	Till	0.06	0.01	0.0035373	< LOD	0.012	0.0094831
5M107-B	Till 05	Till	0.058	0.0066	0.0033501	< LOD	0.0045	0.008981

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Al	Al Stdev	Al LOD	As	As Stdev	As LOD	Bi	Bi Stdev	Bi LOD
4M078-A	675	12	0.15441	0.063	0.029	0.061159	< LOD	0.013	0.039948
4M078-B	714	13	0.13656	< LOD	0.025	0.054087	< LOD	0.016	0.035329
4M079-A	608	19	0.16729	< LOD	0.027	0.064375	< LOD	0.049	0.030522
4M079-B	461	14	0.15202	< LOD	0.032	0.057001	< LOD	0.015	0.034429
4M080-B	1240	180	0.15873	1.13	0.3	0.077755	< LOD	0.015	0.039361
4M087-B	602	26	0.18563	< LOD	0.051	0.099088	< LOD	0.023	0.048667
4M095-A	949	11	0.15791	0.057	0.023	0.052378	< LOD	0.014	0.03577
4M095-B	924	29	0.13916	0.062	0.024	0.046157	< LOD	0.011	0.031522
4M106-B	3039	91	0.17308	0.233	0.057	0.058279	< LOD	0.017	0.045011
598D1M35	5040	830	1.131	270	49	0.73573	< LOD	0.094	0.19934
598D1M38	526	35	0.49488	154.4	5.9	0.25733	< LOD	0.058	0.088215
598D1M41	1320	260	0.31787	220	140	0.12934	0.054	0.032	0.047182
598D1M42	655	23	0.2982	0.81	0.18	0.15	< LOD	0.021	0.037556
598D1M56	3380	310	0.66027	243	12	0.42658	< LOD	0.089	0.11431
598D1M57	8000	1.30E+03	0.87731	120	19	0.66301	< LOD	0.07	0.14616
598D1M63	749	88	0.66597	11.9	2.7	0.40684	< LOD	0.058	0.10667
598D1M89	4970	400	0.70745	92.7	7.8	0.47919	< LOD	0.081	0.14008
598D2M24	21600	2.20E+03	0.48942	32.8	4.4	0.2396	< LOD	0.039	0.089817
598D2M47	706	10	0.5804	0.3	0.17	0.20853	< LOD	0.049	0.080516
598D2M76	445	33	0.47264	5.9	1.4	0.23313	< LOD	0.046	0.078741
5M013-B	3500	720	0.17041	0.333	0.069	0.057595	0.034	0.018	0.030704
5M041	5800	4.30E+03	0.19314	0.28	0.11	0.08699	< LOD	0.021	0.044855
5M044-A	546	64	0.14638	0.147	0.043	0.062785	< LOD	0.014	0.040036
5M044-B	563	88	0.16812	0.189	0.069	0.054927	< LOD	0.015	0.036136
5M045-A	2690	140	0.20947	0.265	0.078	0.078161	< LOD	0.019	0.041621
5M045-B	2410	160	0.19155	0.31	0.12	0.071473	< LOD	0.019	0.03806
5M051-A	2150	690	0.20654	0.128	0.046	0.10622	< LOD	0.015	0.037043
5M058-A	924	22	0.15508	0.104	0.045	0.07392	< LOD	0.017	0.038289
5M062	571.4	7.6	0.159	< LOD	0.025	0.060683	< LOD	0.015	0.036864
5M068-A	443	5.9	0.18371	0.125	0.069	0.09258	< LOD	0.021	0.040408
5M068-B	472	55	0.19303	< LOD	0.046	0.097276	< LOD	0.02	0.042457
5M084-A	1269	37	0.1523	0.064	0.028	0.055323	< LOD	0.016	0.046914
5M084-B	1204	39	0.13804	0.071	0.048	0.050142	< LOD	0.015	0.04252
5M089-B	3300	340	0.14647	2.86	0.4	0.059197	0.048	0.017	0.037033
5M091-A	3040	330	0.22567	1.1	0.2	0.094488	< LOD	0.02	0.055611
5M103	6860	380	0.58095	0.3	0.16	0.23296	< LOD	0.052	0.12099
5M105	773	12	0.35375	< LOD	0.061	0.12638	< LOD	0.031	0.076925
5M107-A	755	50	0.19452	< LOD	0.029	0.074243	0.08	0.13	0.046688
5M107-B	653	29	0.18422	< LOD	0.026	0.070312	< LOD	0.014	0.044216

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ca	Ca Stdev	Ca LOD	Cd	Cd Stdev	Cd LOD	Co	Co Stdev	Co LOD
4M078-A	< LOD	10	8.0021	< LOD	0.0076	0.019637	11.21	0.22	0.014339
4M078-B	20	19	7.0767	< LOD	0.0096	0.017366	11.27	0.2	0.012681
4M079-A	14.9	9.7	7.5323	< LOD	0.013	0.018951	16.17	0.31	0.016757
4M079-B	< LOD	3.9	8.5725	< LOD	0.017	0.021396	16.27	0.41	0.0098639
4M080-B	194	51	5.76	0.099	0.039	0.025291	25.42	0.46	0.0067415
4M087-B	40	25	8.1622	< LOD	0.037	0.041581	13.58	0.37	0.0078332
4M095-A	12.8	9.4	8.5526	< LOD	0.011	0.034502	0.643	0.028	0.011591
4M095-B	21	33	7.5369	< LOD	0.037	0.030404	0.57	0.027	0.010214
4M106-B	65	13	8.9264	< LOD	0.0094	0.018786	11.18	0.22	0.012958
598D1M35	2430	220	47.369	< LOD	0.13	0.17769	0.365	0.088	0.062084
598D1M38	1930	210	28.578	< LOD	0.058	0.087575	1.06	0.2	0.029643
598D1M41	2240	470	12.449	0.066	0.048	0.048612	0.34	0.2	0.01463
598D1M42	< LOD	13	11.029	< LOD	0.024	0.05723	0.124	0.016	0.013973
598D1M56	81	16	33.213	< LOD	0.067	0.096169	0.28	0.056	0.034893
598D1M57	5500	2.00E+03	34.14	< LOD	0.0042	0.15277	0.097	0.049	0.050041
598D1M63	< LOD	14	28.98	< LOD	0.053	0.17672	< LOD	0.016	0.026908
598D1M89	220	200	40.675	< LOD	0.12	0.17427	0.112	0.059	0.044771
598D2M24	2810	510	19.294	< LOD	0.055	0.066072	0.12	0.11	0.020787
598D2M47	< LOD	12	17.854	< LOD	0.05	0.079634	0.064	0.021	0.024878
598D2M76	< LOD	9	19.378	< LOD	0.041	0.073064	0.075	0.024	0.030024
5M013-B	52	13	6.9185	< LOD	0.017	0.044434	9.88	0.2	0.012076
5M041	41	47	7.0946	< LOD	0.031	0.040049	25.37	0.41	0.009501
5M044-A	18	6.3	9.1772	< LOD	0.013	0.025132	28.46	0.42	0.011899
5M044-B	17.6	7.8	8.6078	< LOD	0.012	0.01929	26.89	0.44	0.011555
5M045-A	56	27	9.9336	< LOD	0.012	0.029292	12.07	0.26	0.021984
5M045-B	47	14	9.0837	< LOD	0.014	0.026786	11.88	0.34	0.020103
5M051-A	51	15	7.673	< LOD	0.043	0.043041	71.1	1.2	0.013092
5M058-A	56	33	5.6921	< LOD	0.013	0.018774	34.71	0.4	0.010414
5M062	47.4	8.7	8.3783	< LOD	0.015	0.027737	14.68	0.31	0.013992
5M068-A	38	26	6.747	< LOD	0.0048	0.035661	88.4	1.1	0.0070906
5M068-B	30	51	7.0892	< LOD	0.017	0.03747	90.1	1.1	0.0074502
5M084-A	< LOD	4.1	7.8944	< LOD	0.011	0.035447	13.19	0.2	0.011102
5M084-B	< LOD	3	7.1552	< LOD	0.018	0.032127	13.45	0.26	0.010062
5M089-B	361	55	7.8776	< LOD	0.02	0.035755	25.1	2.1	0.013591
5M091-A	135	32	12.349	0.19	0.3	0.031385	11.27	0.22	0.024645
5M103	45	15	17.716	< LOD	0.052	0.054734	32.9	1.4	0.020561
5M105	< LOD	7.5	19.033	< LOD	0.028	0.065567	1.489	0.098	0.037177
5M107-A	< LOD	3.7	8.8261	< LOD	0.013	0.040489	39.08	0.87	0.014869
5M107-B	< LOD	4.1	8.3588	< LOD	0.023	0.038345	38.93	0.8	0.014082

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Cr	Cr Stdev	Cr LOD	Cu	Cu Stdev	Cu LOD	Eu	Eu Stdev	Eu LOD
4M078-A	451.2	6.1	0.95191	1.26	0.29	0.10674	< LOD	0.0011	0.0012901
4M078-B	477.9	6.1	0.84184	1.3	0.19	0.0944	0.0018	0.0014	0.0011409
4M079-A	197.6	2.7	0.87051	3.15	0.95	0.091774	< LOD	0.0019	0.002768
4M079-B	203.8	3.6	0.99014	2.34	0.97	0.092028	< LOD	0.0015	0.0039328
4M080-B	229.2	5.1	0.95851	9.8	1.9	0.066703	0.194	0.057	0.001699
4M087-B	215.2	5.5	1.3551	3.6	1.5	0.074046	0.0027	0.0031	0.0016743
4M095-A	183.2	3.5	0.80136	2.2	0.51	0.11071	0.011	0.025	0.0040662
4M095-B	188.6	2.1	0.70619	3.2	2	0.097558	< LOD	0.00088	0.0035833
4M106-B	199	3	1.1715	5.6	1.2	0.11885	0.0063	0.0034	0.005668
598D1M35	277.6	8.8	7.2824	2.81	0.51	0.72232	0.055	0.027	0.020242
598D1M38	310	13	3.1589	4.7	0.78	0.47656	0.221	0.062	0.0086439
598D1M41	361.5	7.2	1.5408	0.48	0.3	0.21454	0.032	0.011	0.0040557
598D1M42	316.5	9.1	1.4658	< LOD	0.14	0.15464	< LOD	0.0033	0.0049078
598D1M56	292	23	3.9698	< LOD	0.28	0.41126	0.025	0.014	0.010766
598D1M57	284	10	5.721	2.3	1.3	0.55601	0.082	0.047	0.016947
598D1M63	269	11	3.7787	0.65	0.73	0.42699	< LOD	0.0078	0.013702
598D1M89	320	16	5.362	0.66	0.37	0.44673	< LOD	0.0089	0.016801
598D2M24	249	11	3.4414	0.32	0.19	0.20733	0.14	0.12	0.0071147
598D2M47	264	5.5	3.1467	0.52	0.28	0.16642	0.017	0.015	0.003264
598D2M76	262.1	7	3.0715	< LOD	0.1	0.17931	0.0118	0.0087	0
5M013-B	452.4	8.3	0.99217	4.79	0.87	0.096291	0.069	0.022	0.0027945
5M041	284.2	4	1.2653	1.87	0.88	0.051016	< LOD	0.0026	0.0048783
5M044-A	188.7	2.8	1.0504	1.27	0.32	0.10454	< LOD	0.0019	0.0026526
5M044-B	210.3	3.7	0.89331	1.95	0.5	0.10673	< LOD	0.0017	0.0021704
5M045-A	684	10	1.2735	2.1	0.64	0.13012	< LOD	0.0039	0.0057408
5M045-B	614	12	1.1645	3.6	1.1	0.11899	0.0093	0.0057	0.0052496
5M051-A	400.6	7.4	1.1602	0.63	0.15	0.074054	< LOD	0.0022	0.0025036
5M058-A	403.5	4.1	0.94327	1.61	0.27	0.07138	< LOD	0.0016	0.0039301
5M062	198	2.9	1.0758	0.72	0.19	0.10142	< LOD	0.0026	0.0031259
5M068-A	233.7	5.5	1.0083	1.55	0.64	0.075383	< LOD	0.0026	0.0046888
5M068-B	212.1	3.3	1.0594	1.3	0.39	0.079206	< LOD	0.0026	0.0049266
5M084-A	198.1	3.1	0.98749	1.54	0.23	0.090189	0.0013	0.0012	0
5M084-B	202.7	3.2	0.89502	2.5	1.9	0.081743	0.0015	0.0013	0
5M089-B	183.6	3.7	1.0925	28.4	4.1	0.10101	0.1	0.021	0.0054304
5M091-A	457	13	1.1624	9.4	1.6	0.14023	0.047	0.016	0.003808
5M103	1755	22	3.2695	7	1.8	0.20432	0.029	0.017	0.018161
5M105	720	38	2.3213	11	21	0.27854	0.008	0.0079	0
5M107-A	240.9	3.6	0.92744	2.02	0.43	0.10589	< LOD	0.0012	0.0028337
5M107-B	247.7	5.1	0.87833	1.83	0.19	0.10028	< LOD	0.0012	0.0026837

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Ge	Ge Stdev	Ge LOD	Hf	Hf Stdev	Hf LOD
4M078-A	66.3	1.1	0.022163	1.016	0.069	0.050325	< LOD	0.0022	0.002797
4M078-B	69.2	1.6	0.0196	1.085	0.081	0.044506	< LOD	0.00071	0.0024736
4M079-A	68.55	0.97	0.015981	0.948	0.061	0.048801	< LOD	0.0021	0.0041462
4M079-B	67.8	1.7	0.017566	0.879	0.063	0.050931	0.0017	0.0022	0
4M080-B	57.6	1.7	0.021135	0.87	0.12	0.046315	0.5	0.13	0.0027623
4M087-B	55.5	2.4	0.031897	2.24	0.23	0.080475	0.0048	0.005	0.0047219
4M095-A	13.93	0.28	0.025463	0.27	0.033	0.06267	< LOD	0.002	0.0019274
4M095-B	14.46	0.26	0.022439	0.26	0.033	0.055227	< LOD	0.00061	0.0016985
4M106-B	13.85	0.35	0.026728	4.09	0.2	0.049008	< LOD	0.0022	0.0052485
598D1M35	3.42	0.49	0.10735	9.34	0.75	0.39845	0.23	0.071	0
598D1M38	13.82	0.89	0.066653	2.39	0.33	0.1509	0.041	0.027	0.0047598
598D1M41	3.8	0.29	0.037628	3.25	0.22	0.097954	0.14	0.049	0.0051037
598D1M42	4.68	0.26	0.02417	2.13	0.2	0.068666	< LOD	0.0012	0.0024047
598D1M56	11.8	1.4	0.093772	5.96	0.6	0.19288	0.083	0.033	0
598D1M57	6.05	0.59	0.097573	4.9	0.83	0.28655	0.106	0.043	0.02491
598D1M63	6.87	0.49	0.068514	3.74	0.48	0.19935	< LOD	0.0031	0.0064326
598D1M89	8.48	0.99	0.10753	4.53	0.69	0.24494	0.165	0.052	0.011447
598D2M24	7.92	0.56	0.048288	4.12	0.36	0.16469	0.69	0.67	0.012088
598D2M47	19.9	0.7	0.062278	2.66	0.33	0.12062	< LOD	0.000021	0.0055456
598D2M76	6.06	0.42	0.0666	3.34	0.54	0.12773	0.0015	0.0035	0
5M013-B	49.7	0.97	0.018839	2.3	0.11	0.051757	0.105	0.031	0.0049741
5M041	12.7	0.62	0.028986	0.922	0.087	0.067747	8.6	2.7	0.0051555
5M044-A	14.67	0.5	0.027817	0.348	0.041	0.056211	0.0086	0.0051	0
5M044-B	11.95	0.31	0.017253	0.334	0.041	0.050602	0.0051	0.0039	0.0019537
5M045-A	66.78	0.91	0.026192	2.35	0.14	0.06645	0.0122	0.0072	0
5M045-B	68.4	1.2	0.023951	2.34	0.13	0.060765	0.034	0.018	0
5M051-A	46	1.4	0.020423	1.297	0.078	0.058003	0.76	0.3	0.0064765
5M058-A	51.09	0.85	0.020647	0.92	0.07	0.05108	< LOD	0.0037	0.0045646
5M062	26.86	0.41	0.032201	1.446	0.085	0.064549	0.017	0.03	0.0021033
5M068-A	21.73	0.72	0.024871	0.438	0.065	0.064901	3.7	1.1	0
5M068-B	20.47	0.52	0.026132	0.62	0.11	0.068193	0.061	0.021	0
5M084-A	187.1	3.4	0.017131	2.053	0.098	0.046035	< LOD	0.0018	0.0028392
5M084-B	193.8	4.1	0.015527	2.05	0.1	0.041724	< LOD	0.0013	0.0025733
5M089-B	40.1	1	0.019139	0.883	0.079	0.053363	0.377	0.074	0
5M091-A	41.9	1.2	0.027724	2.84	0.15	0.07685	0.147	0.038	0
5M103	61.6	2.9	0.080846	1.46	0.22	0.16866	0.071	0.028	0.010132
5M105	35.9	2	0.028976	3.67	0.26	0.12097	< LOD	0.0045	0.0048793
5M107-A	134.1	2.9	0.021383	1.019	0.075	0.053182	0.0065	0.0057	0.0048625
5M107-B	139.6	2.7	0.020251	1.064	0.076	0.050367	< LOD	0.007	0.004605

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	K	K Stdev	K LOD	Mg	Mg Stdev	Mg LOD	Mn	Mn Stdev	Mn LOD
4M078-A	< LOD	1.8	5.8707	74.1	2.7	0.0066736	1687	26	0.29919
4M078-B	< LOD	2.1	5.1919	84	4.2	0.0059019	1743	22	0.26459
4M079-A	< LOD	2.5	5.6449	78.1	1.3	0.0096208	1233.7	8.8	0.24216
4M079-B	12.1	2.5	5.1041	52.5	4.5	0.0093167	1073	25	0.26304
4M080-B	< LOD	2.2	5.1911	179	27	0.010008	1079	13	0.23338
4M087-B	30.3	3.7	7.0406	33	1.3	0.0098182	1044	22	0.33484
4M095-A	34.6	2.1	5.6226	103.9	1.7	0.008391	787.4	8.3	0.30429
4M095-B	25.9	1.8	4.9549	113	7.3	0.0073945	802	11	0.26816
4M106-B	< LOD	5.6	6.341	272	25	0.010114	785	23	0.402
598D1M35	3260	430	36.465	140300	1.50E+03	0.053246	10930	130	1.3572
598D1M38	< LOD	12	18.772	7430	870	0.033996	4170	440	0.80855
598D1M41	920	180	10.453	3810	510	0.016244	988	35	0.41051
598D1M42	< LOD	3.7	8.781	36.6	3.1	0.013002	514	14	0.32119
598D1M56	2070	140	21.171	4250	400	0.039644	491	20	0.88841
598D1M57	7700	1.20E+03	25.106	25100	5.30E+03	0.060808	2100	400	1.1834
598D1M63	244	64	18.991	411	72	0.023039	480	31	1.0154
598D1M89	3780	420	26.201	5160	380	0.040776	587	45	1.1473
598D2M24	20500	2.10E+03	15.928	13300	1.20E+03	0.029099	678	27	0.5859
598D2M47	< LOD	6.6	13.754	52	34	0.022149	445	16	0.55714
598D2M76	< LOD	6.2	14.788	74	23	0.023788	402	11	0.60203
5M013-B	13	13	5.3314	242	34	0.0091596	312.2	4	0.32964
5M041	< LOD	11	7.146	63.2	9.3	0.012815	701.9	8.9	0.25774
5M044-A	< LOD	2.1	6.0326	187	52	0.008429	759.7	9.3	0.33159
5M044-B	< LOD	6.3	5.6765	230	66	0.0087066	687.3	9.9	0.31518
5M045-A	105	35	7.3245	183	28	0.014266	300.6	4.1	0.36722
5M045-B	< LOD	6.1	6.6978	132	27	0.013046	302.6	4.2	0.3358
5M051-A	< LOD	3.1	6.3821	236	56	0.012827	549.9	8	0.28577
5M058-A	< LOD	2.4	5.3975	126	2	0.0079062	1667	30	0.22309
5M062	< LOD	2.3	5.7296	160.5	1.8	0.011714	1078	14	0.28683
5M068-A	< LOD	2.9	5.3	45.2	2	0.0058262	651	13	0.2298
5M068-B	< LOD	3.1	5.5688	47.7	1.7	0.0061217	703.6	8.9	0.24146
5M084-A	24	3.1	6.1978	97.3	1.4	0.0088568	3935	66	0.31815
5M084-B	28.3	2.2	5.6174	95.1	2	0.0080274	3885	87	0.28836
5M089-B	48	9.3	6.1268	1640	220	0.017659	1251	40	0.32611
5M091-A	82	41	7.8318	320	54	0.016579	324.7	5.9	0.39609
5M103	< LOD	11	18.663	1190	160	0.034234	1260	100	0.79715
5M105	< LOD	9.9	13.249	26.7	2.4	0.018522	370	13	0.70151
5M107-A	< LOD	3.1	7.3287	95.5	2.8	0.0075857	1152	26	0.32454
5M107-B	< LOD	15	6.9407	95.4	1.8	0.0071841	1387	32	0.30736

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Mo	Mo Stdev	Mo LOD	Nb	Nb Stdev	Nb LOD	Ni	Ni Stdev	Ni LOD
4M078-A	< LOD	0.021	0.048236	< LOD	0.0028	0.0045717	19.74	0.68	0.060054
4M078-B	< LOD	0.023	0.042658	< LOD	0.0021	0.004043	18.92	0.46	0.05311
4M079-A	0.054	0.024	0.032124	< LOD	0.0025	0.0057635	24.09	0.49	0.070192
4M079-B	< LOD	0.023	0.04769	< LOD	0.0024	0.0060063	24.71	0.82	0.055403
4M080-B	< LOD	0.023	0.053803	0.25	0.11	0.0057885	12.93	0.7	0.051822
4M087-B	0.11	0.057	0.058251	0.025	0.015	0.0081682	5.13	0.33	0.060928
4M095-A	< LOD	0.032	0.040812	< LOD	0.0021	0.004937	90.2	2.1	0.072465
4M095-B	< LOD	0.015	0.035966	< LOD	0.0019	0.0043507	175.9	7	0.063859
4M106-B	0.17	0.042	0.044908	0.046	0.0091	0.0069856	36.75	0.81	0.064927
598D1M35	< LOD	0.21	0.30545	0.239	0.075	0.042336	6.98	0.8	0.33731
598D1M38	0.24	0.11	0.1588	0.7	1.4	0.013172	6.8	1.1	0.16718
598D1M41	< LOD	0.044	0.08049	0.041	0.014	0.010072	1.31	0.19	0.078284
598D1M42	< LOD	0.04	0.089084	< LOD	0.0048	0.010542	1.42	0.14	0.075692
598D1M56	< LOD	0.14	0.17804	0.216	0.052	0.027415	2.33	0.37	0.20481
598D1M57	< LOD	0.12	0.2754	0.444	0.087	0.029223	2.42	0.6	0.32715
598D1M63	< LOD	0.11	0.17557	< LOD	0.018	0.030531	0.25	0.14	0.214
598D1M89	< LOD	0.2	0.20887	0.197	0.078	0.030043	1.83	0.5	0.2122
598D2M24	< LOD	0.079	0.099739	0.77	0.11	0.017532	1.91	0.29	0.15955
598D2M47	< LOD	0.076	0.10555	< LOD	0.0035	0.015708	1.53	0.24	0.13843
598D2M76	< LOD	0.077	0.16378	0.023	0.017	0.019246	1.73	0.32	0.14187
5M013-B	0.114	0.048	0.052301	1.551	0.086	0.0063917	49.4	1.2	0.069743
5M041	0.076	0.048	0.061721	0.027	0.011	0.0053907	60.1	1.6	0.047186
5M044-A	< LOD	0.021	0.056874	0.0072	0.0038	0.0053268	27.52	0.7	0.076884
5M044-B	< LOD	0.024	0.045616	0.0103	0.0043	0.0039576	37	16	0.076256
5M045-A	0.074	0.04	0.050556	0.039	0.012	0.0069552	55.7	1.8	0.093332
5M045-B	0.058	0.036	0.04623	0.04	0.016	0.0063602	57.2	2.9	0.085347
5M051-A	< LOD	0.023	0.055593	0.055	0.018	0.0073487	193.7	2.7	0.061528
5M058-A	0.053	0.027	0.040943	< LOD	0.0025	0.0048344	31.65	0.94	0.044809
5M062	0.11	0.036	0.050961	0.0058	0.0032	0.004019	23.45	0.66	0.083596
5M068-A	< LOD	0.022	0.049812	0.0113	0.0049	0.0033194	64	1.4	0.058307
5M068-B	< LOD	0.032	0.052338	0.0035	0.0034	0.0034878	62.2	1.6	0.061264
5M084-A	0.097	0.032	0.052137	< LOD	0.0026	0.0060074	5.8	6.6	0.086177
5M084-B	0.105	0.028	0.047254	< LOD	0.0025	0.0054449	1.55	0.25	0.078108
5M089-B	0.087	0.038	0.04961	0.122	0.017	0.004895	38.7	2.3	0.085876
5M091-A	0.52	0.2	0.076994	0.322	0.039	0.0069454	46.6	1.8	0.075406
5M103	3.67	0.44	0.14971	< LOD	0.0094	0.024013	97.9	4.8	0.13477
5M105	< LOD	0.063	0.1106	0.019	0.021	0.0099438	1.62	0.22	0.16793
5M107-A	< LOD	0.024	0.059278	0.0065	0.0039	0.0049339	31.1	1.2	0.077342
5M107-B	< LOD	0.023	0.056139	< LOD	0.0022	0.0046727	31.57	0.97	0.073247

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	P	P Stdev	P LOD	Pb	Pb Stdev	Pb LOD	Sb	Sb Stdev	Sb LOD
4M078-A	< LOD	1.5	2.7554	10.3	1.9	0.0087918	< LOD	0.02	0.035414
4M078-B	4.6	1.7	2.4368	11.9	1.7	0.0077751	0.038	0.041	0.031319
4M079-A	< LOD	1.4	2.6807	15.4	2	0.0013769	0.146	0.065	0.037074
4M079-B	< LOD	1.5	2.8971	14.6	4.9	0.0052348	< LOD	0.016	0.028186
4M080-B	13.1	1.5	2.4519	30.9	4.6	0.0069658	0.075	0.027	0.037633
4M087-B	< LOD	1.7	3.2936	13.3	4.1	0.0071383	< LOD	0.037	0.051875
4M095-A	< LOD	1.4	3.1463	13.2	2.5	0.0065683	0.093	0.026	0.034297
4M095-B	< LOD	1.2	2.7726	12	1.9	0.0057882	< LOD	0.014	0.030224
4M106-B	5.8	1.6	2.7978	23.6	5.9	0.0072726	0.49	0.21	0.037807
598D1M35	< LOD	16	22.221	1.37	0.19	0.051062	2.41	0.39	0.28574
598D1M38	75	11	10.906	7.3	1.1	0.016792	8.3	1.6	0.10947
598D1M41	10.7	4	4.6575	1.14	0.2	0.0065805	0.621	0.087	0.048446
598D1M42	< LOD	3.2	4.5506	0.45	0.37	0.010278	0.13	0.22	0.061215
598D1M56	< LOD	8.9	13.081	3.7	4.1	0.023898	1.63	0.24	0.15603
598D1M57	< LOD	13	15.528	2.85	0.62	0.02393	2.11	0.57	0.19725
598D1M63	< LOD	9.7	12.563	0.65	0.45	0.022717	0.3	0.13	0.14452
598D1M89	< LOD	14	16.059	1.54	0.29	0.013575	0.87	0.27	0.18518
598D2M24	< LOD	5.3	7.8921	1.07	0.13	0.015928	0.41	0.1	0.12243
598D2M47	13	22	7.786	2.6	1.5	0.0077796	< LOD	0.072	0.10006
598D2M76	43	84	8.0536	2.1	2.1	0.013967	1.87	0.24	0.10044
5M013-B	6.7	1.8	2.8256	8.4	1.8	0.0049283	0.104	0.089	0.036884
5M041	3.9	1.8	3.3924	8.7	1.9	0.0055808	0.17	0.11	0.048487
5M044-A	9.5	1.5	3.5018	7.04	0.8	0.0040809	< LOD	0.017	0.038754
5M044-B	11.4	1.5	2.6935	10.8	1.7	0.0049378	0.039	0.026	0.038927
5M045-A	8	2.3	3.688	9.3	2.2	0.0074374	< LOD	0.023	0.046625
5M045-B	8.2	1.8	3.3725	9.6	2.1	0.006801	0.043	0.027	0.042636
5M051-A	11.6	4.6	3.4819	8.3	1.6	0.0050903	0.091	0.083	0.047943
5M058-A	4.8	1.5	2.2961	14.5	2.5	0.0056961	< LOD	0.017	0.043914
5M062	43.7	6.2	3.2096	9.1	1.3	0.0067974	< LOD	0.016	0.040497
5M068-A	23	13	2.7126	11.5	2.5	0.0059929	< LOD	0.025	0.053559
5M068-B	8.5	2	2.8502	8.09	0.72	0.0062968	< LOD	0.024	0.056275
5M084-A	< LOD	2.2	3.4483	10.8	1.7	0.0057169	< LOD	0.018	0.042466
5M084-B	< LOD	1.5	3.1254	9.8	1.7	0.0051815	< LOD	0.017	0.03849
5M089-B	18.6	3.8	3.3381	17.4	1.6	0.0037587	0.2	0.27	0.037371
5M091-A	10.6	2.1	3.436	17.5	3.5	0.0086535	0.075	0.025	0.057795
5M103	< LOD	4.3	8.0037	24.3	7.3	0.011944	< LOD	0.073	0.13972
5M105	6.2	3.3	5.6392	0.064	0.035	0.0090487	0.22	0.1	0.085811
5M107-A	5	1.8	2.8674	6.02	0.7	0.0066944	< LOD	0.016	0.050094
5M107-B	< LOD	1.6	2.7156	7.7	1	0.00634	< LOD	0.018	0.047442

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Si	Si Stdev	Si LOD	Sn	Sn Stdev	Sn LOD
4M078-A	0.148	0.019	0.032276	541	39	76.557	0.179	0.033	0.02365
4M078-B	0.148	0.017	0.028544	430	40	67.704	0.25	0.054	0.020916
4M079-A	0.513	0.03	0.031585	468	56	84.439	0.46	0.12	0.020998
4M079-B	0.402	0.029	0.031841	< LOD	49	98.592	0.47	0.24	0.021089
4M080-B	0.388	0.036	0.026168	1730	200	61.418	0.304	0.046	0.019461
4M087-B	0.535	0.046	0.035749	293	39	92.434	0.073	0.028	0.031665
4M095-A	0.05	0.016	0.036455	< LOD	83	113.03	0.043	0.018	0.023304
4M095-B	0.051	0.013	0.032125	< LOD	130	99.606	0.035	0.01	0.020537
4M106-B	2.74	0.12	0.033544	1492	98	111.12	0.247	0.042	0.03149
598D1M35	62.6	2.6	0.25286	921000	3.70E+04	638.2	0.45	0.16	0.19536
598D1M38	3.21	0.32	0.11787	15700	2.50E+03	362.47	0.78	0.15	0.080244
598D1M41	1.76	0.25	0.062455	17400	2.70E+03	186.59	0.216	0.042	0.041345
598D1M42	1.275	0.074	0.056146	565	91	158.04	0.294	0.047	0.044354
598D1M56	2.34	0.29	0.14429	16600	1.40E+03	460.78	0.239	0.098	0.12234
598D1M57	10.6	2.3	0.24063	140000	3.30E+04	524.28	0.43	0.15	0.14908
598D1M63	0.37	0.12	0.15733	2580	500	355.59	0.18	0.1	0.094682
598D1M89	2.33	0.31	0.18666	19300	1.30E+03	455.08	0.33	0.12	0.12164
598D2M24	3.93	0.46	0.084107	49600	4.90E+03	219.78	0.96	0.19	0.075226
598D2M47	0.956	0.094	0.085442	890	140	229.05	0.265	0.068	0.061379
598D2M76	0.458	0.087	0.10103	3570	840	230.5	0.201	0.068	0.051699
5M013-B	0.537	0.039	0.037368	2030	220	82.989	1.71	0.63	0.01859
5M041	1.66	0.21	0.034713	810	110	79.602	2.92	0.9	0.03286
5M044-A	0.056	0.017	0.032782	1650	170	106.42	1.73	0.44	0.023617
5M044-B	0.047	0.02	0.030791	1690	200	85.026	2.4	1.7	0.022069
5M045-A	0.39	0.04	0.040901	1750	260	107	3.67	0.92	0.030666
5M045-B	0.288	0.033	0.037402	1250	200	97.848	4.28	0.93	0.028042
5M051-A	0.885	0.049	0.038326	1410	260	100.81	3.5	0.93	0.030736
5M058-A	0.565	0.036	0.03133	618	47	61.63	1.82	0.51	0.02208
5M062	0.212	0.024	0.032425	843	46	92.867	2.32	0.53	0.022685
5M068-A	0.214	0.051	0.030741	785	49	78.206	1.54	0.82	0.033544
5M068-B	0.08	0.027	0.032301	968	49	82.172	6.1	7.2	0.035246
5M084-A	11.48	0.18	0.03967	< LOD	72	134.92	32.5	1.7	0.022546
5M084-B	10.93	0.2	0.035955	< LOD	58	122.28	31.5	2.4	0.020435
5M089-B	0.316	0.045	0.035798	6240	790	89.045	0.51	0.11	0.019472
5M091-A	1.072	0.087	0.045687	3290	380	114.1	1.18	0.28	0.032939
5M103	4.07	0.26	0.078405	2710	440	204.92	8	1.4	0.062907
5M105	0.393	0.064	0.069158	4700	1.60E+03	188.82	0.56	0.11	0.044108
5M107-A	1.688	0.075	0.036085	653	68	96.408	4.03	0.41	0.021225
5M107-B	1.64	0.06	0.034174	< LOD	61	91.304	3.65	0.24	0.020101

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ta	Ta Stdev	Ta LOD	Ti	Ti Stdev	Ti LOD	V	V Stdev	V LOD
4M078-A	< LOD	0.00059	0.0015994	377	11	0.10611	1801	20	0.036877
4M078-B	< LOD	0.001	0.0014144	423.1	8.6	0.093838	1850	18	0.032613
4M079-A	< LOD	0.00026	0.00051323	504	10	0.13476	762.6	5.5	0.035465
4M079-B	< LOD	0.00055	0.0013471	408	11	0.10902	749.5	9.4	0.038614
4M080-B	0.0112	0.005	0.001683	389	23	0.095478	918	12	0.027166
4M087-B	< LOD	0.00041	0.0015015	389.9	7.8	0.11484	521	10	0.029705
4M095-A	< LOD	0.00051	0.0012443	732.1	8.9	0.12544	27.32	0.35	0.038137
4M095-B	< LOD	0.00072	0.0010966	681.1	8.8	0.11054	29.1	0.31	0.033608
4M106-B	0.0044	0.0018	0.001192	1235	70	0.11926	75.29	0.87	0.03766
598D1M35	0.014	0.0096	0.0044187	67.3	4.8	0.7859	8.73	0.64	0.17555
598D1M38	< LOD	0.00091	0.0048308	6	0.98	0.43839	32.7	2.1	0.090254
598D1M41	0.0021	0.0021	0.0016242	38.5	3.9	0.15044	110	4.4	0.044998
598D1M42	0.0029	0.0057	0.0016685	23.9	1.1	0.18724	20.36	0.45	0.036558
598D1M56	0.025	0.01	0.0038738	110.6	8.2	0.44236	147.7	4.2	0.1236
598D1M57	0.016	0.012	0.0073984	137	19	0.64155	96.2	4.3	0.13888
598D1M63	< LOD	0.000056	0.0025866	14	1.3	0.54577	74.8	5.4	0.11215
598D1M89	0.017	0.015	0.0064532	97.8	9.2	0.65895	128.9	5.2	0.11598
598D2M24	0.043	0.015	0.0027932	192	20	0.25469	112	4.5	0.079403
598D2M47	< LOD	0.0015	0.0014964	10.6	1.1	0.25368	239.1	3	0.065316
598D2M76	0.0042	0.0045	0.0038423	35.1	2.1	0.26842	112.3	3.1	0.075881
5M013-B	0.182	0.014	0.0014729	952	12	0.12273	431.3	5	0.031897
5M041	0.0022	0.0015	0	188.6	4.3	0.092981	1634	18	0.036034
5M044-A	< LOD	0.00037	0.0010329	177.5	3.3	0.14362	503.3	6.5	0.036134
5M044-B	< LOD	0.00094	0.0020112	166.7	2.9	0.10499	509.3	7.9	0.037703
5M045-A	0.0045	0.0021	0.0016901	1353	24	0.090656	529	5.2	0.045461
5M045-B	0.0028	0.0017	0.0015455	1222	25	0.082899	529.7	7.7	0.041571
5M051-A	0.013	0.0048	0	486	18	0.083693	2514	29	0.030118
5M058-A	< LOD	0.00037	0.0019788	478	39	0.13144	915.3	5.6	0.027531
5M062	0.00091	0.00081	0	340	10	0.18056	44.69	0.61	0.040534
5M068-A	< LOD	0.00046	0.0016372	297.1	5.1	0.071257	1219	15	0.027408
5M068-B	< LOD	0.0000047	0.0017203	326.2	5.3	0.074871	1169	10	0.028798
5M084-A	< LOD	0.0007	0.00082339	1335	58	0.12686	16.3	0.21	0.032361
5M084-B	< LOD	0.00056	0.00074628	1122	47	0.11498	16.55	0.27	0.029331
5M089-B	0.0109	0.0039	0.0011443	745	19	0.13181	226.4	3.8	0.040748
5M091-A	0.0322	0.006	0.0017025	942	24	0.19008	341.8	3.5	0.047674
5M103	< LOD	0.0022	0.0019529	12200	1.10E+03	0.33548	6172	63	0.073594
5M105	0.023	0.05	0.0046766	1001	21	0.24134	1291	36	0.08104
5M107-A	< LOD	0.001	0.0017817	561	40	0.114	936	14	0.038806
5M107-B	< LOD	0.0005	0.0016874	587	24	0.10796	942	16	0.036751

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	W	W Stdev	W LOD	Y	Y Stdev	Y LOD	Yb	Yb Stdev	Yb LOD
4M078-A	0.0012	0.0018	0	< LOD	0.0021	0.0033475	< LOD	0.002	0.0060137
4M078-B	0.0055	0.0041	0	< LOD	0.0017	0.0029604	< LOD	0.0015	0.0053183
4M079-A	0.0038	0.003	0	0.0045	0.0025	0.0037116	< LOD	0.003	0.0049328
4M079-B	0.00046	0.00093	0	< LOD	0.0025	0.0031259	< LOD	0.0034	0.0042518
4M080-B	0.207	0.087	0.0056867	1.95	0.52	0.0031034	0.16	0.044	0.0059044
4M087-B	0.0043	0.0055	0	< LOD	0.0049	0.0067216	0.002	0.0045	0
4M095-A	0.009	0.01	0.0055776	< LOD	0.0015	0.0050016	< LOD	0.0011	0.0052361
4M095-B	< LOD	0.0023	0.0049152	< LOD	0.005	0.0044076	< LOD	0.0013	0.0046142
4M106-B	0.043	0.02	0	0.058	0.0096	0.0026875	0.0069	0.0048	0.002864
598D1M35	3.39	0.5	0.016286	1.62	0.19	0.018827	0.56	0.14	0.013828
598D1M38	2.91	0.49	0	2.21	0.39	0.01214	0.34	0.12	0.0059894
598D1M41	0.343	0.074	0.0037821	0.36	0.048	0.0072084	0.074	0.024	0.0071483
598D1M42	0.0055	0.0059	0.0035639	< LOD	0.0045	0.0061276	< LOD	0.005	0.0060518
598D1M56	1.22	0.21	0	0.314	0.054	0.0093055	0.046	0.03	0
598D1M57	7.1	1.4	0.034614	0.85	0.26	0.02236	0.31	0.11	0
598D1M63	0.088	0.034	0.0095337	0.056	0.019	0.011857	< LOD	0.018	0.022767
598D1M89	0.33	0.12	0	0.239	0.064	0.018863	0.076	0.048	0
598D2M24	0.3	0.11	0	0.84	0.53	0.01328	0.096	0.074	0
598D2M47	0.057	0.038	0.0075312	0.036	0.018	0.013807	< LOD	0.016	0.015714
598D2M76	0.66	0.14	0.015937	0.106	0.025	0.014033	0.051	0.028	0.014938
5M013-B	1.57	0.1	0	0.194	0.065	0.0054595	0.009	0.006	0.0027143
5M041	0.034	0.019	0.0036625	1.02	0.36	0.0059159	0.63	0.22	0.0035011
5M044-A	0.0054	0.0041	0	0.0082	0.0039	0.0041195	0.013	0.021	0.0056495
5M044-B	< LOD	0.0039	0.0079507	0.0176	0.008	0.0026637	0.0036	0.0042	0.0026537
5M045-A	0.034	0.014	0.0035703	0.033	0.012	0.0033395	< LOD	0.0044	0.0047068
5M045-B	0.032	0.015	0.0032648	0.101	0.038	0.0030538	0.011	0.0066	0.0043041
5M051-A	0.0148	0.0078	0.0067457	0.219	0.055	0.0037917	0.13	0.037	0
5M058-A	0.0066	0.0047	0.0029683	< LOD	0.0026	0.003497	< LOD	0.0032	0.0038939
5M062	0.03	0.021	0.0029711	0.0415	0.0094	0.0024321	0.0026	0.003	0
5M068-A	< LOD	0.006	0.0070405	0.189	0.055	0.0048582	0.163	0.054	0.0067302
5M068-B	0.0092	0.009	0.0073976	< LOD	0.0045	0.0051046	< LOD	0.0059	0.0070715
5M084-A	0.0054	0.0037	0	< LOD	0.0024	0.0037758	< LOD	0.0023	0.0061044
5M084-B	0.0021	0.002	0	0.0052	0.0028	0.0034222	< LOD	0.0027	0.0055328
5M089-B	0.086	0.038	0.0029979	1.21	0.24	0.0044948	0.062	0.019	0.0039191
5M091-A	0.559	0.07	0.0038157	0.26	0.07	0.0057634	0.0234	0.0097	0.0035821
5M103	< LOD	0.02	0.024163	0.61	0.12	0.007507	0.114	0.045	0.013956
5M105	0.0093	0.0095	0	< LOD	0.0059	0.014269	< LOD	0.0031	0.0062433
5M107-A	< LOD	0.0013	0.0070355	0.0037	0.0024	0.0029782	< LOD	0.0033	0.0066047
5M107-B	< LOD	0.0039	0.006663	0.0061	0.0077	0.0028205	< LOD	0.0013	0.006255

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
4M078-A	323	12	0.14982	0.0183	0.0079	0.0036207
4M078-B	357	13	0.1325	0.027	0.012	0.003202
4M079-A	418	23	0.14388	0.085	0.034	0.0035269
4M079-B	500	100	0.14163	0.068	0.034	0.0024963
4M080-B	167.7	8.8	0.11205	16.9	4.4	0.004033
4M087-B	114.3	5	0.12998	0.072	0.029	0.0058007
4M095-A	233.6	6.4	0.14265	0.0175	0.0068	0.0039055
4M095-B	213.1	4.6	0.12571	0.0116	0.0057	0.0034417
4M106-B	55	10	0.14485	0.178	0.05	0.0070144
598D1M35	1482	47	1.1295	29.5	3.1	0.032165
598D1M38	20.3	3.3	0.46245	5.5	1.3	0.0069662
598D1M41	72.8	5.1	0.26341	5.8	1.7	0.0077678
598D1M42	75	3.2	0.23882	0.079	0.074	0.0049209
598D1M56	34	44	0.63883	14.45	0.91	0.027726
598D1M57	177	39	0.81795	11.9	1.9	0.031684
598D1M63	29.1	3	0.66132	0.615	0.091	0.018563
598D1M89	37.3	4.9	0.82711	8.7	1.2	0.016941
598D2M24	57.1	3.9	0.36548	19	16	0.019866
598D2M47	49.4	2.7	0.37215	0.087	0.048	0.015492
598D2M76	17.8	2.5	0.34531	0.43	0.12	0.016392
5M013-B	33.4	2.7	0.11989	2.49	0.72	0.0019407
5M041	62.4	2.5	0.12377	320	100	0.002925
5M044-A	97.7	6.6	0.20129	0.195	0.076	0.0073476
5M044-B	53	1.9	0.16056	0.187	0.072	0.0065205
5M045-A	83.9	8.2	0.17269	0.37	0.12	0.002393
5M045-B	66	10	0.15791	1.24	0.45	0.0021883
5M051-A	72.6	3.1	0.1488	29	11	0.0072411
5M058-A	181	15	0.11007	0.015	0.012	0.004612
5M062	83.4	5.9	0.15384	0.0131	0.0055	0.0062058
5M068-A	60.7	3.5	0.13393	147	42	0.0075507
5M068-B	85.4	4	0.14073	2.48	0.57	0.0079337
5M084-A	1447	68	0.18104	0.019	0.0072	0
5M084-B	1490	63	0.16409	0.0063	0.0038	0
5M089-B	132.4	7.8	0.12623	12.7	2.4	0.0067038
5M091-A	92	12	0.21656	2.61	0.6	0.0053437
5M103	1200	180	0.26155	0.86	0.12	0.011353
5M105	91.1	4.2	0.25166	< LOD	0.0078	0.0044438
5M107-A	1521	91	0.16307	0.028	0.015	0
5M107-B	1433	44	0.15443	0.0129	0.006	0

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Site	Type	In	In Stdev	In LOD	Ag	Ag Stdev	Ag LOD
5M108-A	Till 05	Till	0.016	0.008	0.0045352	0.0229	0.0097	0.010344
5M108-B	Till 05	Till	0.0115	0.0034	0.004232	< LOD	0.0049	0.0096526
5M113	Till 05	Till	0.0171	0.0066	0.0050069	< LOD	0.0056	0.015096
5M117	Till 05	Till	0.0086	0.0053	0.0047799	< LOD	0.012	0.015625
5M127-A	Till 05	Till	0.0102	0.0044	0.0054448	< LOD	0.0058	0.017212
5M127-B	Till 05	Till	0.0117	0.0041	0.0051184	< LOD	0.0081	0.01618
5M128-A	Till 05	Till	< LOD	0.0047	0.0074126	< LOD	0.0093	0.024715
5M128-B	Till 05	Till	0.0071	0.0044	0.0059652	< LOD	0.0064	0.019889
603D1M39	Tiriganiaq	EPD	< LOD	0.0091	0.016117	< LOD	0.018	0.027375
669D1M31	Discovery	EPD	< LOD	0.013	0.014469	< LOD	0.03	0.05018
669D1M33	Discovery	EPD	0.123	0.029	0.027206	0.382	0.087	0.050865
669D1M36	Discovery	EPD	0.4	1.2	0.28976	< LOD	1.6	0.91758
669D1M64	Discovery	EPD	< LOD	0.0045	0.007535	< LOD	0.01	0.017114
669D1M70	Discovery	EPD	< LOD	0.015	0.027043	0.343	0.091	0.03397
669D1M71	Discovery	EPD	< LOD	0.012	0.019237	< LOD	0.022	0.052336
669D1M75	Discovery	EPD	< LOD	0.0077	0.0083502	0.061	0.022	0.014353
669D1M88	Discovery	EPD	< LOD	0.021	0.028774	< LOD	0.057	0.090645
669D1M90	Discovery	EPD	0.024	0.018	0.018647	< LOD	0.044	0.05341
669D2M1	Discovery	EPD	0.0109	0.0065	0.0073284	< LOD	0.015	0.014728
669D2M13	Discovery	EPD	0.0105	0.0056	0.0068709	0.082	0.028	0.016683
669D2M16	Discovery	EPD	< LOD	0.0071	0.011	< LOD	0.017	0.034061
669D2M2	Discovery	EPD	0.13	0.26	0.013784	< LOD	0.035	0.036241
669D2M43	Discovery	EPD	< LOD	0.0045	0.01236	< LOD	0.013	0.026253
669D2M48	Discovery	EPD	< LOD	0.0088	0.011271	< LOD	0.01	0.044235
669D2M56	Discovery	EPD	< LOD	0.0079	0.013337	0.026	0.016	0.018219
6M027-A	Till 06	Till	< LOD	0.0032	0.0089109	< LOD	0.0085	0.011331
6M027-B	Till 06	Till	0.014	0.012	0.0086827	0.039	0.055	0.011041
6M028-A	Till 06	Till	< LOD	0.0024	0.0040995	< LOD	0.0048	0.010581
6M031-A	Till 06	Till	< LOD	0.0092	0.0053629	< LOD	0.0061	0.012738
6M031-B	Till 06	Till	0.009	0.014	0.0046503	< LOD	0.0045	0.011046
6M032-A	Till 06	Till	0.0207	0.0095	0.0034702	< LOD	0.0062	0.016303
6M032-B	Till 06	Till	0.0175	0.0058	0.0033673	< LOD	0.0066	0.012875
6M034	Till 06	Till	0.0482	0.0086	0.002982	0.016	0.015	0.00999
6M035-A	Till 06	Till	0.0189	0.0034	0.0020582	< LOD	0.004	0.0088416
6M036-A	Till 06	Till	0.005	0.0028	0.0037796	0.016	0.012	0.011264
6M036-B	Till 06	Till	< LOD	0.0021	0.0038535	< LOD	0.0034	0.012379
6M042	Till 06	Till	< LOD	0.0016	0.006717	< LOD	0.016	0.028594
6M059-A	Till 06	Till	0.0104	0.0035	0.0033862	< LOD	0.0047	0.012947
6M059-B	Till 06	Till	0.037	0.062	0.0032298	< LOD	0.0052	0.012349

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Al	Al Stdev	Al LOD	As	As Stdev	As LOD	Bi	Bi Stdev	Bi LOD
5M108-A	681	29	0.18437	0.098	0.038	0.071464	< LOD	0.015	0.041158
5M108-B	668.4	7.4	0.17204	< LOD	0.032	0.066686	< LOD	0.015	0.038406
5M113	6430	780	0.21	0.41	0.11	0.098478	< LOD	0.027	0.056574
5M117	4630	240	0.17173	0.86	0.15	0.079218	< LOD	0.021	0.047212
5M127-A	2362	66	0.22422	0.169	0.049	0.080597	< LOD	0.018	0.046513
5M127-B	2043	34	0.21078	0.349	0.062	0.075765	0.048	0.019	0.043725
5M128-A	265	39	0.22931	0.41	0.17	0.12862	0.169	0.073	0.057355
5M128-B	257	69	0.18454	< LOD	0.051	0.1035	< LOD	0.025	0.046156
603D1M39	5100	1.90E+03	0.44653	58	21	0.28938	< LOD	0.057	0.091111
669D1M31	783	25	0.63813	1.12	0.47	0.35459	0.114	0.064	0.1056
669D1M33	42300	4.00E+03	0.80231	132	11	0.52678	< LOD	0.1	0.14585
669D1M36	15100	6.10E+03	11.64	120	200	5.4689	< LOD	5.5	1.7944
669D1M64	980	110	0.24778	18.7	4.8	0.14068	< LOD	0.023	0.04316
669D1M70	739	29	0.76555	29200	4.20E+03	0.28254	8.8	1.7	0.12325
669D1M71	755	24	0.77454	< LOD	0.39	0.65994	< LOD	0.069	0.12158
669D1M75	929	95	0.27125	6.4	2.5	0.17976	0.39	0.13	0.05094
669D1M88	896	42	1.1894	< LOD	0.55	1.1218	0.7	0.47	0.21227
669D1M90	4130	800	0.76355	72	21	0.45608	< LOD	0.072	0.12652
669D2M1	1210	260	0.33782	8.4	4.1	0.21227	< LOD	0.024	0.054195
669D2M13	730.1	7.8	0.29573	0.69	0.4	0.16368	0.42	0.19	0.052917
669D2M16	833	20	0.52753	3.9	3.6	0.34435	< LOD	0.045	0.07236
669D2M2	1071	74	0.48802	57.1	5.8	0.30036	< LOD	0.049	0.088238
669D2M43	1480	400	0.4202	6	2.3	0.29678	< LOD	0.049	0.068304
669D2M48	857	17	0.34308	0.67	0.17	0.18639	< LOD	0.095	0.067974
669D2M56	1107	57	0.42803	44.7	7.1	0.19505	< LOD	0.062	0.064275
6M027-A	584	18	0.2611	0.098	0.071	0.087363	< LOD	0.018	0.060152
6M027-B	552	15	0.25442	< LOD	0.034	0.085125	< LOD	0.019	0.058611
6M028-A	750	110	0.18881	< LOD	0.032	0.063819	< LOD	0.017	0.035458
6M031-A	341	12	0.21204	0.15	0.18	0.096505	0.097	0.095	0.038324
6M031-B	335	29	0.18387	< LOD	0.031	0.083682	< LOD	0.016	0.033232
6M032-A	293.1	4.6	0.19544	< LOD	0.037	0.082794	< LOD	0.013	0.036572
6M032-B	445	24	0.19937	< LOD	0.049	0.092979	0.038	0.03	0.036279
6M034	6140	720	0.24297	< LOD	0.044	0.092075	< LOD	0.021	0.046052
6M035-A	708	29	0.20213	0.298	0.088	0.075088	0.039	0.078	0.032422
6M036-A	631	14	0.18494	< LOD	0.033	0.073737	< LOD	0.017	0.039071
6M036-B	558.8	9.4	0.15052	< LOD	0.029	0.059618	< LOD	0.014	0.038942
6M042	1620	110	0.3487	0.73	0.2	0.13403	< LOD	0.052	0.084847
6M059-A	609.4	8	0.20048	< LOD	0.037	0.0935	< LOD	0.015	0.036483
6M059-B	534.2	7.5	0.19122	< LOD	0.034	0.089182	0.05	0.13	0.034798

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ca	Ca Stdev	Ca LOD	Cd	Cd Stdev	Cd LOD	Co	Co Stdev	Co LOD
5M108-A	20	24	6.6057	< LOD	0.014	0.028119	22.31	0.4	0.0071246
5M108-B	< LOD	2.7	6.1641	< LOD	0.012	0.026239	22.3	0.3	0.0066483
5M113	22	13	6.8092	< LOD	0.0069	0.03826	24.68	0.54	0.011354
5M117	650	140	11.22	< LOD	0.02	0.047108	20.77	0.49	0.016344
5M127-A	15.7	3.6	6.6786	< LOD	0.015	0.031791	17.67	0.54	0.010544
5M127-B	28.3	3.9	6.2783	< LOD	0.015	0.029885	17.22	0.31	0.0099119
5M128-A	12.9	9.6	9.2881	< LOD	0.031	0.054625	93	1.6	0.012161
5M128-B	8.5	4.4	7.4745	< LOD	0.011	0.043959	89.4	2.2	0.0097865
603D1M39	1460	280	21.049	< LOD	0.02	0.033654	6.09	0.32	0.02414
669D1M31	< LOD	13	30.675	< LOD	0.066	0.11522	0.224	0.042	0.033262
669D1M33	26900	2.80E+03	38.228	< LOD	0.1	0.17795	0.383	0.059	0.03758
669D1M36	18000	1.20E+04	412.79	6	13	1.4838	< LOD	1.2	0.44004
669D1M64	68	26	10.433	< LOD	0.022	0.039777	0.29	0.13	0.013898
669D1M70	1290	600	26.936	< LOD	0.041	0.098796	19.4	5.2	0.034436
669D1M71	< LOD	15	30.957	< LOD	0.089	0.10624	0.186	0.043	0.040849
669D1M75	33	12	12.766	< LOD	0.042	0.046645	0.28	0.046	0.013971
669D1M88	< LOD	30	48.345	< LOD	0.076	0.21093	0.239	0.085	0.061836
669D1M90	370	120	25.057	< LOD	0.062	0.15229	0.317	0.068	0.032498
669D2M1	49	27	13.556	< LOD	0.018	0.070182	0.246	0.026	0.017814
669D2M13	1290	250	10.879	< LOD	0.038	0.046294	0.286	0.038	0.01211
669D2M16	< LOD	12	18.876	< LOD	0.026	0.069199	0.167	0.031	0.017834
669D2M2	98	48	18.338	< LOD	0.0007	0.079491	0.234	0.06	0.018565
669D2M43	870	390	18.393	< LOD	0.051	0.099121	0.254	0.057	0.017777
669D2M48	134	47	14.764	0.023	0.023	0	0.209	0.023	0.014937
669D2M56	124	20	15.953	< LOD	0.04	0.068819	0.269	0.03	0.019202
6M027-A	< LOD	4.7	12.759	< LOD	0.015	0.03578	35.36	0.4	0.019453
6M027-B	< LOD	4.8	12.432	0.07	0.13	0.034864	36.17	0.69	0.018954
6M028-A	168	57	8.7611	< LOD	0.019	0.027828	65.68	0.66	0.015567
6M031-A	20.9	9.3	7.0546	0.27	0.54	0.034029	38.37	0.5	0.0094371
6M031-B	19.1	6.3	6.1173	< LOD	0.017	0.029507	38.22	0.59	0.0081832
6M032-A	18.1	9.4	6.246	< LOD	0.012	0.017215	43.67	0.42	0.0062738
6M032-B	14.4	5.9	6.8558	< LOD	0.00037	0.048466	43.7	1.1	0.01067
6M034	70	23	6.7081	0.07	0.13	0.02629	24.64	0.76	0.0085531
6M035-A	< LOD	4.8	6.6928	< LOD	0.011	0.029121	29.21	0.44	0.0085605
6M036-A	< LOD	4	8.8694	< LOD	0.017	0.038312	36.3	0.37	0.014364
6M036-B	111	16	7.8004	< LOD	0.011	0.019142	36.85	0.68	0.013978
6M042	1870	250	22.693	< LOD	0.077	0.059127	51.66	0.95	0.041731
6M059-A	< LOD	3.3	6.8943	< LOD	0.016	0.048738	12.59	0.24	0.01073
6M059-B	< LOD	9.8	6.5759	< LOD	0.015	0.046487	12.81	0.29	0.010234

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Cr	Cr Stdev	Cr LOD	Cu	Cu Stdev	Cu LOD	Eu	Eu Stdev	Eu LOD
5M108-A	276.1	3.5	1.13	2.04	0.4	0.075389	< LOD	0.00076	0.0022121
5M108-B	302.4	3.6	1.0544	1.5	0.33	0.070349	< LOD	0.0011	0.0020642
5M113	2692	37	1.3003	2.91	0.74	0.071192	< LOD	0.004	0.0055666
5M117	582	31	1.0904	11.4	1.3	0.13488	0.13	0.047	0.0016292
5M127-A	581.4	7.7	1.2368	5.08	0.7	0.066425	0.012	0.0057	0.0035177
5M127-B	620.6	9.1	1.1626	4.03	0.53	0.062443	0.0196	0.0067	0.0033069
5M128-A	1149	27	1.3703	3.34	0.96	0.077507	0.0076	0.0059	0.0019284
5M128-B	1118	31	1.1027	3.28	0.89	0.062373	0.0045	0.0033	0.0015519
603D1M39	643	26	3.2741	0.78	0.35	0.29725	0.74	0.27	0.0057578
669D1M31	266.8	9.4	3.3759	0.76	0.53	0.43773	< LOD	0.0065	0.010329
669D1M33	286.8	6.9	4.1952	5	4.2	0.43155	1.04	0.13	0.0048659
669D1M36	120	150	52.599	< LOD	21	5.9386	< LOD	0.24	0.22851
669D1M64	340.9	8.3	1.4342	0.3	0.29	0.15397	0.0146	0.0068	0.0032221
669D1M70	252	10	3.5517	1.08	0.67	0.33263	0.273	0.06	0.0042256
669D1M71	272	16	3.6115	0.66	0.41	0.34172	< LOD	0.0063	0.012182
669D1M75	288.1	7	1.621	16.7	9.3	0.15914	< LOD	0.0047	0.0065094
669D1M88	335	25	6.8907	< LOD	0.42	0.58052	< LOD	0.0064	0.026651
669D1M90	272	10	4.1221	1.29	0.49	0.33184	0.141	0.048	0.0077744
669D2M1	266.4	6.1	1.9808	1.93	0.64	0.15808	0.0098	0.0076	0.0029829
669D2M13	267	7.1	1.6677	5.3	3.1	0.12484	0.005	0.005	0.0043369
669D2M16	252.6	7.9	2.2659	2.8	1.6	0.25302	< LOD	0.0073	0.008791
669D2M2	266	7.3	2.6993	1	0.48	0.24111	0.034	0.029	0.0061374
669D2M43	245.5	8.9	2.3003	0.28	0.33	0.21722	0.025	0.018	0.011851
669D2M48	285.2	5.7	2.3941	< LOD	0.065	0.2195	0.002	0.003	0
669D2M56	269.4	4.8	2.4391	5.1	2.3	0.1667	0.069	0.018	0.0054108
6M027-A	399.6	4.6	1.3982	1.65	0.25	0.13137	< LOD	0.0016	0.0028522
6M027-B	405.6	9.9	1.3624	1.45	0.21	0.128	0.009	0.017	0.0027791
6M028-A	456.8	8.5	1.1085	1.6	0.39	0.095443	< LOD	0.003	0.0042392
6M031-A	267.3	5	1.12	2.2	0.55	0.073633	< LOD	0.0015	0.0028849
6M031-B	270.3	4.8	0.9712	0.9	0.37	0.063849	< LOD	0.0017	0.0025016
6M032-A	350.8	5.6	1.1001	1.05	0.39	0.057234	< LOD	0.0013	0.0018992
6M032-B	376.8	9.2	1.1644	0.96	0.2	0.08117	< LOD	0.0023	0.0028167
6M034	290.3	4.8	1.2087	5.5	2.4	0.074143	0.0165	0.0062	0.0016902
6M035-A	313.4	3.8	1.2035	1.64	0.35	0.064839	0.0024	0.0015	0.001312
6M036-A	202.4	4	0.9428	1.01	0.37	0.10544	0.0023	0.0018	0
6M036-B	198.3	3.5	0.92793	1.05	0.2	0.10405	< LOD	0.00081	0.0012576
6M042	162.8	5.5	2.3024	6.04	0.55	0.26732	0.218	0.045	0.003165
6M059-A	208.1	2.8	1.171	1.19	0.25	0.081625	< LOD	0.0021	0.0028325
6M059-B	210.8	2.9	1.1169	0.75	0.18	0.077855	< LOD	0.0019	0.0027017

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Ge	Ge Stdev	Ge LOD	Hf	Hf Stdev	Hf LOD
5M108-A	42.19	0.58	0.024968	0.82	0.065	0.056603	0.0017	0.0019	0
5M108-B	44.2	1.3	0.023299	0.849	0.063	0.052819	0.0006	0.0013	0
5M113	82.4	1.9	0.040248	1.28	0.13	0.072975	< LOD	0.0015	0.004121
5M117	22.4	0.52	0.026849	0.554	0.078	0.069765	4.4	1.8	0.0078645
5M127-A	63.5	2.1	0.032862	1.8	0.11	0.067377	0.058	0.016	0.0026021
5M127-B	62.3	2.4	0.030892	1.88	0.14	0.063338	0.12	0.02	0.0024461
5M128-A	35.4	1	0.045941	0.386	0.084	0.085773	0.0126	0.0087	0.0031755
5M128-B	35.24	0.97	0.03697	0.354	0.076	0.069025	0.0053	0.0043	0.0025555
603D1M39	28.2	2.1	0.055862	3.86	0.35	0.11457	0.39	0.11	0.010667
669D1M31	17.8	1	0.063469	5.38	0.4	0.20089	< LOD	0.0031	0.012096
669D1M33	39.2	1.6	0.10798	7.61	0.61	0.20692	0.062	0.048	0
669D1M36	2.1	4.3	1.3582	53	33	2.7619	< LOD	0.12	0.098295
669D1M64	26.06	0.83	0.023317	5.39	0.28	0.086977	0.0126	0.0079	0
669D1M70	1.51	0.18	0.10383	9.3	1.3	0.2139	0.041	0.023	0.014363
669D1M71	24.9	1.1	0.078884	9.1	0.86	0.18381	0.0051	0.0077	0
669D1M75	20.76	0.55	0.034793	6.17	0.38	0.069668	< LOD	0.0039	0.0037688
669D1M88	16.2	1.5	0.11463	7.82	0.95	0.35965	< LOD	0.029	0.02552
669D1M90	18.95	0.85	0.089986	7.17	0.6	0.20808	0.013	0.018	0.0069309
669D2M1	22.3	0.94	0.03714	4.31	0.25	0.098544	< LOD	0.008	0.0096195
669D2M13	28.6	1.1	0.032251	4.97	0.28	0.06748	< LOD	0.0043	0.0038376
669D2M16	26.8	1.6	0.071189	6.87	0.8	0.14928	0.009	0.0097	0
669D2M2	23	1.3	0.061901	5.14	0.58	0.11973	< LOD	0.000025	0.0046856
669D2M43	25.09	0.82	0.0539	3.84	0.33	0.12699	< LOD	0.01	0.014678
669D2M48	18.15	0.5	0.037159	5.1	0.29	0.10699	0.0046	0.0041	0
669D2M56	32	0.98	0.057274	5.17	0.37	0.11759	< LOD	0.004	0.012058
6M027-A	49.15	0.77	0.02942	1.62	0.12	0.075103	< LOD	0.0025	0.0051346
6M027-B	51	1.3	0.028666	1.68	0.1	0.073179	< LOD	0.0018	0.0050031
6M028-A	19.99	0.38	0.024688	0.451	0.06	0.055034	< LOD	0.003	0.0023346
6M031-A	37.22	0.73	0.031688	0.511	0.06	0.05498	< LOD	0.0021	0.0023854
6M031-B	38.1	1.1	0.027478	0.502	0.057	0.047675	< LOD	0.0016	0.0020684
6M032-A	100.1	1.2	0.027338	1.37	0.082	0.055257	< LOD	0.00088	0.0021957
6M032-B	101.8	2.5	0.025088	1.41	0.12	0.04877	0.0025	0.0032	0
6M034	87	2.4	0.03345	2.37	0.14	0.063548	0.0053	0.0059	0
6M035-A	64.3	1.2	0.024846	0.743	0.049	0.047622	0.069	0.027	0.0022291
6M036-A	27.34	0.45	0.022341	1.678	0.089	0.067992	2.9	1.4	0
6M036-B	28.66	0.92	0.021604	1.766	0.092	0.049057	0.059	0.023	0.0027265
6M042	37.7	1.4	0.036086	0.88	0.21	0.13222	0.017	0.018	0.0054318
6M059-A	54.7	2	0.025229	1.292	0.097	0.049043	0.0027	0.0024	0
6M059-B	54.6	1.2	0.024064	1.41	0.088	0.046778	0.0009	0.0014	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	K	K Stdev	K LOD	Mg	Mg Stdev	Mg LOD	Mn	Mn Stdev	Mn LOD
5M108-A	< LOD	2.2	5.9199	60.11	0.95	0.0095564	1445	14	0.2582
5M108-B	< LOD	2.4	5.5241	66.5	1.1	0.0089175	1562	24	0.24094
5M113	2560	420	7.3029	2310	390	0.013436	322.4	5.2	0.30986
5M117	< LOD	4.6	8.648	1830	110	0.014851	397	4.8	0.37867
5M127-A	< LOD	2.6	6.9939	158	18	0.010263	651	12	0.32093
5M127-B	< LOD	2.8	6.5746	129.8	5.9	0.0096476	684	12	0.30169
5M128-A	< LOD	3.8	7.4606	56.9	2.7	0.013721	2593	71	0.331
5M128-B	< LOD	8.6	6.0039	52.7	1.5	0.011042	2501	59	0.26637
603D1M39	1620	690	13.819	1750	190	0.050396	711	26	0.67471
669D1M31	< LOD	16	20.701	353	21	0.034208	523	21	0.8433
669D1M33	3170	320	22.467	8670	760	0.04573	1052	59	0.93454
669D1M36	< LOD	950	305.01	81400	2.60E+03	0.50501	8610	210	12.567
669D1M64	357	90	6.9035	400	110	0.014567	524	20	0.34394
669D1M70	< LOD	18	18.579	266	19	0.031633	466	18	0.9387
669D1M71	< LOD	11	20.065	467	81	0.031683	499	14	0.81763
669D1M75	128	61	8.5778	541	99	0.015892	540	11	0.36956
669D1M88	< LOD	17	35.372	172	46	0.077869	466	28	1.8836
669D1M90	2540	620	20.43	1200	270	0.046442	503	16	0.91245
669D2M1	260	140	10.543	201	82	0.015879	482	11	0.44663
669D2M13	< LOD	3.4	8.1372	309	40	0.020114	541	15	0.40875
669D2M16	< LOD	6	14.724	146	26	0.026609	460	11	0.56868
669D2M2	400	100	12.823	1360	200	0.029687	598	26	0.68019
669D2M43	63	41	14.154	229	85	0.01964	453	14	0.58945
669D2M48	53	11	7.1031	180	19	0.0082506	495	16	0.47375
669D2M56	< LOD	5.7	12.503	233	35	0.01764	477.5	9.2	0.48959
6M027-A	< LOD	3.1	10.599	80	49	0.011177	2126	22	0.407
6M027-B	< LOD	3.1	10.327	55.7	1.3	0.01089	2145	44	0.39658
6M028-A	112	38	6.9655	460	110	0.010483	866	11	0.33522
6M031-A	< LOD	3.5	6.4686	67.3	1.6	0.012639	1195	13	0.25051
6M031-B	21	43	5.6091	62.6	4.4	0.010959	1193	15	0.21722
6M032-A	< LOD	2.9	7.5655	32.36	0.58	0.0082326	1361	17	0.2606
6M032-B	6.3	3.8	5.5097	27.9	1.1	0.010486	1470	50	0.24218
6M034	< LOD	3.2	6.8924	1720	410	0.01499	351	11	0.3101
6M035-A	< LOD	1.6	5.6467	103.4	1.5	0.0081596	1526	20	0.24867
6M036-A	< LOD	3	7.0502	69.3	1.3	0.010209	991.7	9.7	0.30958
6M036-B	< LOD	2.1	5.7228	56	1.7	0.0065054	912	16	0.29165
6M042	< LOD	7.6	14.805	424	48	0.021069	402	17	0.81217
6M059-A	< LOD	1.9	5.5406	80.5	1.5	0.010544	2327	64	0.24354
6M059-B	< LOD	2.4	5.2847	72.2	1.3	0.010057	2130	48	0.23229

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Mo	Mo Stdev	Mo LOD	Nb	Nb Stdev	Nb LOD	Ni	Ni Stdev	Ni LOD
5M108-A	< LOD	0.027	0.052963	< LOD	0.0025	0.0060742	25.8	1.4	0.041632
5M108-B	< LOD	0.037	0.049423	< LOD	0.0019	0.0056681	26.4	1.2	0.038849
5M113	0.137	0.067	0.059402	0.69	0.11	0.0073747	122.4	3.9	0.05561
5M117	< LOD	0.032	0.089357	0.074	0.022	0.0061555	354	87	0.10064
5M127-A	0.074	0.039	0.069244	0.08	0.016	0.0048801	79.2	1.8	0.07249
5M127-B	< LOD	0.032	0.065093	0.142	0.019	0.0045876	78.8	1.6	0.068144
5M128-A	< LOD	0.042	0.076679	0.175	0.064	0.0061073	412	8.7	0.063054
5M128-B	< LOD	0.037	0.061707	< LOD	0.003	0.0049148	500	210	0.050742
603D1M39	< LOD	0.076	0.10728	0.225	0.099	0.014345	28	1.8	0.16468
669D1M31	< LOD	0.074	0.25783	0.266	0.044	0.024666	0.6	0.15	0.16799
669D1M33	< LOD	0.1	0.22891	1.93	0.61	0.040035	1.45	0.23	0.33036
669D1M36	6	12	2.8842	1.7	2.8	0.32627	30	25	2.6693
669D1M64	0.064	0.047	0.059773	0.568	0.079	0.0099552	1.5	1.4	0.081562
669D1M70	< LOD	0.12	0.15219	0.07	0.029	0.030979	2.8	0.45	0.20281
669D1M71	< LOD	0.12	0.17857	0.173	0.032	0.025235	1.5	1.4	0.20041
669D1M75	< LOD	0.053	0.080305	0.275	0.045	0.0098913	1.32	0.2	0.076194
669D1M88	< LOD	0.21	0.44906	0.078	0.04	0.042122	0.68	0.28	0.32806
669D1M90	< LOD	0.13	0.18397	1.85	0.6	0.029435	1.54	0.42	0.16296
669D2M1	< LOD	0.05	0.072788	0.16	0.077	0.012209	0.83	0.34	0.093448
669D2M13	< LOD	0.026	0.085828	0.116	0.022	0.0054816	5.5	8.8	0.075052
669D2M16	< LOD	0.094	0.12384	0.159	0.039	0.017732	0.63	0.16	0.14574
669D2M2	< LOD	0.087	0.14388	0.223	0.055	0.018753	0.73	0.19	0.14148
669D2M43	< LOD	0.086	0.13438	0.071	0.032	0.011934	0.51	0.15	0.15052
669D2M48	< LOD	0.048	0.11027	0.125	0.02	0.010375	0.564	0.084	0.098263
669D2M56	0.18	0.11	0.086478	0.202	0.094	0.015047	1.46	0.86	0.12367
6M027-A	< LOD	0.024	0.075845	< LOD	0.0026	0.0072593	40.1	1	0.10987
6M027-B	< LOD	0.028	0.073903	< LOD	0.0058	0.0070734	41.55	0.93	0.10706
6M028-A	< LOD	0.026	0.049781	< LOD	0.005	0.0068974	185.1	2.5	0.070327
6M031-A	< LOD	0.027	0.04353	< LOD	0.0031	0.0045943	38.6	1	0.058664
6M031-B	0.038	0.026	0.037746	< LOD	0.0021	0.0039838	39	1.1	0.050869
6M032-A	< LOD	0.024	0.059418	< LOD	0.0023	0.0044568	59.1	1.6	0.055996
6M032-B	< LOD	0.035	0.050048	< LOD	0.0029	0.0073021	58.2	1.1	0.06111
6M034	< LOD	0.031	0.058268	0.0078	0.0043	0.0058164	94.7	2.3	0.066636
6M035-A	0.065	0.027	0.054415	0.197	0.081	0.0072604	27.58	0.51	0.063202
6M036-A	< LOD	0.026	0.056011	0.0107	0.0075	0.0056083	13.76	0.76	0.087942
6M036-B	< LOD	0.025	0.04702	< LOD	0.0025	0.0044565	13.56	0.45	0.058541
6M042	< LOD	0.065	0.10362	1.19	0.21	0.010685	24.7	1.2	0.20563
6M059-A	0.056	0.031	0.050329	< LOD	0.0021	0.007343	0.68	0.15	0.061453
6M059-B	< LOD	0.029	0.048004	< LOD	0.0028	0.0070039	0.663	0.072	0.058615

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	P	P Stdev	P LOD	Pb	Pb Stdev	Pb LOD	Sb	Sb Stdev	Sb LOD
5M108-A	< LOD	1.6	2.8599	10.7	1.2	0.0059006	< LOD	0.02	0.042357
5M108-B	< LOD	1.3	2.6687	11.1	1.6	0.0055061	< LOD	0.032	0.039525
5M113	< LOD	1.7	3.4069	11.6	2.3	0.0071059	< LOD	0.037	0.052338
5M117	11.4	2.2	3.8883	17.2	3.9	0.0048255	0.124	0.041	0.053685
5M127-A	7.8	1.6	3.0889	12.7	1.9	0.004374	< LOD	0.024	0.045635
5M127-B	9.5	1.7	2.9037	14.6	3.4	0.0041118	< LOD	0.023	0.042899
5M128-A	4.1	2.1	3.4887	10	2.1	0.0058473	< LOD	0.03	0.059038
5M128-B	5.4	1.9	2.8075	14.4	3.2	0.0047056	< LOD	0.029	0.047511
603D1M39	< LOD	6.8	8.9163	1.86	0.89	0.0085728	0.146	0.09	0.093847
669D1M31	< LOD	8.7	16.208	1.9	2.8	0.031336	0.17	0.095	0.16114
669D1M33	16	11	15.772	1.83	0.19	0.022004	0.86	0.18	0.16844
669D1M36	< LOD	1.80E+03	237.13	3.1	3.8	0.23979	10	18	2.6368
669D1M64	5.7	8.5	5.1569	0.85	0.91	0.0057546	0.358	0.069	0.058151
669D1M70	800	400	11.905	1.82	0.26	0.023137	5.24	0.5	0.11946
669D1M71	< LOD	7.6	11.522	1.6	2.2	0.017258	0.181	0.096	0.15968
669D1M75	< LOD	3.4	5.4212	1.38	0.76	0.011079	0.251	0.063	0.067817
669D1M88	< LOD	16	20.797	0.286	0.086	0.03985	< LOD	0.17	0.35642
669D1M90	87	48	13.053	0.65	0.18	0.015468	< LOD	0.096	0.1773
669D2M1	< LOD	4.1	5.8953	8.2	1.9	0.01247	< LOD	0.035	0.091783
669D2M13	8.7	2.9	4.8479	0.83	0.43	0.0086684	0.192	0.057	0.058422
669D2M16	< LOD	6	8.6238	9.7	4.3	0.011215	< LOD	0.058	0.10579
669D2M2	9.1	8.1	8.7485	1.68	0.5	0.010457	< LOD	0.096	0.12077
669D2M43	< LOD	5.8	9.4719	1.1	1.5	0.013886	< LOD	0.052	0.095082
669D2M48	7.8	3.2	6.38	0.33	0.27	0.010605	0.113	0.052	0.08863
669D2M56	10.8	6.9	8.3407	13.5	3.3	0.013382	0.118	0.06	0.09925
6M027-A	< LOD	2.1	4.6568	13.5	2.4	0.0082148	< LOD	0.021	0.055344
6M027-B	< LOD	2.4	4.5375	15.2	1.7	0.0080045	0.127	0.091	0.053927
6M028-A	4.8	1.7	3.0338	14.2	2.4	0.006701	< LOD	0.022	0.036563
6M031-A	3.7	1.6	3.2209	33.6	8.1	0.0043855	0.73	0.56	0.046379
6M031-B	< LOD	1.2	2.7929	20.6	3.5	0.0038028	0.155	0.069	0.040216
6M032-A	< LOD	1.4	3.3146	18.2	3.6	0.0064571	0.043	0.025	0.042
6M032-B	< LOD	1.5	2.5217	14.2	4.3	0.0067337	0.04	0.031	0.039027
6M034	42	20	2.6277	12.2	2.4	0.00597	< LOD	0.034	0.048543
6M035-A	< LOD	1.7	3.1169	10	1.5	0.0049154	0.075	0.051	0.035719
6M036-A	5.9	1.8	3.3253	19.4	3.2	0.0084337	< LOD	0.023	0.052285
6M036-B	3.5	1.4	2.686	19.9	4.1	0.0085702	0.049	0.022	0.034522
6M042	< LOD	4.7	7.2639	13.5	4.4	0.01667	< LOD	0.06	0.07999
6M059-A	< LOD	1.4	2.5358	7.16	0.96	0.0067714	0.075	0.025	0.039246
6M059-B	< LOD	1.2	2.4187	7.18	0.69	0.0064587	< LOD	0.018	0.037433

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Si	Si Stdev	Si LOD	Sn	Sn Stdev	Sn LOD
5M108-A	0.722	0.036	0.03028	324	36	87.333	1.73	0.43	0.02518
5M108-B	0.872	0.034	0.028255	167	31	81.494	1.13	0.21	0.023496
5M113	0.83	0.12	0.038277	6700	1.00E+03	94.278	2.26	0.75	0.026754
5M117	1.13	0.16	0.045638	6780	430	102.71	1.11	0.61	0.029486
5M127-A	1.412	0.062	0.027904	931	70	82.45	1.08	0.4	0.02881
5M127-B	1.354	0.069	0.026231	1132	59	77.507	0.93	0.26	0.027083
5M128-A	< LOD	0.029	0.044393	468	62	103.4	0.47	0.23	0.032318
5M128-B	< LOD	0.016	0.035725	381	40	83.212	1.33	0.44	0.026007
603D1M39	1.56	0.33	0.094841	8400	3.60E+03	298.04	0.24	0.17	0.078194
669D1M31	0.147	0.075	0.14231	2390	300	420.71	0.244	0.063	0.10212
669D1M33	9.7	1.1	0.14865	112000	1.10E+04	536.53	0.88	0.16	0.11793
669D1M36	580	340	2.1711	17000000	1.00E+07	6203.9	4	10	1.5072
669D1M64	0.406	0.073	0.055443	5600	1.10E+03	187.44	0.2	0.13	0.041849
669D1M70	0.59	0.11	0.13636	6570	500	425.26	0.247	0.096	0.10745
669D1M71	0.166	0.07	0.10251	2760	520	359.86	0.24	0.11	0.082494
669D1M75	0.258	0.049	0.051816	4030	770	144.68	0.171	0.046	0.034379
669D1M88	< LOD	0.15	0.22295	1510	580	610.96	< LOD	0.13	0.19882
669D1M90	0.69	0.18	0.16719	15500	4.10E+03	386.3	0.26	0.11	0.10117
669D2M1	0.28	0.06	0.057975	3930	950	151.06	0.239	0.073	0.055146
669D2M13	0.213	0.036	0.051727	1850	240	118.52	0.172	0.043	0.038109
669D2M16	0.291	0.064	0.09019	1190	340	233.2	0.32	0.13	0.072447
669D2M2	0.59	0.14	0.087432	11300	1.70E+03	249.78	0.177	0.079	0.075602
669D2M43	0.42	0.18	0.1095	3500	1.30E+03	246.96	0.282	0.083	0.069306
669D2M48	0.18	0.076	0.08921	2270	230	222.11	12	23	0.056913
669D2M56	0.157	0.048	0.065563	2800	370	228.78	0.32	0.11	0.059953
6M027-A	0.74	0.042	0.059061	< LOD	59	170.28	0.243	0.031	0.0299
6M027-B	0.696	0.045	0.057548	< LOD	720	165.92	0.257	0.032	0.029135
6M028-A	0.405	0.091	0.037837	1670	310	97.789	0.025	0.014	0.02207
6M031-A	0.066	0.017	0.02961	509	70	66.966	0.092	0.04	0.036303
6M031-B	0.063	0.017	0.025676	< LOD	33	58.068	0.064	0.02	0.031479
6M032-A	2.795	0.065	0.030906	283	30	75.65	2.24	0.11	0.016452
6M032-B	2.5	0.12	0.0271	265	43	72.345	2.45	0.19	0.024341
6M034	0.404	0.033	0.032339	2580	570	77.253	0.74	0.17	0.037542
6M035-A	0.863	0.035	0.035754	< LOD	59	124.02	0.186	0.026	0.022883
6M036-A	1.94	0.1	0.04011	965	65	96.404	0.139	0.031	0.016988
6M036-B	1.657	0.055	0.031463	508	43	74.628	0.268	0.067	0.023054
6M042	0.346	0.097	0.081522	3650	540	214.81	0.167	0.087	0.055633
6M059-A	1.961	0.058	0.027252	< LOD	42	72.751	0.077	0.02	0.024477
6M059-B	1.793	0.052	0.025993	< LOD	40	69.391	0.124	0.045	0.023347

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ta	Ta Stdev	Ta LOD	Ti	Ti Stdev	Ti LOD	V	V Stdev	V LOD
5M108-A	0.00034	0.00038	0	483	5.3	0.11017	1123	12	0.02945
5M108-B	0.00094	0.00086	0	514.6	7.3	0.1028	1142	11	0.027481
5M113	0.0384	0.0088	0.001117	1980	210	0.14977	962	13	0.028287
5M117	0.0035	0.0022	0.0014943	340	64	0.13881	2905	43	0.042959
5M127-A	0.0047	0.0023	0.00070857	968	41	0.1019	370.9	4.1	0.031767
5M127-B	0.0086	0.0029	0.00066609	1129	37	0.095794	364	4.7	0.029862
5M128-A	< LOD	0.002	0.0023977	79.1	4.7	0.15221	1583	23	0.030218
5M128-B	< LOD	0.00053	0.0019296	71.4	2.4	0.12249	1532	31	0.024318
603D1M39	0.0097	0.0072	0.0025137	300	14	0.29077	634	16	0.074283
669D1M31	0.0155	0.0075	0.0086772	998	27	0.44376	375	11	0.10036
669D1M33	0.056	0.017	0.0021243	1270	100	0.63854	386.7	6.3	0.11838
669D1M36	< LOD	0.091	0.048135	690	290	6.2757	21	22	1.6342
669D1M64	0.0206	0.0058	0.0031315	1233	22	0.16756	1158	25	0.041387
669D1M70	0.0067	0.0052	0.0054795	273.7	9.4	0.32517	6.21	0.33	0.094137
669D1M71	0.0116	0.0073	0.0017906	371	10	0.32208	366	13	0.10583
669D1M75	0.0202	0.0059	0.0027485	599	12	0.20866	302.5	9.4	0.03811
669D1M88	< LOD	0.0071	0.0046097	473	21	0.58961	150.1	7.1	0.15823
669D1M90	0.05	0.019	0.004809	1980	240	0.38406	274	11	0.11457
669D2M1	0.0052	0.0034	0.0028857	838	30	0.19794	248.1	5.1	0.049878
669D2M13	0.0071	0.0033	0.00078023	849	10	0.18025	315.4	8.7	0.041054
669D2M16	0.0067	0.0041	0.0018172	1058	23	0.29201	220.2	4.5	0.069746
669D2M2	0.0166	0.0096	0.0039793	1042	29	0.24712	286.6	6.7	0.075221
669D2M43	0.004	0.0038	0.001978	740	20	0.27559	145.2	3.2	0.063518
669D2M48	0.004	0.0025	0	554.1	7.7	0.14905	242.1	2.7	0.051764
669D2M56	0.0027	0.0022	0	638	15	0.17778	72.2	2	0.057238
6M027-A	< LOD	0.00085	0.0025504	352	22	0.17422	1119	15	0.043019
6M027-B	< LOD	0.0026	0.0024851	334	20	0.16976	1251	20	0.041917
6M028-A	< LOD	0.00067	0.0015138	297	9.6	0.1257	1418.6	6.9	0.039665
6M031-A	< LOD	0.0021	0.0026808	298.8	6.9	0.071963	895	12	0.02721
6M031-B	< LOD	0.00061	0.0023246	285	22	0.062401	896	11	0.023594
6M032-A	< LOD	0.00051	0.0016553	221.3	3.7	0.12181	852.1	8.5	0.028328
6M032-B	0.00004	0.00069	0	381	21	0.097453	847	23	0.031004
6M034	0.0011	0.0011	0.0010689	748	19	0.1031	668	11	0.029379
6M035-A	0.0159	0.0056	0.001203	379	12	0.061128	1334	14	0.030554
6M036-A	0.0035	0.0025	0.0023423	625.3	6	0.10636	2775	27	0.036026
6M036-B	< LOD	0.00059	0.0015591	526	7.9	0.10343	2770	44	0.035948
6M042	0.056	0.015	0.004311	2240	250	0.28765	4989	77	0.091539
6M059-A	0.00083	0.00071	0	479.4	4.6	0.098	49.96	0.48	0.031178
6M059-B	0.00144	0.00095	0	425.9	6.7	0.093474	51.35	0.69	0.029738

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	W	W Stdev	W LOD	Y	Y Stdev	Y LOD	Yb	Yb Stdev	Yb LOD
5M108-A	0.016	0.018	0.0030399	< LOD	0.0021	0.0052603	< LOD	0.0022	0.010066
5M108-B	0.0048	0.0038	0.0028366	< LOD	0.0018	0.0049086	< LOD	0.0018	0.0093926
5M113	0.014	0.013	0.009015	0.021	0.011	0.0063492	< LOD	0.006	0.011988
5M117	0.121	0.042	0.0038489	1.24	0.3	0.0047777	0.86	0.35	0
5M127-A	0.167	0.049	0.0082303	0.344	0.041	0.0048384	0.056	0.017	0.0035342
5M127-B	0.149	0.025	0.0077368	0.602	0.049	0.0045483	0.079	0.018	0.0033223
5M128-A	0.11	0.048	0.0045118	0.045	0.022	0.0081023	0.013	0.012	0
5M128-B	0.02	0.018	0.0036309	0.04	0.014	0.0065203	< LOD	0.00002	0
603D1M39	6.6	2.1	0	2.94	0.97	0.0045533	0.141	0.051	0.019841
669D1M31	0.215	0.062	0.019954	0.03	0.013	0.015986	< LOD	0.01	0.015221
669D1M33	2.17	0.96	0.030972	9.48	0.95	0.019914	0.86	0.15	0.020812
669D1M36	< LOD	0.32	0.29136	2.56	0.8	0.21405	0.44	0.39	0.12369
669D1M64	0.234	0.061	0	0.09	0.019	0.0055919	0.0091	0.0067	0
669D1M70	0.291	0.066	0.013448	3.6	1.3	0.011487	0.198	0.091	0.019702
669D1M71	0.179	0.048	0.015896	0.083	0.022	0.012805	< LOD	0.0096	0.023406
669D1M75	0.269	0.048	0.0088416	0.088	0.022	0.0079801	0.02	0.014	0.0033722
669D1M88	0.17	0.1	0	0.066	0.035	0.02375	< LOD	0.00046	0.024707
669D1M90	3.8	2.2	0	0.6	0.18	0.01379	0.062	0.038	0.019415
669D2M1	0.032	0.028	0.015611	0.039	0.02	0.0073004	0.0074	0.0096	0.0057313
669D2M13	0.155	0.039	0.0040443	0.065	0.015	0.0067965	0.01	0.013	0.0034338
669D2M16	0.33	0.19	0.01491	0.047	0.02	0.0080455	< LOD	0.0045	0.012659
669D2M2	0.116	0.053	0.015459	0.148	0.031	0.0024682	0.015	0.015	0
669D2M43	0.16	0.2	0.0070802	0.63	0.33	0.013965	0.073	0.048	0
669D2M48	0.09	0.026	0	0.0319	0.0091	0.0080938	0.0017	0.0023	0
669D2M56	0.5	0.35	0.012547	0.293	0.054	0.0072258	0.031	0.015	0
6M027-A	0.0028	0.0027	0	< LOD	0.0036	0.0065475	< LOD	0.0044	0.010358
6M027-B	< LOD	1	0	< LOD	0.0021	0.0063798	< LOD	0.0085	0.010092
6M028-A	0.0063	0.0058	0	0.053	0.021	0.0045464	0.0066	0.0063	0
6M031-A	< LOD	0.0042	0.0097121	< LOD	0.0026	0.0059145	0.0009	0.0015	0
6M031-B	< LOD	0.0054	0.0084217	< LOD	0.0019	0.0051286	0.0023	0.0028	0
6M032-A	0.021	0.035	0	< LOD	0.0023	0.0051239	< LOD	0.0037	0.010872
6M032-B	0.0041	0.0057	0	< LOD	0.0019	0.0043044	< LOD	0.0033	0.011337
6M034	0.027	0.013	0.0094046	0.041	0.018	0.0050128	0.0023	0.0035	0
6M035-A	0.04	0.015	0.0042572	0.0244	0.0092	0.0034031	0.0065	0.0072	0
6M036-A	0.008	0.0055	0.0032579	0.45	0.21	0.0050753	0.34	0.16	0
6M036-B	0.0076	0.0047	0	0.0289	0.0073	0.0032632	0.009	0.0057	0.0058622
6M042	3.54	0.5	0.014954	1.79	0.27	0.01101	0.096	0.042	0.0069502
6M059-A	0.004	0.0034	0	< LOD	0.0027	0.0043286	< LOD	0.0035	0.011401
6M059-B	0.0046	0.0036	0	< LOD	0.0019	0.0041287	< LOD	0.0028	0.010874

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
5M108-A	120.1	2.4	0.10918	0.0084	0.0043	0.0043955
5M108-B	164.2	9.3	0.10188	0.0067	0.0044	0.0041016
5M113	237	29	0.11967	0.027	0.013	0.0097586
5M117	84.6	6.7	0.1538	160	67	0.0075638
5M127-A	14.3	1.2	0.13654	1.65	0.17	0.0020995
5M127-B	11.69	0.73	0.12835	3.27	0.21	0.0019736
5M128-A	747	18	0.12977	0.5	0.22	0.0062176
5M128-B	681	22	0.10443	0.038	0.013	0.0050036
603D1M39	31	2.3	0.43676	9.8	2	0.0064334
669D1M31	31.1	2.1	0.68268	< LOD	0.0063	0.021272
669D1M33	64.3	4.8	0.77863	2.75	0.84	0.030012
669D1M36	417	53	9.5006	5.6	5.8	0.30384
669D1M64	29.8	1.8	0.25191	0.44	0.11	0.0062124
669D1M70	18.4	1.3	0.74454	3.71	0.29	0.0067146
669D1M71	25.9	2.1	0.59401	< LOD	0.018	0.021196
669D1M75	26.6	1.6	0.3148	0.02	0.012	0.0039221
669D1M88	20.1	2.2	1.304	< LOD	0.028	0.045621
669D1M90	30.1	2.6	0.80582	0.96	0.29	0.033471
669D2M1	27.5	1.9	0.29255	0.123	0.07	0.011964
669D2M13	29.1	1.6	0.23042	< LOD	0.0046	0.0056796
669D2M16	33.3	4.8	0.44094	0.017	0.018	0.013041
669D2M2	40.6	2.8	0.45139	0.165	0.058	0.014483
669D2M43	23.5	1.8	0.38047	0.093	0.054	0.017664
669D2M48	25.2	1.1	0.24294	< LOD	0.0071	0.015551
669D2M56	29.8	1.8	0.29363	0.207	0.063	0.0083938
6M027-A	395	33	0.2121	0.006	0.0032	0
6M027-B	426	24	0.20667	0.0031	0.0025	0
6M028-A	76.6	2.1	0.12468	0.043	0.016	0.0047333
6M031-A	269	14	0.14637	< LOD	0.0093	0.0086967
6M031-B	322	52	0.12692	< LOD	0.0046	0.0075411
6M032-A	865	22	0.11242	< LOD	0.0037	0.0068402
6M032-B	1098	50	0.12988	0.003	0.004	0.001975
6M034	284	58	0.11648	0.0247	0.0096	0.006885
6M035-A	525	58	0.11015	2.15	0.78	0.0048491
6M036-A	71.3	1.7	0.17709	114	56	0.0056831
6M036-B	82	30	0.14605	2.17	0.64	0.0035294
6M042	72.8	8.3	0.30193	0.612	0.095	0.0084727
6M059-A	197.7	5.8	0.13061	0.0052	0.0032	0.0019861
6M059-B	183.9	7.5	0.12458	0.0042	0.0035	0.0018944

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Site	Type	In	In Stdev	In LOD	Ag	Ag Stdev	Ag LOD
6M064-A	Till 06	Till	0.0109	0.0034	0.0030097	< LOD	0.006	0.012375
6M064-B	Till 06	Till	0.0121	0.0032	0.0030774	< LOD	0.0074	0.012653
6M071-A	Till 06	Till	< LOD	0.0021	0.003154	< LOD	0.0061	0.01926
6M071-B	Till 06	Till	0.015	0.027	0.0044729	< LOD	0.0062	0.0063331
6M074-A	Till 06	Till	0.0081	0.0024	0.0026845	< LOD	0.0038	0.014383
6M074-B	Till 06	Till	0.0094	0.0028	0.0047579	< LOD	0.0061	0.009805
6M075-A	Till 06	Till	0.0076	0.0035	0.0040253	< LOD	0.0054	0.0135
6M075-B	Till 06	Till	0.02	0.012	0.0039418	< LOD	0.0076	0.013637
6M080-A	Till 06	Till	< LOD	0.0039	0.0058339	< LOD	0.0091	0.011231
6M080-B	Till 06	Till	< LOD	0.0021	0.0055219	< LOD	0.0055	0.01063
6M082-B	Till 06	Till	< LOD	0.0031	0.003751	0.021	0.014	0.011245
6M087	Till 06	Till	0.033	0.0091	0.0071368	0.14	0.25	0.018565
6M088-A	Till 06	Till	< LOD	0.0021	0.0045566	0.016	0.0087	0.0064516
6M088-B	Till 06	Till	< LOD	0.0022	0.0042269	0.0071	0.0057	0.0059848
6M095-A	Till 06	Till	0.011	0.0034	0.0026982	< LOD	0.0052	0.01262
6M095-B	Till 06	Till	0.0119	0.0038	0.0026458	< LOD	0.0051	0.012374
6M097-A	Till 06	Till	0.0048	0.0028	0.0041617	0.039	0.016	0.015935
7M034-B	Till 07	Till	0.0135	0.0044	0.0035451	< LOD	0.01	0.014542
7M048-A	Till 07	Till	0.013	0.0032	0.0040449	< LOD	0.0074	0.0093635
7M048-B	Till 07	Till	0.039	0.035	0.0038398	0.01	0.011	0.0088886
7M048-C	Till 07	Till	0.07	0.1	0.004113	< LOD	0.0057	0.0095212
7M051-A	Till 07	Till	0.0067	0.005	0.0061672	0.015	0.0091	0.011603
7M055-A	Till 07	Till	0.0077	0.0045	0.0033408	< LOD	0.0054	0.0080789
7M055-B	Till 07	Till	< LOD	0.0019	0.0030611	< LOD	0.0041	0.0076649
7M056	Till 07	Till	0.0038	0.0017	0.0024184	< LOD	0.0037	0.0060289
7M063	Till 07	Till	0.0186	0.0074	0.0051114	< LOD	0.0099	0.012988
7M066	Till 07	Till	< LOD	0.0048	0.0049616	< LOD	0.017	0.010786
7M069-A	Till 07	Till	0.023	0.017	0.003168	< LOD	0.0047	0.0079742
7M069-B	Till 07	Till	0.0081	0.0024	0.0043282	< LOD	0.004	0.0078395
7M078-C	Till 07	Till	< LOD	0.0021	0.0030281	< LOD	0.0062	0.0093949
7M080-A	Till 07	Till	0.0064	0.0076	0.0041914	< LOD	0.008	0.013621
7M080-B	Till 07	Till	0.0061	0.0038	0.0040694	< LOD	0.0069	0.013224
7M089-A	Till 07	Till	< LOD	0.0045	0.0052271	0.022	0.035	0.020216
7M089-B	Till 07	Till	0.0043	0.0032	0.0041033	< LOD	0.0073	0.01587
7M089-C	Till 07	Till	0.0056	0.0035	0.0035786	0.018	0.011	0.016541
7M098-A	Till 07	Till	< LOD	0.0022	0.0053529	0.06	0.11	0.012878
7M098-B	Till 07	Till	< LOD	0.0021	0.0038767	< LOD	0.0049	0.010522
7M099-A	Till 07	Till	< LOD	0.0014	0.0052449	< LOD	0.0042	0.013534
7M099-B	Till 07	Till	0.009	0.015	0.0049161	< LOD	0.003	0.012685

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Al	Al Stdev	Al LOD	As	As Stdev	As LOD	Bi	Bi Stdev	Bi LOD
6M064-A	1052	22	0.17965	0.24	0.055	0.062345	< LOD	0.015	0.03765
6M064-B	1024	15	0.18369	0.256	0.062	0.063746	< LOD	0.016	0.038496
6M071-A	612	10	0.17091	< LOD	0.042	0.086209	< LOD	0.034	0.034417
6M071-B	745	50	0.16967	< LOD	0.042	0.070942	0.16	0.33	0.035162
6M074-A	591.3	9.4	0.17301	0.09	0.048	0.062336	< LOD	0.016	0.038381
6M074-B	593	17	0.16712	0.059	0.025	0.05265	< LOD	0.015	0.038681
6M075-A	917	26	0.19957	0.228	0.061	0.065949	< LOD	0.022	0.039823
6M075-B	1099	36	0.17049	0.125	0.041	0.062997	0.047	0.018	0.03603
6M080-A	608	14	0.19396	0.096	0.044	0.075923	< LOD	0.018	0.046568
6M080-B	596	22	0.18359	< LOD	0.039	0.071862	< LOD	0.048	0.044077
6M082-B	480	100	0.21378	0.39	0.15	0.069847	< LOD	0.027	0.045952
6M087	1330	150	0.33069	0.4	0.11	0.14231	< LOD	0.029	0.068718
6M088-A	1556	41	0.17284	0.133	0.036	0.072269	< LOD	0.014	0.03582
6M088-B	1550	120	0.16034	0.103	0.039	0.06704	< LOD	0.015	0.033228
6M095-A	1528	52	0.17737	0.158	0.036	0.064902	< LOD	0.017	0.036215
6M095-B	1424	26	0.17392	0.087	0.037	0.06364	< LOD	0.015	0.035511
6M097-A	4830	760	0.22433	0.96	0.17	0.10021	< LOD	0.016	0.048307
7M034-B	2230	520	0.20429	< LOD	0.043	0.072831	0.21	0.36	0.040987
7M048-A	1259	27	0.16662	0.42	0.52	0.065126	< LOD	0.059	0.039447
7M048-B	1307	19	0.15817	< LOD	0.029	0.061823	< LOD	0.015	0.037446
7M048-C	1211	19	0.16943	< LOD	0.027	0.066223	< LOD	0.015	0.040112
7M051-A	1800	330	0.20663	1.08	0.22	0.083319	< LOD	0.021	0.049189
7M055-A	1208	39	0.19015	< LOD	0.039	0.098727	< LOD	0.015	0.032268
7M055-B	996	19	0.15229	< LOD	0.033	0.094215	< LOD	0.012	0.0283
7M056	443	18	0.17269	0.076	0.033	0.071832	< LOD	0.013	0.034131
7M063	1920	210	0.24573	0.33	0.09	0.091549	< LOD	0.028	0.050718
7M066	2350	230	0.20637	0.64	0.24	0.063392	< LOD	0.026	0.043757
7M069-A	1780	110	0.1876	1.08	0.14	0.070715	< LOD	0.015	0.038338
7M069-B	1653	30	0.17635	1.592	0.097	0.050628	< LOD	0.013	0.037681
7M078-C	880	190	0.17299	0.123	0.057	0.071367	< LOD	0.017	0.044025
7M080-A	1111	28	0.21381	< LOD	0.051	0.085977	< LOD	0.023	0.052202
7M080-B	1116	37	0.20759	< LOD	0.049	0.083475	< LOD	0.031	0.050683
7M089-A	3140	880	0.21008	2.8	1.5	0.096067	< LOD	0.026	0.042877
7M089-B	2404	84	0.16491	0.287	0.097	0.075414	< LOD	0.017	0.033659
7M089-C	3960	270	0.18612	0.129	0.061	0.097458	< LOD	0.022	0.037563
7M098-A	619	31	0.19214	< LOD	0.033	0.08182	< LOD	0.016	0.048769
7M098-B	630	26	0.16462	< LOD	0.028	0.058158	< LOD	0.085	0.045809
7M099-A	404	14	0.17878	< LOD	0.038	0.080254	< LOD	0.015	0.035195
7M099-B	348.8	4.8	0.16758	< LOD	0.036	0.075224	0.15	0.31	0.032989

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ca	Ca Stdev	Ca LOD	Cd	Cd Stdev	Cd LOD	Co	Co Stdev	Co LOD
6M064-A	14.6	4.6	7.3366	< LOD	0.0098	0.042012	6	1	0.017848
6M064-B	25	15	7.5014	< LOD	0.024	0.042956	5.36	0.14	0.018249
6M071-A	< LOD	3	6.0691	< LOD	0.018	0.041764	28.02	0.71	0.0099159
6M071-B	13.1	5.4	6.7609	0.061	0.096	0.0098416	28.23	0.46	0.0082149
6M074-A	11	19	8.4782	< LOD	0.0096	0.03031	18.46	0.23	0.015417
6M074-B	< LOD	3.9	8.794	< LOD	0.011	0.027482	18.28	0.35	0.012636
6M075-A	21.3	5.5	10.812	< LOD	0.022	0.032348	25.16	0.55	0.017575
6M075-B	33.1	7.8	8.3941	< LOD	0.03	0.019353	25.42	0.48	0.015896
6M080-A	30	11	9.693	< LOD	0.014	0.032962	43.91	0.84	0.020854
6M080-B	< LOD	4.7	9.1745	< LOD	0.013	0.031199	39.77	0.76	0.019739
6M082-B	212	77	10.946	< LOD	0.014	0.024529	41	1.9	0.014694
6M087	51	13	9.8022	< LOD	0.026	0.036956	8.81	0.36	0.015273
6M088-A	41	17	6.8874	0.017	0.014	0.010026	15	0.31	0.0083685
6M088-B	25.6	6.3	6.3891	< LOD	0.01	0.0093003	15.3	0.3	0.007763
6M095-A	47	73	10.205	< LOD	0.012	0.032714	25.51	0.34	0.013986
6M095-B	22	14	10.006	< LOD	0.013	0.032078	26.18	0.49	0.013714
6M097-A	600	160	7.9456	< LOD	0.02	0.030081	44	1.3	0.010777
7M034-B	20	11	7.2696	0.031	0.029	0.022859	23.74	0.51	0.0082073
7M048-A	11.7	6.8	8.6948	< LOD	0.011	0.03219	10.17	0.22	0.012258
7M048-B	14	25	8.2537	< LOD	0.011	0.030557	10.67	0.22	0.011636
7M048-C	< LOD	3.9	8.8412	< LOD	0.01	0.032732	10.6	0.22	0.012464
7M051-A	258	56	7.2924	< LOD	0.02	0.023768	33.28	0.43	0.010059
7M055-A	32	16	7.0815	< LOD	0.014	0.037827	28.54	0.42	0.0084099
7M055-B	< LOD	2.5	6.5138	< LOD	0.036	0.022785	28.34	0.31	0.0090081
7M056	5.6	6.3	5.3894	0.037	0.079	0.031993	34.42	0.41	0.0084797
7M063	494	92	8.187	< LOD	0.017	0.035412	14.81	0.32	0.013574
7M066	261	61	12.309	< LOD	0.024	0.022649	41.82	0.98	0.019327
7M069-A	39.7	8.3	8.946	< LOD	0.012	0.026058	4.62	0.11	0.010262
7M069-B	59.3	9.3	9.3981	< LOD	0.012	0.026604	4.75	0.1	0.009946
7M078-C	58	35	9.5447	< LOD	0.018	0.045515	31.37	0.44	0.021374
7M080-A	16	22	7.7377	< LOD	0.022	0.055634	11.35	0.31	0.013423
7M080-B	11.8	6.2	7.5125	< LOD	0.023	0.054015	11.15	0.27	0.013032
7M089-A	39	11	8.036	0.028	0.039	0.022782	24.16	0.49	0.012563
7M089-B	38	24	6.3083	< LOD	0.015	0.017884	24.05	0.69	0.0098623
7M089-C	153	23	5.7373	< LOD	0.022	0.041962	24.5	0.62	0.010997
7M098-A	13	27	8.9701	< LOD	0.014	0.029698	25.63	0.36	0.018601
7M098-B	< LOD	5.3	8.4143	< LOD	0.012	0.013946	25.54	0.9	0.012531
7M099-A	130	240	6.0787	< LOD	0.018	0.029014	50.4	1.3	0.0080609
7M099-B	< LOD	3.4	5.6976	< LOD	0.015	0.027195	49.85	0.74	0.0075556

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Cr	Cr Stdev	Cr LOD	Cu	Cu Stdev	Cu LOD	Eu	Eu Stdev	Eu LOD
6M064-A	184.4	3	1.0693	0.52	0.13	0.11629	< LOD	0.0022	0.0033751
6M064-B	191.4	3.8	1.0933	0.58	0.2	0.1189	< LOD	0.0013	0.003451
6M071-A	273.7	9.5	1.035	0.69	0.2	0.065153	< LOD	0.0016	0.0034209
6M071-B	315.5	6.4	1.1484	1.13	0.74	0.068505	< LOD	0.0017	0.0041205
6M074-A	326.9	4.2	0.97674	1.1	1.6	0.10447	< LOD	0.0016	0.0048322
6M074-B	352.1	4.5	0.94699	2.9	3.1	0.091838	< LOD	0.0016	0.0020465
6M075-A	371.8	9.4	1.1531	0.361	0.093	0.10666	0.0043	0.0035	0.0042254
6M075-B	369.1	5.5	0.96871	2.4	0.57	0.13404	0.005	0.0035	0.0044433
6M080-A	244.3	5.5	1.2887	2.44	0.67	0.14948	0.0038	0.0029	0.0015914
6M080-B	225.7	7.2	1.2197	1.41	0.47	0.14149	0.0061	0.008	0.0015063
6M082-B	206.6	4.8	1.136	11.9	2	0.13573	0.032	0.016	0.00276
6M087	301	5	1.7504	6.6	1.4	0.097715	0.0158	0.0091	0.0070571
6M088-A	264.9	3.6	1.1699	1.32	0.33	0.069786	< LOD	0.0011	0.0041976
6M088-B	274	7	1.0852	1.09	0.16	0.064737	< LOD	0.0013	0.0038939
6M095-A	226.8	2.9	1.0656	0.7	0.23	0.14939	0.0037	0.0022	0.0014217
6M095-B	239.1	4.3	1.0449	0.58	0.12	0.14648	< LOD	0.0018	0.001394
6M097-A	239.8	3.6	1.3231	10.2	2.5	0.072511	0.079	0.027	0.0021419
7M034-B	265.2	4.8	1.0667	1.49	0.2	0.059622	< LOD	0.0014	0.0013796
7M048-A	199.8	2.7	1.0595	1.65	0.39	0.087167	0.0027	0.0022	0.0024282
7M048-B	229.3	3.6	1.0058	1.7	1.4	0.082746	< LOD	0.0015	0.002305
7M048-C	216.7	3.9	1.0774	0.86	0.15	0.088635	< LOD	0.0013	0.0024691
7M051-A	269.5	4.1	1.2195	9.4	2	0.082213	0.53	0.12	0.0035543
7M055-A	270.4	4	1.2034	0.353	0.079	0.07019	< LOD	0.0014	0.0027364
7M055-B	275.8	3.4	0.9802	0.323	0.084	0.057628	< LOD	0.0007	0.0049081
7M056	243.7	3.1	0.76	0.88	0.19	0.054321	< LOD	0.0015	0.0023446
7M063	1310	140	1.4261	0.68	0.19	0.0872	0.063	0.026	0.007404
7M066	399	14	1.4893	8.3	1.5	0.16358	0.0066	0.006	0.0046951
7M069-A	200.2	3.6	1.0847	2.71	0.28	0.12398	0.0231	0.0072	0.0042882
7M069-B	211.7	3	0.95944	3.56	0.25	0.10843	0.0212	0.0052	0.0027564
7M078-C	201.4	6.3	1.2614	4	1.4	0.094118	0.0047	0.0048	0.0046864
7M080-A	251.9	5.5	1.3163	0.59	0.21	0.080402	0.0017	0.0026	0
7M080-B	251.1	4.1	1.278	1.2	0.32	0.078063	0.0022	0.0032	0
7M089-A	377	12	1.3113	8.8	3.7	0.09251	0.0209	0.0092	0.0031985
7M089-B	368.5	6.1	1.0294	3.9	2.1	0.072621	0.0044	0.0035	0.0025108
7M089-C	384	9	0.95367	7.9	1.3	0.078017	0.0056	0.004	0.0022935
7M098-A	183.9	2.4	1.0799	0.36	0.1	0.14446	< LOD	0.0013	0.0035326
7M098-B	185.5	6.3	0.96388	0.404	0.098	0.11508	< LOD	0.0011	0.0012982
7M099-A	363.2	4	1.2819	2.9	4	0.062528	< LOD	0.00092	0.0013746
7M099-B	621	19	1.2016	0.416	0.063	0.058608	< LOD	0.0012	0.0012884

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Ge	Ge Stdev	Ge LOD	Hf	Hf Stdev	Hf LOD
6M064-A	20.64	0.56	0.030513	2.92	0.2	0.063927	0.0057	0.0046	0
6M064-B	21.14	0.54	0.031198	2.98	0.18	0.065363	0.0023	0.0029	0
6M071-A	26.14	0.87	0.024491	1.034	0.073	0.058908	0.003	0.0027	0.002292
6M071-B	26.43	0.52	0.025199	0.982	0.087	0.051728	0.0074	0.0048	0.0021498
6M074-A	68.2	1.1	0.021458	0.921	0.063	0.061981	< LOD	0.0024	0.0078891
6M074-B	70.3	1.5	0.021591	0.824	0.055	0.065352	< LOD	0.0015	0.0058059
6M075-A	89.8	1.7	0.018044	0.883	0.097	0.066497	0.0084	0.006	0.0054606
6M075-B	95.5	2	0.022222	0.927	0.068	0.053131	< LOD	0.0011	0.0020439
6M080-A	39.1	1.9	0.030851	0.699	0.092	0.073134	0.0003	0.0014	0
6M080-B	39.7	1.1	0.029201	0.704	0.073	0.069223	0.0016	0.0028	0
6M082-B	9.55	0.45	0.021939	0.567	0.088	0.064347	0.0034	0.0046	0.0024843
6M087	36.6	1.5	0.051408	2.33	0.19	0.10249	0.058	0.025	0.008775
6M088-A	75.2	2.1	0.02567	0.999	0.078	0.052696	0.006	0.0042	0.00219
6M088-B	75	1.6	0.023813	1.021	0.07	0.048883	0.009	0.0041	0.0020316
6M095-A	30.02	0.69	0.02629	2.6	0.13	0.059074	0.0152	0.0071	0.0046427
6M095-B	30.78	0.55	0.025779	2.92	0.48	0.057926	< LOD	0.0023	0.0045525
6M097-A	21.6	1.1	0.02607	0.963	0.083	0.073011	5.5	1.8	0
7M034-B	71	2.3	0.017982	1.042	0.094	0.071819	0.018	0.025	0
7M048-A	66.28	0.79	0.016997	2.191	0.09	0.062656	0.0021	0.0016	0
7M048-B	73.2	1.4	0.016135	2.73	0.11	0.059478	0.00012	0.00086	0
7M048-C	72.5	1.4	0.017284	2.78	0.13	0.063712	0.0001	0.001	0
7M051-A	59.4	2.3	0.027534	1.41	0.15	0.068612	0.66	0.15	0.0051919
7M055-A	47.99	0.9	0.024697	0.873	0.072	0.050873	0.001	0.002	0
7M055-B	47.48	0.69	0.017396	0.78	0.055	0.046912	< LOD	0.00093	0.0050391
7M056	68.2	1.2	0.017312	0.74	0.13	0.060252	< LOD	0.0018	0.001906
7M063	6.08	0.25	0.041482	0.965	0.095	0.066259	0.047	0.064	0.0091661
7M066	33.5	1.3	0.029839	0.54	0.088	0.076482	1.93	0.93	0
7M069-A	9.93	0.23	0.022126	2.62	0.12	0.062746	0.0196	0.0066	0.0021562
7M069-B	10.76	0.24	0.01863	2.89	0.12	0.048392	0.0169	0.0048	0.0038178
7M078-C	26.95	0.82	0.019553	0.639	0.076	0.054369	0.075	0.036	0.0025809
7M080-A	18.61	0.45	0.029638	2.84	0.18	0.073794	0.014	0.014	0
7M080-B	19.3	0.75	0.028776	2.8	0.17	0.071647	0.0073	0.0063	0
7M089-A	43.8	3.3	0.02388	1.1	0.12	0.061839	0.022	0.017	0
7M089-B	41.6	1.2	0.018746	1.151	0.091	0.048544	0.32	0.14	0
7M089-C	44.5	1.6	0.027443	1.29	0.1	0.050448	0.022	0.013	0.0055212
7M098-A	54.83	0.81	0.019532	1.092	0.081	0.051233	0.0029	0.0035	0
7M098-B	55.9	1.5	0.018914	1.102	0.075	0.051611	< LOD	0.0014	0.0028145
7M099-A	32.91	0.55	0.030295	0.783	0.072	0.059832	0.007	0.013	0.0050387
7M099-B	33.25	0.77	0.028396	0.83	0.079	0.056082	< LOD	0.00078	0.0047229

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	K	K Stdev	K LOD	Mg	Mg Stdev	Mg LOD	Mn	Mn Stdev	Mn LOD
6M064-A	< LOD	2.4	6.3546	140	2.7	0.01001	975	12	0.33519
6M064-B	< LOD	3	6.4973	130	3.2	0.010234	988	19	0.34273
6M071-A	< LOD	2	5.8061	101.2	2.6	0.0087183	1488	24	0.22942
6M071-B	< LOD	2.3	5.8441	185	37	0.0069042	1542	29	0.25765
6M074-A	< LOD	66	6.5735	70.21	0.78	0.011582	793.2	9.6	0.34638
6M074-B	< LOD	3.1	6.8988	57.8	1.4	0.0097514	788	12	0.29404
6M075-A	< LOD	2.9	7.118	148	79	0.01113	851	46	0.36412
6M075-B	< LOD	12	6.2732	133	14	0.010762	894	21	0.35891
6M080-A	43.9	3.6	6.6135	131.5	4.3	0.017425	519.4	9	0.40209
6M080-B	60	30	6.2598	107.9	3.4	0.016493	487	11	0.38058
6M082-B	< LOD	14	7.2184	128	41	0.011072	590	42	0.40079
6M087	< LOD	6	11.583	320	63	0.016273	968	18	0.40995
6M088-A	12.8	5	5.9534	103.8	6.9	0.0070333	1369	19	0.26247
6M088-B	33.3	6.6	5.5227	116.1	6.5	0.0065244	1411	25	0.24348
6M095-A	< LOD	2.8	5.9104	137.9	3.8	0.013619	1213	31	0.33402
6M095-B	< LOD	2.7	5.7955	105.6	6.2	0.013355	1122	20	0.32753
6M097-A	77	25	5.8869	3230	630	0.011585	683	22	0.29966
7M034-B	41.2	4.5	5.6723	151.5	4.5	0.012992	1718	28	0.26331
7M048-A	< LOD	2.6	6.8801	42.9	1.2	0.0063656	440.9	4.3	0.31865
7M048-B	7.5	4.7	6.5311	51.6	4.5	0.0060427	423.6	6.4	0.30249
7M048-C	7	2.8	6.9959	48.3	5.8	0.0064728	447.9	7	0.32402
7M051-A	10.1	6.4	7.1999	485	85	0.011158	1381	19	0.28296
7M055-A	< LOD	5.9	5.887	126.2	7.2	0.011613	2652	39	0.26555
7M055-B	< LOD	1.8	4.5944	129.6	7	0.0098194	2631	32	0.2343
7M056	< LOD	6.8	5.0736	58.9	2.4	0.0078283	1375	17	0.23563
7M063	850	110	10.582	1030	150	0.013911	860	26	0.32519
7M066	< LOD	4.5	9.6852	301	22	0.014741	580	11	0.39072
7M069-A	33.6	2.6	6.1953	257	11	0.0078525	642.2	9.8	0.36611
7M069-B	29	23	6.0077	206	6.5	0.010808	658.4	8.2	0.29525
7M078-C	< LOD	3.5	7.6729	152	45	0.013219	868.2	8.4	0.3934
7M080-A	< LOD	2.9	8.3004	74.8	2.8	0.0088743	707	26	0.28895
7M080-B	< LOD	2.5	8.0589	71.7	1.9	0.0086161	690.6	7.9	0.28054
7M089-A	< LOD	6.8	7.3204	229	23	0.01132	862	31	0.30306
7M089-B	< LOD	3.7	5.7466	266	26	0.0088863	761	19	0.2379
7M089-C	47.7	7.6	5.711	977	74	0.01096	836	21	0.23052
7M098-A	< LOD	2.4	7.3535	70.8	1.4	0.011041	2127	36	0.31123
7M098-B	< LOD	4.9	6.8906	153	14	0.0074049	1930	37	0.29309
7M099-A	< LOD	2.3	6.0079	89.8	2.7	0.0082756	1539	29	0.266
7M099-B	< LOD	2	5.6313	71.1	1.8	0.0077569	1500	27	0.24933

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Mo	Mo Stdev	Mo LOD	Nb	Nb Stdev	Nb LOD	Ni	Ni Stdev	Ni LOD
6M064-A	0.098	0.038	0.03947	0.164	0.096	0.0053469	12.42	0.51	0.066255
6M064-B	< LOD	0.028	0.040357	0.0488	0.0098	0.0054671	12.62	0.41	0.067743
6M071-A	< LOD	0.03	0.057249	< LOD	0.0028	0.0049646	39.1	0.93	0.057425
6M071-B	< LOD	0.025	0.048286	< LOD	0.0034	0.0094896	39.44	0.88	0.045614
6M074-A	< LOD	0.018	0.055666	< LOD	0.0024	0.0045284	20.47	0.48	0.081304
6M074-B	< LOD	0.021	0.047573	0.0164	0.0059	0.0045883	21.31	0.65	0.073894
6M075-A	< LOD	0.035	0.06259	< LOD	0.0032	0.00646	64.4	4.6	0.074881
6M075-B	0.088	0.035	0.047693	0.0165	0.0057	0.0066016	65.1	2	0.10539
6M080-A	< LOD	0.032	0.057035	0.056	0.028	0.0068875	114.1	4.3	0.080613
6M080-B	< LOD	0.026	0.053985	< LOD	0.0037	0.0065191	115.6	4.1	0.076301
6M082-B	< LOD	0.041	0.058006	0.058	0.032	0.0050326	19.8	4.9	0.096969
6M087	< LOD	0.038	0.11773	0.054	0.019	0.0078807	17.4	9.4	0.072699
6M088-A	< LOD	0.03	0.049189	< LOD	0.0044	0.009667	16	15	0.046467
6M088-B	0.075	0.032	0.04563	0.0129	0.0057	0.0089676	5.49	0.6	0.043105
6M095-A	0.042	0.032	0.038863	0.052	0.028	0.0057777	81.6	2.2	0.10158
6M095-B	0.041	0.033	0.038108	0.0292	0.0076	0.0056655	82.2	2.3	0.099602
6M097-A	< LOD	0.036	0.065762	0.99	0.3	0.0080943	71	15	0.071345
7M034-B	< LOD	0.027	0.065475	< LOD	0.0036	0.005294	38.2	1.5	0.047569
7M048-A	0.107	0.033	0.039361	0.0063	0.0035	0.0054853	10.31	0.38	0.060525
7M048-B	0.241	0.04	0.037365	< LOD	0.003	0.005207	10.18	0.37	0.057455
7M048-C	0.253	0.052	0.040024	< LOD	0.003	0.0055776	10.61	0.38	0.061545
7M051-A	< LOD	0.025	0.062723	0.072	0.018	0.0069934	35.23	0.69	0.059967
7M055-A	0.051	0.027	0.047602	< LOD	0.002	0.006115	17.57	0.41	0.055226
7M055-B	< LOD	0.025	0.060107	0.0044	0.0026	0.0035718	17.2	0.34	0.046822
7M056	< LOD	0.02	0.031901	0.0052	0.0025	0.0044937	36.54	0.76	0.035373
7M063	0.072	0.076	0.057234	0.03	0.011	0.0079316	57.8	2.2	0.05747
7M066	< LOD	0.034	0.072547	0.0101	0.0083	0.0058125	112.5	3.9	0.12584
7M069-A	< LOD	0.031	0.063803	0.83	0.13	0.0040642	11.31	0.3	0.073706
7M069-B	0.098	0.028	0.040899	0.283	0.046	0.0050906	12.04	0.33	0.063816
7M078-C	< LOD	0.035	0.06368	0.58	0.25	0.0067834	32.18	0.96	0.089389
7M080-A	< LOD	0.039	0.082439	< LOD	0.005	0.0058471	33.57	0.99	0.066421
7M080-B	< LOD	0.049	0.08004	0.0126	0.0065	0.005677	33.79	0.83	0.064489
7M089-A	< LOD	0.047	0.063349	0.0156	0.0094	0.0085785	58.3	1.8	0.062299
7M089-B	< LOD	0.026	0.049729	< LOD	0.0043	0.0067342	59.4	2.2	0.048906
7M089-C	< LOD	0.037	0.05937	0.03	0.016	0.0064445	62.2	1.8	0.050085
7M098-A	< LOD	0.023	0.058552	< LOD	0.003	0.0061951	13	0.35	0.071002
7M098-B	< LOD	0.024	0.042316	0.062	0.018	0.0076735	12.45	0.44	0.072224
7M099-A	< LOD	0.024	0.053783	< LOD	0.003	0.0060387	80.1	1.9	0.055911
7M099-B	< LOD	0.023	0.050412	< LOD	0.0024	0.0056602	81.9	3.3	0.052406

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	P	P Stdev	P LOD	Pb	Pb Stdev	Pb LOD	Sb	Sb Stdev	Sb LOD
6M064-A	4.8	1.5	2.7565	10	1.4	0.0040742	0.043	0.02	0.039857
6M064-B	< LOD	1.7	2.8184	19.4	3.2	0.0041657	0.132	0.036	0.040752
6M071-A	3.2	1.6	2.911	11.3	2.1	0.0065587	< LOD	0.019	0.043769
6M071-B	< LOD	1.4	2.4888	9.3	1	0.0032027	0.065	0.047	0.04226
6M074-A	3.4	1.6	3.0523	5.6	1	0.007037	0.054	0.019	0.046125
6M074-B	3.5	1.4	2.7891	4.13	0.76	0.0079393	0.068	0.062	0.039225
6M075-A	7.3	6	3.5456	8.5	1.6	0.0018134	< LOD	0.028	0.051062
6M075-B	< LOD	1.6	3.3313	7.53	0.83	0.0052873	0.06	0.1	0.038193
6M080-A	< LOD	1.9	3.843	25.1	5.4	0.0056814	0.29	0.12	0.043371
6M080-B	< LOD	2.4	3.6375	16.1	3.3	0.0053775	0.22	0.11	0.041051
6M082-B	4.2	2.6	3.4252	13.6	1.9	0.006279	< LOD	0.03	0.0495
6M087	< LOD	3.2	4.428	14.8	3.7	0.0052954	0.31	0.57	0.05908
6M088-A	< LOD	1.4	2.5353	10.7	2.1	0.0032626	0.12	0.21	0.04305
6M088-B	< LOD	1.3	2.3519	11.2	1.3	0.0030266	< LOD	0.018	0.039936
6M095-A	< LOD	1.5	3.2868	5.71	0.83	0.004475	< LOD	0.018	0.045291
6M095-B	< LOD	1.7	3.2229	6.44	0.88	0.0043881	< LOD	0.039	0.044411
6M097-A	6.5	2.1	3.195	15.6	2.5	0.0057062	0.123	0.04	0.051392
7M034-B	< LOD	2.9	3.2373	12.4	2.3	0.0064189	0.101	0.039	0.047858
7M048-A	< LOD	1.7	3.1831	10.09	0.98	0.0075729	0.039	0.026	0.03642
7M048-B	< LOD	1.9	3.0216	12.1	2	0.0071888	< LOD	0.018	0.034573
7M048-C	< LOD	1.7	3.2367	11.3	1.1	0.0077004	< LOD	0.017	0.037033
7M051-A	4	2.1	3.5845	14.6	2.7	0.0075091	< LOD	0.025	0.04767
7M055-A	< LOD	1.6	3.4693	12.1	1.2	0.0040621	0.1	0.043	0.040702
7M055-B	< LOD	1.2	2.8686	11.3	1.3	0.0051473	< LOD	0.017	0.036887
7M056	3.8	1.2	2.6145	12.7	1.1	0.0054542	< LOD	0.015	0.041134
7M063	4	2.3	3.3715	1.7	1.3	0.0061666	0.089	0.037	0.05833
7M066	14	5.4	3.9416	22.9	7.2	0.0057304	0.097	0.089	0.058983
7M069-A	< LOD	2.1	3.3477	10	1.5	0.0049995	0.104	0.081	0.041515
7M069-B	< LOD	1.4	2.9476	13.8	5.4	0.0043634	0.073	0.036	0.039717
7M078-C	5.2	2.5	3.0887	12.8	1.9	0.0059696	< LOD	0.029	0.043762
7M080-A	< LOD	2.1	2.9242	12.4	2.6	0	< LOD	0.021	0.053613
7M080-B	< LOD	1.9	2.8391	16	2.7	0	< LOD	0.035	0.052053
7M089-A	6.1	2.5	3.2919	33	25	0.0048291	0.048	0.037	0.045955
7M089-B	5.1	1.7	2.5842	12.5	2.2	0.0037909	0.052	0.033	0.036075
7M089-C	13.6	1.8	2.5236	24.5	3.4	0.0043958	0.088	0.03	0.041586
7M098-A	4	1.5	3.3917	13.3	3.4	0.0057652	< LOD	0.019	0.046566
7M098-B	2.9	1.7	2.5438	11.1	1.6	0.0076359	< LOD	0.015	0.036052
7M099-A	< LOD	1.8	2.745	16.9	3.4	0.0054018	< LOD	0.02	0.038236
7M099-B	< LOD	1.2	2.5729	11.7	2	0.0050632	< LOD	0.019	0.035839

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Si	Si Stdev	Si LOD	Sn	Sn Stdev	Sn LOD
6M064-A	0.376	0.034	0.037432	579	50	79.336	0.54	0.12	0.01832
6M064-B	0.367	0.033	0.038273	423	48	81.118	0.93	0.57	0.018731
6M071-A	0.279	0.024	0.036434	454	32	65.631	0.081	0.027	0.027583
6M071-B	0.297	0.027	0.032745	524	93	72.935	0.095	0.062	0.02997
6M074-A	0.433	0.029	0.033078	1480	240	164.47	0.741	0.073	0.023519
6M074-B	0.441	0.029	0.034117	1100	73	79.391	0.646	0.076	0.021455
6M075-A	0.844	0.051	0.036216	909	60	92.663	0.369	0.063	0.025735
6M075-B	1.13	0.1	0.035037	901	64	83.109	0.53	0.054	0.016373
6M080-A	0.157	0.029	0.044065	< LOD	88	111.48	0.39	0.23	0.024628
6M080-B	0.151	0.031	0.041708	< LOD	55	105.51	0.112	0.08	0.023311
6M082-B	0.328	0.068	0.039154	850	200	108.12	0.244	0.07	0.028064
6M087	0.855	0.072	0.047782	1450	260	115.3	1.52	0.23	0.050373
6M088-A	0.203	0.023	0.033357	380	140	74.299	0.504	0.092	0.03053
6M088-B	0.194	0.018	0.030944	155	37	68.923	0.6	0.31	0.028321
6M095-A	2.204	0.09	0.037222	625	80	92.332	0.193	0.035	0.023494
6M095-B	2.091	0.082	0.036498	570	610	90.538	0.43	0.12	0.023038
6M097-A	1.66	0.3	0.046247	6500	1.00E+03	93.357	0.236	0.041	0.024042
7M034-B	1.557	0.071	0.027835	168	51	88.963	0.6	0.18	0.027898
7M048-A	0.59	0.033	0.037651	< LOD	81	106.21	0.897	0.05	0.022281
7M048-B	0.618	0.03	0.035741	490	110	100.82	1.225	0.071	0.021151
7M048-C	0.572	0.031	0.038285	310	160	108	1.21	0.11	0.022657
7M051-A	0.58	0.1	0.032526	1570	280	85.451	0.5	0.52	0.03295
7M055-A	0.432	0.029	0.041716	753	98	115.78	0.066	0.018	0.024612
7M055-B	0.386	0.022	0.026438	444	40	85.571	0.15	0.18	0.026289
7M056	0.59	0.032	0.028374	604	58	63.999	0.131	0.093	0.023457
7M063	4.08	0.65	0.042654	4790	430	90.986	0.139	0.041	0.029294
7M066	0.501	0.087	0.048248	3290	440	108.73	0.051	0.036	0.032904
7M069-A	1.2	0.052	0.039543	< LOD	130	117.02	0.416	0.06	0.034339
7M069-B	1.131	0.049	0.030527	235	82	87.799	0.328	0.033	0.023726
7M078-C	0.3	0.11	0.034895	1420	340	103.36	0.274	0.092	0.024908
7M080-A	1.106	0.07	0.032872	349	65	85.467	0.42	0.21	0.0249
7M080-B	1.044	0.063	0.031915	234	48	82.98	0.265	0.08	0.024175
7M089-A	1.46	0.12	0.041978	1420	180	100.06	0.106	0.038	0.031042
7M089-B	1.56	0.13	0.032953	1610	170	78.545	0.101	0.041	0.024368
7M089-C	2.38	0.22	0.033453	3940	300	77.539	0.35	0.13	0.020823
7M098-A	0.341	0.031	0.036561	923	49	101.98	0.281	0.033	0.028319
7M098-B	0.328	0.03	0.03326	943	70	88.206	0.311	0.039	0.021744
7M099-A	0.332	0.031	0.032926	344	45	75.98	0.084	0.03	0.022836
7M099-B	0.296	0.024	0.030862	900	1700	71.218	0.041	0.016	0.021404

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ta	Ta Stdev	Ta LOD	Ti	Ti Stdev	Ti LOD	V	V Stdev	V LOD
6M064-A	0.042	0.03	0.0011647	256.8	5.9	0.11873	32.14	0.62	0.033214
6M064-B	0.0086	0.0027	0.0011909	241.9	4.6	0.12139	31.89	0.62	0.03396
6M071-A	< LOD	0.00077	0.0019418	344.8	7.2	0.080317	1237	15	0.032369
6M071-B	0.00099	0.00099	0.00058447	387.6	7.4	0.089146	1284	17	0.023587
6M074-A	< LOD	0.0005	0.0020973	571.6	7.8	0.10957	695.1	7.3	0.033329
6M074-B	< LOD	0.00061	0.0011893	579	11	0.11243	697.5	8.6	0.031702
6M075-A	0.0007	0.001	0	484	14	0.14573	724.2	5.7	0.045506
6M075-B	0.0024	0.0013	0.0012538	519	21	0.13951	725	10	0.035104
6M080-A	0.0023	0.0019	0.0012499	360	10	0.16451	1868	27	0.047073
6M080-B	0.0016	0.0015	0.001183	340.7	5.9	0.15571	1908	30	0.044556
6M082-B	0.0035	0.0064	0.0025575	579	48	0.13351	2757	43	0.047943
6M087	0.0044	0.003	0	175.5	9	0.1238	65	16	0.055505
6M088-A	< LOD	0.00039	0.0005954	588	10	0.090813	3196	35	0.024028
6M088-B	0.00063	0.00082	0.00055233	633	11	0.084242	3177	53	0.02229
6M095-A	< LOD	0.00099	0.0016681	546	79	0.13499	188.7	2.3	0.033952
6M095-B	< LOD	0.0011	0.0016356	436	22	0.13236	193.2	2.5	0.033292
6M097-A	0.148	0.048	0.0016945	850	170	0.13902	2326	29	0.031587
7M034-B	< LOD	0.00091	0.0010445	352.9	8.8	0.076156	1592	34	0.023477
7M048-A	< LOD	0.00086	0.0012084	1187	23	0.19085	336	12	0.0358
7M048-B	< LOD	0.00044	0.0011471	864	15	0.18117	555	12	0.033984
7M048-C	< LOD	0.0005	0.0012287	1116	22	0.19407	589	10	0.036403
7M051-A	0.0042	0.0022	0.0021993	270.4	7	0.062905	1725	25	0.033344
7M055-A	< LOD	0.00043	0.0015222	708.1	9.7	0.10052	1157	11	0.030778
7M055-B	< LOD	0.00078	0.0011608	675.6	7.1	0.070386	1149	12	0.027594
7M056	< LOD	0.00069	0.0015391	187.3	3.8	0.077463	845.4	7.2	0.022225
7M063	0.006	0.0029	0.00083647	249	39	0.13181	986	18	0.032529
7M066	< LOD	0.0014	0.002153	562	20	0.10682	2069	46	0.04691
7M069-A	0.058	0.011	0.0015175	372.3	8.6	0.14817	30.1	0.41	0.035815
7M069-B	0.0185	0.0043	0.0011072	357.6	7	0.13344	30.69	0.46	0.038491
7M078-C	0.0052	0.0034	0.00068962	209	17	0.12195	936	11	0.046991
7M080-A	0.00063	0.00093	0	346.4	9.4	0.12801	141.1	2.6	0.034563
7M080-B	0.00073	0.00086	0	339.7	6.3	0.12429	137.6	2.1	0.033557
7M089-A	0.0016	0.0016	0.00074572	813	18	0.16692	2630	30	0.032008
7M089-B	< LOD	0.00063	0.0005854	702	18	0.13103	2594	43	0.025126
7M089-C	0.0064	0.0045	0.0013667	800	22	0.072703	2568	51	0.03056
7M098-A	< LOD	0.00072	0.0013017	500	12	0.12558	624.1	6.9	0.046464
7M098-B	0.0067	0.0034	0	470	13	0.1399	584	11	0.037972
7M099-A	< LOD	0.00064	0.0016073	205.2	2.8	0.080631	1192	18	0.026184
7M099-B	< LOD	0.00021	0.0015065	201.8	3.4	0.075577	1187	17	0.024543

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	W	W Stdev	W LOD	Y	Y Stdev	Y LOD	Yb	Yb Stdev	Yb LOD
6M064-A	0.031	0.011	0.007785	0.034	0.01	0.0034035	0.0067	0.0047	0
6M064-B	0.039	0.012	0.0079599	0.0321	0.0078	0.00348	0.0048	0.0039	0
6M071-A	0.002	0.0035	0	< LOD	0.0037	0.0049391	0.0019	0.0027	0
6M071-B	< LOD	0.0065	0.00533	0.0095	0.005	0.0029761	< LOD	0.0011	0.0040826
6M074-A	< LOD	0.0026	0.0063526	< LOD	0.0016	0.0043104	< LOD	0.00094	0.0045882
6M074-B	< LOD	0.0015	0	< LOD	0.0016	0.0027502	< LOD	0.0026	0.0070378
6M075-A	0.061	0.02	0.0069302	0.0234	0.0071	0.0057395	0.027	0.047	0
6M075-B	0.097	0.037	0	0.0217	0.0075	0.0044774	0.0057	0.0044	0.0027066
6M080-A	0.0076	0.0073	0	0.082	0.029	0.0043101	0.0077	0.0062	0
6M080-B	0.0051	0.0055	0	0.0138	0.0069	0.0040796	< LOD	0.0021	0
6M082-B	0.048	0.022	0.01011	0.218	0.088	0.0033873	0.017	0.011	0.0033745
6M087	0.023	0.016	0.0076613	0.166	0.065	0.0086116	0.023	0.016	0.0054295
6M088-A	0.11	0.17	0.0054297	0.0125	0.0067	0.0030318	< LOD	0.0037	0.004159
6M088-B	0.08	0.11	0.0050369	0.033	0.013	0.0028124	< LOD	0.0033	0.003858
6M095-A	0.0239	0.0093	0.0032792	0.0219	0.0066	0.0058509	< LOD	0.0017	0.004323
6M095-B	0.0107	0.0063	0.0032154	0.013	0.0044	0.0057372	< LOD	0.0029	0.004239
6M097-A	0.087	0.063	0	6.4	1.8	0.0037853	1.31	0.32	0.0073326
7M034-B	0.0063	0.0053	0	0.0079	0.0047	0.0070945	0.0012	0.0022	0
7M048-A	0.0104	0.006	0.0027082	0.0142	0.0054	0.0016895	0.004	0.0029	0
7M048-B	< LOD	0.0023	0.0025708	< LOD	0.0016	0.0016038	0.002	0.0023	0
7M048-C	< LOD	0.0035	0.0027538	0.0029	0.002	0.001718	< LOD	0.0012	0
7M051-A	0.089	0.031	0.0064361	2	0.42	0.0026093	0.095	0.029	0
7M055-A	0.0016	0.0025	0	< LOD	0.0017	0.005422	< LOD	0.0035	0.0065871
7M055-B	0.0047	0.0035	0.0036906	< LOD	0.0015	0.0042632	< LOD	0.0017	0.0087313
7M056	0.054	0.099	0.0038802	0.0113	0.0048	0.0019158	< LOD	0.0018	0.0036195
7M063	0.115	0.031	0	1.01	0.36	0.0067707	0.07	0.032	0.0094623
7M066	< LOD	0.0092	0.0094685	0.253	0.059	0.0055987	0.23	0.11	0.0079075
7M069-A	0.109	0.02	0.0062396	0.297	0.036	0.0032191	0.0303	0.0089	0.0058576
7M069-B	0.071	0.013	0	0.279	0.026	0.0048683	0.0227	0.0071	0.0025929
7M078-C	0.155	0.066	0.0071052	0.065	0.031	0.0044207	0.02	0.011	0.0033023
7M080-A	0.018	0.01	0	0.0095	0.0059	0.0074535	< LOD	0.0022	0.0099027
7M080-B	0.016	0.01	0	< LOD	0.0042	0.0072366	< LOD	0.0048	0.0096146
7M089-A	0.057	0.027	0.0037531	0.217	0.078	0.0040426	0.033	0.021	0
7M089-B	0.021	0.013	0.0029462	0.119	0.031	0.0031735	0.052	0.02	0
7M089-C	0.025	0.012	0.0091774	0.173	0.04	0.0042002	0.0232	0.0095	0
7M098-A	< LOD	0.0031	0.0045666	< LOD	0.0024	0.0041973	< LOD	0.0021	0.0030484
7M098-B	0.113	0.028	0.0028957	0.004	0.0028	0.0033685	0.0036	0.0034	0
7M099-A	0.017	0.023	0	< LOD	0.0026	0.0047286	< LOD	0.0043	0.0068436
7M099-B	0.0041	0.0048	0	< LOD	0.0022	0.0044322	< LOD	0.0029	0.0064146

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
6M064-A	53	4.5	0.12902	0.194	0.03	0.0048558
6M064-B	46.5	1.9	0.13191	0.154	0.027	0.0049649
6M071-A	98.6	9.1	0.13306	0.039	0.017	0.0044008
6M071-B	190	110	0.10476	0.148	0.068	0.0057786
6M074-A	298	11	0.18488	0.0031	0.0028	0.0025247
6M074-B	421	20	0.14248	0.0061	0.0035	0.0046495
6M075-A	124	25	0.18071	0.102	0.019	0.0023225
6M075-B	216	24	0.12639	0.128	0.04	0.005748
6M080-A	85.3	3	0.17751	0.055	0.019	0.0069963
6M080-B	80.8	3.6	0.16801	0.0141	0.0093	0.0066221
6M082-B	61.8	2	0.20417	0.24	0.1	0.0082916
6M087	203.1	6.9	0.1504	1.19	0.33	0.0069136
6M088-A	204.1	9.7	0.10672	0.148	0.078	0.0058866
6M088-B	228	12	0.098999	0.297	0.096	0.0054607
6M095-A	62	15	0.20998	0.582	0.069	0
6M095-B	71.3	6.5	0.2059	0.129	0.044	0
6M097-A	64.6	5.9	0.12076	212	71	0.0082343
7M034-B	480	270	0.13419	0.12	0.12	0.0083592
7M048-A	82.6	8	0.12234	0.059	0.017	0.002396
7M048-B	112	12	0.11614	0.0178	0.0064	0.0022745
7M048-C	89.1	5.9	0.1244	0.017	0.0069	0.0024363
7M051-A	231	12	0.11952	11.9	2.5	0.0098509
7M055-A	350	22	0.11369	0.02	0.026	0.0073971
7M055-B	260.1	9.9	0.1144	0.0133	0.0098	0.0058546
7M056	239.2	8.9	0.099558	0.086	0.025	0
7M063	94.8	2.9	0.11692	0.49	0.68	0.0082173
7M066	93	10	0.22305	65	31	0.0061513
7M069-A	17.4	1.8	0.17874	0.343	0.036	0.0066332
7M069-B	33	12	0.15801	0.452	0.034	0.0042165
7M078-C	143.8	6.8	0.11947	3.6	1.6	0.0087178
7M080-A	24.3	2.2	0.14357	0.202	0.035	0.0080078
7M080-B	26.8	1.8	0.1394	0.176	0.035	0.0077748
7M089-A	64.7	4.2	0.14988	1.28	0.92	0.0096163
7M089-B	108	38	0.11765	11.4	4.5	0.0075489
7M089-C	195	50	0.13824	0.97	0.26	0.0034932
7M098-A	475	16	0.14685	0.023	0.029	0.0057457
7M098-B	505	17	0.14267	0.0214	0.0076	0.0040552
7M099-A	185.8	6.1	0.11357	0.043	0.019	0.0044318
7M099-B	188.6	7.6	0.10645	0.0063	0.0045	0.004154

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Site	Type	In	In Stdev	In LOD	Ag	Ag Stdev	Ag LOD
7M105-B	Till 07	Till	0.0115	0.0025	0.001806	0.25	0.49	0.0076472
A535M	F-Zone	BIF	0.047	0.028	0.02993	0.75	0.74	0.068597
A568M1	Tiriganiaq	Hydro	0.02	0.014	0.012875	< LOD	0.034	0.062365
A590M1	Tiriganiaq	Hydro	< LOD	0.011	0.018877	< LOD	0.033	0.059462
A600M3	Pump	BIF	< LOD	0.032	0.053928	< LOD	0.038	0.063738
A602M1	Tiriganiaq	Magmatic	0.022	0.017	0.017903	< LOD	0.028	0.04344
A635M3	Tiriganiaq	Hydro	0.044	0.023	0.040765	< LOD	0.023	0.047303
A650M	F-Zone	Hydro	< LOD	0.018	0.048201	< LOD	0.041	0.07887
A669M1	Discovery	BIF	< LOD	0.019	0.029842	< LOD	0.041	0.074694
A669M2	Discovery	BIF	< LOD	0.016	0.046219	< LOD	0.021	0.047631
M1-2-A	Till 01	Till	0.0146	0.0095	0.0044759	0.41	0.81	0.0083031
M1-2-B	Till 01	Till	0.0076	0.0036	0.0036191	0.034	0.064	0.013857
M2-2	Till 02	Till	< LOD	0.0034	0.0049341	< LOD	0.011	0.019419
M2-6	Till 02	Till	0.0049	0.0032	0.0035894	< LOD	0.0077	0.012295
M472M2	Mustang	Magmatic	0.014	0.012	0.0092443	< LOD	0.046	0.054249
M5-1	Till 05	Till	< LOD	0.0019	0.0043904	< LOD	0.006	0.011655
M529M	Pump	Hydro	< LOD	0.019	0.037657	< LOD	0.045	0.10343
M5-4	Till 05	Till	0.0347	0.0091	0.0046844	< LOD	0.0085	0.013024
M582M2	Tiriganiaq	BIF	0.051	0.02	0.018355	< LOD	0.041	0.054923
M584M2	Tiriganiaq	Hydro	0.077	0.014	0.016737	< LOD	0.021	0.059717
M592M	Tiriganiaq	Metamorphism	< LOD	0.013	0.025154	< LOD	0.023	0.066831
M595M2	Pump	Hydro	0.04	0.016	0.014623	< LOD	0.025	0.061543
M601M2	Tiriganiaq	Hydro	< LOD	0.0093	0.024234	< LOD	0.032	0.04576
M617M1	Tiriganiaq	Magmatic	< LOD	0.0055	0.019235	< LOD	0.019	0.064571
M619M1	Tiriganiaq	Hydro	0.024	0.0047	0.010408	< LOD	0.009	0.030026
M619M2-B	Tiriganiaq	Metamorphism	< LOD	0.0039	0.0094489	< LOD	0.012	0.036519
M623M1	Tiriganiaq	BIF	< LOD	0.011	0.025228	< LOD	0.024	0.046752
M626M	Tiriganiaq	Hydro	< LOD	0.025	0.042171	< LOD	0.02	0.07406
M6-2-A	Till 06	Till	0.0158	0.0079	0.0037628	0.025	0.024	0.015629
M6-4	Till 06	Till	< LOD	0.0036	0.0062897	< LOD	0.013	0.024246
M6-5	Till 06	Till	0.0096	0.004	0.0062781	< LOD	0.0061	0.014345
M651M-A	F-Zone	Metamorphism	< LOD	0.0067	0.0098196	< LOD	0.027	0.05571
M654M	F-Zone	Hydro	< LOD	0.028	0.039399	< LOD	0.049	0.077859
M657M1	Discovery	BIF	< LOD	0.015	0.025391	< LOD	0.029	0.065289
M657M2	Discovery	BIF	< LOD	0.029	0.043978	< LOD	0.04	0.077495
M677M1	Tiriganiaq	BIF	0.0094	0.0036	0.0052168	< LOD	0.0094	0.033496
M677M2-A	Tiriganiaq	BIF	< LOD	0.016	0.025881	< LOD	0.051	0.076706
M6-8	Till 06	Till	0.0144	0.0078	0.005539	0.034	0.024	0.023344
T534M2	F-Zone	BIF	0.027	0.012	0.021637	< LOD	0.027	0.071099
T569M1	Tiriganiaq	BIF	< LOD	0.019	0.038527	< LOD	0.036	0.059157

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Al	Al Stdev	Al LOD	As	As Stdev	As LOD	Bi	Bi Stdev	Bi LOD
7M105-B	2396	29	0.14587	0.218	0.038	0.048385	< LOD	0.012	0.033044
A535M	330	25	1.0093	2.7	1.4	0.64102	0.49	0.16	0.13713
A568M1	384	22	0.80235	5.93	0.87	1.2481	< LOD	0.05	0.1163
A590M1	707	39	0.9162	10.5	4.7	2.6894	< LOD	0.062	0.12138
A600M3	1250	240	1.2888	2.23	0.69	0.6031	< LOD	0.12	0.17873
A602M1	2760	460	0.92014	1.24	0.38	0.528	< LOD	0.06	0.10453
A635M3	629	44	0.75663	5.17	0.77	0.40138	< LOD	0.057	0.10592
A650M	700	39	0.93355	14.2	1.6	0.37628	< LOD	0.068	0.15347
A669M1	319	15	1.0124	< LOD	0.28	0.47741	< LOD	0.21	0.14894
A669M2	931	41	0.83207	44.3	4	0.34317	< LOD	0.062	0.11926
M1-2-A	2500	180	0.19254	0.74	0.13	0.10378	< LOD	0.017	0.040663
M1-2-B	2180	120	0.19508	1.64	0.15	0.087146	0.19	0.067	0.042008
M2-2	815	93	0.29627	0.37	0.13	0.1211	< LOD	0.033	0.056347
M2-6	818	32	0.21907	0.257	0.073	0.10361	< LOD	0.024	0.049442
M472M2	1640	110	0.92552	< LOD	0.18	0.35351	< LOD	0.046	0.10664
M5-1	1480	440	0.2249	< LOD	0.061	0.12382	< LOD	0.025	0.046668
M529M	835	53	1.8365	6.7	1.4	0.56473	< LOD	0.093	0.22987
M5-4	5970	330	0.26441	0.349	0.085	0.11483	< LOD	0.034	0.068882
M582M2	1260	120	0.80902	1.29	0.44	0.58656	< LOD	0.059	0.085404
M584M2	904	36	0.96305	0.44	0.15	0.2816	< LOD	0.04	0.11169
M592M	712	30	0.70034	0.67	0.19	0.3354	< LOD	0.048	0.11759
M595M2	5580	560	0.82373	0.5	0.21	0.33472	< LOD	0.039	0.0971
M601M2	444	27	1.1931	0.4	0.26	0.33152	< LOD	0.068	0.13702
M617M1	589	22	0.92942	< LOD	0.14	0.34159	< LOD	0.04	0.10532
M619M1	880	44	0.58338	0.669	0.099	0.21325	< LOD	0.017	0.063082
M619M2-B	1033	28	0.63657	0.66	0.16	0.25402	< LOD	0.02	0.071839
M623M1	2070	480	0.82755	1	0.26	0.43526	< LOD	0.058	0.1323
M626M	534	35	1.1571	< LOD	0.35	0.61501	< LOD	0.11	0.18555
M6-2-A	2590	300	0.21669	0.357	0.08	0.10327	< LOD	0.016	0.042719
M6-4	2530	510	0.31539	1.59	0.42	0.10832	< LOD	0.031	0.055604
M6-5	370.2	3.3	0.23298	< LOD	0.047	0.1108	< LOD	0.02	0.051366
M651M-A	930	54	1.0653	2.37	0.37	0.35407	< LOD	0.045	0.09621
M654M	539	30	1.091	1.02	0.37	0.5721	< LOD	0.083	0.14862
M657M1	1064	54	0.71165	4.5	1.3	0.49892	< LOD	0.07	0.13304
M657M2	1043	84	1.2282	1.54	0.79	0.59342	< LOD	0.082	0.19647
M677M1	915	45	0.59467	0.268	0.083	0.24585	< LOD	0.018	0.064547
M677M2-A	808	60	1.4974	1.14	0.53	0.4504	< LOD	0.098	0.1786
M6-8	1360	170	0.33564	1.93	0.42	0.13954	0.189	0.061	0.068713
T534M2	737	31	1.0196	1.65	0.26	0.33288	< LOD	0.04	0.12183
T569M1	245	13	0.87111	< LOD	0.22	0.50006	< LOD	0.074	0.14543

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ca	Ca Stdev	Ca LOD	Cd	Cd Stdev	Cd LOD	Co	Co Stdev	Co LOD
7M105-B	21.2	4.5	7.9007	< LOD	0.013	0.031872	4.31	0.11	0.010707
A535M	< LOD	30	50.606	0.41	0.35	0.11975	2.01	0.43	0.057343
A568M1	< LOD	18	34.135	< LOD	0.063	0.095866	0.488	0.071	0.036195
A590M1	82	68	39.526	< LOD	0.083	0.21206	0.076	0.036	0.03403
A600M3	< LOD	35	58.001	< LOD	0.0044	0.20419	0.37	0.1	0.059601
A602M1	2790	520	38.714	< LOD	0.093	0.13348	21.44	0.57	0.042742
A635M3	122	73	39.888	< LOD	0.075	0.13092	0.099	0.033	0.02975
A650M	< LOD	20	37.491	< LOD	0.072	0.13992	1.34	0.12	0.048674
A669M1	< LOD	20	40.261	< LOD	0.092	0.188	0.117	0.05	0.048587
A669M2	< LOD	15	39.65	< LOD	0.074	0.13187	0.209	0.04	0.031574
M1-2-A	30.6	5	8.6177	< LOD	0.021	0.031182	9.47	0.22	0.010757
M1-2-B	39	18	6.9096	< LOD	0.015	0.026159	9.69	0.21	0.0093721
M2-2	72	27	9.9248	< LOD	0.025	0.040213	47.9	1.3	0.012448
M2-6	23.8	4.5	6.8733	< LOD	0.011	0.024669	7.02	0.23	0.01285
M472M2	47	15	27.645	< LOD	0.065	0.12701	28.75	0.8	0.060125
M5-1	73	60	8.4885	< LOD	0.02	0.022888	61.3	1.4	0.00953
M529M	123	59	74.068	< LOD	0.14	0.41434	3.39	0.29	0.12582
M5-4	619	99	9.547	< LOD	0.016	0.032788	36.4	1	0.012455
M582M2	489	60	36.053	< LOD	0.064	0.13949	3.95	0.22	0.031477
M584M2	55	20	33.435	< LOD	0.043	0.18045	9.29	0.2	0.051554
M592M	210	100	36.573	< LOD	0.048	0.053955	64.8	1.2	0.036858
M595M2	5920	640	28.346	< LOD	0.039	0.10539	42.2	0.89	0.05662
M601M2	< LOD	64	42.125	< LOD	0.069	0.18661	11.37	0.42	0.074196
M617M1	192	49	34.856	< LOD	0.037	0.12895	23.04	0.37	0.054624
M619M1	830	110	21.504	< LOD	0.021	0.091812	5.794	0.098	0.037891
M619M2-B	28	15	20.084	< LOD	0.022	0.11025	10.38	0.17	0.041929
M623M1	650	220	36.994	< LOD	0.063	0.1104	1.73	0.1	0.041976
M626M	< LOD	26	46.327	< LOD	0.089	0.24592	49.1	4.7	0.057657
M6-2-A	1450	250	7.7433	0.052	0.037	0.02517	40.65	0.98	0.011934
M6-4	183	48	9.2865	< LOD	0.029	0.052139	33.7	1.2	0.011955
M6-5	31	11	7.6632	< LOD	0.012	0.051423	5.78	0.13	0.0097316
M651M-A	300	240	32.09	< LOD	0.068	0.10872	15.56	0.44	0.059781
M654M	< LOD	22	44.833	0.054	0.077	0	1.07	0.15	0.046462
M657M1	145	25	43.381	< LOD	0.061	0.12983	0.72	0.26	0.048034
M657M2	< LOD	42	48.753	< LOD	0.0018	0.13272	0.39	0.099	0.059216
M677M1	990	170	22.812	< LOD	0.022	0.048413	0.783	0.037	0.03337
M677M2-A	51	33	50.249	< LOD	0.095	0.17424	0.88	0.14	0.10193
M6-8	141	71	9.8045	< LOD	0.033	0.056172	3.46	0.16	0.017594
T534M2	< LOD	14	42.373	0.082	0.059	0.075016	0.544	0.066	0.076646
T569M1	< LOD	21	42.433	< LOD	0.037	0.099807	0.48	0.068	0.05111

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Cr	Cr Stdev	Cr LOD	Cu	Cu Stdev	Cu LOD	Eu	Eu Stdev	Eu LOD
7M105-B	194.1	2.4	0.74028	1.3	1.9	0.10227	< LOD	0.0015	0.0037563
A535M	275	13	5.219	500	120	0.42461	< LOD	0.011	0.018093
A568M1	242	5.4	4.5437	9.6	1.6	0.3719	< LOD	0.007	0.01021
A590M1	268.7	8.3	3.8869	1.71	0.75	0.47877	< LOD	0.0058	0.018607
A600M3	321	15	6.4297	22.9	5.4	0.60706	< LOD	0.014	0.011407
A602M1	328	11	5.4736	1.28	0.31	0.39388	0.095	0.037	0.018919
A635M3	284.1	6.3	4.1555	21.9	2.5	0.35361	0.0123	0.0099	0
A650M	304.9	8.1	4.8108	20.1	2.5	0.3787	< LOD	0.02	0.019589
A669M1	307.9	8.6	4.9706	< LOD	0.21	0.52373	< LOD	0.0045	0.014456
A669M2	359	10	4.7366	17.2	2	0.35588	< LOD	0.0053	0.020551
M1-2-A	544	10	1.1587	4.25	0.8	0.067345	0.0063	0.0029	0.0028983
M1-2-B	538.4	8.2	1.1506	4.73	0.56	0.063056	0.0074	0.0026	0.0018627
M2-2	396.6	9.6	1.6282	5.4	1.4	0.088474	0.0238	0.0094	0
M2-6	275	6.2	1.3833	3.39	0.59	0.094943	< LOD	0.0017	0.0035216
M472M2	232.8	6.9	4.6292	10.9	2	0.52064	< LOD	0.0029	0.01662
M5-1	237.9	3.5	1.5258	1.4	0.43	0.089503	< LOD	0.0027	0.0074521
M529M	193.6	8.5	7.9656	43.1	5.1	0.9711	< LOD	0.015	0.020374
M5-4	18770	290	1.715	4.48	0.71	0.10477	0.052	0.011	0.0055764
M582M2	227.4	7.2	3.6922	13.6	2.1	0.51191	0.148	0.051	0.020874
M584M2	215.5	3.9	4.3535	12.5	1.7	0.57105	0.085	0.036	0.015952
M592M	395	22	4.5462	8.4	2	0.42758	< LOD	0.0032	0.011462
M595M2	212.2	5.3	3.6202	20.6	2.2	0.47569	0.101	0.029	0.015181
M601M2	288.8	9.6	4.2809	22.9	3.5	0.75702	< LOD	0.0072	0.034121
M617M1	368	9.5	3.7876	11.9	1.1	0.64306	< LOD	0.0087	0.024136
M619M1	195.5	2.3	2.711	14.25	0.74	0.32484	0.054	0.011	0.0043461
M619M2-B	388.8	7.2	2.8426	10.3	1.9	0.33726	< LOD	0.0031	0.0070454
M623M1	302.5	7.1	4.5908	5.69	0.82	0.51102	< LOD	0.0057	0.010127
M626M	590	20	5.5924	2.2	1.5	0.48345	< LOD	0.0077	0.021181
M6-2-A	255.8	3.6	1.3689	10.1	1.6	0.085584	0.152	0.04	0.0015875
M6-4	205.6	5.8	1.7039	16.2	3.6	0.10884	0.03	0.013	0.0036885
M6-5	205.1	3.9	1.4643	0.9	0.27	0.071548	< LOD	0.0023	0.0045995
M651M-A	250	10	3.7665	5.57	0.83	0.46497	< LOD	0.0072	0.015897
M654M	308.8	8.5	5.6148	21.4	5.2	0.41986	< LOD	0.016	0.015423
M657M1	315	11	4.9188	61	11	0.51035	0.042	0.015	0.015727
M657M2	306	13	6.8428	3.4	2.2	0.49087	< LOD	0.0069	0.015999
M677M1	196.3	2.7	2.78	12.15	0.78	0.27023	0.411	0.088	0.0099415
M677M2-A	209.6	9.7	6.165	20.9	3	0.93103	< LOD	0.016	0.035032
M6-8	210	10	1.7067	11.6	2	0.093481	0.071	0.022	0.005009
T534M2	209.8	5	4.4452	12.2	1.4	0.59513	< LOD	0.0076	0.012946
T569M1	288.7	8	4.897	< LOD	0.21	0.43166	< LOD	0.0056	0.013175

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Ge	Ge Stdev	Ge LOD	Hf	Hf Stdev	Hf LOD
7M105-B	10.52	0.33	0.023522	5.59	0.14	0.057893	0.0061	0.0029	0.0017805
A535M	2.04	0.29	0.13754	1.98	0.67	0.35417	< LOD	0.022	0.028987
A568M1	6.22	0.44	0.065646	3.95	0.4	0.26647	< LOD	0.00018	0.010421
A590M1	9.34	0.58	0.074036	2.63	0.41	0.29122	< LOD	0.014	0.023432
A600M3	7.27	0.79	0.19274	3.32	0.71	0.42327	0.071	0.059	0.026765
A602M1	11.89	0.97	0.1322	1.76	0.29	0.28516	0.97	0.55	0
A635M3	17.35	0.79	0.09943	4.34	0.43	0.24386	0.01	0.012	0.008158
A650M	26.7	1.2	0.11394	1.7	0.32	0.30226	2.31	0.62	0
A669M1	12.32	0.71	0.11425	1.9	0.3	0.33292	< LOD	0.011	0.010711
A669M2	22.38	0.91	0.09277	6.19	0.5	0.26634	< LOD	0.0074	0.0089736
M1-2-A	32.81	0.66	0.023997	3.65	0.15	0.069179	0.067	0.018	0
M1-2-B	33.99	0.71	0.022671	4.04	0.18	0.063491	0.128	0.017	0
M2-2	33.04	0.97	0.039237	0.686	0.098	0.093622	0.86	0.44	0.0032914
M2-6	28	1	0.031443	2.36	0.18	0.063694	0.0108	0.007	0.0041083
M472M2	85.4	4	0.1097	2.6	0.32	0.24808	0.3	0.17	0.021207
M5-1	40.3	1.2	0.037098	0.649	0.092	0.075329	0.0085	0.0076	0.0078839
M529M	29.4	1.9	0.27813	5.41	0.7	0.66416	0.025	0.031	0
M5-4	39.7	2.1	0.042694	1.12	0.12	0.085552	0.023	0.011	0.0038125
M582M2	9.51	0.58	0.11288	7.36	0.65	0.26021	0.92	0.23	0
M584M2	21.37	0.62	0.12572	7.01	0.35	0.19628	0.2	0.097	0
M592M	16.3	0.63	0.091772	0.46	0.15	0.20386	0.011	0.011	0
M595M2	26.3	1.1	0.083679	1.63	0.22	0.20919	0.027	0.019	0.014739
M601M2	50.9	6.4	0.17938	3.47	0.41	0.28985	0.77	0.36	0.0256
M617M1	13.12	0.5	0.11251	0.96	0.14	0.24551	0.65	0.21	0.011713
M619M1	9.47	0.23	0.058673	20.17	0.6	0.16849	0.0019	0.0023	0
M619M2-B	17.75	0.5	0.062988	2.74	0.14	0.13711	1.82	0.22	0.012098
M623M1	8.59	0.43	0.11516	10.23	0.58	0.26257	0.62	0.26	0.011748
M626M	19.1	1.5	0.087728	1.49	0.3	0.326	0.008	0.012	0
M6-2-A	31.97	0.76	0.024098	0.924	0.079	0.060429	0.74	0.29	0
M6-4	37.5	1.2	0.041125	0.576	0.081	0.073592	0.019	0.011	0.0050249
M6-5	8.07	0.25	0.032143	3.87	0.22	0.067011	0.0016	0.0019	0
M651M-A	37.6	1.7	0.086288	2.51	0.31	0.22506	2.39	0.8	0.019209
M654M	54.1	2.2	0.086415	4.21	0.48	0.27865	< LOD	0.0065	0.022863
M657M1	6.73	0.37	0.10789	6.68	0.41	0.29954	0.257	0.066	0.025945
M657M2	6.95	0.75	0.14149	6.7	1.1	0.2842	< LOD	0.0001	0
M677M1	12.47	0.34	0.055052	7.13	0.25	0.13702	1.2	0.17	0.01005
M677M2-A	13	1.3	0.17609	6.68	0.9	0.47728	< LOD	0.014	0.027986
M6-8	44.2	1.7	0.051721	4.63	0.3	0.080214	0.022	0.015	0.0058435
T534M2	7.59	0.38	0.1226	3.22	0.27	0.26595	< LOD	0.0086	0.029005
T569M1	2.74	0.26	0.12755	4.67	0.56	0.31353	< LOD	0.0055	0.017011

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	K	K Stdev	K LOD	Mg	Mg Stdev	Mg LOD	Mn	Mn Stdev	Mn LOD
7M105-B	29.9	2.5	5.1941	148	14	0.0077514	372.9	4.9	0.2811
A535M	< LOD	13	28.359	63.1	7.8	0.053898	591	18	1.4549
A568M1	< LOD	9	18.229	188	51	0.039118	392.4	4.7	1.1045
A590M1	< LOD	14	23.941	66	33	0.035078	385.2	8.9	1.4236
A600M3	< LOD	21	32.709	715	95	0.081277	629	12	2.0818
A602M1	< LOD	12	26.66	152	37	0.041566	646.2	9.4	1.2589
A635M3	< LOD	10	21.53	167	42	0.033452	504	27	1.0957
A650M	< LOD	12	24.148	39.6	7	0.032115	642	27	1.2008
A669M1	< LOD	15	26.094	20.8	4.2	0.040573	433.4	7.2	1.4437
A669M2	< LOD	10	21.598	23.1	1.2	0.039252	484.8	5	1.0602
M1-2-A	< LOD	3.7	5.4497	380	67	0.01037	626	12	0.28863
M1-2-B	< LOD	2.3	5.1194	322	38	0.010074	610.3	8.5	0.26059
M2-2	< LOD	3.3	8.3611	242	78	0.013799	1035	18	0.3444
M2-6	< LOD	9.5	9.1633	162	15	0.014488	799	22	0.30509
M472M2	< LOD	17	34.254	126	18	0.050138	554	24	1.3645
M5-1	37	84	7.9804	59	10	0.012288	1050	42	0.40225
M529M	< LOD	41	60.797	27.7	5.2	0.12729	336.5	4.9	2.1938
M5-4	< LOD	12	9.0647	1408	90	0.013701	2380	100	0.3493
M582M2	< LOD	20	21.502	1840	250	0.041316	404.3	6.1	1.2111
M584M2	< LOD	16	42.65	121	21	0.073045	514.9	4.4	1.3258
M592M	< LOD	10	20.613	106.8	5.5	0.030853	736	12	0.99448
M595M2	< LOD	12	23.296	106	9.3	0.050519	526.6	7.8	1.1526
M601M2	< LOD	20	53.092	57.2	6.8	0.077469	537	29	1.5483
M617M1	< LOD	16	42.62	87.8	8.8	0.058321	645.5	5.1	1.2754
M619M1	< LOD	7.2	21.943	553	24	0.035449	802.9	6.2	0.91524
M619M2-B	< LOD	6.9	22.294	83.8	3.4	0.038569	677.5	5	0.82651
M623M1	< LOD	12	22.423	430	130	0.046035	485.8	5.6	1.1307
M626M	< LOD	19	34.052	30.3	2.2	0.056295	771	17	1.6942
M6-2-A	< LOD	3.3	7.094	920	180	0.01056	932	18	0.27954
M6-4	< LOD	14	9.8629	1060	250	0.018167	874	17	0.37043
M6-5	< LOD	3.3	8.3585	61.1	5.2	0.012441	823.8	7.1	0.29999
M651M-A	< LOD	13	31.795	47.4	2.9	0.045799	466	13	1.1724
M654M	< LOD	13	30.675	86	11	0.041439	626.1	9.5	1.509
M657M1	< LOD	19	25.671	255	28	0.037381	482.4	8.7	1.0862
M657M2	< LOD	22	32.38	70.8	9.7	0.061168	483	10	1.7078
M677M1	< LOD	9	21.255	262	35	0.033859	474	20	0.92724
M677M2-A	< LOD	27	62.164	10.8	2.4	0.08043	377.6	5.7	1.8939
M6-8	131	40	10.401	237	55	0.018318	729	15	0.45082
T534M2	< LOD	15	41.192	33.4	3.1	0.053458	472.9	4.2	1.4857
T569M1	< LOD	12	28.221	44.7	3.2	0.051522	468	10	1.3695

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Mo	Mo Stdev	Mo LOD	Nb	Nb Stdev	Nb LOD	Ni	Ni Stdev	Ni LOD
7M105-B	0.276	0.04	0.037702	2.05	0.38	0.0045607	12.54	0.35	0.066941
A535M	< LOD	0.31	0.30074	< LOD	0.026	0.036555	5.09	0.88	0.29017
A568M1	< LOD	0.077	0.22238	< LOD	0.015	0.030493	6.3	1.4	0.16621
A590M1	< LOD	0.14	0.26217	< LOD	0.025	0.044674	0.67	0.28	0.25969
A600M3	< LOD	0.3	0.32943	0.226	0.071	0.032415	1.55	0.52	0.34393
A602M1	< LOD	0.1	0.21436	< LOD	0.017	0.026777	34.6	1.4	0.21447
A635M3	< LOD	0.085	0.18379	0.105	0.036	0.022719	0.74	0.2	0.21118
A650M	< LOD	0.11	0.19216	< LOD	0.015	0.02205	21.5	1.1	0.26692
A669M1	< LOD	0.12	0.23401	< LOD	0.021	0.045819	0.52	0.16	0.26161
A669M2	< LOD	0.13	0.2301	< LOD	0.012	0.027344	0.51	0.2	0.24848
M1-2-A	0.17	0.14	0.055236	1.527	0.077	0.0063132	35.14	0.85	0.057308
M1-2-B	< LOD	0.026	0.057188	0.762	0.079	0.0070389	36.49	0.83	0.062043
M2-2	0.142	0.064	0.062622	0.084	0.027	0.0055648	50.3	1.6	0.059178
M2-6	0.11	0.13	0.050836	0.022	0.0095	0.010695	18.74	0.59	0.065397
M472M2	< LOD	0.14	0.21386	< LOD	0.019	0.028767	9.41	0.71	0.27452
M5-1	< LOD	0.034	0.063346	< LOD	0.0034	0.006906	48.7	1.3	0.083604
M529M	< LOD	0.24	0.49509	< LOD	0.038	0.065138	4.41	0.66	0.70253
M5-4	6.75	0.46	0.071636	0.038	0.011	0.010153	355.4	7.2	0.058239
M582M2	0.26	0.18	0.22441	0.102	0.034	0.037694	19.9	1.2	0.24742
M584M2	< LOD	0.089	0.24505	< LOD	0.014	0.037933	28.23	0.92	0.30929
M592M	< LOD	0.09	0.19197	0.042	0.023	0.01444	174.4	3.7	0.18796
M595M2	< LOD	0.095	0.21433	0.033	0.017	0.020446	49.1	1.7	0.25806
M601M2	< LOD	0.16	0.25526	< LOD	0.026	0.046565	19.4	1.3	0.41616
M617M1	< LOD	0.088	0.15203	0.215	0.058	0.030786	48.4	1.1	0.2694
M619M1	< LOD	0.039	0.11841	0.0358	0.0085	0.021815	6.39	0.21	0.18148
M619M2-B	< LOD	0.046	0.12722	< LOD	0.0067	0.019601	55.28	0.82	0.20367
M623M1	< LOD	0.087	0.26653	0.103	0.031	0.018606	6.6	2.3	0.17433
M626M	< LOD	0.16	0.28171	< LOD	0.017	0.042922	111.1	4.1	0.31386
M6-2-A	< LOD	0.027	0.056019	0.029	0.011	0.0058895	96.6	5.8	0.08227
M6-4	0.081	0.052	0.076171	0.074	0.023	0.006589	38.4	2	0.067976
M6-5	< LOD	0.03	0.05519	< LOD	0.0032	0.006657	2	0.24	0.068129
M651M-A	< LOD	0.11	0.25238	0.022	0.017	0.020084	69.4	2	0.29273
M654M	0.34	0.24	0.29962	0.068	0.029	0.034417	4.4	2.2	0.37221
M657M1	< LOD	0.17	0.25189	0.061	0.022	0.038958	5.7	2.6	0.27518
M657M2	< LOD	0.23	0.33922	< LOD	0.022	0.040279	2.41	0.61	0.32907
M677M1	< LOD	0.044	0.12441	0.118	0.02	0.013798	1.49	0.59	0.17469
M677M2-A	< LOD	0.16	0.38238	< LOD	0.03	0.040898	0.9	0.4	0.51996
M6-8	0.17	0.1	0.088488	0.6	0.68	0.010064	3.7	1.3	0.083395
T534M2	< LOD	0.14	0.27238	< LOD	0.01	0.035597	1.29	0.25	0.336
T569M1	< LOD	0.14	0.29537	< LOD	0.016	0.038648	1.84	0.35	0.22933

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	P	P Stdev	P LOD	Pb	Pb Stdev	Pb LOD	Sb	Sb Stdev	Sb LOD
7M105-B	< LOD	1.4	2.9065	11.7	1.2	0.0060676	0.097	0.096	0.031683
A535M	29	21	12.559	11.1	5.6	0.027021	0.4	0.18	0.24913
A568M1	13	13	10.707	9.1	1.2	0.034675	< LOD	0.11	0.19141
A590M1	< LOD	14	13.238	0.258	0.083	0.026101	< LOD	0.089	0.19838
A600M3	< LOD	19	14.742	3.94	0.86	0.041431	2.67	0.5	0.29243
A602M1	< LOD	16	11.108	4.84	0.49	0.027012	0.3	0.14	0.17127
A635M3	< LOD	8.9	10.602	< LOD	2	20.433	0.168	0.082	0.14995
A650M	14.5	9.5	11.524	7.49	0.76	0.029534	< LOD	0.1	0.17388
A669M1	< LOD	11	11.354	< LOD	0.026	0.033257	< LOD	0.11	0.22582
A669M2	< LOD	8.4	8.763	5.47	0.53	0.032826	< LOD	0.07	0.14894
M1-2-A	11.6	2.2	3.755	9.3	1.4	0.0075939	< LOD	0.036	0.049408
M1-2-B	19.1	1.9	2.7784	9.44	0.68	0.0049622	0.078	0.055	0.044692
M2-2	5.7	2.3	3.6152	12.3	2.6	0.0039807	0.077	0.039	0.052154
M2-6	7.5	2	3.5542	8	1.9	0.0069835	< LOD	0.03	0.051686
M472M2	< LOD	6.3	9.1659	7.27	0.76	0.023349	< LOD	0.059	0.11225
M5-1	6.4	2.1	3.6473	7.9	2	0.0077534	< LOD	0.032	0.063561
M529M	< LOD	13	16.062	10.4	1.2	0.025358	< LOD	0.12	0.35223
M5-4	7.7	2.2	4.2553	10.8	4.9	0.011009	< LOD	0.038	0.084664
M582M2	< LOD	13	10.843	2.06	0.21	0.025924	0.43	0.18	0.21496
M584M2	18.3	6.1	8.7654	5.4	0.32	0.025736	0.156	0.057	0.10321
M592M	< LOD	7.1	10.112	4.2	1.1	0.042881	< LOD	0.068	0.20648
M595M2	< LOD	5.9	9.2055	4.9	0.44	0.020145	2.58	0.25	0.10645
M601M2	< LOD	9.7	10.771	9.9	2	0.020895	< LOD	0.1	0.16329
M617M1	14	11	10.249	4.05	0.25	0.015351	0.165	0.067	0.16028
M619M1	359	57	6.7607	4.62	0.18	0.010444	0.16	0.033	0.086038
M619M2-B	9.5	6.8	6.7526	3.45	0.14	0.0084309	< LOD	0.027	0.078702
M623M1	< LOD	10	9.8796	5.66	0.4	0.03905	< LOD	0.085	0.1941
M626M	< LOD	14	13.544	0.28	0.23	0.048651	< LOD	0.11	0.24467
M6-2-A	< LOD	1.9	4.4911	13.4	1.8	0.004713	< LOD	0.024	0.04747
M6-4	7.7	2.3	3.762	15.3	5.1	0.0085414	1	1.9	0.071303
M6-5	5.4	1.7	3.4278	5.8	1.3	0.0052132	< LOD	0.083	0.053079
M651M-A	129	87	8.9953	4.72	0.46	0.019374	< LOD	0.054	0.12706
M654M	16	12	11.582	1.94	0.54	0.038709	0.71	0.18	0.19561
M657M1	< LOD	8.8	8.9318	17	1.1	0.043151	0.47	0.16	0.19008
M657M2	< LOD	15	14.134	1.04	0.39	0.036573	< LOD	0.21	0.28139
M677M1	< LOD	2.6	7.0415	3.99	0.16	0.013605	0.236	0.059	0.077055
M677M2-A	< LOD	11	15.791	8.39	0.94	0.029294	< LOD	0.11	0.18354
M6-8	9	3.9	4.4144	3.78	0.41	0.0068885	0.092	0.051	0.071448
T534M2	< LOD	5.8	9.9058	4.7	0.37	0.022031	< LOD	0.07	0.1639
T569M1	< LOD	10	10.259	0.041	0.024	0.022028	< LOD	0.099	0.16993

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Si	Si Stdev	Si LOD	Sn	Sn Stdev	Sn LOD
7M105-B	0.081	0.016	0.033676	220	100	104.41	1.29	0.054	0.021528
A535M	< LOD	0.15	0.22873	< LOD	670	631.11	3.49	0.42	0.20752
A568M1	0.332	0.099	0.19693	5010	800	475.22	4.25	0.36	0.16711
A590M1	0.6	0.13	0.21557	< LOD	510	615.35	0.35	0.11	0.17753
A600M3	0.74	0.23	0.36049	2450	650	668.51	2.72	0.57	0.24183
A602M1	5.16	0.77	0.17705	2300	1.10E+03	579.09	< LOD	0.1	0.17293
A635M3	1.32	0.19	0.18775	2590	830	457.96	4.1	1.2	3.0497
A650M	2.79	0.25	0.21681	870	270	526.18	< LOD	0.1	0.20526
A669M1	0.53	0.14	0.21207	< LOD	360	528.86	0.21	0.098	0.14035
A669M2	0.61	0.12	0.19095	< LOD	260	456.7	< LOD	0.08	0.17105
M1-2-A	1.214	0.058	0.044636	2060	220	102.16	0.248	0.028	0.036976
M1-2-B	0.988	0.056	0.040217	2710	150	81.184	0.22	0.024	0.020907
M2-2	0.56	0.14	0.046718	1590	290	98.889	0.46	0.34	0.037431
M2-6	0.357	0.038	0.037718	1343	81	97.03	0.144	0.048	0.031534
M472M2	0.59	0.13	0.15206	< LOD	200	295.85	< LOD	0.057	0.083558
M5-1	0.287	0.035	0.042103	2800	1.20E+03	114.3	0.26	0.11	0.04067
M529M	< LOD	0.19	0.28672	< LOD	320	533.41	6.14	0.69	0.18786
M5-4	2.1	0.14	0.044849	3700	280	123.78	5.09	0.41	0.038679
M582M2	1.86	0.3	0.19164	6400	1.40E+03	541.6	6.67	0.64	0.13613
M584M2	1.39	0.1	0.16315	900	150	286.49	13.65	0.58	0.067582
M592M	0.236	0.089	0.18195	< LOD	280	518.51	0.82	0.14	0.15018
M595M2	22	2.2	0.15957	8750	910	270.21	0.166	0.057	0.079765
M601M2	1	0.18	0.19133	< LOD	220	339.97	0.217	0.086	0.10514
M617M1	< LOD	0.073	0.16168	790	130	286.01	< LOD	0.031	0.06681
M619M1	3.52	0.11	0.10797	1310	180	208.07	0.12	0.023	0.048282
M619M2-B	2.31	0.1	0.10613	< LOD	70	181.87	0.061	0.023	0.051155
M623M1	0.51	0.11	0.21096	2760	580	503.54	0.344	0.09	0.17009
M626M	0.86	0.19	0.2656	< LOD	440	643.95	< LOD	0.13	0.18779
M6-2-A	1.33	0.21	0.040529	3840	520	111.4	0.82	0.35	0.034523
M6-4	0.376	0.048	0.047622	4150	910	107.92	0.16	0.14	0.036212
M6-5	< LOD	0.016	0.038944	946	66	87.363	0.38	0.11	0.029175
M651M-A	2.6	0.23	0.12724	1680	160	235.55	0.6	0.12	0.074764
M654M	0.27	0.13	0.26146	2830	480	516.34	6.83	0.64	0.19315
M657M1	0.8	0.12	0.20533	1450	540	549.26	0.42	0.11	0.18238
M657M2	0.82	0.22	0.28271	1100	480	582.39	0.25	0.27	0.21488
M677M1	0.359	0.05	0.11237	510	280	218.66	0.353	0.037	0.061231
M677M2-A	< LOD	0.17	0.23546	< LOD	270	432.75	0.38	0.16	0.1601
M6-8	0.233	0.063	0.044155	7400	2.00E+03	118.69	0.239	0.058	0.04649
T534M2	0.371	0.088	0.16995	< LOD	200	273.67	4.38	0.28	0.12142
T569M1	< LOD	0.11	0.20337	< LOD	350	482.99	2.71	0.26	0.16914

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Ta	Ta Stdev	Ta LOD	Ti	Ti Stdev	Ti LOD	V	V Stdev	V LOD
7M105-B	0.374	0.064	0.0011495	1061.1	9.7	0.11588	20.39	0.3	0.03523
A535M	< LOD	0.00016	0.009433	151.2	9.7	0.58991	38	1.5	0.19454
A568M1	< LOD	0.0042	0.0099027	61.3	3.2	0.39392	49.6	1.3	0.13821
A590M1	0.0024	0.0036	0	190.3	8.8	0.56707	187	6.2	0.14692
A600M3	0.025	0.016	0.016168	426	27	0.66113	35.7	2.1	0.19088
A602M1	< LOD	0.0037	0.007496	242.3	9.7	0.42788	3295	74	0.13772
A635M3	< LOD	0.0043	0.0053752	639	19	0.37621	699	13	0.12177
A650M	< LOD	0.0028	0.0060093	329	14	0.62578	3520	87	0.14711
A669M1	< LOD	0.0016	0.0040886	608	20	0.46516	240.6	6.2	0.15806
A669M2	< LOD	0.0042	0.0059102	1100	36	0.41683	262	11	0.11636
M1-2-A	0.307	0.017	0.00067574	661	11	0.12985	173.8	2.4	0.030152
M1-2-B	0.136	0.017	0.0014735	616.7	9.5	0.12089	182	2.4	0.027469
M2-2	< LOD	0.0018	0.002793	648	58	0.12829	2219	40	0.03629
M2-6	< LOD	0.0013	0.0015836	171.7	4.7	0.097336	204.4	3.3	0.030529
M472M2	< LOD	0.0038	0.0042412	1207	51	0.58549	3150	160	0.14533
M5-1	< LOD	0.000014	0.0015152	614	11	0.11563	2863	45	0.036114
M529M	< LOD	0.006	0.012928	576	30	1.3999	387	11	0.31971
M5-4	< LOD	0.000021	0.0026947	8940	520	0.16479	1374	34	0.038812
M582M2	< LOD	0.0046	0.005127	996	39	0.48227	90.4	4	0.15676
M584M2	0.0085	0.0037	0.0054458	974	21	0.69505	79.7	2.3	0.15953
M592M	< LOD	0.0015	0.0032414	253	18	0.51226	1800	40	0.11187
M595M2	< LOD	0.0037	0.0034741	548	46	0.44693	3284	68	0.12358
M601M2	< LOD	0.0038	0.0075319	336	16	0.73314	1279	34	0.17183
M617M1	0.0206	0.0076	0.010483	485	42	0.50005	1720	27	0.13629
M619M1	0.0143	0.0031	0.0033874	177.6	3.3	0.28335	55.12	0.65	0.092453
M619M2-B	< LOD	0.0014	0.0029614	330.7	7	0.41084	2441	34	0.11161
M623M1	0.024	0.012	0.0094812	912	26	0.43188	80.2	2.3	0.12779
M626M	0.0013	0.0039	0	83.5	6.1	0.49063	3860	130	0.1488
M6-2-A	0.0065	0.0028	0.0014556	469.6	7.5	0.099582	1743	19	0.038155
M6-4	< LOD	0.0019	0.0023502	514.1	8.5	0.17064	2129	22	0.041713
M6-5	< LOD	0.00072	0.0013585	272.1	2.9	0.1464	17.28	0.36	0.033723
M651M-A	0.006	0.0047	0	403	19	0.47911	3020	93	0.14464
M654M	< LOD	0.0021	0.009661	192.1	7.8	0.46039	69.5	2.3	0.17082
M657M1	0.0024	0.0028	0	146.4	6.6	0.53994	38.51	0.92	0.14515
M657M2	< LOD	0.0025	0.0061347	90	6.7	0.70372	40.1	1.9	0.16765
M677M1	0.0108	0.0038	0.0041788	842	34	0.38178	181.2	3.1	0.090193
M677M2-A	< LOD	0.008	0.005896	396	24	1.0259	78.9	7.8	0.24963
M6-8	0.0162	0.0098	0.0025072	530	14	0.17047	83.3	1.8	0.051353
T534M2	< LOD	0.003	0.0082862	94.5	3.5	0.7105	38.94	0.88	0.17848
T569M1	< LOD	0.0019	0.0091221	74.9	4.7	0.72734	12.58	0.68	0.1467

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	W	W Stdev	W LOD	Y	Y Stdev	Y LOD	Yb	Yb Stdev	Yb LOD
7M105-B	0.425	0.09	0.0051525	< LOD	0.0022	0.0046203	< LOD	0.002	0.004837
A535M	0.53	0.2	0.017356	< LOD	0.021	0.034483	< LOD	0.00015	0
A568M1	< LOD	0.017	0.030924	< LOD	0.015	0.02087	< LOD	0.00017	0.024642
A590M1	0.015	0.023	0	< LOD	0.022	0.026156	< LOD	0.00033	0.030842
A600M3	0.28	0.13	0.01766	0.164	0.091	0.02055	< LOD	0.037	0.058115
A602M1	0.054	0.039	0	2.13	0.44	0.024299	0.263	0.097	0.03193
A635M3	0.095	0.038	0.021531	0.298	0.083	0.01448	0.077	0.035	0.0099841
A650M	< LOD	0.021	0.036917	1.78	0.41	0.026219	0.74	0.2	0.012178
A669M1	0.017	0.022	0	< LOD	0.012	0.0278	0.012	0.018	0
A669M2	< LOD	0.00025	0.026362	< LOD	0.008	0.025723	< LOD	0.017	0.021964
M1-2-A	0.267	0.026	0	0.097	0.014	0.0057722	0.0088	0.0048	0.0031877
M1-2-B	0.254	0.036	0	0.129	0.013	0.0032918	0.021	0.0075	0.0063766
M2-2	0.4	0.16	0.01389	0.266	0.071	0.0078825	0.053	0.029	0
M2-6	< LOD	0.0077	0.0089874	0.057	0.014	0.0077569	0.0112	0.008	0.0040237
M472M2	< LOD	0.011	0.029032	0.091	0.052	0.01651	0.032	0.027	0.020808
M5-1	0.007	0.01	0	< LOD	0.0034	0.006787	< LOD	0.0048	0.0044125
M529M	0.045	0.042	0.037186	0.087	0.047	0.027481	0.009	0.016	0
M5-4	< LOD	0.007	0.0074098	1.36	0.18	0.008778	0.178	0.047	0.012743
M582M2	0.24	0.1	0.053326	1.41	0.27	0.0171	0.179	0.082	0.012745
M584M2	0.083	0.032	0.019218	16.6	6.6	0.02286	1.29	0.51	0.010694
M592M	< LOD	0.016	0.033275	< LOD	0.017	0.026916	< LOD	0.0044	0.0104
M595M2	0.083	0.037	0.020177	3.67	0.5	0.018875	0.74	0.14	0.017336
M601M2	< LOD	0.022	0.014442	0.67	0.28	0.021483	0.161	0.078	0.013764
M617M1	< LOD	0.017	0.025382	0.378	0.078	0.020287	0.207	0.066	0.021733
M619M1	0.0162	0.0064	0.0066642	0.92	0.11	0.016069	0.055	0.014	0.017926
M619M2-B	< LOD	0.0054	0.016562	0.845	0.095	0.0056481	0.514	0.071	0
M623M1	0.054	0.038	0.034355	0.95	0.4	0.024565	0.172	0.074	0
M626M	0.015	0.023	0	< LOD	0.019	0.038505	< LOD	0.021	0.028785
M6-2-A	0.084	0.021	0.0073257	1.27	0.3	0.0058538	0.135	0.03	0.0068664
M6-4	0.031	0.031	0.010992	0.219	0.064	0.0053682	0.018	0.011	0
M6-5	0.0108	0.0096	0.0040442	< LOD	0.003	0.0057943	0.0029	0.0045	0
M651M-A	0.045	0.029	0.0093494	1.06	0.4	0.019087	0.4	0.13	0
M654M	0.214	0.073	0	0.028	0.02	0.025536	< LOD	0.012	0.01967
M657M1	0.142	0.049	0.024348	0.406	0.06	0.019826	0.055	0.028	0.015876
M657M2	< LOD	0.019	0.024493	0.029	0.026	0.026816	< LOD	0.035	0.016151
M677M1	4.1	1.3	0	1.77	0.51	0.0084909	0.19	0.056	0.013158
M677M2-A	< LOD	0.021	0.038312	< LOD	0.028	0.041127	< LOD	0.00039	0.036513
M6-8	0.14	0.043	0.011485	0.61	0.18	0.0086301	0.041	0.026	0.0057232
T534M2	0.019	0.027	0.017927	< LOD	0.01	0.019216	< LOD	0.0034	0.024304
T569M1	< LOD	0.016	0.013091	< LOD	0.0091	0.017912	< LOD	0.0058	0.012141

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-5 LA-ICP-MS magnetite data (continued).

Sample	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
7M105-B	140.9	3.9	0.13178	0.035	0.0075	0.0036079
A535M	50	22	1.1589	< LOD	0.00075	0.04775
A568M1	60.4	2.5	0.68433	0.028	0.021	0.020816
A590M1	18.3	1.5	0.95588	0.18	0.15	0.02005
A600M3	37.4	4.1	1.1595	3.7	3.5	0.040336
A602M1	25.5	1.8	1.007	37	20	0
A635M3	20.4	1.3	0.78257	1.28	0.36	0.023152
A650M	42.7	2.3	0.84277	89	21	0.033685
A669M1	19.1	1.4	0.88232	< LOD	0.036	0.064639
A669M2	30	3.2	0.81603	< LOD	0.023	0.031745
M1-2-A	33.6	2.2	0.17511	0.79	0.17	0.0044898
M1-2-B	33.2	1.7	0.10501	2.5	0.21	0.0071606
M2-2	94.1	3.4	0.14401	33	17	0.0064446
M2-6	72.4	3.7	0.12408	0.268	0.047	0.0068363
M472M2	87.3	6.5	0.42941	14.2	6.7	0
M5-1	61.6	2.8	0.13644	0.41	0.4	0.0063611
M529M	52.1	4.2	1.2217	0.059	0.077	0.046113
M5-4	1820	160	0.16974	0.268	0.04	0.01578
M582M2	85.2	3.9	0.88945	33.5	6.5	0.026137
M584M2	142.2	3.9	0.44638	5.1	2.3	0.052725
M592M	130	12	0.76452	< LOD	0.015	0.027421
M595M2	46	2.7	0.34524	0.412	0.079	0.037767
M601M2	24.7	1.7	0.61876	24	11	0.034002
M617M1	32.5	1.3	0.46675	25.7	7.9	0.025721
M619M1	72.8	1.4	0.3501	0.043	0.015	0.0050548
M619M2-B	53.3	2.4	0.29846	75.6	8.5	0.020893
M623M1	20.6	1.4	0.70069	47	21	0.020222
M626M	14.3	3.9	1.1291	< LOD	0.0096	0.025162
M6-2-A	68.1	2.7	0.16079	26	10	0.0068006
M6-4	190	140	0.18472	0.43	0.12	0.0068313
M6-5	315	11	0.13157	0.0079	0.0045	0.0023056
M651M-A	48.5	5.5	0.4674	93	28	0.026002
M654M	32.8	5.3	1.026	0.05	0.052	0.034439
M657M1	24.7	1.3	0.68078	7	1	0.036769
M657M2	35	3	1.2299	< LOD	0.045	0.044731
M677M1	19.39	0.78	0.32361	40	7.8	0.011616
M677M2-A	20.3	2.3	0.88284	< LOD	0.024	0.052693
M6-8	190.9	6.5	0.15054	1.26	0.37	0.0092079
T534M2	61.5	2	0.43986	< LOD	0.014	0.043885
T569M1	40.6	2.1	0.86781	< LOD	0.017	0.010789

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data.

Sample	Site	Al	Al Stdev	Al LOD	B	B Stdev	B LOD
1TU103-A	Till 01	154200	4.80E+03	0.3352	26870	860	2.0401
1TU103-B	Till 01	157200	1.10E+03	0.28755	25810	210	1.7501
1TU103-C	Till 01	153000	2.00E+03	0.2613	23170	860	1.5903
1TU15-A	Till 01	168800	1.50E+03	0.26393	27260	480	2.2504
1TU15-B	Till 01	179900	1.30E+03	0.23612	26590	280	2.0133
1TU15-C	Till 01	177700	1.20E+03	0.22317	26560	320	1.9029
1TU47-A	Till 01	169800	1.90E+03	0.30858	28490	290	1.963
1TU47-B	Till 01	168100	1.50E+03	0.31147	27620	270	1.9814
1TU47-C	Till 01	168800	1.30E+03	0.3017	27990	280	1.9192
1TU59-A	Till 01	165870	860	0.13148	27430	280	1.3829
1TU59-B	Till 01	166000	1.70E+03	0.16616	26340	380	1.7478
1TU59-C	Till 01	163200	3.50E+03	0.17365	26630	580	1.8265
1TU79-A	Till 01	174300	2.70E+03	1.0452	27640	470	2.3573
1TU79-B	Till 01	176200	1.60E+03	0.79264	26810	300	1.7876
1TU79-C	Till 01	173400	1.90E+03	0.96305	26570	280	2.172
1TU81-A	Till 01	171300	1.00E+03	0.22785	28030	210	1.8761
1TU81-B	Till 01	172300	1.40E+03	0.21739	27230	340	1.79
1TU98-A	Till 01	173800	1.90E+03	0.3563	27720	260	3.0988
1TU98-B	Till 01	179200	1.70E+03	0.36842	26910	310	3.2042
1TU98-C	Till 01	176100	1.70E+03	0.32547	26610	310	2.8306
1TU98-D	Till 01	173300	2.50E+03	0.34992	26410	520	3.0432
T1-2-A	Till 01	170350	910	0.15171	25850	270	1.3233
T1-2-B	Till 01	163500	2.20E+03	0.084863	27130	450	0.74019
2TU104-A	Till 02	152700	1.60E+03	0.21954	26490	280	1.669
2TU104-B	Till 02	156500	1.00E+03	0.20228	26110	190	1.5378
2TU104-C	Till 02	156400	1.40E+03	0.18521	26050	370	1.4081
2TU18-A	Till 02	157860	900	0.32416	26650	270	2.3394
2TU18-B	Till 02	156700	1.10E+03	0.29098	26490	260	2.1
2TU46-A	Till 02	164100	1.20E+03	0.25441	26770	250	1.7071
2TU46-B	Till 02	169600	1.40E+03	0.23729	26750	210	1.5922
2TU74-A	Till 02	170900	3.90E+03	0.2672	27010	670	1.6708
2TU74-B	Till 02	170400	2.80E+03	0.27465	25810	500	1.7174
2TU74-C	Till 02	173400	2.00E+03	0.25982	26880	310	1.6246
2TU74-D	Till 02	169100	2.70E+03	0.24864	26430	460	1.5547
2TU86-A	Till 02	144760	670	0.098556	27950	260	0.73283
2TU89-A	Till 02	179800	1.40E+03	0.23144	26740	270	1.2284
2TU89-B	Till 02	177600	1.60E+03	0.26832	26260	290	1.4242
2TU97-A	Till 02	173400	1.40E+03	0.24232	26990	260	1.8644
2TU97-B	Till 02	168500	6.70E+03	0.25869	31100	6.60E+03	1.9904
T2-1-A	Till 02	169800	1.00E+03	0.16089	27810	230	1.2743

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ba	Ba Stdev	Ba LOD	Be	Be Stdev	Be LOD	Ca	Ca Stdev	Ca LOD
1TU103-A	4.04	0.79	0	< LOD	1	0	10260	380	23.822
1TU103-B	3.49	0.53	0	< LOD	1	0	9350	270	20.436
1TU103-C	2.69	0.46	0	< LOD	1	0	33900	5.70E+03	18.57
1TU15-A	0.22	0.2	0	< LOD	1	0	6180	270	19.7
1TU15-B	0.1	0.1	0	0.06	0.12	0	1909	79	17.625
1TU15-C	0.17	0.15	0	0.36	0.4	0	1988	63	16.658
1TU47-A	0.57	0.23	0	< LOD	1	0	14220	300	23.846
1TU47-B	0.43	0.15	0	< LOD	1	0	13910	270	24.07
1TU47-C	5.4	2.8	0	< LOD	1	0	13940	250	23.314
1TU59-A	0.53	0.14	0	0.53	0.27	0	8361	92	13.659
1TU59-B	0.83	0.3	0	0.95	0.57	0	7300	190	17.263
1TU59-C	0.95	0.28	0	0.43	0.51	0	6830	180	18.041
1TU79-A	0.81	0.91	0	0.94	0.84	0	4320	130	25.716
1TU79-B	0.67	0.29	0	1.03	0.57	0	4590	200	19.502
1TU79-C	0.66	0.35	0	0.42	0.57	0	4130	130	23.694
1TU81-A	0.078	0.078	0	1	0.68	0	4200	100	18.202
1TU81-B	0.058	0.049	0	0.63	0.52	0	3947	78	17.366
1TU98-A	0.57	0.28	0	0.76	0.72	0	5570	170	25.825
1TU98-B	1.51	0.54	0	0.14	0.28	0	5320	180	26.704
1TU98-C	0.96	0.4	0	0.11	0.22	0	5440	130	23.591
1TU98-D	0.43	0.35	0	0.58	0.65	0	5150	150	25.362
T1-2-A	113	14	0	0.32	0.27	0	4183	74	11.097
T1-2-B	2.68	0.4	0	0.44	0.15	0	4182	61	6.207
2TU104-A	0.94	0.42	0	< LOD	1	0	5350	190	20.895
2TU104-B	0.44	0.16	0	< LOD	1	0	4000	100	19.252
2TU104-C	0.25	0.12	0	0.21	0.25	0	4390	120	17.628
2TU18-A	1.97	0.42	0	< LOD	1	0	7980	210	17.462
2TU18-B	2.25	0.34	0	< LOD	1	0	8520	140	15.675
2TU46-A	0.27	0.21	0	2.05	0.89	0	2300	210	17.784
2TU46-B	0.087	0.091	0	1.75	0.73	0	1964	49	16.588
2TU74-A	1.96	0.37	0	2.86	0.94	0	4010	210	23.499
2TU74-B	3.71	0.59	0	1.91	0.81	0	3000	140	24.154
2TU74-C	1.32	0.4	0	2.01	0.8	0	4710	220	22.85
2TU74-D	2.88	0.68	0	4.3	1.1	0	3590	190	21.866
2TU86-A	3.28	0.83	0	0.036	0.052	0	11290	130	5.3473
2TU89-A	0.99	0.22	0	0.38	0.26	0	5167	82	13.81
2TU89-B	1.34	0.47	0	0.22	0.32	0	5450	140	16.011
2TU97-A	0.2	0.13	0	0.75	0.38	0	4265	79	16.99
2TU97-B	0.19	0.15	0	0.88	0.53	0	4000	210	18.138
T2-1-A	2.99	0.24	0	1.93	0.4	0	7079	67	9.0247

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ce	Ce Stdev	Ce LOD	Co	Co Stdev	Co LOD	Cr	Cr Stdev	Cr LOD
1TU103-A	0.196	0.061	0	17.4	1.2	0	152.7	7.3	1.6973
1TU103-B	0.107	0.061	0	17.81	0.74	0	200	18	1.456
1TU103-C	3.03	0.73	0	14.63	0.94	0	344	27	1.3231
1TU15-A	0.59	0.12	0	18.5	1.3	0	24.8	3.6	1.5146
1TU15-B	0.098	0.031	0	20.39	0.78	0	72.4	5.7	1.355
1TU15-C	0.052	0.022	0	20.22	0.66	0	30.3	2.7	1.2807
1TU47-A	0.537	0.086	0	11.04	0.64	0.026759	214	20	1.369
1TU47-B	0.443	0.077	0	10.65	0.69	0.02701	144.5	8.1	1.3818
1TU47-C	0.411	0.061	0	11.39	0.67	0.026163	158.8	7	1.3385
1TU59-A	0.146	0.023	0	40.4	1.1	0	628	26	1.0112
1TU59-B	0.98	0.22	0	41.1	1.5	0	487	35	1.2779
1TU59-C	1.15	0.15	0	43.4	2.4	0	694	21	1.3355
1TU79-A	3.02	0.21	0	25.8	1.4	0	510	43	1.8494
1TU79-B	3.26	0.26	0	25.92	0.81	0	671	27	1.4025
1TU79-C	2.96	0.25	0	26.2	1.2	0	471	27	1.704
1TU81-A	6.28	0.31	0	15.84	0.58	0	< LOD	0.79	1.4947
1TU81-B	6.21	0.29	0	15.23	0.77	0	< LOD	0.78	1.426
1TU98-A	4.41	0.39	0	15.8	1	0	933	49	2.1904
1TU98-B	4.41	0.44	0	13.3	1	0	708	38	2.2649
1TU98-C	4.11	0.38	0	12.4	1.3	0	829	25	2.0009
1TU98-D	3.68	0.34	0	15.3	1	0	534	39	2.1512
T1-2-A	3.66	0.15	0	25.43	0.77	0	693	22	0.76369
T1-2-B	3.391	0.08	0	26.4	1.1	0	1049	23	0.42718
2TU104-A	0.069	0.023	0	33.6	0.79	0	275	17	1.4489
2TU104-B	0.003	0.006	0	32.27	0.94	0	243	13	1.335
2TU104-C	< LOD	1	0	32.7	1.3	0	154	10	1.2224
2TU18-A	1.58	0.15	0	19.07	0.77	0	11.1	2.5	1.4889
2TU18-B	1.84	0.13	0	18.43	0.94	0	27.9	3.7	1.3365
2TU46-A	1.09	0.11	0	3.32	0.39	0	< LOD	1.1	1.0868
2TU46-B	1.63	0.13	0	3.33	0.32	0	< LOD	0.66	1.0137
2TU74-A	2.53	0.19	0	20.52	0.99	0	381	31	1.5116
2TU74-B	1.6	0.2	0	21.6	1.2	0	214	13	1.5538
2TU74-C	3.04	0.19	0	21.64	0.92	0	382	21	1.4699
2TU74-D	2	0.23	0	21.85	0.97	0	272	19	1.4066
2TU86-A	0.067	0.013	0	25.13	0.55	0	383	14	0.33698
2TU89-A	4.49	0.21	0	16.81	0.62	0	758	21	1.0121
2TU89-B	4.22	0.29	0	19.4	1.3	0	691	28	1.1734
2TU97-A	8.23	0.46	0	24.2	0.68	0	43.3	4.4	1.5735
2TU97-B	3.08	0.31	0	25.5	1.4	0	205	16	1.6798
T2-1-A	15.27	0.24	0	14.69	0.31	0	11.5	1.7	0.63935

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Cs	Cs Stdev	Cs LOD	Cu	Cu Stdev	Cu LOD	Dy	Dy Stdev	Dy LOD
1TU103-A	< LOD	0.00011	0.013886	4.16	0.88	0.24532	< LOD	1	0
1TU103-B	< LOD	0.0087	0.011912	3.89	0.66	0.21045	0.018	0.021	0
1TU103-C	< LOD	0.0084	0.010824	4.68	0.94	0.19124	1.4	0.43	0
1TU15-A	< LOD	0.00011	0.0089418	3.12	0.76	0.099814	< LOD	1	0
1TU15-B	< LOD	0.0034	0.0079998	3.87	0.87	0.0893	< LOD	1	0
1TU15-C	< LOD	0.0085	0.0075609	4.21	0.94	0.0844	< LOD	1	0
1TU47-A	< LOD	0.0056	0.010413	3.56	0.63	0.24976	0.027	0.027	0
1TU47-B	< LOD	0.012	0.01051	3.54	0.76	0.2521	< LOD	1	0
1TU47-C	0.21	0.14	0.010181	2.99	0.87	0.24419	< LOD	1	0
1TU59-A	0.0035	0.0048	0.0028854	5.02	0.7	0.096419	0.29	0.17	0
1TU59-B	< LOD	0.000021	0.0036465	4.29	0.81	0.12185	0.57	0.21	0
1TU59-C	< LOD	0.000022	0.0038109	4.39	0.52	0.12735	0.22	0.14	0
1TU79-A	< LOD	0.00005	0.0057959	3.89	0.97	0.33785	0.015	0.03	0
1TU79-B	< LOD	0.0063	0.0043954	3.66	0.73	0.25621	0.037	0.024	0
1TU79-C	0.007	0.02	0.0053403	3.49	0.97	0.3113	0.039	0.064	0
1TU81-A	< LOD	0.0027	0.0089112	4.08	0.64	0.14869	0.064	0.037	0
1TU81-B	< LOD	0.0065	0.0085019	4.33	0.74	0.14186	0.021	0.019	0
1TU98-A	< LOD	0.014	0.006654	4.6	1.2	0.26058	0.23	0.16	0
1TU98-B	< LOD	0.000045	0.0068804	3.5	1.3	0.26944	0.056	0.059	0
1TU98-C	< LOD	0.013	0.0060782	4.45	0.97	0.23803	0.022	0.031	0
1TU98-D	< LOD	0.000047	0.0065347	3.5	1	0.25591	0.029	0.042	0
T1-2-A	0.036	0.016	0.0081077	3.11	0.47	0.11372	0.031	0.017	0
T1-2-B	< LOD	0.0018	0.0045351	3.9	1.1	0.063609	0.024	0.0086	0
2TU104-A	< LOD	0.0037	0.01299	4.35	0.83	0.16818	0.0042	0.0085	0
2TU104-B	< LOD	0.000049	0.011969	3.53	0.71	0.15495	< LOD	1	0
2TU104-C	< LOD	0.0035	0.010959	4.23	0.81	0.14188	< LOD	1	0
2TU18-A	< LOD	0.000091	0.015057	4.36	0.66	0.2384	0.0045	0.0091	0
2TU18-B	< LOD	0.0052	0.013516	6.4	1.9	0.214	0.061	0.054	0
2TU46-A	< LOD	0.0034	0.012488	5.37	0.71	0.11042	0.021	0.019	0
2TU46-B	< LOD	0.0063	0.011648	5.37	0.85	0.10299	0.025	0.022	0
2TU74-A	0.08	0.034	0.013278	5.65	0.97	0.16227	< LOD	0.022	0.01979
2TU74-B	0.019	0.024	0.013648	7.2	1.6	0.16679	0.045	0.041	0.020342
2TU74-C	0.037	0.024	0.012911	5	1.1	0.15778	0.04	0.042	0.019244
2TU74-D	0.054	0.033	0.012356	6.4	1.2	0.15099	0.056	0.051	0.018415
2TU86-A	0.94	0.5	0.0017532	0.39	0.14	0.088214	0.035	0.023	0.0027138
2TU89-A	< LOD	0.000057	0.0084901	4.42	0.78	0.12593	0.013	0.011	0
2TU89-B	< LOD	0.000045	0.0098433	4.87	0.75	0.146	0.018	0.021	0
2TU97-A	< LOD	0.0048	0.0038442	4.07	0.57	0.16662	0.073	0.033	0
2TU97-B	0.019	0.024	0.0041039	4.9	1.2	0.17788	0.102	0.052	0
T2-1-A	< LOD	0.0019	0.0055759	1.22	0.2	0.11168	0.049	0.015	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Er	Er Stdev	Er LOD	Eu	Eu Stdev	Eu LOD	Fe	Fe Stdev	Fe LOD
1TU103-A	0.004	0.008	0	0.06	0.039	0	65200	2.40E+03	4.4248
1TU103-B	0.015	0.017	0	0.044	0.021	0	66950	850	3.7958
1TU103-C	0.68	0.18	0	0.46	0.13	0	69700	2.00E+03	3.4493
1TU15-A	< LOD	1	0	0.285	0.053	0	67100	1.30E+03	5.0045
1TU15-B	< LOD	1	0	0.047	0.025	0	57100	790	4.4773
1TU15-C	< LOD	1	0	0.079	0.032	0	57100	1.00E+03	4.2316
1TU47-A	0.053	0.03	0	0.364	0.074	0	47860	910	4.1889
1TU47-B	0.011	0.016	0	0.349	0.069	0	49000	1.20E+03	4.2282
1TU47-C	< LOD	1	0	0.308	0.076	0	49080	640	4.0956
1TU59-A	0.91	0.49	0	0.123	0.028	0	57650	670	2.3201
1TU59-B	0.33	0.12	0	0.279	0.087	0	57400	1.10E+03	2.9321
1TU59-C	0.12	0.1	0	0.414	0.09	0	63600	5.20E+03	3.0643
1TU79-A	0.012	0.024	0	0.391	0.079	0	49100	1.10E+03	4.501
1TU79-B	0.008	0.011	0	0.447	0.068	0	48750	610	3.4134
1TU79-C	0.08	0.11	0	0.34	0.072	0	50400	1.50E+03	4.1472
1TU81-A	0.002	0.0041	0	0.081	0.029	0	91000	1.00E+03	3.4733
1TU81-B	0.0044	0.0062	0	0.068	0.019	0	89500	1.60E+03	3.3137
1TU98-A	0.43	0.33	0	0.52	0.11	0	37500	1.20E+03	3.6317
1TU98-B	0.013	0.026	0	0.545	0.097	0	35740	360	3.7553
1TU98-C	0.021	0.033	0	0.581	0.091	0	36050	910	3.3175
1TU98-D	< LOD	1	0	0.39	0.1	0	39590	930	3.5666
T1-2-A	0.006	0.0094	0.0041434	0.373	0.054	0	41920	640	2.1456
T1-2-B	0.0028	0.0025	0.0023176	0.34	0.024	0	41800	570	1.2001
2TU104-A	< LOD	1	0	0.0021	0.0041	0	60900	1.30E+03	3.2139
2TU104-B	0.006	0.012	0	< LOD	1	0	58430	860	2.9612
2TU104-C	< LOD	1	0	< LOD	1	0	58720	770	2.7114
2TU18-A	0.0064	0.0088	0	0.286	0.068	0	62450	780	3.2626
2TU18-B	0.061	0.076	0	0.325	0.068	0	62780	750	2.9287
2TU46-A	< LOD	0.015	0.015593	0.014	0.012	0	109100	1.40E+03	2.4424
2TU46-B	< LOD	0.000043	0.014544	0.0061	0.0073	0	110200	1.40E+03	2.2781
2TU74-A	0.035	0.024	0	0.438	0.078	0	44300	1.40E+03	3.0954
2TU74-B	0.032	0.022	0	0.286	0.049	0	52500	1.30E+03	3.1817
2TU74-C	0.019	0.016	0	0.455	0.081	0	45100	1.10E+03	3.0098
2TU74-D	0.075	0.037	0	0.521	0.099	0	50500	1.50E+03	2.8803
2TU86-A	0.102	0.067	0	0.0518	0.0098	0	63120	390	1.1897
2TU89-A	0.0037	0.0052	0	0.555	0.072	0	49570	610	2.505
2TU89-B	< LOD	1	0	0.524	0.086	0	47380	940	2.9042
2TU97-A	0.031	0.022	0	0.137	0.031	0	62510	620	2.7979
2TU97-B	0.056	0.033	0	0.134	0.045	0	63200	2.70E+03	2.9869
T2-1-A	0.0116	0.0059	0	0.565	0.038	0	100270	860	1.1863

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Gd	Gd Stdev	Gd LOD	Hf	Hf Stdev	Hf LOD
1TU103-A	23.4	1.5	0	< LOD	1	0	0.01	0.023	0.0084934
1TU103-B	23.36	0.92	0	0.037	0.032	0	0.115	0.089	0.007286
1TU103-C	23.9	1.2	0	1.36	0.42	0	1.14	0.35	0.0066209
1TU15-A	52.4	5	0.016504	0.011	0.015	0	0.0037	0.0073	0
1TU15-B	37.1	1.3	0.014766	0.0044	0.0089	0	0.012	0.017	0
1TU15-C	41.1	2.2	0.013956	< LOD	1	0	0.003	0.0059	0
1TU47-A	29.4	1.6	0	0.047	0.036	0	6.2	2.2	0
1TU47-B	30.5	1.5	0	0.067	0.051	0	0.57	0.44	0
1TU47-C	27.8	1.3	0	0.029	0.038	0	0.092	0.067	0
1TU59-A	30.16	0.84	0	0.022	0.022	0	38	19	0
1TU59-B	29.9	1.5	0	0.51	0.16	0	1.16	0.3	0
1TU59-C	31.7	1.5	0	0.26	0.16	0	0.58	0.31	0
1TU79-A	34.1	1.9	0	0.098	0.071	0	0.011	0.023	0
1TU79-B	30.7	1.2	0	0.076	0.048	0	0.014	0.017	0
1TU79-C	33.1	1.9	0	0.074	0.052	0	1.4	1.8	0
1TU81-A	76	2.3	0	0.108	0.04	0	0.021	0.016	0.0068811
1TU81-B	67.9	1.8	0	0.163	0.057	0	< LOD	0.0067	0.0065651
1TU98-A	44.2	2.9	0	0.037	0.043	0	20	16	0.022801
1TU98-B	38.4	2.2	0	0.041	0.047	0	0.11	0.05	0.023577
1TU98-C	38.6	2.2	0	0.091	0.064	0	0.07	0.048	0.020828
1TU98-D	41	2	0	0.064	0.049	0	0.035	0.034	0.022392
T1-2-A	41.4	1.3	0	0.057	0.033	0	0.032	0.019	0
T1-2-B	41.55	0.76	0	0.053	0.014	0	0.0306	0.0085	0
2TU104-A	21.2	1.1	0	0.01	0.014	0	0.036	0.025	0
2TU104-B	21.3	1.1	0	< LOD	1	0	0.037	0.027	0
2TU104-C	20.82	0.88	0	< LOD	1	0	0.025	0.023	0
2TU18-A	51.7	1.8	0	0.036	0.028	0	0.017	0.02	0
2TU18-B	53	1.4	0	0.123	0.077	0	0.8	1.4	0
2TU46-A	79.7	2.8	0	0.057	0.048	0	0.0028	0.0056	0
2TU46-B	74.8	1.8	0	0.04	0.036	0	0.017	0.015	0
2TU74-A	44.2	2.2	0	0.032	0.028	0	0.13	0.13	0
2TU74-B	40.3	1.5	0	0.056	0.048	0	0.31	0.12	0
2TU74-C	42	1.4	0	0.045	0.035	0	0.025	0.027	0
2TU74-D	40.2	2	0	0.047	0.039	0	0.81	0.64	0
2TU86-A	31.87	0.59	0	0.0104	0.0072	0	3.2	1.5	0
2TU89-A	37.2	1.2	0.013712	0.065	0.031	0.010479	< LOD	0.0036	0.006556
2TU89-B	37.5	1.8	0.015897	0.025	0.027	0.012149	0.024	0.038	0.0076009
2TU97-A	61	1.3	0	0.27	0.07	0	0.071	0.045	0
2TU97-B	61.4	4.2	0	0.023	0.023	0	0.018	0.017	0
T2-1-A	69.2	1.4	0	0.121	0.025	0	0.027	0.011	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ho	Ho Stdev	Ho LOD	K	K Stdev	K LOD	La	La Stdev	La LOD
1TU103-A	< LOD	1	0	95	5.4	2.049	0.103	0.047	0
1TU103-B	0.0044	0.0058	0	72.7	2.4	1.7577	0.039	0.026	0
1TU103-C	0.263	0.085	0	74.6	3.3	1.5973	1.28	0.34	0
1TU15-A	0.0022	0.0044	0	65.4	9.8	1.6896	0.415	0.061	0
1TU15-B	< LOD	1	0	41.1	2.4	1.5116	0.049	0.017	0
1TU15-C	< LOD	1	0	47.5	2.6	1.4287	0.049	0.023	0
1TU47-A	0.021	0.012	0	85.2	5.8	2.0968	0.199	0.056	0
1TU47-B	0.0071	0.0071	0	77.5	3.4	2.1164	0.192	0.039	0
1TU47-C	0.0023	0.0047	0	270	110	2.05	0.167	0.043	0
1TU59-A	0.129	0.069	0	187.2	8.3	1.0296	0.098	0.027	0
1TU59-B	0.115	0.042	0	252	18	1.3013	0.48	0.11	0
1TU59-C	0.038	0.031	0	340	26	1.3599	0.58	0.11	0
1TU79-A	< LOD	1	0	225.3	7.4	2.5262	1.77	0.22	0
1TU79-B	< LOD	1	0	163.2	7.7	1.9158	1.94	0.18	0
1TU79-C	0.0038	0.0076	0	205.1	7.2	2.3277	1.68	0.13	0
1TU81-A	0.0013	0.003	0	369.8	9.5	1.3464	3.42	0.17	0
1TU81-B	0.0041	0.0044	0	343.1	8.8	1.2846	3.26	0.18	0
1TU98-A	0.091	0.076	0	216.9	5.7	2.4125	2.14	0.28	0
1TU98-B	0.0023	0.0046	0	205.7	9.9	2.4946	2.57	0.26	0
1TU98-C	0.0017	0.0034	0	220.6	4	2.2037	2.31	0.21	0
1TU98-D	< LOD	1	0	175.8	7.1	2.3692	1.94	0.17	0
T1-2-A	0.007	0.0059	0	2750	320	1.0732	2.1	0.091	0
T1-2-B	0.0018	0.0011	0	350	15	0.60031	1.813	0.057	0
2TU104-A	< LOD	1	0	100.9	2.7	1.7799	0.059	0.025	0
2TU104-B	< LOD	1	0	86.5	2.8	1.64	0.0018	0.0035	0
2TU104-C	< LOD	1	0	91.4	3.1	1.5016	< LOD	1	0
2TU18-A	< LOD	1	0	251	55	1.6598	1.03	0.12	0
2TU18-B	0.017	0.015	0	228.8	5.1	1.4899	1.31	0.1	0
2TU46-A	0.0042	0.0049	0	453	75	1.5303	0.694	0.098	0
2TU46-B	0.0008	0.0016	0	359	5.9	1.4273	0.96	0.11	0
2TU74-A	0.009	0.008	0	153.3	9.7	1.6578	1.357	0.096	0
2TU74-B	0.0059	0.0047	0	141.3	3.1	1.704	0.92	0.092	0
2TU74-C	0.0137	0.0079	0	156.3	2.8	1.612	1.62	0.13	0
2TU74-D	0.011	0.01	0	153.9	4.1	1.5426	1.03	0.12	0
2TU86-A	0.0162	0.0096	0	181	35	0.47224	0.0362	0.009	0
2TU89-A	0.0023	0.0028	0	237.3	3.2	1.5894	2.47	0.18	0
2TU89-B	0.0035	0.0052	0	250.8	5	1.8427	2.46	0.2	0
2TU97-A	0.0106	0.006	0	315	20	1.4711	4.35	0.23	0
2TU97-B	0.0128	0.0081	0	313	15	1.5704	1.67	0.15	0
T2-1-A	0.0034	0.002	0	458.4	7.8	0.76547	10.78	0.16	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Li	Li Stdev	Li LOD	Lu	Lu Stdev	Lu LOD	Mg	Mg Stdev	Mg LOD
1TU103-A	10.8	1.5	0.20707	< LOD	1	0	44200	1.30E+03	0.033518
1TU103-B	12.32	0.86	0.17763	0.0151	0.009	0	43560	360	0.028753
1TU103-C	9.29	0.86	0.16142	0.2	0.059	0	38400	1.50E+03	0.026128
1TU15-A	14.1	1.2	0.15309	< LOD	1	0	35870	390	0.060458
1TU15-B	9.88	0.99	0.13696	< LOD	1	0	32940	300	0.05409
1TU15-C	8.4	1	0.12945	0.001	0.002	0	32810	310	0.051122
1TU47-A	33.1	2.2	0.14524	0.044	0.02	0	49140	430	0.070405
1TU47-B	37.8	2.4	0.1466	0.008	0.0084	0	49810	440	0.071065
1TU47-C	33.9	2.8	0.142	0.0022	0.003	0	50320	530	0.068835
1TU59-A	36.8	1.6	0.15629	0.69	0.36	0	43910	250	0.047015
1TU59-B	34.6	1.7	0.19752	0.033	0.012	0	42240	660	0.059418
1TU59-C	38.6	4.2	0.20642	0.025	0.018	0	43800	2.30E+03	0.062096
1TU79-A	10.7	1.5	0.28838	< LOD	0.0000093	0	37610	450	0.20478
1TU79-B	11.6	1	0.21869	< LOD	0.0000096	0	37810	340	0.1553
1TU79-C	10.18	0.69	0.26571	0.02	0.03	0	37280	510	0.18869
1TU81-A	33.5	1.5	0.14502	< LOD	1	0	28030	170	0.25535
1TU81-B	34.6	2	0.13836	< LOD	1	0	27790	290	0.24362
1TU98-A	8.4	1.6	0.25905	0.3	0.29	0	43550	420	0.10842
1TU98-B	10	1.2	0.26786	< LOD	1	0	43570	390	0.11211
1TU98-C	8.3	1.1	0.23663	0.0035	0.0047	0	43420	480	0.099039
1TU98-D	7	1.5	0.2544	< LOD	1	0	43240	650	0.10648
T1-2-A	13.31	0.75	0.13542	0.0015	0.0023	0	38240	350	0.025165
T1-2-B	12.35	0.46	0.075747	0.001	0.00079	0	39340	530	0.014076
2TU104-A	7.03	0.81	0.14268	0.0009	0.0018	0	45010	470	0.071793
2TU104-B	7.43	0.85	0.13146	0.0039	0.0046	0	45010	280	0.066148
2TU104-C	7.68	0.89	0.12037	< LOD	1	0	45170	560	0.060568
2TU18-A	9.3	1.2	0.16651	0.0042	0.0049	0	43280	360	0.072674
2TU18-B	7.32	0.89	0.14947	0.014	0.025	0	45150	350	0.065237
2TU46-A	34.9	2.6	0.15569	< LOD	0.0017	0.0024895	22770	250	0.072645
2TU46-B	31.5	1.5	0.14521	< LOD	0.0000068	0.002322	23080	230	0.067758
2TU74-A	10.37	0.92	0.29736	0.0119	0.0092	0	41100	1.10E+03	0.062162
2TU74-B	14.7	1.8	0.30565	0.0147	0.0088	0	38310	580	0.063894
2TU74-C	10.6	1.1	0.28914	0.0102	0.0072	0	42110	510	0.060444
2TU74-D	10.72	0.93	0.2767	0.034	0.022	0	38230	820	0.057843
2TU86-A	12.29	0.57	0.069071	0.106	0.053	0	43900	390	0
2TU89-A	15.27	0.98	0.15409	< LOD	1	0	38770	350	0
2TU89-B	15	1	0.17865	0.0032	0.0047	0	38310	410	0
2TU97-A	21.99	0.82	0.18044	0.0059	0.0053	0	33990	300	0.057671
2TU97-B	21.4	3	0.19263	0.011	0.011	0	33500	1.30E+03	0.061567
T2-1-A	31.3	1.5	0.084051	0.0076	0.003	0	21740	170	0.019524

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Mn	Mn Stdev	Mn LOD	Mo	Mo Stdev	Mo LOD	Na	Na Stdev	Na LOD
1TU103-A	178	7.3	1.9312	< LOD	0.00019	0.040317	13050	430	3.223
1TU103-B	179.4	3.2	1.6567	< LOD	0.049	0.034585	12180	110	2.7648
1TU103-C	414	63	1.5055	< LOD	0.05	0.031428	11020	460	2.5124
1TU15-A	335	8.1	1.6672	< LOD	1	0	11600	300	2.8294
1TU15-B	285.4	4.1	1.4916	0.041	0.059	0	9260	100	2.5313
1TU15-C	297.3	5.7	1.4098	< LOD	1	0	10080	130	2.3924
1TU47-A	212.2	4.5	1.7692	< LOD	1	0	11730	180	2.2451
1TU47-B	211	3.5	1.7858	< LOD	1	0	11330	100	2.2661
1TU47-C	221.6	5.8	1.7298	< LOD	1	0	11730	160	2.195
1TU59-A	197.3	2.2	1.009	< LOD	1	0	14030	160	1.6441
1TU59-B	209	4.8	1.2752	0.028	0.056	0	13890	160	2.0778
1TU59-C	225.3	4.4	1.3327	0.036	0.071	0	14110	220	2.1714
1TU79-A	93.6	5.4	1.945	< LOD	1	0	12860	300	3.3458
1TU79-B	84.6	3.8	1.475	< LOD	1	0	11840	110	2.5373
1TU79-C	90.1	3.2	1.7921	< LOD	1	0	12280	320	3.0828
1TU81-A	541.5	7.3	1.4386	0.053	0.062	0	14900	140	1.8861
1TU81-B	543.8	9.6	1.3725	0.055	0.056	0	14340	150	1.7995
1TU98-A	151	10	2.5003	< LOD	1	0	13290	130	4.0103
1TU98-B	241.4	9.3	2.5854	< LOD	1	0	12140	170	4.1467
1TU98-C	208.2	7.8	2.2839	< LOD	1	0	12020	170	3.6633
1TU98-D	122.3	7.1	2.4555	< LOD	1	0	12820	370	3.9384
T1-2-A	166.9	8.9	1.042	0.008	0.016	0	13450	110	1.5238
T1-2-B	152	3	0.58287	0.014	0.012	0	13790	210	0.85238
2TU104-A	134.1	2.9	1.5657	0.031	0.066	0	16160	200	2.7674
2TU104-B	127	2.4	1.4426	< LOD	0.000072	0	16299	99	2.5498
2TU104-C	127.2	2.9	1.3209	< LOD	0.000047	0	16480	210	2.3347
2TU18-A	263.8	4	1.8911	< LOD	1	0	13680	400	3.141
2TU18-B	261.8	5.3	1.6976	0.031	0.063	0	13300	120	2.8195
2TU46-A	855	15	1.5238	0.065	0.065	0	16110	170	2.6829
2TU46-B	824	11	1.4213	0.024	0.033	0	16010	120	2.5024
2TU74-A	104.1	8.6	1.6515	< LOD	1	0	13630	300	2.7346
2TU74-B	154.1	5.2	1.6975	0.017	0.035	0	13640	510	2.8108
2TU74-C	101.7	6.6	1.6058	0.015	0.029	0	13360	180	2.659
2TU74-D	156.6	2.7	1.5367	< LOD	1	0	13360	320	2.5446
2TU86-A	152.1	1.5	0.41821	0.0026	0.0052	0	13810	130	0.61943
2TU89-A	161.8	3.1	1.3866	0.028	0.041	0	13060	110	2.2109
2TU89-B	126.5	4.1	1.6077	0.035	0.07	0	12820	170	2.5632
2TU97-A	474.6	7	1.2233	0.036	0.042	0	13810	130	2.0083
2TU97-B	574	28	1.3059	0.015	0.029	0	14320	970	2.1439
T2-1-A	492.9	8.6	0.67167	0.037	0.027	0	13310	120	1.1819

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Nb	Nb Stdev	Nb LOD	Nd	Nd Stdev	Nd LOD	Ni	Ni Stdev	Ni LOD
1TU103-A	0.041	0.028	0	0.081	0.059	0	16.8	2.1	0
1TU103-B	0.11	0.041	0	0.098	0.074	0	22.9	2.2	0
1TU103-C	0.053	0.028	0	2.29	0.61	0	16	1.7	0
1TU15-A	0.49	0.1	0	0.078	0.054	0	55.1	2.4	0
1TU15-B	0.011	0.015	0	0.014	0.029	0	65.5	3	0
1TU15-C	0.062	0.03	0	< LOD	1	0	64.9	3.4	0
1TU47-A	0.012	0.014	0	0.24	0.13	0	33.3	2.9	0.064717
1TU47-B	0.0061	0.0084	0	0.184	0.087	0	36.5	2.9	0.065324
1TU47-C	0.02	0.019	0	0.34	0.14	0	37.2	3.1	0.063275
1TU59-A	0.042	0.016	0	0.078	0.043	0	192.7	4	0
1TU59-B	0.042	0.032	0	0.73	0.26	0	187.3	7.3	0
1TU59-C	0.016	0.018	0	0.64	0.21	0	197.4	8.4	0
1TU79-A	0.081	0.059	0	1.24	0.36	0	134.3	8.5	0.17734
1TU79-B	0.054	0.031	0	0.98	0.22	0	135.4	4.2	0.13449
1TU79-C	0.033	0.038	0	0.83	0.2	0	134.6	5.9	0.1634
1TU81-A	0.32	0.065	0	1.93	0.33	0	14.1	1.2	0
1TU81-B	0.271	0.056	0	1.97	0.27	0	10.5	1.4	0
1TU98-A	0.016	0.024	0	1.88	0.58	0	43.3	4.7	0.09176
1TU98-B	0.055	0.049	0	1.72	0.53	0	37.4	4.8	0.094881
1TU98-C	0.045	0.049	0	1.54	0.39	0	36.7	3.2	0.083819
1TU98-D	0.032	0.035	0	1	0.22	0	38.5	3.9	0.090115
T1-2-A	0.281	0.058	0	1.13	0.17	0	85	3.5	0
T1-2-B	0.06	0.013	0	0.924	0.066	0	85.4	1.9	0
2TU104-A	0.0027	0.0054	0	0.082	0.071	0	245.7	9.6	0
2TU104-B	< LOD	1	0	< LOD	1	0	168.5	8	0
2TU104-C	< LOD	1	0	< LOD	1	0	195.5	9.7	0
2TU18-A	0.235	0.09	0	0.6	0.15	0	5.6	1.2	0
2TU18-B	0.164	0.044	0	0.79	0.23	0	5.74	0.82	0
2TU46-A	0.77	0.12	0	0.201	0.085	0	0.58	0.38	0
2TU46-B	0.85	0.13	0	0.44	0.14	0	0.39	0.22	0
2TU74-A	0.048	0.034	0	0.7	0.2	0	38	3.2	0
2TU74-B	0.047	0.024	0	0.79	0.28	0	53.7	3.2	0
2TU74-C	0.073	0.049	0	0.87	0.22	0	38.9	2.4	0
2TU74-D	0.221	0.073	0	0.76	0.21	0	55.5	3.9	0
2TU86-A	0.05	0.017	0	0.033	0.013	0	116.1	2.5	0.017095
2TU89-A	0.131	0.039	0	1.46	0.2	0	28.1	1.5	0
2TU89-B	0.074	0.034	0	1.38	0.23	0	36.6	3.2	0
2TU97-A	0.166	0.036	0	2.97	0.28	0	61.8	1.8	0
2TU97-B	0.27	0.076	0	0.97	0.21	0	73	7.6	0
T2-1-A	1.326	0.078	0	3.23	0.17	0	12.73	0.68	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Pb	Pb Stdev	Pb LOD	Pr	Pr Stdev	Pr LOD	Rb	Rb Stdev	Rb LOD
1TU103-A	8.59	0.77	0.019659	0.024	0.012	0	< LOD	0.00069	0.051668
1TU103-B	6.66	0.65	0.016864	0.019	0.014	0	< LOD	0.032	0.044323
1TU103-C	9.78	0.63	0.015325	0.48	0.14	0	0.062	0.06	0.040277
1TU15-A	9.4	3.6	0.016236	0.045	0.023	0	< LOD	0.018	0.016737
1TU15-B	2.64	0.23	0.014526	0.0095	0.0089	0	< LOD	0.017	0.014974
1TU15-C	4.06	0.33	0.013729	0.0098	0.0076	0	0.022	0.027	0.014152
1TU47-A	13.34	0.46	0.014475	0.063	0.024	0	< LOD	0.034	0.029604
1TU47-B	12.21	0.43	0.01461	0.072	0.027	0	< LOD	0.013	0.029881
1TU47-C	12.76	0.6	0.014152	0.068	0.023	0	1.03	0.57	0.028944
1TU59-A	9.48	0.29	0.010172	0.0223	0.0079	0.00399	< LOD	0.019	0.019783
1TU59-B	7.61	0.41	0.012855	0.138	0.041	0.0050426	< LOD	0.018	0.025002
1TU59-C	7.97	0.51	0.013434	0.177	0.038	0.0052699	< LOD	0.025	0.026129
1TU79-A	5.31	0.43	0.020432	0.261	0.058	0	< LOD	0.021	0.039739
1TU79-B	5.25	0.34	0.015495	0.317	0.048	0	< LOD	0.019	0.030136
1TU79-C	4.79	0.45	0.018826	0.334	0.061	0	0.037	0.044	0.036615
1TU81-A	5.79	0.45	0.014801	0.572	0.049	0	< LOD	0.015	0.036921
1TU81-B	5.31	0.32	0.014122	0.545	0.069	0	< LOD	0.017	0.035225
1TU98-A	5.19	0.46	0.019174	0.413	0.078	0	< LOD	0.026	0.028473
1TU98-B	4.86	0.4	0.019826	0.391	0.061	0	< LOD	0.017	0.029442
1TU98-C	5.06	0.36	0.017515	0.414	0.077	0	0.034	0.04	0.026009
1TU98-D	5.08	0.63	0.01883	0.355	0.088	0	< LOD	0.037	0.027963
T1-2-A	3.8	0.19	0.009803	0.324	0.042	0	3.6	0.58	0.0077942
T1-2-B	3.5	0.11	0.0054834	0.309	0.018	0	0.077	0.021	0.0043598
2TU104-A	7.89	0.55	0.012696	0.013	0.011	0	< LOD	0.017	0.009427
2TU104-B	6.22	0.32	0.011698	< LOD	1	0	0.012	0.018	0.0086858
2TU104-C	6.2	0.41	0.010711	< LOD	1	0	< LOD	0.015	0.0079531
2TU18-A	7.67	0.44	0.01426	0.191	0.048	0	< LOD	0.009	0.039073
2TU18-B	8.47	0.46	0.012801	0.22	0.039	0	< LOD	0.017	0.035075
2TU46-A	5.2	0.33	0.011828	0.101	0.021	0	0.067	0.048	0.016201
2TU46-B	5.45	0.32	0.011032	0.137	0.027	0	0.031	0.026	0.015111
2TU74-A	8.76	0.59	0.019889	0.228	0.046	0	0.031	0.033	0.02841
2TU74-B	6.95	0.48	0.020444	0.181	0.041	0	< LOD	0.03	0.029202
2TU74-C	7.44	0.57	0.019339	0.305	0.055	0	0.036	0.032	0.027625
2TU74-D	11.5	3.1	0.018507	0.181	0.032	0	0.072	0.052	0.026436
2TU86-A	10.45	0.33	0.0072888	0.0078	0.0032	0	0.45	0.24	0.0072362
2TU89-A	5.75	0.32	0.011802	0.448	0.04	0	0.027	0.051	0.026819
2TU89-B	5.67	0.33	0.013683	0.425	0.061	0	0.056	0.092	0.031093
2TU97-A	4.65	0.33	0.011857	0.881	0.063	0	0.018	0.017	0.01645
2TU97-B	5.53	0.61	0.012658	0.32	0.057	0	0.047	0.032	0.017561
T2-1-A	4.23	0.13	0.0086573	1.173	0.038	0	0.0127	0.0089	0.010407

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Sm	Sm Stdev	Sm LOD	Sn	Sn Stdev	Sn LOD
1TU103-A	32.8	1.8	0.072574	0.005	0.01	0	0.39	0.16	0.044806
1TU103-B	32.4	1.1	0.062258	0.034	0.046	0	0.41	0.14	0.038437
1TU103-C	33.6	1.6	0.056575	0.95	0.26	0	0.8	0.22	0.034928
1TU15-A	92	7.1	0.092772	0.009	0.013	0	5.07	0.52	0.045622
1TU15-B	25.2	1.7	0.083	< LOD	1	0	1.06	0.21	0.040816
1TU15-C	41.8	2.2	0.078446	< LOD	1	0	1.28	0.2	0.038577
1TU47-A	68.4	2.6	0.040736	0.08	0.04	0	0.175	0.081	0.042418
1TU47-B	76.9	1.7	0.041118	0.042	0.047	0	0.199	0.081	0.042816
1TU47-C	71.1	2.2	0.039828	0.034	0.026	0	0.152	0.087	0.041472
1TU59-A	16.5	1.2	0.027492	0.012	0.011	0	1.02	0.14	0.029427
1TU59-B	13.75	0.93	0.034745	0.282	0.098	0	1.26	0.19	0.03719
1TU59-C	14.35	0.63	0.036311	0.12	0.084	0	1.68	0.25	0.038866
1TU79-A	29.8	2.1	0.079792	0.123	0.061	0	1.52	0.36	0.088126
1TU79-B	29.4	1.1	0.060511	0.117	0.06	0	1.16	0.19	0.066831
1TU79-C	27.2	1.9	0.07352	0.101	0.043	0	1.59	0.32	0.081199
1TU81-A	49.7	1.3	0.049148	0.384	0.089	0	5.36	0.37	0.044076
1TU81-B	49	1.4	0.04689	0.325	0.078	0	4.45	0.35	0.042051
1TU98-A	28.3	2.2	0.078841	0.145	0.074	0	0.9	0.23	0.092912
1TU98-B	30.5	2.1	0.081523	0.2	0.13	0	1.19	0.24	0.096073
1TU98-C	28.5	1.5	0.072019	0.192	0.096	0	0.81	0.25	0.084872
1TU98-D	19.3	1.9	0.077428	0.095	0.097	0	0.86	0.29	0.091246
T1-2-A	30.24	0.78	0.04309	0.102	0.027	0	1.79	0.22	0.050306
T1-2-B	26.5	0.53	0.024103	0.105	0.016	0	1.338	0.084	0.028139
2TU104-A	73.2	9.7	0.039645	< LOD	1	0	0.163	0.073	0.065513
2TU104-B	72.9	2.6	0.036527	< LOD	1	0	0.28	0.098	0.060362
2TU104-C	59.6	1.5	0.033446	< LOD	1	0	0.279	0.082	0.05527
2TU18-A	18.4	1.2	0.057809	0.027	0.024	0	2.65	0.32	0.048608
2TU18-B	18.95	0.85	0.051892	0.101	0.058	0	1.97	0.27	0.043634
2TU46-A	11.37	0.74	0.056154	0.077	0.032	0	10.01	0.51	0.035551
2TU46-B	12.05	0.53	0.052376	0.109	0.037	0	11.89	0.65	0.03316
2TU74-A	14.73	0.95	0.058022	0.06	0.049	0	7.6	1.4	0.059884
2TU74-B	20.4	1.2	0.059639	0.11	0.056	0	15.95	0.94	0.061553
2TU74-C	16.7	1	0.056418	0.109	0.057	0	5.9	1.6	0.058229
2TU74-D	21.4	0.91	0.05399	0.085	0.037	0	14.6	2.3	0.055723
2TU86-A	31.86	0.69	0.015415	0.0066	0.0049	0	0.065	0.018	0.023482
2TU89-A	26.81	0.82	0.071062	0.193	0.05	0	0.92	0.16	0.070888
2TU89-B	31	1.4	0.082388	0.102	0.061	0	0.9	0.25	0.082186
2TU97-A	34.51	0.85	0.068778	0.368	0.067	0	1.03	0.14	0.037503
2TU97-B	27.5	2.1	0.073424	0.13	0.049	0	2.07	0.33	0.040036
T2-1-A	26.43	0.5	0.026338	0.267	0.037	0	7.59	0.33	0.019377

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sr	Sr Stdev	Sr LOD	Ta	Ta Stdev	Ta LOD	Tb	Tb Stdev	Tb LOD
1TU103-A	649	28	0	0.0121	0.0083	0	< LOD	1	0
1TU103-B	454	18	0	0.0231	0.0092	0	0.0018	0.0035	0
1TU103-C	643	17	0	0.0103	0.0087	0	0.17	0.049	0
1TU15-A	139.6	7.3	0	0.176	0.053	0	0.0011	0.0022	0
1TU15-B	45.1	1.6	0	0.0044	0.0036	0	< LOD	1	0
1TU15-C	49.7	2.2	0	0.013	0.0088	0	< LOD	1	0
1TU47-A	152.9	3.5	0	< LOD	1	0	0.0076	0.0067	0
1TU47-B	145.8	3.6	0	0.001	0.0021	0	0.0036	0.0052	0
1TU47-C	149.3	3.2	0	< LOD	1	0	0.0048	0.0044	0
1TU59-A	265.6	5.8	0	0.0138	0.0076	0	0.019	0.013	0
1TU59-B	204.6	9.7	0	0.0009	0.0018	0	0.08	0.034	0
1TU59-C	191.1	5.5	0	0.0044	0.0051	0	0.036	0.027	0
1TU79-A	108.1	4.6	0	0.014	0.01	0	0.0097	0.0093	0
1TU79-B	124.7	4.9	0	0.0157	0.0074	0	0.0027	0.003	0
1TU79-C	100.2	5.1	0	0.02	0.014	0	0.0019	0.0037	0
1TU81-A	30.3	2.4	0	0.152	0.03	0.0041346	0.0179	0.0087	0
1TU81-B	24.06	0.77	0	0.131	0.03	0.0039447	0.0126	0.0071	0
1TU98-A	105.5	4.6	0	0.021	0.022	0	0.026	0.023	0
1TU98-B	92.5	2.2	0	0.013	0.012	0	0.016	0.017	0
1TU98-C	96.7	3.6	0	< LOD	1	0	0.0055	0.008	0
1TU98-D	110.3	3.6	0	0.017	0.014	0	0.0047	0.0064	0
T1-2-A	103.2	2.3	0	0.041	0.012	0	0.0044	0.0038	0
T1-2-B	94.3	1.5	0	0.0131	0.0034	0	0.0058	0.0023	0
2TU104-A	165.4	4.8	0	< LOD	1	0	< LOD	0.0000062	0
2TU104-B	141.2	2.2	0	< LOD	1	0	< LOD	0.000005	0
2TU104-C	142.8	2.7	0	< LOD	1	0	< LOD	0.0000032	0
2TU18-A	244	6.6	0	0.1	0.024	0	< LOD	1	0
2TU18-B	272.1	6.3	0	0.052	0.019	0	0.0123	0.0095	0
2TU46-A	6.13	0.44	0	0.576	0.052	0	0.0087	0.0067	0
2TU46-B	5.27	0.93	0	0.805	0.065	0	0.0024	0.0035	0
2TU74-A	168.2	8.6	0	0.032	0.014	0	0.0075	0.0053	0
2TU74-B	138.3	2.8	0	0.027	0.014	0	0.0082	0.0072	0
2TU74-C	175.3	5.6	0	0.056	0.021	0	0.0052	0.0051	0
2TU74-D	153.1	9	0	0.138	0.034	0	0.014	0.011	0
2TU86-A	227.7	3.9	0.001861	0.0097	0.0035	0	0.0026	0.0016	0.0013345
2TU89-A	139.2	3.2	0	0.0137	0.0066	0	0.0091	0.007	0
2TU89-B	139	4.3	0	0.02	0.012	0	0.0067	0.0081	0
2TU97-A	32.56	0.72	0.011554	0.077	0.023	0	0.0173	0.009	0
2TU97-B	36.5	2.5	0.012334	0.384	0.077	0	0.0084	0.0066	0
T2-1-A	95.5	1.4	0	0.865	0.03	0	0.0133	0.0038	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Th	Th Stdev	Th LOD	Ti	Ti Stdev	Ti LOD	Tm	Tm Stdev	Tm LOD
1TU103-A	0.022	0.013	0	2460	110	0	< LOD	1	0
1TU103-B	0.0074	0.0072	0	1790	120	0	0.0056	0.006	0
1TU103-C	0.158	0.048	0	2440	180	0	0.107	0.037	0
1TU15-A	< LOD	0.0000087	0	3610	180	0	< LOD	1	0
1TU15-B	< LOD	0.00001	0	422	42	0	< LOD	1	0
1TU15-C	< LOD	0.0000077	0	414	18	0	< LOD	1	0
1TU47-A	0.026	0.027	0.0054805	4568	81	0	0.002	0.0028	0
1TU47-B	< LOD	0.0051	0.0055319	4563	88	0	0.0022	0.0031	0
1TU47-C	< LOD	0.000018	0.0053583	4589	79	0	< LOD	1	0
1TU59-A	0.064	0.05	0.0016848	5326	57	0	0.25	0.14	0
1TU59-B	0.204	0.056	0.0021292	4920	120	0	0.039	0.02	0
1TU59-C	0.117	0.079	0.0022252	4830	250	0	0.023	0.018	0
1TU79-A	< LOD	1	0	3116	52	0	< LOD	1	0
1TU79-B	0.001	0.0019	0	3130	110	0	< LOD	1	0
1TU79-C	0.004	0.0054	0	3256	61	0	0.0051	0.0055	0
1TU81-A	0.0068	0.0055	0	3550	77	0.34993	0.0007	0.0013	0
1TU81-B	0.0048	0.0043	0	3423	57	0.33386	< LOD	1	0
1TU98-A	0.35	0.33	0	3666	88	0	0.113	0.099	0
1TU98-B	< LOD	1	0	3786	87	0	< LOD	1	0
1TU98-C	< LOD	1	0	3611	89	0	0.0016	0.0031	0
1TU98-D	< LOD	1	0	3577	59	0	< LOD	1	0
T1-2-A	0.0118	0.0072	0	3091	44	0	0.0011	0.0021	0
T1-2-B	0.0047	0.0021	0	3048	51	0	0.00012	0.00024	0
2TU104-A	0.019	0.014	0	2090	100	0	< LOD	1	0
2TU104-B	0.0009	0.002	0	1055	50	0	< LOD	1	0
2TU104-C	< LOD	0.0000017	0	1142	54	0	< LOD	1	0
2TU18-A	0.063	0.049	0	3891	87	0	0.001	0.002	0
2TU18-B	0.33	0.16	0	5260	150	0	0.006	0.011	0
2TU46-A	0.0056	0.0056	0	1572	34	0	< LOD	1	0
2TU46-B	0.0008	0.0017	0	1774	33	0	< LOD	1	0
2TU74-A	0.025	0.013	0	3710	140	0	0.0064	0.0057	0
2TU74-B	0.021	0.013	0	3280	120	0	0.0109	0.0081	0
2TU74-C	0.0044	0.0041	0	4380	100	0	0.0038	0.0045	0
2TU74-D	0.028	0.022	0	4071	78	0	0.014	0.011	0
2TU86-A	0.0136	0.0068	0	3350	40	0	0.029	0.015	0
2TU89-A	< LOD	1	0	5748	75	0	< LOD	1	0
2TU89-B	< LOD	1	0	5030	130	0	< LOD	1	0
2TU97-A	0.037	0.024	0.0044893	3576	43	0	0.0032	0.0027	0
2TU97-B	< LOD	0.0036	0.0047925	3520	160	0	0.0113	0.0078	0
T2-1-A	0.0055	0.0027	0	7074	60	0	0.0016	0.0013	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	U	U Stdev	U LOD	V	V Stdev	V LOD	Y	Y Stdev	Y LOD
1TU103-A	0.0022	0.0044	0	782	33	0.11418	0.013	0.012	0
1TU103-B	0.004	0.0041	0	624	22	0.097945	0.19	0.12	0
1TU103-C	0.166	0.051	0	849	31	0.089004	6.7	1.8	0
1TU15-A	< LOD	1	0	313.3	7.8	0.14283	0.019	0.02	0
1TU15-B	< LOD	1	0	224.5	4.6	0.12778	0.0048	0.0067	0
1TU15-C	< LOD	1	0	238.2	2.4	0.12077	< LOD	1	0
1TU47-A	0.13	0.054	0	877	32	0.13039	0.34	0.14	0
1TU47-B	0.0108	0.0083	0	715	13	0.13161	0.065	0.053	0
1TU47-C	0.0021	0.0043	0	803	21	0.12748	0.019	0.016	0
1TU59-A	7.5	3.9	0	372.4	4.1	0.06853	4.5	2.4	0
1TU59-B	0.62	0.15	0	328.2	8.1	0.086609	2.53	0.74	0
1TU59-C	0.3	0.17	0	377	14	0.090513	1.27	0.78	0
1TU79-A	0.0033	0.0066	0	373.6	8.5	0.1077	0.048	0.04	0.0085285
1TU79-B	0.0015	0.0021	0	406.7	9.7	0.081679	0.041	0.029	0.0064676
1TU79-C	0.42	0.5	0	371.9	9	0.099239	0.27	0.31	0.0078581
1TU81-A	0.0031	0.0034	0	79.6	1.5	0.098954	0.081	0.031	0
1TU81-B	< LOD	0.0000082	0	80.5	1.9	0.094409	0.113	0.034	0
1TU98-A	3.2	2.5	0.0033638	445.4	9.4	0.20158	3	2.3	0
1TU98-B	0.012	0.015	0.0034782	428.7	9.7	0.20844	0.035	0.033	0
1TU98-C	0.006	0.0058	0.0030727	428	6.6	0.18414	0.06	0.037	0
1TU98-D	0.012	0.015	0.0033035	374.3	9.8	0.19797	0.036	0.038	0
T1-2-A	0.0045	0.0034	0.0013288	389.4	4.6	0.067445	0.077	0.025	0
T1-2-B	0.00112	0.00091	0.0007433	480	11	0.037726	0.055	0.01	0
2TU104-A	< LOD	1	0	944	33	0.1096	0.014	0.016	0
2TU104-B	< LOD	1	0	537	14	0.10098	0.01	0.012	0
2TU104-C	< LOD	1	0	558	44	0.092461	< LOD	1	0
2TU18-A	0.023	0.012	0	121.9	4.9	0.10732	0.069	0.035	0
2TU18-B	0.44	0.63	0	157.1	3.6	0.096335	0.4	0.31	0
2TU46-A	< LOD	1	0	5.48	0.89	0.098841	0.128	0.043	0
2TU46-B	0.0007	0.0014	0	3.06	0.31	0.092191	0.052	0.023	0
2TU74-A	0.055	0.041	0	342	15	0.10245	0.295	0.091	0
2TU74-B	0.084	0.054	0	250.1	7	0.10531	0.43	0.15	0
2TU74-C	0.0131	0.007	0	354	10	0.099623	0.171	0.064	0
2TU74-D	0.27	0.18	0	301	10	0.095336	0.43	0.2	0
2TU86-A	0.065	0.032	0	573.8	5.9	0.032302	0.54	0.27	0.0017143
2TU89-A	0.0021	0.0032	0	221	3.5	0.089421	0.066	0.025	0
2TU89-B	0.002	0.004	0	298	14	0.10367	0.077	0.035	0
2TU97-A	0.5	0.27	0	146	2.8	0.087534	0.34	0.13	0
2TU97-B	0.016	0.01	0	195	10	0.093447	0.59	0.17	0
T2-1-A	0.001	0.0013	0	92	1.9	0.037688	0.147	0.021	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Yb	Yb Stdev	Yb LOD	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
1TU103-A	0.016	0.023	0	98.7	5.9	0.45676	0.19	0.16	0
1TU103-B	0.038	0.034	0	91.7	3.1	0.39183	3.4	2.7	0
1TU103-C	0.99	0.24	0	86.1	5.7	0.35606	45	12	0
1TU15-A	< LOD	1	0	257.4	7.6	0.50854	0.052	0.067	0
1TU15-B	0.0041	0.0081	0	220.8	8.5	0.45497	0.025	0.029	0
1TU15-C	< LOD	1	0	230	8.7	0.43001	0.027	0.031	0
1TU47-A	0.171	0.088	0	98	11	0.42017	221	78	0
1TU47-B	0.021	0.029	0	77	3.7	0.42411	19	14	0
1TU47-C	< LOD	1	0	92	7.6	0.41081	2.7	1.9	0
1TU59-A	2.9	1.6	0	186.6	4.8	0.36599	1600	830	0
1TU59-B	0.209	0.096	0	183.3	7.2	0.46254	49	13	0
1TU59-C	0.13	0.13	0	213	19	0.48339	30	14	0
1TU79-A	< LOD	1	0	79.1	9.8	0.61902	0.3	0.15	0
1TU79-B	0.0037	0.0074	0	58.4	5	0.46944	0.097	0.046	0
1TU79-C	0.08	0.1	0	83.9	8	0.57037	55	71	0
1TU81-A	0.0061	0.0086	0	401	13	0.43125	0.126	0.054	0
1TU81-B	0.003	0.006	0	359	13	0.41144	0.174	0.076	0
1TU98-A	1.4	1.1	0	223	11	0.45451	920	690	0
1TU98-B	0.01	0.019	0	195.2	9.2	0.46997	3.82	0.61	0
1TU98-C	0.022	0.033	0	183.8	6.7	0.41518	2.65	0.51	0
1TU98-D	0.02	0.041	0	167.9	7.4	0.44636	1.81	0.3	0
T1-2-A	0.009	0.011	0	109	4.6	0.35086	0.47	0.1	0
T1-2-B	0.005	0.0039	0	107.1	2.9	0.19626	0.385	0.042	0
2TU104-A	0.0043	0.0086	0	186	8	0.38368	0.085	0.046	0
2TU104-B	0.017	0.024	0	161.6	5.6	0.35351	0.119	0.062	0
2TU104-C	< LOD	1	0	155.3	5	0.32369	0.07	0.04	0
2TU18-A	0.026	0.034	0	91.4	5.7	0.52049	0.27	0.16	0
2TU18-B	0.07	0.12	0	84.1	4.6	0.46723	11	19	0
2TU46-A	0.0037	0.0075	0	1235	20	0.34645	0.202	0.088	0
2TU46-B	0.0031	0.0062	0	1201	28	0.32314	0.092	0.052	0
2TU74-A	0.07	0.043	0	186.3	8.7	0.42755	4.7	4.4	0
2TU74-B	0.104	0.061	0	223.2	7.3	0.43947	9.5	4.9	0
2TU74-C	0.041	0.035	0	166.5	9.9	0.41573	1.2	1.4	0
2TU74-D	0.114	0.081	0	192.9	9.5	0.39784	32	27	0
2TU86-A	0.36	0.19	0	90.5	2.1	0.13361	106	51	0
2TU89-A	0.005	0.01	0	125.1	4.2	0.3136	0.208	0.073	0
2TU89-B	< LOD	1	0	115.1	5.8	0.36358	0.36	0.11	0
2TU97-A	0.023	0.019	0	221.1	5.4	0.39146	2.1	1.1	0
2TU97-B	0.09	0.05	0	258	13	0.4179	0.154	0.073	0
T2-1-A	0.0135	0.0077	0	337.5	8.4	0.20478	0.319	0.046	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Site	Al	Al Stdev	Al LOD	B	B Stdev	B LOD
T2-1-B	Till 02	156900	3.00E+03	0.12224	28200	1.10E+03	0.96824
T2-1-C	Till 02	156900	3.90E+03	0.10475	27250	840	1.0133
T2-2-A	Till 02	167220	850	0.2407	27340	230	1.0274
T2-2-B	Till 02	154500	2.70E+03	0.17457	28360	840	0.74513
T2-3-A	Till 02	175530	700	0.086101	28110	270	0.76321
T2-3-B	Till 02	172600	1.10E+03	0.083511	26770	340	0.74025
T2-3-C	Till 02	158300	3.50E+03	0.14619	28090	810	0.62396
T2-4-A	Till 02	172000	1.30E+03	0.4636	27530	300	1.2807
T2-4-B	Till 02	168100	2.10E+03	0.27879	27420	450	0.77018
T2-5-A	Till 02	164020	720	0.41943	27650	200	1.1402
T2-5-B	Till 02	152800	4.20E+03	0.37115	28500	1.10E+03	1.0089
T2-5-C	Till 02	149000	4.00E+03	0.34247	27800	1.00E+03	0.9461
3TU03-A	Till 03	165200	1.50E+03	0.5491	27250	330	1.7729
3TU03-B	Till 03	167900	1.30E+03	0.4928	26990	290	1.5911
3TU03-C	Till 03	161500	3.90E+03	0.44913	27300	1.20E+03	1.4501
3TU09-A	Till 03	120000	1.10E+04	0.28727	18900	1.70E+03	1.0069
3TU09-B	Till 03	152100	2.90E+03	0.38068	23270	420	1.3343
3TU09-C	Till 03	158100	5.70E+03	0.44496	24070	940	1.5596
3TU11-A	Till 03	151100	1.10E+03	0.21774	29010	320	1.5487
3TU11-B	Till 03	154800	1.10E+03	0.20318	28130	270	1.4452
3TU11-C	Till 03	154600	1.80E+03	0.21999	27420	460	1.5647
3TU24-A	Till 03	185400	1.10E+03	0.17049	27830	230	1.2019
3TU24-B	Till 03	170600	5.30E+03	0.18309	27600	1.80E+03	1.2907
3TU35-A	Till 03	168300	3.10E+03	0.35966	26400	1.00E+03	3.6136
3TU35-B	Till 03	171800	1.40E+03	0.22764	26440	230	2.2872
3TU35-C	Till 03	170800	2.50E+03	0.26498	28700	4.10E+03	2.6623
3TU48-A	Till 03	172430	900	0.18195	27300	230	1.47
3TU48-B	Till 03	164000	4.30E+03	0.17484	27300	1.00E+03	1.4126
3TU50-A	Till 03	156300	1.60E+03	0.33784	30000	3.20E+03	1.8534
3TU50-B	Till 03	157200	1.20E+03	0.31827	27200	350	1.746
3TU60	Till 03	174300	1.00E+03	0.47699	27710	250	1.5147
3TU61-A	Till 03	166600	8.80E+03	0.19377	27500	1.40E+03	2.1162
3TU61-B	Till 03	176100	1.30E+03	0.16414	27610	240	1.7927
3TU61-C	Till 03	172800	1.00E+03	0.19056	27270	420	2.0811
3TU74-A	Till 03	179600	1.10E+03	0.25247	28700	1.20E+03	1.3381
3TU74-B	Till 03	180900	1.30E+03	0.2607	27730	300	1.3817
3TU74-C	Till 03	180600	2.20E+03	0.2536	27560	410	1.3441
4TU01-A	Till 04	144870	750	0.078807	27410	200	0.72655
4TU05	Till 04	159200	950	0.27101	27680	330	1.0124
4TU36-A	Till 04	147450	990	0.08398	27560	260	0.87228

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ba	Ba Stdev	Ba LOD	Be	Be Stdev	Be LOD	Ca	Ca Stdev	Ca LOD
T2-1-B	2.51	0.22	0	1.44	0.31	0	6340	120	6.857
T2-1-C	2.31	0.19	0	1.68	0.34	0	6320	170	5.9838
T2-2-A	0.157	0.062	0	7.16	0.95	0	2761	37	8.6281
T2-2-B	0.116	0.05	0	5.95	0.75	0	2409	56	6.2577
T2-3-A	1.1	0.19	0	0.12	0.13	0	6515	58	7.9092
T2-3-B	111	27	0	0.63	0.22	0	5720	85	7.6712
T2-3-C	1.37	0.24	0	0.156	0.096	0	5310	110	5.2401
T2-4-A	0.64	0.15	0	0.52	0.22	0	4986	55	9.301
T2-4-B	2.73	0.53	0	0.51	0.13	0	5329	78	5.5933
T2-5-A	1.74	0.18	0	0.16	0.11	0	7120	100	6.6038
T2-5-B	1.75	0.19	0	0.29	0.16	0	6710	190	5.8435
T2-5-C	1.62	0.2	0	0.085	0.079	0	6770	450	6.8708
3TU03-A	0.22	0.11	0	1.24	0.51	0	6820	130	22.335
3TU03-B	0.25	0.14	0	0.96	0.52	0	6780	190	20.045
3TU03-C	0.21	0.18	0	0.48	0.42	0	6070	170	18.269
3TU09-A	2.61	0.89	0.026015	1.54	0.65	0	3620	340	14.163
3TU09-B	0.8	0.55	0.034473	1.5	0.82	0	7700	1.30E+03	18.768
3TU09-C	0.43	0.37	0.040295	2	1.1	0	3850	600	21.937
3TU11-A	1.6	0.45	0	< LOD	1	0	15470	180	18.938
3TU11-B	1.82	0.51	0	< LOD	1	0	14500	350	17.672
3TU11-C	1.58	0.47	0	< LOD	1	0	13050	280	19.134
3TU24-A	0.055	0.047	0	1.38	0.45	0	1862	36	15.03
3TU24-B	0.052	0.06	0	1.2	0.59	0	1890	730	16.14
3TU35-A	0.17	0.24	0	< LOD	1	0	5900	240	24.506
3TU35-B	0.63	0.21	0	0.22	0.26	0	6620	110	15.511
3TU35-C	2.4	1	0	0.27	0.4	0	6050	210	18.055
3TU48-A	0.33	0.12	0	0.82	0.47	0	4707	92	13.224
3TU48-B	0.32	0.16	0	0.77	0.43	0	4200	110	12.707
3TU50-A	5.17	0.79	0	< LOD	1	0	8570	310	19.154
3TU50-B	5.46	0.77	0	0.18	0.26	0	9570	150	18.045
3TU60	1.86	0.25	0	1.27	0.39	0	6412	94	16.721
3TU61-A	0.41	0.14	0	0.8	1.1	0	4480	270	21.613
3TU61-B	0.34	0.13	0	0.81	0.45	0	4034	72	18.309
3TU61-C	0.3	0.14	0	0.88	0.71	0	3984	95	21.255
3TU74-A	0.52	0.22	0	0.41	0.37	0	5050	100	18.401
3TU74-B	0.42	0.18	0	0.31	0.31	0	5025	83	19.001
3TU74-C	0.67	0.24	0	0.46	0.39	0	4966	92	18.483
4TU01-A	2.41	0.2	0	0.046	0.045	0	7612	83	5.9411
4TU05	3.01	0.32	0	0.13	0.13	0	12610	120	13.638
4TU36-A	1.24	0.15	0	0.42	0.15	0	6530	120	5.9072

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ce	Ce Stdev	Ce LOD	Co	Co Stdev	Co LOD	Cr	Cr Stdev	Cr LOD
T2-1-B	14.59	0.39	0	14.4	0.57	0	9.4	1.2	0.48578
T2-1-C	13.71	0.43	0	14.06	0.55	0	8.85	0.92	0.49537
T2-2-A	0.357	0.035	0	36.48	0.65	0	6.5	3.4	0.59774
T2-2-B	0.274	0.023	0	36.42	0.93	0	4.2	2.5	0.43352
T2-3-A	6.45	0.23	0	29.26	0.59	0	1532	45	0.48711
T2-3-B	4.85	0.29	0	26.49	0.76	0	1129	15	0.47246
T2-3-C	4.53	0.15	0	29.4	1	0	995	56	0.36302
T2-4-A	3.66	0.1	0	27.21	0.62	0	733	12	0.55652
T2-4-B	3.794	0.083	0	28.56	0.61	0	1152	20	0.33468
T2-5-A	6.81	0.2	0	26.07	0.47	0.0051909	394	11	0.64018
T2-5-B	7.2	0.23	0	26.7	1.6	0.0045933	472	21	0.56648
T2-5-C	7	0.24	0	25.45	0.81	0	441	18	0.41112
3TU03-A	1.97	0.16	0	31.69	0.97	0	670	21	1.3417
3TU03-B	1.81	0.12	0	30.7	1.3	0	742	46	1.2041
3TU03-C	1.21	0.12	0	31.85	0.94	0	558	27	1.0974
3TU09-A	4.5	3	0	24	2.4	0	13.8	2.2	1.1651
3TU09-B	2.7	0.72	0	29.7	1.3	0	17.6	3.7	1.5439
3TU09-C	0.42	0.11	0	31.6	1.5	0	20.6	3.9	1.8046
3TU11-A	2.3	0.19	0	27.7	1.1	0	770	100	1.3177
3TU11-B	1.14	0.15	0	26.84	0.97	0	301	27	1.2296
3TU11-C	0.342	0.067	0	27.17	0.83	0	644	87	1.3314
3TU24-A	2.405	0.094	0	0.346	0.069	0	< LOD	0.46	0.77894
3TU24-B	1.88	0.12	0	0.318	0.085	0	< LOD	0.6	0.83649
3TU35-A	2.48	0.6	0	28.5	1.3	0	405	73	1.9728
3TU35-B	4.04	0.19	0	27.72	0.91	0	1141	31	1.2487
3TU35-C	11.6	7.8	0	26.7	1.9	0	996	59	1.4535
3TU48-A	2.6	0.13	0	22.4	0.67	0	601	13	1.1157
3TU48-B	2.23	0.17	0	22.86	0.95	0	433	21	1.0721
3TU50-A	0.043	0.021	0	17	1.2	0	1.4	1.3	1.2742
3TU50-B	0.0062	0.0073	0	11.9	1.6	0	1.5	0.87	1.2004
3TU60	5.42	0.21	0	22.47	0.67	0	24.9	2.1	1.0887
3TU61-A	1.8	0.27	0	28.9	2.3	0	400	61	1.7513
3TU61-B	2.31	0.13	0	29.45	0.92	0	680	25	1.4835
3TU61-C	1.94	0.14	0	29.1	1.6	0	333	22	1.7222
3TU74-A	3.08	0.18	0	28.89	0.92	0	165	12	1.125
3TU74-B	3.34	0.13	0	28.57	0.75	0	277	18	1.1617
3TU74-C	3.64	0.22	0	28.4	1	0	389	19	1.13
4TU01-A	0.121	0.017	0	16.03	0.32	0	5.3	1.1	0.41542
4TU05	0.247	0.026	0	12.79	0.45	0	85.9	2.9	0.81731
4TU36-A	0.125	0.018	0	27.91	0.43	0	40.9	1.6	0.33279

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Cs	Cs Stdev	Cs LOD	Cu	Cu Stdev	Cu LOD	Dy	Dy Stdev	Dy LOD
T2-1-B	< LOD	0.0019	0.0042365	2.02	0.29	0.084852	0.0302	0.0098	0
T2-1-C	0.095	0.097	0.0027594	2.91	0.34	0.054941	0.038	0.013	0.0070445
T2-2-A	< LOD	0.0035	0.0047775	2.13	0.26	0.10795	< LOD	0.000014	0
T2-2-B	< LOD	0.0022	0.003465	2.48	0.37	0.078296	< LOD	0.000015	0
T2-3-A	0.0016	0.0018	0	2.43	0.35	0.11178	0.32	0.17	0
T2-3-B	0.038	0.011	0	2.58	0.39	0.10842	0.53	0.29	0
T2-3-C	< LOD	0.0021	0.0029015	3.15	0.38	0.065564	0.052	0.016	0
T2-4-A	0.0101	0.0077	0.0035699	3.76	0.39	0.10805	0.0181	0.0093	0
T2-4-B	0.0026	0.0023	0.0021468	3.57	0.28	0.064977	0.027	0.0084	0
T2-5-A	< LOD	0.002	0.0025478	4.1	1.6	0.091969	0.023	0.011	0
T2-5-B	0.0025	0.0029	0.0022545	4.4	0.91	0.081381	0.035	0.015	0
T2-5-C	< LOD	0.0014	0.0026371	4.07	0.48	0.079818	0.02	0.011	0
3TU03-A	< LOD	0.0034	0.0040524	5.94	0.85	0.10901	0.02	0.021	0
3TU03-B	< LOD	0.00006	0.0036369	5.74	0.81	0.097836	0.0033	0.0065	0
3TU03-C	< LOD	0.000095	0.0033146	5.28	0.94	0.089166	0.01	0.016	0
3TU09-A	0.096	0.031	0.0073909	11.7	5.4	0.079724	0.89	0.77	0
3TU09-B	< LOD	0.01	0.009794	13.1	3.2	0.10565	0.14	0.17	0
3TU09-C	< LOD	0.0065	0.011448	5.5	1.8	0.12349	0.047	0.049	0
3TU11-A	0.0038	0.0078	0	3.99	0.9	0.18628	0.004	0.008	0
3TU11-B	0.023	0.019	0	3.94	0.56	0.17383	0.046	0.038	0
3TU11-C	0.0036	0.0054	0	4.2	0.86	0.18821	< LOD	1	0
3TU24-A	< LOD	0.0047	0.0064841	3.97	0.42	0.15852	0.022	0.014	0
3TU24-B	< LOD	0.0084	0.0069631	5	1.4	0.17024	0.014	0.017	0
3TU35-A	< LOD	0.000076	0.01511	9.4	9.1	0.19609	0.009	0.017	0
3TU35-B	< LOD	0.0057	0.0095637	5.67	0.84	0.12411	0.05	0.03	0
3TU35-C	0.055	0.03	0.011132	9.3	4.4	0.14447	0.62	0.55	0
3TU48-A	< LOD	0.0048	0.011823	3.66	0.47	0.14871	0.0049	0.0068	0
3TU48-B	< LOD	0.0027	0.011361	5.32	0.71	0.1429	0.011	0.015	0
3TU50-A	< LOD	0.01	0.01369	3.93	0.7	0.24752	0.013	0.019	0
3TU50-B	< LOD	0.0073	0.012897	4.07	0.77	0.23319	< LOD	1	0
3TU60	< LOD	0.0031	0.010204	5.18	0.63	0.15272	0.029	0.017	0
3TU61-A	< LOD	0.0000078	0	4.4	2.5	0.15854	0.006	0.012	0
3TU61-B	0.0027	0.0057	0	3.24	0.56	0.1343	0.026	0.027	0
3TU61-C	< LOD	0.0000092	0	2.99	0.54	0.15591	0.019	0.023	0
3TU74-A	< LOD	0.0055	0.007025	7.6	4	0.1071	0.012	0.015	0
3TU74-B	< LOD	0.0088	0.0072539	6.7	2.5	0.11059	0.025	0.024	0
3TU74-C	< LOD	0.000021	0.0070563	6.3	1.8	0.10758	0.042	0.03	0
4TU01-A	< LOD	0.002	0.0039384	0.73	0.21	0.087286	0.0072	0.0062	0
4TU05	< LOD	0.0026	0.0058184	4.59	0.47	0.11624	0.0068	0.0071	0
4TU36-A	< LOD	0.0022	0.0035524	0.32	0.11	0.10542	0.011	0.0077	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Er	Er Stdev	Er LOD	Eu	Eu Stdev	Eu LOD	Fe	Fe Stdev	Fe LOD
T2-1-B	0.0142	0.0076	0	0.439	0.036	0	99760	1.90E+03	0.90133
T2-1-C	0.009	0.0062	0	0.453	0.03	0	95800	2.70E+03	1.2388
T2-2-A	< LOD	1	0	0.0214	0.0081	0	78160	560	1.715
T2-2-B	< LOD	1	0	0.0194	0.007	0	79500	1.70E+03	1.2439
T2-3-A	0.112	0.066	0	0.809	0.075	0	43930	480	1.9602
T2-3-B	0.19	0.095	0	0.709	0.068	0	41700	550	1.9012
T2-3-C	0.0169	0.0085	0	0.551	0.044	0	43900	1.00E+03	1.0416
T2-4-A	0.0063	0.0081	0	0.31	0.03	0	41980	500	1.7146
T2-4-B	0.0069	0.0037	0	0.336	0.023	0	41770	660	1.0311
T2-5-A	0.003	0.004	0	0.42	0.036	0	55700	440	1.8885
T2-5-B	0.0035	0.0036	0	0.386	0.033	0	55300	1.70E+03	1.6711
T2-5-C	0.009	0.0068	0	0.391	0.029	0	53400	1.40E+03	1.2666
3TU03-A	0.0048	0.0097	0	0.561	0.088	0	59300	1.80E+03	3.9779
3TU03-B	< LOD	1	0	0.59	0.1	0	57250	850	3.57
3TU03-C	0.01	0.011	0	0.427	0.078	0	56200	1.50E+03	3.2537
3TU09-A	0.32	0.26	0	0.2	0.13	0	44200	4.10E+03	2.4989
3TU09-B	0.07	0.041	0	0.082	0.027	0	56300	1.30E+03	3.3114
3TU09-C	0.066	0.045	0	0.041	0.028	0	59700	2.40E+03	3.8706
3TU11-A	< LOD	1	0	0.128	0.038	0	70030	950	2.5062
3TU11-B	0.11	0.11	0	0.105	0.028	0	70300	1.00E+03	2.3387
3TU11-C	0.0034	0.0068	0	0.044	0.023	0	66250	940	2.5322
3TU24-A	0.015	0.01	0	0.0097	0.006	0	124400	1.00E+03	2.8728
3TU24-B	0.0044	0.0088	0	0.0095	0.0093	0	122100	2.70E+03	3.0851
3TU35-A	< LOD	1	0	0.44	0.12	0.0073665	41600	1.00E+03	4.6129
3TU35-B	0.0041	0.0057	0	0.507	0.06	0.0046625	37990	630	2.9197
3TU35-C	0.106	0.091	0	0.8	0.35	0.0054272	40500	860	3.3985
3TU48-A	< LOD	1	0	0.43	0.042	0	41950	420	3.6693
3TU48-B	0.0024	0.0048	0	0.346	0.045	0	44800	1.90E+03	3.5259
3TU50-A	0.033	0.023	0	0.0043	0.0087	0	87400	8.40E+03	4.3334
3TU50-B	0.012	0.014	0	0.0019	0.0037	0	85000	1.00E+03	4.0824
3TU60	0.008	0.0066	0	0.201	0.03	0	59240	690	2.689
3TU61-A	< LOD	1	0	0.432	0.085	0	45800	2.60E+03	3.3666
3TU61-B	0.0022	0.0044	0	0.446	0.071	0	47070	680	2.8518
3TU61-C	0.006	0.013	0	0.394	0.063	0	47210	900	3.3108
3TU74-A	< LOD	1	0	0.572	0.08	0	50040	880	3.1352
3TU74-B	0.005	0.01	0	0.647	0.072	0	50700	1.10E+03	3.2374
3TU74-C	0.016	0.023	0	0.639	0.082	0	50260	900	3.1492
4TU01-A	0.0102	0.0052	0	0.084	0.0098	0	63090	510	0.99954
4TU05	0.0034	0.0041	0	0.111	0.019	0	62740	620	2.1847
4TU36-A	0.055	0.015	0	0.105	0.015	0	63340	460	1.3873

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Gd	Gd Stdev	Gd LOD	Hf	Hf Stdev	Hf LOD
T2-1-B	67.4	1.8	0	0.091	0.021	0	0.0242	0.0088	0
T2-1-C	64.1	2.2	0.011487	0.107	0.024	0	0.0214	0.0085	0
T2-2-A	226.4	3.4	0	< LOD	1	0	0.015	0.014	0.0037415
T2-2-B	226.6	6.4	0	< LOD	1	0	0.0086	0.0054	0.0027136
T2-3-A	43.3	1	0.0059948	0.4	0.2	0	0.4	0.23	0
T2-3-B	40.53	0.79	0.0058145	0.64	0.3	0	0.76	0.4	0
T2-3-C	41.7	1.2	0	0.096	0.022	0	0.044	0.019	0.0022723
T2-4-A	46.41	0.96	0	0.047	0.02	0	0.0145	0.0092	0
T2-4-B	44.21	0.75	0	0.077	0.016	0	0.0129	0.0048	0
T2-5-A	49.16	0.94	0	0.097	0.022	0.004566	0.018	0.0074	0
T2-5-B	47.9	2.3	0	0.074	0.02	0.0040404	0.018	0.012	0
T2-5-C	46.7	1.6	0	0.101	0.021	0	0.0205	0.0094	0
3TU03-A	64.3	2.3	0.029043	0.072	0.042	0	0.005	0.011	0
3TU03-B	61.4	2.1	0.026065	0.098	0.046	0	0.0025	0.0049	0
3TU03-C	58.5	3.4	0.023755	0.036	0.028	0	0.0052	0.0072	0
3TU09-A	28.3	2.6	0.01099	0.74	0.68	0	2.1	1.9	0
3TU09-B	33.02	0.98	0.014563	0.148	0.07	0	0.091	0.065	0
3TU09-C	35.8	1.5	0.017023	0.035	0.026	0	0.51	0.29	0
3TU11-A	25.6	1.3	0	0.016	0.023	0	0.019	0.019	0
3TU11-B	24.5	1.2	0	0.008	0.016	0	4.3	3.2	0
3TU11-C	22.7	1.3	0	0.011	0.022	0	0.055	0.057	0
3TU24-A	99.6	1.9	0.010472	0.081	0.033	0.0080028	0.0111	0.009	0
3TU24-B	95.3	3.2	0.011246	0.051	0.035	0.008594	0.018	0.015	0
3TU35-A	40.1	3.7	0	0.065	0.095	0	< LOD	1	0
3TU35-B	42.7	1.4	0	0.102	0.053	0	0.017	0.016	0
3TU35-C	39.6	2.3	0	0.81	0.71	0	0.0046	0.0092	0
3TU48-A	38.8	1.2	0	0.06	0.033	0	< LOD	1	0
3TU48-B	38.9	1.6	0	0.027	0.023	0	0.0023	0.0046	0
3TU50-A	28.9	1.1	0	< LOD	1	0	0.01	0.015	0
3TU50-B	24.2	1.1	0	< LOD	1	0	0.025	0.025	0
3TU60	42.8	1	0.033232	0.092	0.035	0	0.0046	0.0065	0
3TU61-A	39.1	3.2	0	0.04	0.043	0	< LOD	1	0
3TU61-B	33.6	1.2	0	0.029	0.025	0	0.005	0.01	0
3TU61-C	31.7	1.2	0	0.005	0.01	0	0.018	0.02	0
3TU74-A	40.6	1.5	0	0.039	0.029	0	0.019	0.018	0
3TU74-B	38.5	1.4	0	0.045	0.029	0	0.015	0.017	0
3TU74-C	39.2	1.3	0	0.052	0.031	0	0.41	0.69	0
4TU01-A	32.96	0.7	0.0063327	0.009	0.0063	0	0.0073	0.005	0
4TU05	37.44	0.93	0.028191	0.0047	0.0066	0	0.0059	0.0056	0
4TU36-A	35.51	0.72	0	0.0054	0.0056	0	0.036	0.011	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ho	Ho Stdev	Ho LOD	K	K Stdev	K LOD	La	La Stdev	La LOD
T2-1-B	0.0035	0.0019	0	430	11	0.5816	9.23	0.29	0
T2-1-C	0.0056	0.0022	0	445	23	0.63115	9.1	0.27	0
T2-2-A	< LOD	1	0	354.7	4.8	1.0547	0.285	0.022	0
T2-2-B	< LOD	1	0	379.3	9.9	0.76493	0.235	0.022	0
T2-3-A	0.043	0.025	0	215.9	4	0.73372	3.73	0.14	0
T2-3-B	0.082	0.042	0	2070	460	0.71165	2.69	0.13	0
T2-3-C	0.0077	0.0032	0	194.1	4.6	0.64054	2.477	0.092	0
T2-4-A	0.0032	0.002	0	384	8.9	0.99404	2.007	0.085	0
T2-4-B	0.00176	0.00094	0	422	21	0.59778	2.004	0.052	0
T2-5-A	0.0036	0.002	0	375	3.9	0.68984	4.04	0.15	0
T2-5-B	0.0043	0.0024	0	382	14	0.61042	3.97	0.17	0
T2-5-C	0.0025	0.0019	0	369	11	0.73432	3.87	0.15	0
3TU03-A	< LOD	1	0	251.2	5.2	1.6966	1.47	0.15	0
3TU03-B	0.0024	0.0036	0	252.8	4.8	1.5226	1.28	0.12	0
3TU03-C	< LOD	1	0	241.6	6	1.3877	0.87	0.11	0
3TU09-A	0.16	0.14	0	100	14	1.1394	2.5	1.7	0
3TU09-B	0.026	0.012	0	81	29	1.5099	1.74	0.44	0
3TU09-C	0.024	0.02	0	59	11	1.7649	0.234	0.08	0
3TU11-A	< LOD	1	0	292.8	8.6	1.5854	1.74	0.11	0
3TU11-B	0.0119	0.0088	0	263	14	1.4794	0.84	0.13	0
3TU11-C	< LOD	1	0	192.2	5.7	1.6018	0.253	0.041	0
3TU24-A	0.0018	0.0019	0	321.4	7.5	1.3661	1.287	0.072	0
3TU24-B	0.0014	0.002	0	269	26	1.467	0.878	0.079	0
3TU35-A	0.0024	0.0047	0	145	44	2.7555	1.39	0.34	0
3TU35-B	0.0007	0.0014	0	214.9	3.5	1.7441	2.55	0.14	0
3TU35-C	0.058	0.046	0	302	57	2.0301	5.3	3.5	0
3TU48-A	0.0012	0.0025	0	143.7	3.4	1.3693	1.51	0.1	0
3TU48-B	0.001	0.0019	0	118.5	4	1.3158	1.16	0.12	0
3TU50-A	0.0043	0.005	0	265.5	5.7	1.4543	0.021	0.015	0
3TU50-B	0.001	0.002	0	245.1	5.4	1.3701	0.0034	0.0068	0
3TU60	0.0015	0.0015	0	161.8	5.1	1.3676	3.26	0.15	0
3TU61-A	0.0043	0.0063	0	193	13	1.5485	1.03	0.14	0
3TU61-B	0.0007	0.0015	0	215.5	9.6	1.3118	1.33	0.12	0
3TU61-C	0.0012	0.0024	0	202.5	7.7	1.5228	1.129	0.084	0
3TU74-A	0.0037	0.0043	0	158.4	3.5	1.2192	1.67	0.1	0
3TU74-B	0.0041	0.0066	0	155.3	5.1	1.2589	1.84	0.13	0
3TU74-C	0.009	0.013	0	164	12	1.2247	2.03	0.14	0
4TU01-A	0.0019	0.0012	0	74.2	2.1	0.55384	0.08	0.015	0
4TU05	0.0024	0.0024	0	88.8	1.9	0.91891	0.171	0.022	0
4TU36-A	0.0063	0.0024	0	118.5	2.2	0.57709	0.091	0.015	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Li	Li Stdev	Li LOD	Lu	Lu Stdev	Lu LOD	Mg	Mg Stdev	Mg LOD
T2-1-B	27.9	1.1	0.063862	0.0033	0.0017	0	20760	450	0.014835
T2-1-C	33.6	1.4	0.078145	0.002	0.0013	0	20300	510	0
T2-2-A	95.2	1.5	0.10278	< LOD	1	0	27750	170	0.045362
T2-2-B	99.1	2.6	0.074541	< LOD	1	0	26470	490	0.032899
T2-3-A	15.43	0.67	0.07974	0.0145	0.0084	0	40310	230	0.016231
T2-3-B	13.72	0.73	0.077341	0.025	0.014	0	39370	440	0.015743
T2-3-C	13.47	0.62	0.06242	0.0008	0.001	0	40470	890	0.02755
T2-4-A	15.09	0.69	0.1091	0.0011	0.0013	0	39560	410	0.090261
T2-4-B	14.82	0.42	0.065611	0.00037	0.00045	0	39270	530	0.05428
T2-5-A	15.46	0.51	0.087631	0.0031	0.0021	0	42280	220	0.06162
T2-5-B	16.03	0.84	0.077543	0.0034	0.0024	0	41200	1.20E+03	0.054526
T2-5-C	16.48	0.95	0.080597	0.0028	0.0017	0	40000	1.20E+03	0.066678
3TU03-A	18.3	1.4	0.13055	0.0033	0.0031	0	44110	450	0.080781
3TU03-B	17.6	1.4	0.11716	< LOD	1	0	43860	400	0.072498
3TU03-C	18.6	1.4	0.10678	0.0041	0.004	0	42800	1.00E+03	0.066074
3TU09-A	9.04	0.94	0.099314	0.051	0.048	0	25800	2.40E+03	0
3TU09-B	11.79	0.94	0.1316	0.0104	0.0084	0	32290	510	0
3TU09-C	11.16	0.97	0.15383	0.0066	0.0064	0	33900	1.30E+03	0
3TU11-A	6.2	0.84	0.10913	0.0011	0.0021	0	51110	460	0.060652
3TU11-B	6.32	0.95	0.10184	0.066	0.05	0	51420	460	0.056597
3TU11-C	6.46	0.69	0.11026	0.0021	0.0041	0	49780	620	0.06128
3TU24-A	161.4	3.3	0.12093	< LOD	1	0	2653	98	0.043841
3TU24-B	154.8	5	0.12986	0.0007	0.0014	0	2509	76	0.04708
3TU35-A	10.1	1.4	0.31443	< LOD	1	0	43870	790	0.11096
3TU35-B	8.93	0.76	0.19902	< LOD	1	0	43760	320	0.070233
3TU35-C	9.8	1.3	0.23166	0.0028	0.0056	0	43750	650	0.081752
3TU48-A	6.81	0.59	0.085949	< LOD	1	0	43720	290	0.05535
3TU48-B	6.61	0.61	0.08259	< LOD	1	0	42500	1.10E+03	0.053186
3TU50-A	9.81	0.91	0.20225	0.004	0.0048	0	39790	460	0.082034
3TU50-B	9.14	0.99	0.19054	0.0046	0.0053	0	41080	450	0.077282
3TU60	13.32	0.67	0.19289	< LOD	0.0014	0.0036974	41220	280	0.071735
3TU61-A	20.8	2	0.18236	0.0025	0.0051	0	40600	2.20E+03	0.4354
3TU61-B	19.3	1.4	0.15447	0.0007	0.0014	0	40430	300	0.36883
3TU61-C	19.2	1.8	0.17933	0.0032	0.0045	0	41270	430	0.42818
3TU74-A	9.6	1.1	0.10883	< LOD	1	0	37530	280	0.085756
3TU74-B	8.62	0.81	0.11238	0.0016	0.0033	0	37530	310	0.08855
3TU74-C	9.65	0.98	0.10932	0.013	0.024	0	37300	420	0.086138
4TU01-A	8.01	0.39	0.086197	0.00099	0.00091	0	40690	280	0.01224
4TU05	7.46	0.45	0.10588	0.0024	0.002	0	48030	270	0.049664
4TU36-A	9.52	0.42	0.07087	0.241	0.021	0	39610	330	0.066303

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Mn	Mn Stdev	Mn LOD	Mo	Mo Stdev	Mo LOD	Na	Na Stdev	Na LOD
T2-1-B	455	10	0.51033	0.042	0.028	0	13550	460	0.89798
T2-1-C	438	13	0.55335	0.021	0.018	0	12740	380	1.0101
T2-2-A	3404	28	0.68929	0.181	0.058	0	16600	130	1.1111
T2-2-B	3530	110	0.49992	0.201	0.064	0	16810	360	0.80583
T2-3-A	91.2	1.9	0.56236	0.0039	0.0078	0	13990	160	1.0356
T2-3-B	92.4	5.1	0.54544	0.008	0.012	0	13290	150	1.0044
T2-3-C	81.5	2.7	0.41863	0.014	0.014	0	13660	430	0.67479
T2-4-A	164.8	3.9	0.87515	< LOD	0.00013	0.033047	14060	260	1.432
T2-4-B	175.5	2.6	0.52629	< LOD	0.0029	0.019873	13510	300	0.86114
T2-5-A	273.6	2.2	0.64611	0.015	0.016	0	14860	180	1.1631
T2-5-B	280	10	0.57173	0.007	0.015	0	15050	690	1.0292
T2-5-C	271.8	8.7	0.64649	< LOD	0.006	0.024412	14700	1.00E+03	1.0578
3TU03-A	535.9	9.4	1.3722	0.012	0.023	0	13630	180	2.505
3TU03-B	540	9.2	1.2315	0.012	0.023	0	13700	120	2.2481
3TU03-C	511	14	1.1224	0.021	0.042	0	13790	400	2.0489
3TU09-A	49	17	1.1097	0.37	0.23	0	10800	1.00E+03	1.7287
3TU09-B	117	15	1.4705	0.015	0.03	0	12390	170	2.2907
3TU09-C	54.7	8.1	1.7188	0.07	0.1	0	12940	530	2.6776
3TU11-A	166.7	3.1	1.5124	0.017	0.033	0	14050	400	2.0904
3TU11-B	170.4	3.1	1.4113	< LOD	1	0	13520	140	1.9506
3TU11-C	155.9	4.2	1.5281	0.016	0.032	0	14190	220	2.112
3TU24-A	2294	19	1.1449	0.129	0.066	0	12930	170	1.636
3TU24-B	2194	59	1.2295	0.102	0.09	0	12150	390	1.7569
3TU35-A	77	11	2.3244	0.034	0.068	0	11960	690	4.2213
3TU35-B	60.7	5.4	1.4712	< LOD	1	0	11345	97	2.6718
3TU35-C	51.5	3.3	1.7125	< LOD	1	0	12230	180	3.11
3TU48-A	56.9	3.3	1.2409	< LOD	1	0	13760	130	1.9186
3TU48-B	66.2	1.7	1.1924	0.01	0.019	0	13560	380	1.8436
3TU50-A	429.7	7.3	1.6492	< LOD	1	0	16280	300	2.2214
3TU50-B	439.2	5.7	1.5537	< LOD	1	0	14640	200	2.0928
3TU60	140.3	5.4	0.93161	0.006	0.011	0	14010	200	1.7262
3TU61-A	215	13	1.3795	< LOD	1	0	15100	780	2.6601
3TU61-B	233.6	5.7	1.1686	0.013	0.026	0	14460	170	2.2534
3TU61-C	236.7	4.9	1.3566	0.018	0.036	0	14160	140	2.616
3TU74-A	120.2	2.4	1.1498	< LOD	1	0	14260	180	2.3721
3TU74-B	120	4.7	1.1872	< LOD	1	0	13450	140	2.4494
3TU74-C	114.7	2.3	1.1549	< LOD	1	0	13460	310	2.3827
4TU01-A	140.3	1.5	0.44501	0.01	0.014	0	15380	150	0.56366
4TU05	216.4	2.8	0.8163	< LOD	1	0	13180	140	1.6364
4TU36-A	180.6	1.6	0.4424	0.016	0.018	0	15440	200	0.91622

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Nb	Nb Stdev	Nb LOD	Nd	Nd Stdev	Nd LOD	Ni	Ni Stdev	Ni LOD
T2-1-B	1.235	0.07	0	2.7	0.14	0	11.84	0.53	0
T2-1-C	1.216	0.063	0	2.7	0.17	0	11.22	0.63	0.031075
T2-2-A	0.833	0.054	0	0.066	0.024	0	70.1	1.7	0.029401
T2-2-B	0.867	0.054	0	0.042	0.016	0	69.4	2.3	0.021324
T2-3-A	0.073	0.02	0	2.18	0.29	0	101.6	2.4	0
T2-3-B	0.227	0.053	0	2.21	0.45	0	92.3	2.4	0
T2-3-C	0.088	0.014	0	1.207	0.096	0	100.3	2.5	0.017856
T2-4-A	0.05	0.016	0.0030713	1.03	0.12	0	61.8	1.7	0
T2-4-B	0.0437	0.0093	0.001847	1.115	0.068	0	61.2	1.2	0
T2-5-A	0.069	0.015	0	1.889	0.09	0	64	1.6	0
T2-5-B	0.077	0.023	0	2	0.16	0	67.4	3.5	0
T2-5-C	0.068	0.016	0.0022688	1.91	0.12	0	64.3	2.7	0
3TU03-A	0.034	0.046	0	0.67	0.17	0	63.2	2.5	0
3TU03-B	0.0042	0.0058	0	0.87	0.16	0	66.6	3.1	0
3TU03-C	0.0078	0.0092	0	0.42	0.14	0	61.7	3.7	0
3TU09-A	0.035	0.023	0	2.9	1.8	0	52.1	5.1	0.084586
3TU09-B	2.9	1	0	1.65	0.79	0	62.7	4.6	0.11209
3TU09-C	2.57	0.37	0	0.177	0.091	0	61.1	5.1	0.13102
3TU11-A	0.0086	0.0093	0	0.66	0.16	0	76.3	4.2	0
3TU11-B	0.014	0.017	0	0.34	0.11	0	79.9	3	0
3TU11-C	< LOD	1	0	0.12	0.078	0	80.7	3.9	0
3TU24-A	0.844	0.073	0	0.77	0.11	0	0.009	0.017	0
3TU24-B	0.83	0.12	0	0.54	0.13	0	0.07	0.1	0
3TU35-A	0.066	0.044	0	0.58	0.27	0	110.9	8	0.093912
3TU35-B	0.079	0.026	0	1.38	0.2	0	102	3.2	0.05944
3TU35-C	0.112	0.073	0	4.5	3.4	0	97.4	6.8	0.069188
3TU48-A	0.047	0.025	0	0.74	0.15	0	74.1	2.5	0
3TU48-B	0.024	0.019	0	0.77	0.16	0	77.1	3.5	0
3TU50-A	0.11	0.034	0	0.015	0.031	0	26.3	2.9	0.061251
3TU50-B	0.042	0.03	0	< LOD	1	0	39.8	2.7	0.057704
3TU60	0.072	0.022	0.01002	1.51	0.16	0	48.3	1.6	0.1013
3TU61-A	0.033	0.039	0	0.53	0.18	0	94.9	6.3	0.13561
3TU61-B	0.022	0.014	0	0.78	0.17	0	99.2	3.5	0.11487
3TU61-C	0.018	0.018	0	0.71	0.19	0	99.2	4.1	0.13336
3TU74-A	0.039	0.025	0	0.9	0.17	0	152	13	0.048438
3TU74-B	0.023	0.016	0	1.06	0.22	0	148.8	4.8	0.050016
3TU74-C	0.037	0.025	0	1.19	0.19	0	150.8	5.9	0.048654
4TU01-A	0.199	0.021	0	0.056	0.02	0	43.3	1.3	0
4TU05	0.275	0.031	0	0.057	0.028	0	27	1.1	0
4TU36-A	0.043	0.012	0	0.046	0.015	0	101.2	2.2	0.041778

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Pb	Pb Stdev	Pb LOD	Pr	Pr Stdev	Pr LOD	Rb	Rb Stdev	Rb LOD
T2-1-B	3.98	0.18	0.0065778	1.008	0.055	0	0.0158	0.0086	0.007907
T2-1-C	3.91	0.18	0.0038137	1.037	0.046	0	0.122	0.098	0.010597
T2-2-A	1.905	0.085	0.0067178	0.0249	0.0062	0	0.061	0.02	0.004556
T2-2-B	1.919	0.089	0.0048722	0.0148	0.0041	0	0.049	0.017	0.0033044
T2-3-A	5.68	0.16	0.0086166	0.593	0.044	0	< LOD	0.009	0.012597
T2-3-B	4.78	0.16	0.0083574	0.549	0.049	0	2.64	0.66	0.012218
T2-3-C	4.97	0.17	0.0040799	0.391	0.023	0	0.031	0.011	0.002767
T2-4-A	3.04	0.15	0.0061245	0.336	0.025	0	0.061	0.036	0.015629
T2-4-B	2.97	0.16	0.0036831	0.349	0.017	0	0.169	0.04	0.009399
T2-5-A	4.92	0.14	0.0085404	0.66	0.039	0	< LOD	0.0084	0.011045
T2-5-B	4.93	0.28	0.0075572	0.638	0.041	0	< LOD	0.009	0.0097732
T2-5-C	4.66	0.23	0.0045243	0.641	0.036	0	< LOD	0.0073	0.011546
3TU03-A	11.7	0.61	0.014505	0.218	0.041	0.0028019	< LOD	0.016	0.026724
3TU03-B	11.66	0.66	0.013018	0.221	0.044	0.0025146	< LOD	0.015	0.023984
3TU03-C	10.24	0.65	0.011864	0.11	0.032	0.0022918	< LOD	0.029	0.021858
3TU09-A	7.41	0.97	0.0036671	0.54	0.36	0	0.3	0.1	0.02909
3TU09-B	6.86	0.41	0.0048594	0.3	0.11	0	0.061	0.061	0.038549
3TU09-C	6.34	0.46	0.00568	0.048	0.021	0	< LOD	0.037	0.045058
3TU11-A	8.68	0.68	0.01165	0.163	0.034	0	< LOD	0.019	0.0173
3TU11-B	7.74	0.3	0.010871	0.096	0.028	0	0.083	0.067	0.016144
3TU11-C	7.27	0.48	0.01177	0.036	0.015	0	< LOD	0.019	0.017479
3TU24-A	5.47	0.26	0.011589	0.266	0.025	0	0.02	0.016	0.017079
3TU24-B	6.47	0.49	0.012445	0.178	0.038	0	< LOD	0.017	0.018341
3TU35-A	6.3	1.2	0.022243	0.2	0.07	0	< LOD	0.04	0.035114
3TU35-B	6.01	0.25	0.014078	0.387	0.049	0	< LOD	0.018	0.022225
3TU35-C	7	0.79	0.016387	1.29	0.9	0	0.62	0.29	0.02587
3TU48-A	7.17	0.33	0.019268	0.254	0.036	0	< LOD	0.0079	0.011056
3TU48-B	6.96	0.34	0.018515	0.214	0.031	0	< LOD	0.013	0.010624
3TU50-A	9.78	0.62	0.0074382	0.0038	0.0055	0	0.02	0.028	0.01331
3TU50-B	8.08	0.39	0.0070074	< LOD	1	0	0.038	0.03	0.012539
3TU60	6.96	0.27	0.010814	0.477	0.037	0	< LOD	0.01	0.018272
3TU61-A	6.54	0.65	0.018591	0.201	0.044	0	< LOD	0.02	0.038428
3TU61-B	5.41	0.27	0.015749	0.23	0.039	0	< LOD	0.025	0.032553
3TU61-C	5.52	0.33	0.018283	0.206	0.036	0	< LOD	0.0083	0.037791
3TU74-A	8.1	1.2	0.0071332	0.325	0.045	0	0.045	0.054	0.019386
3TU74-B	7.42	0.75	0.0073656	0.31	0.044	0	< LOD	0.019	0.020017
3TU74-C	7.17	0.63	0.007165	0.401	0.054	0	< LOD	0.02	0.019472
4TU01-A	5.8	0.13	0.0039853	0.013	0.0041	0	< LOD	0.0066	0.0075822
4TU05	9.1	0.32	0.011876	0.0114	0.0046	0	< LOD	0.014	0.02079
4TU36-A	7.44	0.26	0.0042952	0.0125	0.0037	0	0.0066	0.0062	0.0040859

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Sm	Sm Stdev	Sm LOD	Sn	Sn Stdev	Sn LOD
T2-1-B	21.25	0.6	0.020011	0.212	0.031	0	6.75	0.31	0.014723
T2-1-C	22.26	0.76	0.021441	0.243	0.03	0	6.2	0.33	0.017256
T2-2-A	39.13	0.7	0.033773	0.0049	0.0058	0	79.3	1.1	0.041424
T2-2-B	34.85	0.8	0.024495	0.0035	0.0036	0	81.4	1.9	0.030044
T2-3-A	32.99	0.73	0.023133	0.44	0.17	0	1.72	0.11	0.020271
T2-3-B	28.89	0.9	0.022437	0.65	0.25	0	1.35	0.15	0.019661
T2-3-C	25.34	0.7	0.020511	0.162	0.023	0	1.26	0.13	0.025158
T2-4-A	26.85	0.69	0.023727	0.127	0.03	0	1.25	0.13	0.023062
T2-4-B	25.66	0.47	0.014269	0.142	0.017	0	1.184	0.075	0.013868
T2-5-A	44.84	0.63	0.025511	0.17	0.029	0	1.89	0.11	0.024388
T2-5-B	39.4	1.1	0.022574	0.162	0.03	0	1.87	0.13	0.02158
T2-5-C	39.3	1.1	0.017528	0.205	0.035	0	1.87	0.13	0.017036
3TU03-A	31.2	1.1	0.075919	0.101	0.052	0.018915	1.67	0.22	0.062452
3TU03-B	27	1.1	0.068135	0.075	0.038	0.016975	1.7	0.22	0.056049
3TU03-C	22.07	0.94	0.062097	0.086	0.034	0.015471	1.26	0.2	0.051082
3TU09-A	5.38	0.7	0.032973	0.82	0.58	0	0.36	0.13	0.036535
3TU09-B	7.63	0.59	0.043694	0.16	0.11	0	0.44	0.13	0.048414
3TU09-C	8.97	0.85	0.051072	0.026	0.031	0	0.35	0.15	0.05659
3TU11-A	39.7	1.2	0.054758	0.07	0.05	0	0.23	0.1	0.02874
3TU11-B	37.3	1.4	0.051097	0.014	0.016	0	0.25	0.1	0.026818
3TU11-C	31.2	1.4	0.055325	0.022	0.028	0	0.28	0.17	0.029037
3TU24-A	67.5	1.1	0.027845	0.139	0.035	0	3.02	0.18	0.030045
3TU24-B	61.8	1.6	0.029902	0.101	0.034	0	3.16	0.47	0.032264
3TU35-A	12.3	1.2	0.047509	0.052	0.051	0.015893	1.04	0.46	0.049998
3TU35-B	11.18	0.52	0.03007	0.128	0.051	0.010059	0.99	0.2	0.031646
3TU35-C	11.73	0.85	0.035002	0.9	0.66	0.011709	0.9	0.23	0.036835
3TU48-A	16.08	0.76	0.052154	0.064	0.031	0	1.18	0.16	0.056098
3TU48-B	15.77	0.71	0.050115	0.055	0.028	0	1.26	0.21	0.053905
3TU50-A	9.7	0.61	0.051385	< LOD	1	0	0.228	0.088	0.05446
3TU50-B	8.54	0.74	0.048409	< LOD	1	0	0.33	0.11	0.051306
3TU60	13.27	0.65	0.034048	0.151	0.04	0	2.57	0.19	0.03944
3TU61-A	14	1.7	0.044352	0.036	0.03	0	2.87	0.29	0.056943
3TU61-B	12.97	0.68	0.037571	0.084	0.04	0	2.85	0.26	0.048236
3TU61-C	12.73	0.75	0.043617	0.05	0.034	0	2.99	0.38	0.055998
3TU74-A	28.3	1.1	0.031605	0.117	0.043	0	1.07	0.22	0.051526
3TU74-B	28.2	1.1	0.032634	0.163	0.079	0	1.15	0.19	0.053205
3TU74-C	28.9	0.83	0.031746	0.124	0.044	0	1.16	0.22	0.051756
4TU01-A	5.41	0.22	0.012167	0.0113	0.0071	0	0.142	0.037	0.015784
4TU05	6.68	0.3	0.034646	0.0022	0.0031	0	0.236	0.051	0.034246
4TU36-A	52.69	0.82	0.021531	0.0082	0.0057	0	0.79	0.14	0.022355

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sr	Sr Stdev	Sr LOD	Ta	Ta Stdev	Ta LOD	Tb	Tb Stdev	Tb LOD
T2-1-B	83.1	1.8	0	0.76	0.032	0	0.0104	0.0034	0
T2-1-C	82.1	2.2	0	0.835	0.048	0	0.0096	0.0034	0
T2-2-A	28.87	0.48	0	0.796	0.034	0.0011175	< LOD	1	0
T2-2-B	26.24	0.54	0	0.812	0.032	0.00081047	< LOD	1	0
T2-3-A	186.5	3.5	0	0.0233	0.0072	0	0.063	0.035	0
T2-3-B	159.5	2.9	0	0.0225	0.0063	0	0.086	0.042	0
T2-3-C	142.8	3.8	0	0.0115	0.003	0.00067868	0.0108	0.0036	0
T2-4-A	81.9	1.3	0	0.0136	0.0047	0	0.0053	0.003	0
T2-4-B	82.6	1.2	0	0.0078	0.002	0	0.0056	0.0017	0
T2-5-A	132.2	1.6	0	0.0258	0.0052	0	0.0057	0.0027	0
T2-5-B	123.4	3.6	0	0.0176	0.0056	0	0.0065	0.003	0
T2-5-C	119.9	3	0	0.0181	0.0053	0	0.0065	0.003	0
3TU03-A	97.8	3.7	0	0.0007	0.0014	0	0.0059	0.0063	0
3TU03-B	92	4	0	0.0023	0.0034	0	0.0041	0.0047	0
3TU03-C	78	3.2	0	0.0014	0.0028	0	< LOD	1	0
3TU09-A	215	19	0	< LOD	0.0016	0.0031573	0.118	0.095	0.0017925
3TU09-B	265.6	7.6	0	0.243	0.089	0.0041839	0.017	0.011	0.0023753
3TU09-C	279	13	0	0.199	0.052	0.0048904	0.016	0.013	0.0027764
3TU11-A	181.1	5.2	0	0.0061	0.0059	0	0.0011	0.0021	0
3TU11-B	190.8	3.5	0	< LOD	1	0	0.0017	0.0035	0
3TU11-C	169.5	3.8	0	< LOD	1	0	< LOD	1	0
3TU24-A	2.71	0.16	0	0.152	0.018	0	0.0085	0.0052	0
3TU24-B	2.5	0.35	0	0.146	0.033	0	0.0027	0.0026	0
3TU35-A	131.6	6.3	0	0.015	0.01	0	< LOD	0.0000094	0
3TU35-B	132	3.1	0	0.0113	0.0063	0	0.0092	0.0065	0
3TU35-C	141.5	3.4	0	0.0107	0.0082	0	0.109	0.088	0
3TU48-A	129.4	2.9	0	0.0165	0.0075	0	0.0012	0.0017	0
3TU48-B	106.9	2.7	0	0.0141	0.0078	0	0.0037	0.0038	0
3TU50-A	298	14	0	0.0101	0.007	0	0.0021	0.0042	0
3TU50-B	317.5	7.6	0	0.0111	0.0075	0	< LOD	1	0
3TU60	212.3	4	0	0.015	0.0049	0	0.0073	0.0044	0
3TU61-A	140	11	0	0.008	0.0078	0	< LOD	0.0067	0.0051806
3TU61-B	133.1	6.1	0	0.0061	0.0053	0	< LOD	0.0023	0.0043885
3TU61-C	116.2	3.1	0	0.0042	0.0039	0	< LOD	0.000016	0.0050947
3TU74-A	125.5	2.6	0	0.0035	0.0036	0	0.005	0.0048	0.0020529
3TU74-B	141.1	4.4	0	0.0087	0.0051	0	0.0058	0.0064	0.0021198
3TU74-C	153.2	3.3	0	0.0055	0.0048	0	0.0056	0.0051	0.0020621
4TU01-A	279.7	3.9	0.0038054	0.0646	0.0081	0	0.00103	0.00092	0
4TU05	469.4	8.8	0	0.0174	0.0052	0	0.0016	0.0019	0
4TU36-A	343.7	6.3	0	0.0246	0.0055	0	0.00079	0.00097	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Th	Th Stdev	Th LOD	Ti	Ti Stdev	Ti LOD	Tm	Tm Stdev	Tm LOD
T2-1-B	0.0039	0.0021	0	6960	130	0	0.00135	0.0009	0
T2-1-C	0.0053	0.0019	0	6900	210	0	0.0017	0.0014	0
T2-2-A	0.0067	0.0029	0	4605	39	0.20868	< LOD	1	0
T2-2-B	0.0076	0.0029	0	4550	110	0.15135	< LOD	1	0
T2-3-A	0.23	0.13	0	5461	69	0	0.015	0.009	0
T2-3-B	0.4	0.2	0	4879	72	0	0.031	0.018	0
T2-3-C	0.0206	0.0052	0	4880	110	0.12674	0.0011	0.0012	0
T2-4-A	0.00068	0.00096	0	3598	42	0	< LOD	1	0
T2-4-B	0.00043	0.00067	0	3103	39	0	0.00042	0.00044	0
T2-5-A	0.00062	0.00092	0	4621	31	0	0.00051	0.00075	0
T2-5-B	0.0007	0.001	0	4400	100	0	0.0009	0.0012	0
T2-5-C	0.0012	0.0021	0	4360	130	0	0.00084	0.00084	0
3TU03-A	0.0033	0.004	0	5585	86	0	< LOD	1	0
3TU03-B	0.0086	0.0067	0	5840	150	0	0.0015	0.003	0
3TU03-C	0.0025	0.0039	0	5030	120	0	0.0016	0.0032	0
3TU09-A	2	2.2	0	1830	170	0	0.045	0.039	0
3TU09-B	0.147	0.031	0	3830	680	0	0.0045	0.0036	0
3TU09-C	0.25	0.12	0	3660	220	0	0.016	0.014	0
3TU11-A	< LOD	1	0	2196	47	0	0.002	0.0039	0
3TU11-B	0.0036	0.0042	0	2576	69	0	0.025	0.025	0
3TU11-C	< LOD	1	0	2974	67	0	< LOD	1	0
3TU24-A	0.0015	0.0018	0	1003	17	0	0.00067	0.00095	0
3TU24-B	0.0022	0.0032	0	1058	33	0	0.0007	0.0013	0
3TU35-A	< LOD	1	0	4530	280	0	< LOD	1	0
3TU35-B	< LOD	1	0	4625	76	0	< LOD	1	0
3TU35-C	0.32	0.29	0	3720	150	0	0.012	0.015	0
3TU48-A	< LOD	1	0	4067	53	0.1623	< LOD	1	0
3TU48-B	< LOD	1	0	4110	170	0.15595	< LOD	1	0
3TU50-A	0.0023	0.0046	0	2814	93	0.38485	0.002	0.004	0
3TU50-B	< LOD	1	0	3372	64	0.36256	0.0019	0.0038	0
3TU60	0.0058	0.0035	0	3671	42	0	0.001	0.0015	0
3TU61-A	< LOD	0.000045	0	4060	210	0	< LOD	1	0
3TU61-B	0.0017	0.0036	0	4079	70	0	0.0014	0.0027	0
3TU61-C	< LOD	0.000054	0	4040	76	0	< LOD	1	0
3TU74-A	< LOD	0.000092	0.002051	3431	59	0	< LOD	1	0
3TU74-B	< LOD	0.000071	0.0021178	3692	60	0	< LOD	1	0
3TU74-C	0.033	0.046	0.0020601	3585	65	0	< LOD	1	0
4TU01-A	0.0177	0.0053	0	1754	30	0	0.00033	0.00046	0
4TU05	0.0065	0.0043	0	266.1	7.7	0	0.00045	0.0009	0
4TU36-A	0.001	0.0012	0	1347	33	0	0.0334	0.0049	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	U	U Stdev	U LOD	V	V Stdev	V LOD	Y	Y Stdev	Y LOD
T2-1-B	0.00035	0.00049	0	92.3	2.5	0.028636	0.118	0.02	0
T2-1-C	0.00032	0.00045	0	86.3	2.8	0.046253	0.119	0.018	0
T2-2-A	0.00023	0.00046	0	279.6	2.5	0.056432	0.0025	0.0031	0
T2-2-B	0.00066	0.00078	0	286	6.8	0.040929	0.0013	0.0019	0
T2-3-A	0.28	0.17	0	629.6	7.3	0.047289	1.22	0.7	0
T2-3-B	0.5	0.24	0	562.5	7.9	0.045867	2.4	1.2	0
T2-3-C	0.07	0.01	0	571	15	0.034273	0.131	0.022	0
T2-4-A	0.002	0.0018	0	424.1	4.8	0.052034	0.065	0.017	0
T2-4-B	0.0024	0.0012	0	488.4	7.9	0.031292	0.077	0.011	0
T2-5-A	< LOD	1	0	282.4	3.2	0.050055	0.079	0.017	0
T2-5-B	< LOD	1	0	279.8	8.7	0.044292	0.073	0.016	0
T2-5-C	0.00055	0.0008	0	278.6	8.4	0.038439	0.072	0.016	0
3TU03-A	0.0031	0.0036	0	532	8.5	0.10064	0.0088	0.0084	0
3TU03-B	0.0016	0.0022	0	541	15	0.090317	0.084	0.039	0
3TU03-C	0.0013	0.0018	0	488	25	0.082314	0.056	0.027	0
3TU09-A	0.81	0.9	0	93.9	9.1	0.075023	3.3	2.8	0
3TU09-B	0.061	0.023	0	112.2	3.1	0.099416	0.77	0.15	0
3TU09-C	0.09	0.04	0	124.8	4.9	0.1162	0.54	0.22	0
3TU11-A	< LOD	0.000032	0	494.3	7.5	0.08951	0.01	0.012	0
3TU11-B	0.43	0.31	0	515.1	7.6	0.083526	0.45	0.34	0
3TU11-C	0.015	0.01	0	464.1	9.4	0.090437	0.0058	0.0079	0
3TU24-A	0.0023	0.0024	0	0.99	0.11	0.062168	0.056	0.02	0
3TU24-B	< LOD	1	0	1.1	0.17	0.06676	0.027	0.017	0
3TU35-A	< LOD	1	0	462	24	0.19332	0.047	0.045	0
3TU35-B	0.0025	0.0035	0	561.9	7.9	0.12236	0.042	0.024	0
3TU35-C	0.51	0.44	0	505	19	0.14243	1.6	1.3	0
3TU48-A	0.0022	0.0026	0	245.3	3.3	0.11564	0.033	0.016	0
3TU48-B	0.0019	0.003	0	222.7	6.1	0.11112	0.034	0.016	0
3TU50-A	0.005	0.0057	0	222	4.1	0.088195	0.135	0.053	0
3TU50-B	0.0018	0.0035	0	236.4	4.5	0.083087	0.076	0.033	0
3TU60	0.001	0.0015	0	150.3	2.1	0.088402	0.068	0.021	0
3TU61-A	< LOD	1	0	309	28	0.11594	0.025	0.018	0
3TU61-B	0.0015	0.0031	0	337.7	8.4	0.098212	0.03	0.019	0
3TU61-C	< LOD	1	0	287.2	6.7	0.11402	0.064	0.033	0
3TU74-A	0.0013	0.0026	0	365	7.9	0.096806	0.051	0.02	0
3TU74-B	0.0024	0.0036	0	416.9	8.1	0.09996	0.033	0.023	0
3TU74-C	0.053	0.071	0	424.4	6	0.097238	0.18	0.21	0
4TU01-A	0.002	0.0015	0	128.5	2	0.03629	0.043	0.012	0
4TU05	0.0017	0.0016	0	130.7	1.8	0.047541	0.0203	0.0098	0
4TU36-A	0.00018	0.00035	0	208.5	2.5	0.044293	0.11	0.019	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Yb	Yb Stdev	Yb LOD	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
T2-1-B	0.0098	0.0061	0	358	13	0.1556	0.282	0.045	0
T2-1-C	0.024	0.012	0	343	14	0.17716	0.256	0.037	0
T2-2-A	< LOD	1	0	1134	18	0.24168	0.134	0.035	0
T2-2-B	< LOD	1	0	1212	28	0.17528	0.12	0.028	0
T2-3-A	0.097	0.057	0	139.9	2.4	0.19762	18	11	0
T2-3-B	0.2	0.12	0	104.3	6.3	0.19168	36	18	0
T2-3-C	0.0102	0.0082	0	132.4	6.3	0.14678	2.02	0.41	0
T2-4-A	0.0026	0.0036	0	109.1	3.5	0.20714	0.271	0.073	0
T2-4-B	0.0041	0.0032	0	117.3	3.1	0.12457	0.213	0.027	0
T2-5-A	0.0083	0.0055	0	140.8	3.1	0.16879	0.536	0.057	0
T2-5-B	0.0033	0.0049	0	143	6.5	0.14936	0.468	0.065	0
T2-5-C	0.008	0.0067	0	135	5.9	0.15302	0.492	0.055	0
3TU03-A	0.011	0.017	0	132.4	4.4	0.44353	0.009	0.012	0
3TU03-B	0.011	0.016	0	126.9	5.1	0.39805	0.025	0.024	0
3TU03-C	0.007	0.014	0	138.7	9.3	0.36278	0.044	0.044	0
3TU09-A	0.3	0.29	0	156	18	0.275	76	58	0
3TU09-B	0.12	0.058	0	174.7	6.5	0.36442	3.2	1.8	0
3TU09-C	0.054	0.065	0	179	10	0.42596	22	13	0
3TU11-A	< LOD	1	0	118.3	4.8	0.26731	0.145	0.078	0
3TU11-B	0.24	0.19	0	113.7	4.7	0.24944	160	130	0
3TU11-C	< LOD	1	0	104.4	5.2	0.27008	2.6	1.9	0
3TU24-A	0.0031	0.0043	0	1242	23	0.36945	0.113	0.03	0
3TU24-B	< LOD	1	0	1253	65	0.39674	0.086	0.041	0
3TU35-A	< LOD	1	0	131	15	0.48977	0.117	0.08	0
3TU35-B	0.0033	0.0066	0	132.2	5.2	0.30999	0.171	0.065	0
3TU35-C	0.036	0.035	0	109.2	8.6	0.36083	0.105	0.056	0
3TU48-A	0.005	0.011	0	141.1	4.4	0.4212	0.053	0.031	0
3TU48-B	< LOD	1	0	126.2	5.4	0.40473	0.067	0.036	0
3TU50-A	0.0045	0.009	0	300	13	0.32145	< LOD	0.012	0.013186
3TU50-B	0.0044	0.0089	0	241.7	9.1	0.30283	0.141	0.068	0.012423
3TU60	< LOD	1	0	101.5	4.4	0.30211	0.045	0.022	0
3TU61-A	0.006	0.013	0	155	11	0.49132	0.014	0.028	0
3TU61-B	< LOD	1	0	129.5	5.6	0.4162	0.069	0.036	0
3TU61-C	< LOD	1	0	132.7	6	0.48317	0.045	0.038	0
3TU74-A	0.007	0.013	0	68.8	5.7	0.29751	0.28	0.15	0
3TU74-B	< LOD	1	0	71	15	0.30721	0.153	0.07	0
3TU74-C	0.06	0.11	0	79	15	0.29884	14	20	0
4TU01-A	0.0073	0.0059	0	120	3	0.16139	0.15	0.032	0
4TU05	0.0108	0.0095	0	88.3	2.4	0.20733	0.095	0.049	0
4TU36-A	0.574	0.056	0	126.3	3.9	0.17835	0.397	0.041	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Site	Al	Al Stdev	Al LOD	B	B Stdev	B LOD
4TU48-A	Till 04	178500	1.10E+03	0.17211	27280	240	1.9587
4TU48-B	Till 04	188800	3.50E+03	0.22596	23300	1.10E+03	2.5715
4TU51-A	Till 04	180220	950	0.36158	28210	240	1.8355
4TU51-B	Till 04	181300	1.30E+03	0.33383	27770	270	1.6947
4TU66-A	Till 04	157500	2.00E+03	0.23478	27270	380	1.3681
4TU66-B	Till 04	156100	2.20E+03	0.18732	27280	450	1.0915
4TU67-A	Till 04	174400	1.30E+03	0.30477	26920	300	1.8461
4TU67-B	Till 04	176200	1.20E+03	0.27158	26940	260	1.6451
4TU77-A	Till 04	167000	1.80E+03	0.21024	26990	340	1.6634
4TU77-B	Till 04	164900	3.70E+03	0.19306	25980	580	1.5275
4TU77-C	Till 04	167500	1.70E+03	0.19815	25720	330	1.5678
4TU89-A	Till 04	173200	4.10E+03	0.1807	27220	710	1.3338
4TU89-B	Till 04	177700	1.20E+03	0.15699	27290	210	1.1587
4TU94-A	Till 04	157100	3.10E+03	0.18486	26580	570	1.9181
4TU94-B	Till 04	159000	1.30E+03	0.15811	26000	240	1.6406
T4-1-A	Till 04	182760	820	0.084851	28180	280	0.23309
T4-1-B	Till 04	171100	4.90E+03	0.083001	27570	850	0.22801
5TU04-A	Till 05	179000	1.30E+03	0.21843	27110	270	2.0926
5TU04-B	Till 05	179100	1.90E+03	0.22361	26810	300	2.1423
5TU04-C	Till 05	174300	7.80E+03	0.27206	28500	4.90E+03	2.6065
5TU103-A	Till 05	157000	1.20E+03	0.2924	27160	260	1.4215
5TU103-B	Till 05	158120	960	0.30917	26680	260	1.503
5TU103-C	Till 05	157000	2.50E+03	0.23309	26400	510	1.1332
5TU20-A	Till 05	150500	1.70E+03	0.19217	25300	790	1.8607
5TU20-B	Till 05	139800	3.40E+03	0.20563	20160	700	1.991
5TU20-C	Till 05	137200	4.10E+03	0.1844	18700	1.40E+03	1.7855
5TU20-D	Till 05	134800	3.40E+03	0.17171	18400	1.30E+03	1.6625
5TU20-E	Till 05	152400	2.50E+03	0.17675	26700	1.30E+03	1.7114
5TU22-A	Till 05	178400	1.50E+03	0.25867	26280	220	2.4208
5TU22-B	Till 05	179900	2.30E+03	0.261	27200	1.00E+03	2.4426
5TU23-A	Till 05	170500	3.10E+03	0.16279	26150	330	1.4412
5TU23-B	Till 05	175500	1.20E+03	0.1684	26050	210	1.4908
5TU23-C	Till 05	163700	6.70E+03	0.15156	26600	1.20E+03	1.3417
5TU50-A	Till 05	180700	1.10E+03	0.27622	27410	280	1.5324
5TU50-B	Till 05	177200	2.30E+03	0.28004	27670	760	1.5536
5TU56-A	Till 05	172800	1.50E+03	0.29975	26610	290	2.048
5TU56-B	Till 05	175500	1.50E+03	0.2945	26890	280	2.0121
5TU63-A	Till 05	176700	1.30E+03	0.17773	27830	400	1.6878
5TU63-B	Till 05	176300	1.30E+03	0.17072	26750	290	1.6212
5TU78-A	Till 05	177840	980	0.40133	26960	250	1.8013

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ba	Ba Stdev	Ba LOD	Be	Be Stdev	Be LOD	Ca	Ca Stdev	Ca LOD
4TU48-A	1.04	0.22	0	0.36	0.27	0	7400	110	17.476
4TU48-B	108	46	0	2.8	1.5	0	6360	240	22.944
4TU51-A	1.35	0.35	0	0.22	0.23	0	6320	420	16.096
4TU51-B	1.09	0.23	0	0.5	0.41	0	6410	100	14.86
4TU66-A	1.09	0.28	0	0.25	0.3	0	9010	220	15.771
4TU66-B	2	0.34	0	0.11	0.22	0	9290	140	12.583
4TU67-A	1.08	0.25	0	< LOD	1	0	5160	100	17.931
4TU67-B	1.14	0.26	0	0.038	0.076	0	5260	75	15.978
4TU77-A	0.6	0.23	0	< LOD	1	0	3890	120	19.228
4TU77-B	1.57	0.5	0	< LOD	1	0	4960	230	17.657
4TU77-C	0.56	0.24	0	< LOD	1	0	4690	310	18.122
4TU89-A	0.71	0.28	0	< LOD	1	0	5710	140	17.635
4TU89-B	1.11	0.31	0	0.048	0.095	0	6270	270	15.321
4TU94-A	3.9	1.1	0	0.48	0.67	0	8590	240	24.61
4TU94-B	2.99	0.77	0	0.14	0.28	0	8560	160	21.05
T4-1-A	0.76	0.18	0	1.42	0.5	0	9096	92	9.933
T4-1-B	0.64	0.13	0	0.87	0.31	0	7760	210	9.7164
5TU04-A	1.31	0.35	0	< LOD	0.12	0.1623	7080	140	20.744
5TU04-B	1.38	0.36	0	< LOD	0.00072	0.16616	6850	150	21.236
5TU04-C	0.81	0.49	0	< LOD	0.29	0.20216	6430	400	25.838
5TU103-A	1.83	0.4	0	0.12	0.18	0	8810	130	17.934
5TU103-B	2.44	0.62	0	0.37	0.32	0	8550	220	18.962
5TU103-C	3.48	0.71	0	0.46	0.37	0	7650	190	14.296
5TU20-A	8.4	4	0	< LOD	1	0	13190	530	19.588
5TU20-B	152	24	0	< LOD	1	0	13260	830	20.96
5TU20-C	51	20	0	< LOD	1	0	16650	620	18.796
5TU20-D	132	40	0	< LOD	1	0	16200	1.30E+03	17.502
5TU20-E	8.3	2.3	0	< LOD	1	0	10310	400	18.016
5TU22-A	17.4	7.8	0	0.25	0.22	0	6760	130	24.908
5TU22-B	2.17	0.48	0	0.11	0.16	0	6430	190	25.132
5TU23-A	1.29	0.31	0	0.22	0.2	0	5960	140	16.468
5TU23-B	1.46	0.38	0	0.09	0.19	0	6180	110	17.034
5TU23-C	1.32	0.44	0	0.32	0.34	0	5630	250	15.331
5TU50-A	0.83	0.2	0	0.27	0.32	0	5403	70	14.641
5TU50-B	1.13	0.33	0	0.18	0.19	0	5390	100	14.844
5TU56-A	1.9	1.2	0	< LOD	1	0	4249	76	25.375
5TU56-B	0.36	0.24	0	0.39	0.54	0	5010	850	24.93
5TU63-A	0.66	0.2	0	0.32	0.26	0	5257	89	17.228
5TU63-B	0.52	0.17	0	0.56	0.39	0	5420	75	16.548
5TU78-A	0.99	0.26	0	0.2	0.21	0	5601	78	14.006

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ce	Ce Stdev	Ce LOD	Co	Co Stdev	Co LOD	Cr	Cr Stdev	Cr LOD
4TU48-A	7.54	0.28	0	24.93	0.7	0	750	14	1.1721
4TU48-B	6.65	0.38	0	22.6	1.5	0	704	29	1.5388
4TU51-A	4.28	0.22	0	23.37	0.74	0	1358	25	1.0828
4TU51-B	4.95	0.17	0	23.71	0.78	0	1443	28	0.99974
4TU66-A	0.188	0.058	0	17.61	0.91	0	39	7.5	1.4965
4TU66-B	0.203	0.048	0	17.58	0.56	0	28.7	5.7	1.194
4TU67-A	6.05	0.34	0	33.2	1	0	1331	20	1.1267
4TU67-B	6.36	0.28	0	32.9	1	0	1289	18	1.004
4TU77-A	0.053	0.034	0	25.3	1.5	0	44.3	7	1.5238
4TU77-B	0.131	0.048	0	32	2.2	0	96	10	1.3993
4TU77-C	0.18	0.34	0	23.61	0.95	0	67	13	1.4362
4TU89-A	4.05	0.3	0	28.8	1.4	0	618	28	0.9741
4TU89-B	5.68	0.32	0	28.85	0.85	0	1111	33	0.84629
4TU94-A	0.198	0.04	0	11.88	0.76	0	254	28	1.7884
4TU94-B	0.117	0.032	0	14.25	0.85	0	589	29	1.5297
T4-1-A	10.14	0.28	0	3.89	0.24	0	264	10	0.58011
T4-1-B	9	0.32	0	3.79	0.34	0	400	20	0.56746
5TU04-A	7.55	0.34	0	31.38	0.92	0	1335	27	1.6678
5TU04-B	7.16	0.42	0	30.6	1.3	0	1230	38	1.7073
5TU04-C	3.74	0.77	0	31.6	3.1	0	1440	380	2.0773
5TU103-A	0.14	0.038	0	19.45	0.8	0	35.5	4.6	1.0941
5TU103-B	0.116	0.034	0	16.89	0.86	0	104	11	1.1568
5TU103-C	0.282	0.092	0	16.59	0.86	0	300	19	0.87213
5TU20-A	290	120	0	32.8	1.3	0	114	9	1.4843
5TU20-B	9	11	0	31.5	2.1	0	61	12	1.5883
5TU20-C	9.1	9.4	0	25.5	1.7	0	155	10	1.4243
5TU20-D	30	18	0	27.6	1.6	0	90.8	6.9	1.3262
5TU20-E	0.86	0.12	0	34.4	1	0	60.6	4.6	1.3652
5TU22-A	6.32	0.27	0	28.7	1.2	0	653	15	1.6932
5TU22-B	7.07	0.51	0	27.3	1	0	648	19	1.7085
5TU23-A	4.05	0.68	0	19.5	1.2	0	737	20	1.304
5TU23-B	5.74	0.25	0	17.76	0.49	0	395	19	1.3489
5TU23-C	3.41	0.69	0	22.1	1.7	0	495	53	1.214
5TU50-A	4.36	0.19	0	32.9	0.86	0	546	18	1.3455
5TU50-B	5.16	0.23	0	31.39	0.9	0	902	27	1.3642
5TU56-A	2.19	0.14	0	18.1	1.1	0.035195	702	34	1.9272
5TU56-B	2.63	0.16	0	19.2	0.98	0.034579	227	32	1.8934
5TU63-A	3.57	0.14	0	27.3	0.7	0	803	13	1.0141
5TU63-B	3.45	0.19	0	27.88	0.78	0	862	17	0.97404
5TU78-A	4.22	0.17	0	27.2	1.4	0	1166	25	1.481

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Cs	Cs Stdev	Cs LOD	Cu	Cu Stdev	Cu LOD	Dy	Dy Stdev	Dy LOD
4TU48-A	< LOD	0.0081	0.011355	5.64	0.92	0.10361	0.048	0.026	0
4TU48-B	1.33	0.5	0.014908	7	1.5	0.13603	0.082	0.049	0
4TU51-A	< LOD	0.000035	0	4.5	1.2	0.089431	0.03	0.02	0
4TU51-B	0.0046	0.0066	0	2.5	0.56	0.082567	0.04	0.025	0
4TU66-A	< LOD	0.000056	0.010889	5.1	1.7	0.13893	< LOD	1	0
4TU66-B	< LOD	0.0029	0.0086885	3.07	0.53	0.11085	< LOD	1	0
4TU67-A	< LOD	0.0027	0.0044269	1.77	0.46	0.2631	0.016	0.014	0
4TU67-B	< LOD	0.0047	0.0039448	2.21	0.59	0.23444	0.038	0.022	0
4TU77-A	< LOD	0.000083	0.0080229	3.5	1.6	0.20983	< LOD	1	0
4TU77-B	0.06	0.031	0.0073674	82	65	0.19269	< LOD	1	0
4TU77-C	< LOD	0.0034	0.0075616	3.6	1.7	0.19777	< LOD	1	0
4TU89-A	0.0033	0.0056	0	4.3	1.1	0.19062	0.035	0.026	0
4TU89-B	0.02	0.036	0	2.15	0.49	0.16561	0.009	0.012	0
4TU94-A	< LOD	0.000058	0.012422	3.5	1.3	0.10614	< LOD	1	0
4TU94-B	< LOD	0.000047	0.010625	4.03	0.91	0.090787	0.0045	0.009	0
T4-1-A	< LOD	0.0037	0.0041638	1.03	0.16	0.10934	0.086	0.028	0.0037446
T4-1-B	< LOD	0.0025	0.004073	1.02	0.16	0.10696	0.051	0.017	0.003663
5TU04-A	< LOD	0.0001	0.013874	4.21	0.76	0.24844	0.075	0.04	0
5TU04-B	< LOD	0.000077	0.014203	4.28	0.67	0.25434	0.049	0.045	0
5TU04-C	< LOD	0.00016	0.01728	13	15	0.30945	< LOD	1	0
5TU103-A	< LOD	0.0029	0.011895	3.78	0.73	0.22257	0.013	0.019	0
5TU103-B	< LOD	0.017	0.012577	4.6	1.6	0.23533	0.013	0.019	0
5TU103-C	0.024	0.021	0.0094823	11.7	3.3	0.17743	0.022	0.015	0
5TU20-A	0.81	0.86	0.010261	13.4	3.8	0.17599	5.4	2	0
5TU20-B	46.9	7.7	0.01098	5.6	1.2	0.18832	0.27	0.35	0
5TU20-C	5	1.2	0.009846	13	4.2	0.16887	0.18	0.2	0
5TU20-D	6.7	1.9	0.0091682	8.1	1.3	0.15725	0.56	0.35	0
5TU20-E	1.91	0.53	0.0094375	11.2	6.8	0.16187	0.04	0.038	0
5TU22-A	0.034	0.018	0.0090659	10.8	3.6	0.13822	0.131	0.064	0
5TU22-B	0.012	0.01	0.0091475	5.1	0.93	0.13946	0.072	0.038	0
5TU23-A	< LOD	0.0048	0.0081321	4.7	0.74	0.21296	0.0051	0.0071	0
5TU23-B	0.017	0.011	0.008412	7.8	1.1	0.22029	0.061	0.037	0
5TU23-C	0.01	0.011	0.0075708	6.8	2	0.19826	0.06	0.039	0
5TU50-A	0.0057	0.007	0	4.5	0.52	0.13393	0.014	0.014	0
5TU50-B	0.0021	0.0033	0	5.64	0.81	0.13578	0.027	0.022	0
5TU56-A	0.023	0.05	0.019024	6.4	4.8	0.21236	0.017	0.026	0
5TU56-B	< LOD	0.016	0.018692	4.5	1.1	0.20865	0.024	0.035	0
5TU63-A	0.0034	0.0045	0	4.38	0.6	0.20619	0.015	0.012	0
5TU63-B	< LOD	0.00001	0	6.58	0.93	0.19805	0.037	0.027	0
5TU78-A	< LOD	0.004	0.007841	16.6	8.5	0.19908	0.063	0.038	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Er	Er Stdev	Er LOD	Eu	Eu Stdev	Eu LOD	Fe	Fe Stdev	Fe LOD
4TU48-A	0.006	0.0085	0	0.737	0.074	0	43180	420	3.5946
4TU48-B	0.0045	0.0091	0	0.672	0.083	0	47700	2.00E+03	4.7193
4TU51-A	0.012	0.015	0	0.359	0.065	0	42230	610	2.9265
4TU51-B	0.008	0.012	0	0.398	0.051	0	42080	610	2.7019
4TU66-A	< LOD	1	0	0.071	0.03	0	78000	1.80E+03	3.0114
4TU66-B	0.0037	0.0073	0	0.064	0.02	0	82300	1.40E+03	2.4027
4TU67-A	0.017	0.018	0	0.443	0.077	0	48100	1.40E+03	3.3579
4TU67-B	0.018	0.018	0	0.419	0.059	0	47800	2.50E+03	2.9922
4TU77-A	< LOD	1	0	0.031	0.02	0	46000	1.30E+03	2.97
4TU77-B	0.005	0.011	0	0.029	0.019	0	47100	1.30E+03	2.7273
4TU77-C	< LOD	1	0	0.034	0.021	0	47280	700	2.7992
4TU89-A	< LOD	1	0	0.417	0.062	0	45100	1.40E+03	2.4764
4TU89-B	0.0044	0.0089	0	0.51	0.063	0	45350	790	2.1515
4TU94-A	0.0045	0.0091	0	0.113	0.038	0	72100	1.70E+03	3.5561
4TU94-B	< LOD	1	0	0.092	0.04	0	70420	720	3.0417
T4-1-A	0.048	0.019	0	0.728	0.056	0	24360	220	1.508
T4-1-B	0.0101	0.0085	0	0.645	0.046	0	24700	960	1.4751
5TU04-A	< LOD	0.017	0.017323	0.596	0.083	0	41120	570	4.9221
5TU04-B	< LOD	0.013	0.017734	0.63	0.11	0	40540	710	5.0389
5TU04-C	< LOD	0.03	0.021577	0.53	0.14	0	46300	4.50E+03	6.1307
5TU103-A	0.0065	0.0094	0	0.083	0.024	0	75400	1.20E+03	2.7998
5TU103-B	0.0033	0.0066	0	0.146	0.039	0	72400	1.10E+03	2.9603
5TU103-C	0.0018	0.0037	0	0.085	0.024	0	73000	1.50E+03	2.2319
5TU20-A	1.25	0.42	0	5.1	2	0	60800	1.60E+03	2.6895
5TU20-B	0.09	0.096	0	0.21	0.18	0	58200	2.60E+03	2.878
5TU20-C	0.017	0.019	0	0.32	0.26	0	46400	2.00E+03	2.5808
5TU20-D	0.257	0.077	0	0.71	0.36	0	51200	3.00E+03	2.4031
5TU20-E	0.008	0.012	0	0.142	0.045	0	60200	1.70E+03	2.4738
5TU22-A	0.064	0.032	0	0.406	0.059	0	45270	810	3.4383
5TU22-B	0.034	0.021	0	0.508	0.081	0	43760	720	3.4693
5TU23-A	0.0075	0.0091	0	0.315	0.054	0	41200	1.30E+03	2.2144
5TU23-B	0.043	0.031	0	0.279	0.039	0	39420	410	2.2906
5TU23-C	0.027	0.02	0	0.324	0.05	0	42900	2.00E+03	2.0615
5TU50-A	0.009	0.01	0	0.498	0.063	0	47610	810	3.2705
5TU50-B	0.0055	0.008	0	0.475	0.058	0	48000	1.60E+03	3.3158
5TU56-A	< LOD	1	0	0.293	0.075	0	43620	720	3.6282
5TU56-B	< LOD	1	0	0.341	0.081	0	44650	760	3.5647
5TU63-A	0.0031	0.0062	0	0.434	0.046	0	42910	450	2.6176
5TU63-B	0.0017	0.0034	0	0.507	0.064	0	44070	550	2.5143
5TU78-A	0.04	0.026	0	0.413	0.054	0	44700	1.00E+03	3.8587

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Gd	Gd Stdev	Gd LOD	Hf	Hf Stdev	Hf LOD
4TU48-A	39.3	1.2	0	0.153	0.051	0	0.028	0.015	0
4TU48-B	41.7	2.1	0	0.087	0.052	0	0.04	0.027	0
4TU51-A	45.1	1.4	0.018122	0.082	0.035	0	0.024	0.017	0
4TU51-B	45.6	1.3	0.016731	0.119	0.048	0	0.019	0.016	0
4TU66-A	35.3	1.6	0	< LOD	1	0	0.0031	0.0063	0
4TU66-B	35.1	1.2	0	< LOD	1	0	0.0071	0.0085	0
4TU67-A	44.4	1.5	0	0.102	0.054	0	0.028	0.02	0
4TU67-B	43.5	1.3	0	0.055	0.025	0	0.017	0.014	0
4TU77-A	19.7	1.5	0	< LOD	0.00006	0.011317	0.025	0.021	0
4TU77-B	18	1.1	0	0.031	0.031	0.010392	0.012	0.013	0
4TU77-C	18.3	1.1	0	< LOD	0.000033	0.010666	0.015	0.017	0
4TU89-A	42.6	2.3	0.02916	0.106	0.073	0	0.04	0.028	0
4TU89-B	43.7	1.2	0.025334	0.102	0.059	0	0.009	0.011	0
4TU94-A	30.8	1.5	0	0.007	0.014	0	0.01	0.019	0
4TU94-B	32.4	1.2	0	< LOD	1	0	< LOD	1	0
T4-1-A	41.83	0.97	0	0.185	0.042	0	0.016	0.015	0
T4-1-B	39	1.3	0	0.125	0.038	0	0.0083	0.0063	0
5TU04-A	41.5	1.3	0.035497	0.175	0.085	0	0.029	0.021	0
5TU04-B	39.8	1.6	0.03634	0.1	0.055	0	0.037	0.035	0
5TU04-C	37.4	3.4	0.044214	0.11	0.14	0	< LOD	0.000029	0
5TU103-A	34.7	1.5	0	0.018	0.021	0	0.0021	0.0042	0
5TU103-B	34.5	1.6	0	0.01	0.019	0	0.006	0.013	0
5TU103-C	33.3	1.4	0	0.041	0.035	0	0.031	0.026	0
5TU20-A	31.3	3.7	0	16.9	6.9	0	0.147	0.088	0
5TU20-B	19.17	0.99	0	0.73	0.88	0	0.009	0.012	0
5TU20-C	17.3	1.5	0	0.72	0.69	0	0.066	0.036	0
5TU20-D	19.4	1.4	0	1.9	1.2	0	6.3	3.5	0
5TU20-E	23	1.2	0	0.017	0.02	0	0.186	0.045	0
5TU22-A	42.6	1	0	0.211	0.071	0	0.48	0.54	0.015533
5TU22-B	44.5	1.8	0	0.182	0.073	0	< LOD	0.011	0.015673
5TU23-A	42.4	1.8	0.012514	0.054	0.031	0	0.15	0.24	0
5TU23-B	43.6	1.5	0.012944	0.12	0.062	0	0.34	0.28	0
5TU23-C	43	3.7	0.01165	0.038	0.025	0	0.056	0.03	0
5TU50-A	42.5	1.5	0	0.038	0.024	0	0.012	0.013	0
5TU50-B	40.8	1.2	0	0.074	0.036	0	0.011	0.011	0
5TU56-A	41.1	1.6	0	0.062	0.052	0	0.0046	0.0093	0
5TU56-B	44.7	2.3	0	0.051	0.044	0	0.014	0.021	0
5TU63-A	45.8	1.3	0	0.061	0.03	0	0.0017	0.0034	0
5TU63-B	46.2	1.4	0	0.084	0.039	0	0.0021	0.0043	0
5TU78-A	44.5	1.3	0	0.091	0.035	0	0.047	0.023	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ho	Ho Stdev	Ho LOD	K	K Stdev	K LOD	La	La Stdev	La LOD
4TU48-A	0.0039	0.003	0	386	11	1.3493	4.05	0.16	0
4TU48-B	0.0085	0.0072	0	2200	630	1.7715	3.52	0.29	0
4TU51-A	0.0025	0.003	0	323.3	8.6	1.2336	2.45	0.17	0
4TU51-B	0.0012	0.0017	0	362	6	1.1389	2.79	0.15	0
4TU66-A	< LOD	0.000004	0	86.6	3.5	1.786	0.113	0.037	0
4TU66-B	0.0011	0.0024	0	83.1	2.1	1.425	0.11	0.03	0
4TU67-A	0.004	0.0048	0	256.1	4.7	1.4567	3.31	0.17	0
4TU67-B	0.0077	0.0056	0	255.9	4.5	1.298	3.56	0.17	0
4TU77-A	< LOD	1	0	70	3.2	1.7361	0.015	0.016	0.0039403
4TU77-B	< LOD	1	0	129	23	1.5942	0.046	0.02	0.0036184
4TU77-C	< LOD	1	0	59.7	2.6	1.6362	0.011	0.015	0.0037137
4TU89-A	< LOD	0.0051	0.004708	219	30	1.3492	2.33	0.2	0
4TU89-B	< LOD	0.0024	0.0040902	203.5	3.8	1.1722	3.26	0.21	0
4TU94-A	< LOD	1	0	72.5	2.9	1.9844	0.113	0.053	0
4TU94-B	< LOD	1	0	68.8	2.9	1.6973	0.109	0.041	0
T4-1-A	0.0153	0.0065	0	353.6	3.8	1.0036	6.18	0.17	0
T4-1-B	0.0038	0.0022	0	325	20	0.98168	5.4	0.21	0
5TU04-A	0.0047	0.0048	0	278.1	6.4	2.0097	4.51	0.29	0
5TU04-B	0.0066	0.0076	0	247.6	6.3	2.0574	4.04	0.38	0
5TU04-C	0.005	0.0068	0	164	21	2.5032	2.11	0.46	0
5TU103-A	0.0024	0.0036	0	68.5	2.2	1.2116	0.061	0.026	0
5TU103-B	< LOD	1	0	74.8	5.1	1.2811	0.061	0.023	0
5TU103-C	0.0054	0.005	0	136	30	0.96584	0.222	0.08	0
5TU20-A	0.66	0.25	0	220	100	1.3468	105	46	0
5TU20-B	0.035	0.046	0	7700	1.30E+03	1.4412	3.4	3.7	0
5TU20-C	0.02	0.027	0	2300	1.00E+03	1.2924	3.4	3.5	0
5TU20-D	0.072	0.032	0	3480	890	1.2034	11.9	6.8	0
5TU20-E	0.0027	0.0041	0	383	89	1.2388	0.301	0.064	0
5TU22-A	0.0151	0.0081	0	356	79	1.9186	3.26	0.2	0
5TU22-B	0.007	0.0069	0	247.3	8.9	1.9359	3.54	0.33	0
5TU23-A	0.0013	0.0018	0	310	13	1.3519	2.45	0.42	0
5TU23-B	0.0088	0.0069	0	336.3	5.7	1.3984	3.44	0.21	0
5TU23-C	0.009	0.011	0	318	20	1.2585	1.96	0.42	0
5TU50-A	0.0029	0.0029	0	322.3	5.8	1.6029	2.45	0.12	0
5TU50-B	0.0054	0.0054	0	338	10	1.6251	2.87	0.15	0
5TU56-A	0.0015	0.0029	0	227	74	2.2458	1.32	0.13	0
5TU56-B	< LOD	1	0	146.4	5.2	2.2065	1.3	0.14	0
5TU63-A	< LOD	1	0	187.3	7.4	1.2586	1.94	0.11	0
5TU63-B	0.0037	0.0042	0	192.7	4.3	1.2089	1.89	0.13	0
5TU78-A	0.0108	0.0074	0	181.6	6.5	1.5104	2.51	0.14	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Li	Li Stdev	Li LOD	Lu	Lu Stdev	Lu LOD	Mg	Mg Stdev	Mg LOD
4TU48-A	12.15	0.78	0.21904	< LOD	1	0	41800	320	0.080263
4TU48-B	53	13	0.28758	0.0027	0.0037	0	38200	1.20E+03	0.10538
4TU51-A	14.19	0.82	0.12452	0.0013	0.0026	0	42090	280	0.090465
4TU51-B	12.66	0.9	0.11496	0.0023	0.0027	0	42090	330	0.083522
4TU66-A	9.7	1.1	0.15243	< LOD	1	0	39090	720	0.073627
4TU66-B	11.84	0.85	0.12162	0.0011	0.0016	0	38610	580	0.058746
4TU67-A	10.05	0.98	0.23739	0.0015	0.003	0	39960	300	0.066412
4TU67-B	10.2	2.7	0.21154	0.0006	0.0013	0	40190	290	0.05918
4TU77-A	14.5	1.2	0.18817	0.0009	0.0018	0	44780	510	0.14404
4TU77-B	16.3	1.5	0.1728	0.0018	0.0036	0	44300	1.00E+03	0.13227
4TU77-C	12.5	1.3	0.17735	< LOD	1	0	44990	420	0.13576
4TU89-A	12	1	0.1157	< LOD	1	0	39830	990	0.12456
4TU89-B	11.69	0.86	0.10052	0.0014	0.002	0	40350	270	0.10821
4TU94-A	8.68	0.99	0.19671	0.0052	0.0082	0	41950	930	0.037853
4TU94-B	9.03	0.76	0.16826	0.001	0.0021	0	41900	340	0.032377
T4-1-A	26.2	1.1	0.11309	0.0075	0.0043	0	46920	370	0.020052
T4-1-B	28.7	1.4	0.11063	0.0019	0.0017	0	44600	1.10E+03	0.019615
5TU04-A	7.69	0.86	0.18323	0.001	0.002	0	43100	340	0.080705
5TU04-B	7.4	1	0.18758	< LOD	1	0	42810	480	0.08262
5TU04-C	9.2	1.7	0.22823	< LOD	1	0	44300	3.00E+03	0.10052
5TU103-A	9.84	0.88	0.17109	0.0041	0.0037	0	40240	390	0.052188
5TU103-B	8.28	0.93	0.1809	0.003	0.0044	0	42030	300	0.05518
5TU103-C	9.58	0.8	0.13639	0.0029	0.0035	0	41000	1.40E+03	0.041602
5TU20-A	8.89	0.9	0.13897	0.079	0.036	0	46000	1.10E+03	0.050796
5TU20-B	27.2	3.8	0.1487	< LOD	1	0	43400	1.80E+03	0.054354
5TU20-C	20.5	3.7	0.13335	< LOD	1	0	35100	1.60E+03	0.048743
5TU20-D	38.2	2.8	0.12417	0.22	0.13	0	37700	2.40E+03	0.045387
5TU20-E	10.28	0.98	0.12782	0.0063	0.007	0	46950	980	0.04672
5TU22-A	16.62	0.98	0.26744	0.014	0.012	0	41720	290	0.09175
5TU22-B	15	1.2	0.26985	0.0054	0.0054	0	41200	1.10E+03	0.092576
5TU23-A	11.23	0.9	0.21676	0.0073	0.0089	0	43130	600	0.033068
5TU23-B	15.1	1.3	0.22422	0.0106	0.0098	0	43210	470	0.034206
5TU23-C	14.2	1.9	0.2018	0.0065	0.005	0	42500	1.60E+03	0.030786
5TU50-A	12.95	0.79	0.17506	< LOD	1	0	38220	310	0.056471
5TU50-B	14	1	0.17748	0.003	0.0031	0	37590	680	0.057253
5TU56-A	9.2	1.2	0.20953	0.0014	0.0028	0	42320	390	0.10765
5TU56-B	11	1.1	0.20587	< LOD	1	0	42540	390	0.10577
5TU63-A	8.24	0.56	0.1081	0.0008	0.002	0	41850	310	0.057636
5TU63-B	7.21	0.77	0.10384	< LOD	0.0000054	0	41430	350	0.055362
5TU78-A	20.2	1.2	0.23608	< LOD	0.004	0.0043784	41300	300	0.053016

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Mn	Mn Stdev	Mn LOD	Mo	Mo Stdev	Mo LOD	Na	Na Stdev	Na LOD
4TU48-A	52.8	1.1	1.2174	0.015	0.029	0	12300	110	2.0855
4TU48-B	91	14	1.5983	0.021	0.043	0	10760	590	2.738
4TU51-A	178.3	4.3	1.2674	< LOD	1	0	14120	170	2.0364
4TU51-B	176.3	2.8	1.1702	0.045	0.045	0	13540	100	1.8801
4TU66-A	175.5	4.2	1.531	0.029	0.059	0	13720	430	2.4564
4TU66-B	179.6	3.8	1.2215	0.009	0.019	0	12960	190	1.9599
4TU67-A	90.7	2.2	1.4102	0.012	0.024	0	13120	170	2.2931
4TU67-B	85.4	1.7	1.2566	< LOD	1	0	13070	130	2.0434
4TU77-A	120.6	3.9	1.5387	< LOD	1	0	12690	140	2.2655
4TU77-B	133.1	6	1.413	0.014	0.027	0	11910	270	2.0804
4TU77-C	117.5	2.4	1.4502	0.014	0.028	0	12060	170	2.1353
4TU89-A	134.2	3.9	1.503	0.049	0.072	0	12450	310	2.3404
4TU89-B	134.7	2.5	1.3058	< LOD	1	0	12146	76	2.0333
4TU94-A	178.6	4.3	1.7762	< LOD	0.047	0.045532	13100	270	3.6131
4TU94-B	180.8	3	1.5192	< LOD	0.035	0.038945	12950	140	3.0904
T4-1-A	202.5	2.3	0.65778	0.009	0.018	0	11130	110	0.95992
T4-1-B	213	15	0.64344	0.009	0.017	0	11200	1.20E+03	0.93899
5TU04-A	60	1.8	1.8365	< LOD	1	0	11640	110	2.9751
5TU04-B	57.4	1.9	1.8801	< LOD	1	0	11460	110	3.0457
5TU04-C	226	76	2.2874	< LOD	1	0	12000	1.10E+03	3.7056
5TU103-A	224.9	5.7	1.721	0.033	0.048	0	12990	130	2.094
5TU103-B	195.3	4.8	1.8197	0.016	0.031	0	13580	180	2.214
5TU103-C	190	3.8	1.3719	0.035	0.043	0	13810	340	1.6692
5TU20-A	185	14	1.3978	< LOD	1	0	15160	450	1.795
5TU20-B	165	16	1.4957	< LOD	1	0	15040	770	1.9208
5TU20-C	113	5.1	1.3413	< LOD	1	0	18220	650	1.7224
5TU20-D	142.7	5.2	1.249	< LOD	1	0	16110	750	1.6039
5TU20-E	106.2	4.1	1.2857	< LOD	1	0	14280	580	1.651
5TU22-A	189.3	4.1	1.5987	0.01	0.02	0	11530	100	2.8838
5TU22-B	182.2	3.3	1.6131	0.012	0.025	0	12040	200	2.9097
5TU23-A	136	20	1.2336	0.009	0.018	0	12760	250	2.2168
5TU23-B	123.5	2.4	1.276	0.023	0.046	0	12190	140	2.2931
5TU23-C	157	17	1.1484	< LOD	1	0	13790	960	2.0638
5TU50-A	135.8	2.7	1.135	0.042	0.048	0	13410	140	1.726
5TU50-B	136.1	2.1	1.1507	0.017	0.035	0	13110	230	1.7499
5TU56-A	78.8	5.7	2.2974	< LOD	1	0	13600	130	3.3891
5TU56-B	75.8	2.3	2.2572	< LOD	1	0	13600	160	3.3298
5TU63-A	52.1	1	1.3453	< LOD	1	0	14130	250	2.0151
5TU63-B	53.8	1.3	1.2922	0.018	0.037	0	13950	160	1.9356
5TU78-A	99.5	2.3	1.7017	0.009	0.018	0	13400	150	1.7704

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Nb	Nb Stdev	Nb LOD	Nd	Nd Stdev	Nd LOD	Ni	Ni Stdev	Ni LOD
4TU48-A	0.052	0.021	0	2.42	0.22	0	80.2	2.7	0
4TU48-B	0.114	0.05	0	2.5	0.47	0	66.2	4.7	0
4TU51-A	0.054	0.021	0	1.51	0.24	0	82.9	3.8	0
4TU51-B	0.051	0.022	0	1.97	0.21	0	81.4	3.1	0
4TU66-A	0.253	0.063	0	0.051	0.049	0	35.1	2.6	0
4TU66-B	0.271	0.055	0	0.049	0.028	0	34.7	2	0
4TU67-A	0.039	0.021	0	2.11	0.32	0	144.3	5	0.13545
4TU67-B	0.054	0.028	0	2.01	0.25	0	149.2	5.1	0.1207
4TU77-A	0.03	0.028	0	< LOD	1	0	71.3	3.7	0.15963
4TU77-B	0.0048	0.0096	0	0.054	0.052	0	101.9	9.8	0.14658
4TU77-C	0.033	0.024	0	< LOD	1	0	72.4	3.3	0.15045
4TU89-A	0.053	0.028	0	1.39	0.34	0	107.9	6.2	0.056109
4TU89-B	0.059	0.038	0	2.03	0.25	0	112.5	4.8	0.048747
4TU94-A	0.158	0.063	0	0.106	0.078	0.022873	38.5	4.4	0
4TU94-B	0.128	0.046	0	0.048	0.042	0.019564	43	2.6	0
T4-1-A	0.071	0.018	0	3.02	0.19	0	16.19	0.82	0.023588
T4-1-B	0.062	0.017	0	2.5	0.17	0	16.15	0.85	0.023074
5TU04-A	0.064	0.034	0	2.47	0.33	0	135.5	4.6	0.19132
5TU04-B	0.066	0.043	0	2.41	0.35	0	135.2	6.8	0.19586
5TU04-C	3.1	1.4	0	1.52	0.41	0	131	10	0.2383
5TU103-A	0.22	0.055	0	0.094	0.057	0	40.2	2.4	0.13728
5TU103-B	0.218	0.092	0	0.024	0.036	0	31.5	2.6	0.14515
5TU103-C	0.183	0.047	0	0.2	0.11	0	40	4.1	0.10944
5TU20-A	0.047	0.029	0	185	75	0	38.6	2.2	0
5TU20-B	0.47	0.16	0	6.7	7.7	0	47.3	4.2	0
5TU20-C	0.124	0.062	0	6.6	7.1	0	30.2	2.9	0
5TU20-D	0.21	0.13	0	21	13	0	36.9	3.1	0
5TU20-E	0.041	0.019	0	0.41	0.14	0	58.5	3.4	0
5TU22-A	0.057	0.024	0	2.06	0.29	0	126.8	4.4	0
5TU22-B	0.071	0.034	0	2.54	0.36	0	110.7	5.7	0
5TU23-A	0.05	0.025	0	1.35	0.28	0	54.7	7.6	0
5TU23-B	0.063	0.025	0	1.95	0.25	0	39	2.1	0
5TU23-C	0.035	0.026	0	1.1	0.3	0	55.9	7.1	0
5TU50-A	0.038	0.018	0	1.4	0.19	0	164.1	5.1	0.089301
5TU50-B	0.039	0.021	0	1.63	0.21	0	164.7	5.7	0.090538
5TU56-A	0.088	0.063	0	0.77	0.17	0	96.1	5.9	0
5TU56-B	0.046	0.031	0	0.88	0.22	0	99.7	5.9	0
5TU63-A	0.027	0.013	0	1.24	0.14	0	115.3	3.5	0.082847
5TU63-B	0.042	0.023	0	1.15	0.18	0	115.1	3.8	0.079577
5TU78-A	0.047	0.03	0	1.44	0.21	0	102.6	8.1	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Pb	Pb Stdev	Pb LOD	Pr	Pr Stdev	Pr LOD	Rb	Rb Stdev	Rb LOD
4TU48-A	6.09	0.39	0.011098	0.74	0.055	0	0.124	0.054	0.019859
4TU48-B	5.68	0.4	0.014571	0.609	0.085	0	17.4	5.9	0.026072
4TU51-A	4.45	0.21	0.0086349	0.43	0.039	0	< LOD	0.024	0.031961
4TU51-B	4.37	0.21	0.0079722	0.482	0.045	0	< LOD	0.025	0.029508
4TU66-A	8.73	0.65	0.013788	0.0083	0.0073	0	< LOD	0.023	0.032614
4TU66-B	9.14	0.29	0.011001	0.0123	0.0059	0	< LOD	0.0064	0.026022
4TU67-A	4.78	0.36	0.01798	0.65	0.069	0	< LOD	0.012	0.021016
4TU67-B	4.91	0.38	0.016022	0.644	0.057	0	< LOD	0.015	0.018727
4TU77-A	2.89	0.27	0.010963	0.0023	0.0032	0	< LOD	0.00029	0.027252
4TU77-B	3.08	0.25	0.010068	0.016	0.01	0	0.8	1	0.025025
4TU77-C	3.06	0.32	0.010333	0.0012	0.0023	0	< LOD	0.016	0.025685
4TU89-A	4.79	0.41	0.010795	0.349	0.042	0	0.082	0.07	0.020979
4TU89-B	5.31	0.22	0.0093782	0.488	0.05	0	0.031	0.037	0.018227
4TU94-A	8.92	0.58	0.014853	0.0085	0.0083	0	< LOD	0.027	0.04651
4TU94-B	7.82	0.47	0.012704	0.0055	0.0065	0	< LOD	0.021	0.039782
T4-1-A	8.27	0.31	0.014853	0.929	0.049	0	< LOD	0.011	0.013556
T4-1-B	7.02	0.38	0.014529	0.779	0.049	0	< LOD	0.0073	0.013261
5TU04-A	5.41	0.43	0.0082945	0.807	0.082	0	< LOD	0.017	0.037177
5TU04-B	5.1	0.29	0.0084913	0.636	0.069	0	< LOD	0.022	0.03806
5TU04-C	6.26	0.77	0.010331	0.332	0.092	0	< LOD	0.00075	0.046306
5TU103-A	7.54	0.52	0.0092292	0.0129	0.008	0	< LOD	0.017	0.025451
5TU103-B	7.86	0.32	0.0097583	0.0051	0.0048	0	< LOD	0.0078	0.02691
5TU103-C	8.3	2.1	0.0073571	0.037	0.018	0	0.18	0.11	0.020288
5TU20-A	17	2.9	0.01617	36	16	0.0025972	1.6	1.7	0.017832
5TU20-B	8.25	0.57	0.017303	1.3	1.5	0.0027792	79	13	0.019082
5TU20-C	9.69	0.79	0.015517	1.3	1.4	0.0024922	21.3	5.4	0.017112
5TU20-D	8.47	0.93	0.014448	4.3	2.5	0.0023207	40	12	0.015934
5TU20-E	10.4	2.8	0.014873	0.088	0.024	0.0023888	3.6	1	0.016402
5TU22-A	4.78	0.3	0.01084	0.637	0.067	0	0.32	0.17	0.058067
5TU22-B	5.8	1.6	0.010938	0.669	0.092	0	0.17	0.11	0.058589
5TU23-A	4.56	0.33	0.0081065	0.397	0.078	0	< LOD	0.02	0.026979
5TU23-B	4.2	0.32	0.0083855	0.505	0.049	0	< LOD	0.029	0.027907
5TU23-C	6.09	0.76	0.0075469	0.342	0.072	0	0.05	0.034	0.025116
5TU50-A	5.02	0.3	0.01398	0.446	0.055	0	< LOD	0.011	0.019405
5TU50-B	5.35	0.25	0.014173	0.439	0.046	0	< LOD	0.014	0.019674
5TU56-A	4.34	0.24	0.010337	0.171	0.035	0	0.39	0.34	0.031826
5TU56-B	4.26	0.26	0.010156	0.247	0.046	0	< LOD	0.00014	0.031269
5TU63-A	5.53	0.24	0.0042295	0.353	0.041	0	< LOD	0.0056	0.0075681
5TU63-B	5.88	0.29	0.0040626	0.352	0.045	0	0.009	0.016	0.0072694
5TU78-A	7.21	0.32	0.010401	0.433	0.051	0	0.038	0.044	0.020215

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Sm	Sm Stdev	Sm LOD	Sn	Sn Stdev	Sn LOD
4TU48-A	20.01	0.65	0.018816	0.273	0.049	0	1.31	0.17	0.055662
4TU48-B	18.1	1.3	0.024703	0.39	0.14	0	1.2	0.29	0.073078
4TU51-A	29.01	0.98	0.050562	0.133	0.056	0	1.86	0.23	0.050906
4TU51-B	31.23	0.89	0.046681	0.174	0.05	0	1.97	0.24	0.046999
4TU66-A	17.5	1.1	0.088164	< LOD	1	0	0.36	0.12	0.060331
4TU66-B	19.56	0.6	0.070344	0.007	0.01	0	0.5	0.1	0.048137
4TU67-A	32.8	1.2	0.03596	0.207	0.052	0	1.27	0.19	0.059362
4TU67-B	32.74	0.8	0.032044	0.208	0.06	0	1.15	0.18	0.052898
4TU77-A	217	15	0.060565	< LOD	1	0	0.309	0.099	0.061444
4TU77-B	115.8	9.2	0.055617	< LOD	1	0	0.45	0.36	0.056424
4TU77-C	168.5	3.4	0.057082	< LOD	1	0	0.34	0.1	0.057911
4TU89-A	28.1	1.2	0.090106	0.102	0.057	0	1.33	0.29	0.032445
4TU89-B	27.9	0.97	0.078283	0.213	0.073	0	1.49	0.15	0.028188
4TU94-A	33.5	1.6	0.060191	0.006	0.012	0	0.111	0.072	0
4TU94-B	43.4	3.3	0.051484	< LOD	1	0	0.28	0.11	0
T4-1-A	12.18	0.57	0.021288	0.373	0.051	0	1.69	0.11	0.026835
T4-1-B	11.42	0.76	0.020824	0.315	0.048	0	1.51	0.12	0.02625
5TU04-A	25.6	1.3	0.053251	0.285	0.072	0	1.04	0.17	0.054356
5TU04-B	25.1	1.7	0.054514	0.33	0.1	0	0.82	0.22	0.055646
5TU04-C	22.2	2.6	0.066326	0.17	0.13	0	0.75	0.23	0.067703
5TU103-A	25	1.4	0.054555	0.016	0.016	0	0.44	0.099	0.049458
5TU103-B	25	1.4	0.057683	< LOD	1	0	0.42	0.15	0.052294
5TU103-C	27.2	1.4	0.043489	0.022	0.018	0	0.574	0.096	0.039426
5TU20-A	23	2.2	0.043457	32	13	0	0.196	0.072	0.042501
5TU20-B	10.7	1.1	0.046501	1.2	1.4	0	0.078	0.066	0.045479
5TU20-C	17.2	2	0.0417	1.3	1.3	0	0.129	0.072	0.040783
5TU20-D	9.87	0.85	0.03883	3.9	2.4	0	0.122	0.067	0.037975
5TU20-E	11.66	0.6	0.03997	0.083	0.056	0	0.104	0.057	0.039091
5TU22-A	33.48	0.9	0.081573	0.346	0.079	0	2.35	0.24	0.079095
5TU22-B	34.2	1.3	0.082307	0.268	0.085	0	2.86	0.3	0.079807
5TU23-A	18.1	0.83	0.045136	0.156	0.056	0	0.93	0.18	0.03315
5TU23-B	20.19	0.78	0.04669	0.163	0.062	0	1.3	0.22	0.034291
5TU23-C	18.7	1.1	0.042021	0.093	0.042	0	0.88	0.17	0.030862
5TU50-A	25.23	0.8	0.075472	0.176	0.054	0	0.79	0.13	0.036635
5TU50-B	23.68	0.78	0.076517	0.174	0.048	0	0.79	0.16	0.037142
5TU56-A	12.58	0.78	0.051886	0.053	0.045	0	0.92	0.26	0.028605
5TU56-B	12.5	1	0.050978	0.081	0.052	0	0.68	0.2	0.028104
5TU63-A	15.66	0.61	0.040922	0.105	0.038	0	0.59	0.12	0.02597
5TU63-B	17.04	0.8	0.039307	0.173	0.054	0	0.69	0.12	0.024945
5TU78-A	28.59	0.85	0.035276	0.174	0.052	0	1.52	0.17	0.054743

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sr	Sr Stdev	Sr LOD	Ta	Ta Stdev	Ta LOD	Tb	Tb Stdev	Tb LOD
4TU48-A	234	2.8	0	0.006	0.0043	0	0.0107	0.0056	0
4TU48-B	217.2	8.3	0	0.0167	0.0094	0	0.029	0.022	0
4TU51-A	121.3	3.4	0	0.0039	0.0038	0.0018586	0.0046	0.0053	0
4TU51-B	116.6	2.9	0	0.0031	0.0034	0.001716	0.0105	0.0066	0
4TU66-A	364.6	6.9	0	0.046	0.014	0	< LOD	1	0
4TU66-B	377.6	8.8	0	0.081	0.017	0	< LOD	1	0
4TU67-A	97.5	2.1	0	0.0045	0.0046	0	0.0056	0.005	0
4TU67-B	99.9	1.7	0	0.0024	0.0023	0	0.0118	0.0069	0
4TU77-A	58.6	1.7	0	0.0116	0.0083	0	< LOD	1	0
4TU77-B	68.6	3.6	0	0.0043	0.0049	0	0.0009	0.0018	0
4TU77-C	66.4	3.2	0	0.007	0.01	0	< LOD	1	0
4TU89-A	138.3	4.9	0	0.0067	0.005	0	0.0033	0.0047	0
4TU89-B	172.4	5.5	0	0.0103	0.0061	0	0.0116	0.0068	0
4TU94-A	387	16	0	0.02	0.011	0	< LOD	1	0
4TU94-B	323	14	0	0.035	0.013	0	< LOD	1	0
T4-1-A	69.7	1.2	0	0.0225	0.006	0	0.0169	0.0047	0
T4-1-B	59.1	1.6	0	0.0153	0.0047	0	0.0094	0.0037	0
5TU04-A	143.4	2.7	0	0.0049	0.0046	0	0.0169	0.0092	0
5TU04-B	151.5	3.8	0	0.008	0.0087	0	0.0104	0.008	0
5TU04-C	151.5	5.7	0	0.31	0.12	0	0.012	0.014	0
5TU103-A	190.6	8	0	0.032	0.011	0	< LOD	1	0
5TU103-B	253	15	0	0.028	0.012	0	< LOD	1	0
5TU103-C	230.6	7.1	0	0.0381	0.0097	0	0.0049	0.005	0
5TU20-A	175	13	0	0.0058	0.0049	0	1.32	0.55	0
5TU20-B	130.4	7	0	0.023	0.011	0	0.052	0.064	0
5TU20-C	137.3	3.8	0	0.012	0.012	0	0.069	0.072	0
5TU20-D	136.7	4.5	0	0.016	0.008	0	0.144	0.096	0
5TU20-E	131.7	5	0	0.0025	0.0027	0	0.0047	0.0046	0
5TU22-A	114.4	1.9	0	0.0032	0.0034	0	0.0151	0.0091	0
5TU22-B	111.8	2.7	0	0.0117	0.0071	0	0.02	0.012	0
5TU23-A	99.3	4.7	0	0.004	0.0028	0	0.0019	0.0021	0
5TU23-B	84.4	1.7	0	0.0069	0.0049	0	0.0065	0.006	0
5TU23-C	97.3	6.4	0	0.0064	0.005	0	0.0065	0.0053	0
5TU50-A	78.3	2.2	0	0.0011	0.0022	0	0.008	0.0051	0
5TU50-B	78.3	2.7	0	0.0039	0.0036	0	0.0031	0.0026	0
5TU56-A	131.5	5.7	0	0.013	0.011	0	0.0043	0.0047	0
5TU56-B	134.3	3.7	0	0.0073	0.0073	0	0.0065	0.0089	0
5TU63-A	148.5	2.4	0	0.003	0.0031	0	0.0082	0.0039	0.0020673
5TU63-B	151	2.9	0	0.0031	0.0032	0	0.0086	0.0063	0.0019858
5TU78-A	124.6	2.3	0	0.0081	0.0052	0	0.0086	0.0076	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Th	Th Stdev	Th LOD	Ti	Ti Stdev	Ti LOD	Tm	Tm Stdev	Tm LOD
4TU48-A	< LOD	0.0014	0.0022488	3544	48	0	< LOD	1	0
4TU48-B	0.0102	0.0089	0.0029525	3070	180	0	0.0064	0.0089	0
4TU51-A	0.0007	0.0014	0	3431	82	0	0.0012	0.0017	0
4TU51-B	< LOD	1	0	3154	42	0	0.0016	0.0024	0
4TU66-A	< LOD	1	0	3840	110	0	< LOD	1	0
4TU66-B	< LOD	1	0	5111	76	0	< LOD	1	0
4TU67-A	< LOD	0.0017	0.0025849	4479	52	0	< LOD	1	0
4TU67-B	< LOD	0.000011	0.0023034	4570	49	0	0.0012	0.0024	0
4TU77-A	< LOD	0.000004	0	629	46	0	< LOD	1	0
4TU77-B	0.039	0.013	0	1430	140	0	0.0013	0.0027	0
4TU77-C	< LOD	0.0000045	0	1190	160	0	< LOD	1	0
4TU89-A	0.048	0.03	0.0047515	3921	89	0	< LOD	1	0
4TU89-B	< LOD	0.0046	0.0041281	4025	65	0	0.0013	0.0026	0
4TU94-A	< LOD	1	0	3170	100	0	< LOD	1	0
4TU94-B	0.0013	0.0026	0	3690	150	0	0.001	0.002	0
T4-1-A	0.0087	0.0051	0.003071	3119	41	0	0.0045	0.0031	0
T4-1-B	< LOD	0.0019	0.0030041	2900	83	0	0.00022	0.00045	0
5TU04-A	0.009	0.0059	0	3626	52	0	< LOD	1	0
5TU04-B	0.0015	0.0029	0	3609	75	0	< LOD	1	0
5TU04-C	0.0132	0.0091	0	7000	1.50E+03	0	< LOD	1	0
5TU103-A	0.0024	0.0038	0	4600	73	0	< LOD	1	0
5TU103-B	0.0008	0.0022	0	3670	160	0	< LOD	1	0
5TU103-C	0.028	0.015	0	3290	140	0	< LOD	1	0
5TU20-A	28	10	0	864	94	0	0.155	0.058	0
5TU20-B	0.8	1	0	831	74	0	0.0028	0.0038	0
5TU20-C	0.119	0.083	0	394	29	0	0.0048	0.0077	0
5TU20-D	0.5	0.27	0	560	130	0	0.053	0.019	0
5TU20-E	0.029	0.01	0	923	71	0	< LOD	1	0
5TU22-A	0.151	0.088	0	2822	43	0	0.01	0.013	0
5TU22-B	0.117	0.053	0	3080	120	0	0.0036	0.005	0
5TU23-A	< LOD	1	0	2720	260	0	0.0011	0.0023	0
5TU23-B	0.068	0.031	0	2096	41	0	0.011	0.013	0
5TU23-C	0.029	0.023	0	2870	280	0	0.0007	0.0014	0
5TU50-A	< LOD	1	0	3041	43	0	< LOD	1	0
5TU50-B	< LOD	1	0	2859	63	0	0.0034	0.0038	0
5TU56-A	< LOD	1	0	4181	98	0	< LOD	1	0
5TU56-B	< LOD	1	0	4302	84	0	0.0014	0.0028	0
5TU63-A	< LOD	1	0	3836	39	0	< LOD	1	0
5TU63-B	< LOD	1	0	4211	58	0	< LOD	1	0
5TU78-A	0.027	0.013	0	4416	47	0.1708	0.0006	0.0013	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	U	U Stdev	U LOD	V	V Stdev	V LOD	Y	Y Stdev	Y LOD
4TU48-A	< LOD	1	0	404.8	3.9	0.10168	0.088	0.03	0
4TU48-B	0.0079	0.0068	0	362	11	0.13349	0.192	0.084	0
4TU51-A	0.0011	0.0023	0	465.7	6.2	0.086841	0.048	0.019	0
4TU51-B	0.0011	0.0021	0	470	5.1	0.080176	0.11	0.035	0
4TU66-A	0.001	0.002	0	235.3	5.5	0.11392	0.005	0.01	0
4TU66-B	< LOD	1	0	267	6.4	0.090898	0.013	0.013	0
4TU67-A	< LOD	1	0	612.1	7.2	0.092249	0.099	0.031	0
4TU67-B	< LOD	1	0	690	140	0.082203	0.131	0.042	0
4TU77-A	< LOD	1	0	871	23	0.074804	0.006	0.011	0
4TU77-B	< LOD	1	0	739	26	0.068692	0.021	0.021	0
4TU77-C	< LOD	1	0	892	23	0.070503	< LOD	1	0
4TU89-A	0.001	0.0021	0	431	12	0.10932	0.075	0.041	0
4TU89-B	0.0041	0.0061	0	487.8	7.2	0.09498	0.083	0.031	0
4TU94-A	< LOD	1	0	313	14	0.14527	0.019	0.023	0
4TU94-B	< LOD	1	0	395	12	0.12426	0.009	0.0099	0
T4-1-A	0.0011	0.0014	0	436.6	4.2	0.048045	0.312	0.053	0
T4-1-B	0.0006	0.0011	0	459	14	0.046998	0.115	0.028	0
5TU04-A	0.0035	0.0042	0	565.5	7.6	0.12021	0.178	0.056	0
5TU04-B	< LOD	1	0	538.6	8.2	0.12307	0.185	0.045	0
5TU04-C	0.089	0.048	0	579	41	0.14973	0.086	0.037	0
5TU103-A	0.0006	0.0012	0	266.6	4.8	0.090491	0.08	0.049	0
5TU103-B	0.001	0.002	0	252	12	0.095679	0.025	0.022	0
5TU103-C	0.015	0.0081	0	220.6	9.5	0.072136	0.107	0.04	0
5TU20-A	1.03	0.42	0	180.3	6.2	0.087138	14.5	5.3	0
5TU20-B	0.041	0.044	0	116.9	4.4	0.093243	0.7	0.86	0
5TU20-C	0.059	0.05	0	112	10	0.083616	0.44	0.39	0
5TU20-D	0.139	0.072	0	93.3	8	0.07786	2.06	0.77	0
5TU20-E	0.0042	0.0048	0	172.1	6.1	0.080147	0.051	0.026	0
5TU22-A	0.2	0.15	0	454.9	4.5	0.11592	0.59	0.36	0
5TU22-B	0.056	0.029	0	482.1	9.5	0.11697	0.32	0.1	0
5TU23-A	0.021	0.042	0	393	6.7	0.08846	0.054	0.024	0
5TU23-B	0.12	0.11	0	343.6	5.1	0.091504	0.37	0.12	0
5TU23-C	0.051	0.019	0	399	31	0.082353	0.26	0.11	0
5TU50-A	< LOD	0.000011	0	395.5	5.2	0.069836	0.058	0.03	0
5TU50-B	0.0002	0.001	0	418.4	6.6	0.070803	0.092	0.033	0
5TU56-A	0.0041	0.0083	0	343.8	5.7	0.14292	0.015	0.017	0
5TU56-B	0.0029	0.0058	0	305.5	8.1	0.14042	0.052	0.033	0
5TU63-A	< LOD	1	0	410.5	4.5	0.071849	0.047	0.02	0
5TU63-B	< LOD	1	0	435	6.2	0.069014	0.037	0.016	0
5TU78-A	0.142	0.047	0	538.2	5.6	0.083002	0.293	0.087	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Yb	Yb Stdev	Yb LOD	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
4TU48-A	< LOD	1	0	123.5	4	0.38106	0.57	0.1	0
4TU48-B	0.018	0.026	0	104.7	4.9	0.50029	0.38	0.13	0
4TU51-A	0.0029	0.0057	0	118	4.8	0.31443	0.332	0.08	0
4TU51-B	< LOD	1	0	115.9	4	0.29029	0.459	0.098	0
4TU66-A	< LOD	1	0	132.5	5.3	0.31398	0.016	0.023	0
4TU66-B	0.005	0.01	0	132.9	5	0.25052	0.036	0.027	0
4TU67-A	0.011	0.016	0	127	12	0.344	0.48	0.11	0
4TU67-B	< LOD	1	0	119.5	6.6	0.30654	0.4	0.1	0
4TU77-A	0.0043	0.0086	0	75.1	4.8	0.29907	0.057	0.061	0
4TU77-B	0.0041	0.0083	0	125	15	0.27464	0.21	0.11	0
4TU77-C	< LOD	1	0	66.7	3.1	0.28188	0.021	0.019	0
4TU89-A	0.013	0.015	0	129.9	6.7	0.34502	0.53	0.17	0
4TU89-B	< LOD	1	0	126.6	5.2	0.29975	0.47	0.11	0
4TU94-A	0.018	0.027	0	121	6	0.4723	0.007	0.015	0
4TU94-B	0.005	0.01	0	118.8	6.6	0.40398	0.067	0.043	0
T4-1-A	0.025	0.014	0	613.3	8.9	0.23664	0.24	0.052	0
T4-1-B	0.0081	0.0089	0	625	27	0.23148	0.134	0.04	0
5TU04-A	0.004	0.0081	0	115	4.4	0.47804	0.58	0.14	0
5TU04-B	0.012	0.024	0	107.5	6.7	0.48938	0.44	0.12	0
5TU04-C	0.031	0.032	0	95	13	0.59542	0.21	0.18	0
5TU103-A	< LOD	1	0	133.9	5.9	0.39654	0.045	0.041	0
5TU103-B	0.0044	0.0089	0	138.2	7.1	0.41927	0.033	0.033	0
5TU103-C	0.005	0.01	0	143.5	6.4	0.3161	1.02	0.46	0
5TU20-A	0.74	0.25	0	62.3	4.2	0.26367	2.4	1.6	0
5TU20-B	0.046	0.064	0	60	5.9	0.28215	0.17	0.15	0
5TU20-C	0.018	0.028	0	47.8	3.4	0.25302	0.231	0.091	0
5TU20-D	0.59	0.28	0	52.8	4.4	0.2356	280	180	0
5TU20-E	0.013	0.019	0	60.4	4.2	0.24252	9.4	2.6	0
5TU22-A	0.063	0.055	0	95	3.9	0.3846	18	19	0
5TU22-B	0.0041	0.0081	0	95	4.5	0.38806	0.93	0.26	0
5TU23-A	0.027	0.031	0	220.5	7.4	0.32191	0.75	0.79	0
5TU23-B	0.083	0.038	0	215.9	6	0.33299	12	14	0
5TU23-C	0.033	0.025	0	222	11	0.29969	1.89	0.7	0
5TU50-A	0.0049	0.0097	0	105.2	4.9	0.32474	0.241	0.078	0
5TU50-B	0.013	0.016	0	97.8	4.3	0.32923	0.242	0.064	0
5TU56-A	< LOD	1	0	113.2	5.4	0.66135	0.045	0.044	0
5TU56-B	< LOD	1	0	110.3	4.7	0.64978	0.16	0.09	0
5TU63-A	0.0023	0.0045	0	118.7	4.4	0.36316	0.121	0.049	0
5TU63-B	0.0027	0.0054	0	117.5	4.2	0.34883	0.116	0.053	0
5TU78-A	0.024	0.024	0	113.9	4.2	0.35208	1.57	0.43	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Site	Al	Al Stdev	Al LOD	B	B Stdev	B LOD
5TU78-B	Till 05	178200	1.70E+03	0.38669	27220	850	1.7356
T5-1CORE-A	Till 05	139100	1.20E+03	0.11231	27520	380	0.56731
T5-1RIM-A	Till 05	139110	910	0.075249	28180	350	0.34999
T5-2-A	Till 05	163000	670	0.10775	26950	230	0.91104
T5-2-B	Till 05	159500	1.60E+03	0.10846	27100	1.00E+03	0.91706
T5-2-C	Till 05	145500	3.00E+03	0.090836	26770	660	0.76803
6TU03-A	Till 06	166900	5.30E+03	0.27084	26480	780	1.9739
6TU03-B	Till 06	173700	1.60E+03	0.25061	27000	1.60E+03	1.8264
6TU03-C	Till 06	173500	1.40E+03	0.23856	26020	350	1.7386
6TU12-A	Till 06	176800	1.10E+03	0.26294	27260	260	1.5995
6TU12-B	Till 06	178500	1.80E+03	0.2904	26740	350	1.7665
6TU24-A	Till 06	156100	1.20E+03	0.22244	27300	370	1.973
6TU24-B	Till 06	160200	1.80E+03	0.22855	26770	320	2.0271
6TU24-C	Till 06	158800	6.60E+03	0.21155	26500	410	1.8763
6TU28-A	Till 06	160200	4.20E+03	0.24469	26320	700	1.9092
6TU28-B	Till 06	161900	1.30E+03	0.23117	26110	250	1.8037
6TU50-A	Till 06	146070	670	0.31971	27830	240	1.3109
6TU50-B	Till 06	145600	2.80E+03	0.2786	27530	510	1.1423
6TU77-A	Till 06	179900	1.40E+03	0.28807	27300	340	1.949
6TU77-B	Till 06	183400	1.50E+03	0.27801	27160	260	1.8809
6TU90-A	Till 06	164040	900	0.17769	28060	280	1.8681
6TU90-B	Till 06	163730	880	0.13986	26920	170	1.4704
6TU90-C	Till 06	163900	2.20E+03	0.17894	27190	420	1.8812
6TU92-A	Till 06	166200	1.30E+03	0.27964	26340	260	1.7769
6TU92-B	Till 06	167900	1.40E+03	0.25161	25780	260	1.5988
T6-1-A	Till 06	176900	830	0.090061	27200	180	0.85541
T6-1-B	Till 06	161300	2.40E+03	0.30869	27180	540	0.83916
7TU01-A	Till 07	171400	1.00E+03	0.40875	27250	210	1.4972
7TU01-B	Till 07	169700	1.80E+03	0.3524	26900	690	1.2908
7TU05-A	Till 07	175400	1.30E+03	0.21416	28100	290	1.8105
7TU05-B	Till 07	173500	2.30E+03	0.19447	27050	470	1.644
7TU14-A	Till 07	167800	1.80E+03	0.24886	26750	530	1.6173
7TU14-B	Till 07	163300	1.00E+03	0.20358	26880	300	1.323
7TU14-C	Till 07	165400	1.40E+03	0.20857	27000	390	1.3554
7TU14-D	Till 07	168900	790	0.13289	27140	230	0.86358
7TU27-A	Till 07	164000	1.20E+03	0.18613	27330	340	1.0764
7TU27-B	Till 07	165900	1.40E+03	0.17681	26750	290	1.0225
7TU27-C	Till 07	162700	2.60E+03	0.25975	26180	610	1.5022
7TU47-A	Till 07	169100	1.10E+03	0.21678	28040	330	1.0289
7TU47-B	Till 07	167900	1.90E+03	0.25337	26840	350	1.2026

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ba	Ba Stdev	Ba LOD	Be	Be Stdev	Be LOD	Ca	Ca Stdev	Ca LOD
5TU78-B	5	3.3	0	0.43	0.34	0	5769	88	13.496
T5-1CORE-A	3.55	0.3	0	0.124	0.085	0	11090	200	6.2539
T5-1RIM-A	3.21	0.42	0	0.032	0.064	0	13080	290	5.3959
T5-2-A	1.41	0.16	0	0.073	0.086	0	8510	140	6.4759
T5-2-B	1.53	0.23	0	0.066	0.092	0	6652	88	6.5187
T5-2-C	1.63	0.21	0	0.09	0.081	0	6520	190	5.4593
6TU03-A	0.32	0.23	0	0.25	0.37	0	4600	210	23.835
6TU03-B	0.61	0.27	0	0.47	0.4	0	4610	100	22.055
6TU03-C	0.46	0.31	0	0.07	0.15	0	4070	100	20.995
6TU12-A	0.31	0.17	0	3.08	0.97	0	4300	2.80E+03	21.109
6TU12-B	0.39	0.24	0	1.03	0.82	0	4130	200	23.314
6TU24-A	0.51	0.19	0	< LOD	1	0	9950	160	18.789
6TU24-B	0.4	0.19	0	0.13	0.27	0	11360	330	19.305
6TU24-C	0.42	0.26	0	< LOD	1	0	10100	370	17.869
6TU28-A	2.44	0.64	0	< LOD	1	0	7820	220	22.552
6TU28-B	1.09	0.36	0	0.14	0.28	0	7950	160	21.306
6TU50-A	10.91	0.77	0	0.047	0.066	0	13830	150	15.027
6TU50-B	7.44	0.6	0	< LOD	1	0	13590	250	13.094
6TU77-A	0.87	0.29	0	0.89	0.74	0	6180	150	17.068
6TU77-B	0.86	0.32	0	0.73	0.51	0	6620	120	16.471
6TU90-A	3.01	0.67	0	0.39	0.37	0	7920	270	16.645
6TU90-B	1.33	0.3	0	0.12	0.15	0	4320	120	13.101
6TU90-C	3.9	1.1	0	0.33	0.32	0	6810	110	16.762
6TU92-A	0.55	0.26	0	< LOD	1	0	6650	260	17.362
6TU92-B	1.54	0.87	0	< LOD	1	0	5760	330	15.622
T6-1-A	2.7	1.1	0	0.97	0.21	0	5120	44	5.2088
T6-1-B	1.62	0.5	0	1.11	0.24	0	4649	82	4.8603
7TU01-A	4.84	0.74	0	0.42	0.33	0	6950	290	13.78
7TU01-B	2.83	0.36	0	0.28	0.23	0	5720	89	11.88
7TU05-A	0.31	0.14	0	1.34	0.69	0	5460	110	19.978
7TU05-B	0.38	0.17	0	0.75	0.55	0	5310	100	18.141
7TU14-A	0.061	0.088	0	2.19	0.98	0	6340	160	20.315
7TU14-B	0.17	0.14	0	1.21	0.57	0	6720	120	16.618
7TU14-C	0.27	0.14	0	2.52	0.95	0	6430	140	17.026
7TU14-D	0.28	0.11	0	2.09	0.61	0	6924	91	10.848
7TU27-A	0.21	0.1	0	< LOD	1	0	7990	440	14.999
7TU27-B	0.26	0.15	0	< LOD	1	0	7700	2.60E+03	14.248
7TU27-C	0.43	0.24	0	< LOD	1	0	6770	310	20.932
7TU47-A	1.91	0.32	0	0.047	0.095	0	7526	81	13.167
7TU47-B	1.69	0.46	0	0.08	0.16	0	7100	250	15.39

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ce	Ce Stdev	Ce LOD	Co	Co Stdev	Co LOD	Cr	Cr Stdev	Cr LOD
5TU78-B	4.7	0.21	0	29.5	1.9	0	1127	33	1.427
T5-1CORE-A	0.395	0.046	0	21.19	0.47	0	51.3	2.3	0.34263
T5-1RIM-A	0.322	0.085	0	21.12	0.53	0	140.4	5.3	0.41804
T5-2-A	0.06	0.01	0	20.37	0.46	0	9.1	1.7	0.47327
T5-2-B	0.123	0.019	0	21.61	0.65	0	43.1	2.5	0.4764
T5-2-C	0.067	0.013	0	21.81	0.83	0	53.5	3.3	0.39898
6TU03-A	2.19	0.18	0	30.2	1.8	0	797	57	1.7461
6TU03-B	2.66	0.21	0	27.1	1.1	0	855	31	1.6157
6TU03-C	1.99	0.17	0	27	1.4	0	654	20	1.538
6TU12-A	1.69	0.17	0	7.08	0.77	0	284	14	1.3611
6TU12-B	3.22	0.46	0	19.3	2	0	236	14	1.5033
6TU24-A	0.095	0.03	0	26	0.79	0	12.4	2.2	1.3095
6TU24-B	0.062	0.021	0	28.6	1.1	0	12.4	2.8	1.3454
6TU24-C	0.038	0.025	0	25	1.1	0	16.4	2.8	1.2453
6TU28-A	0.091	0.04	0	19.6	1.3	0	388	20	1.3257
6TU28-B	0.049	0.019	0	19.15	0.83	0	558	28	1.2524
6TU50-A	0.736	0.055	0	49.6	1.2	0	13.1	2	0.86672
6TU50-B	1.135	0.098	0	48.6	1.4	0	27.5	2.2	0.75527
6TU77-A	5.26	0.29	0	16.86	0.91	0	826	38	1.373
6TU77-B	5.83	0.28	0	16.28	0.88	0	731	22	1.325
6TU90-A	0.165	0.029	0	20.93	0.73	0	36.4	5.6	1.4113
6TU90-B	0.142	0.046	0	24.72	0.81	0	15.3	2	1.1109
6TU90-C	0.44	0.36	0	20.7	1.1	0	34.7	3.3	1.4213
6TU92-A	0.47	0.088	0	36	1	0	2171	56	1.3531
6TU92-B	0.258	0.075	0	35.9	1.5	0	1296	32	1.2175
T6-1-A	4.699	0.091	0	22.76	0.37	0	131.4	2.7	0.50091
T6-1-B	4.31	0.14	0	22.42	0.74	0.0038204	142.7	3.9	0.47116
7TU01-A	5.12	0.2	0	16.7	0.78	0	464	34	1.0373
7TU01-B	4.37	0.15	0	16.91	0.73	0	785	20	0.89433
7TU05-A	2.67	0.17	0	36.6	1.3	0	593	25	1.5346
7TU05-B	2.29	0.13	0	37.1	1.4	0	627	15	1.3935
7TU14-A	7.22	0.45	0	40.1	2.4	0	82	26	1.424
7TU14-B	7.36	0.38	0	42.5	1.6	0	1050	80	1.1649
7TU14-C	6.45	0.32	0	35.8	2	0	260	62	1.1935
7TU14-D	9.75	0.31	0	39.63	0.77	0	1019	26	0.76039
7TU27-A	0.06	0.029	0	41.2	1.2	0.022357	333	16	1.2055
7TU27-B	0.036	0.019	0	39.1	1	0.021237	244	16	1.1451
7TU27-C	0.057	0.038	0	40.8	2.9	0.0312	372	52	1.6823
7TU47-A	7.31	0.3	0	23.6	1	0.011184	1268	29	1.0039
7TU47-B	6.92	0.54	0	22.92	0.89	0.013071	929	36	1.1733

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Cs	Cs Stdev	Cs LOD	Cu	Cu Stdev	Cu LOD	Dy	Dy Stdev	Dy LOD
5TU78-B	0.079	0.073	0.0075551	6.9	2.8	0.19182	0.059	0.035	0
T5-1CORE-A	0.037	0.0079	0.0016512	2.86	0.43	0.069535	0.088	0.021	0
T5-1RIM-A	0.0135	0.007	0.0041369	1.74	0.51	0.12049	0.034	0.014	0
T5-2-A	< LOD	0.0033	0.0061819	3.12	0.64	0.08353	< LOD	0.0037	0.0034496
T5-2-B	< LOD	0.0035	0.0062228	5	1.7	0.084082	0.0082	0.0077	0.0034724
T5-2-C	< LOD	0.0029	0.0052115	6.28	0.67	0.070418	< LOD	0.0031	0.0029081
6TU03-A	< LOD	0.000076	0.0073881	3.7	1.9	0.2182	0.028	0.032	0
6TU03-B	< LOD	0.0062	0.0068363	4.23	0.99	0.2019	0.036	0.031	0
6TU03-C	< LOD	0.009	0.0065076	38	43	0.19219	0.0048	0.0096	0
6TU12-A	0.017	0.014	0.0051312	2.91	0.57	0.20094	0.007	0.015	0
6TU12-B	< LOD	0.000021	0.0056671	4.6	1.8	0.22193	0.011	0.015	0
6TU24-A	< LOD	0.0038	0.0088115	2.42	0.75	0.18224	0.013	0.019	0
6TU24-B	< LOD	0.0041	0.0090533	2.3	1.8	0.18724	< LOD	1	0
6TU24-C	< LOD	0.0083	0.0083799	2.11	0.59	0.17331	< LOD	1	0
6TU28-A	< LOD	0.0074	0.01218	3.5	2.5	0.31587	< LOD	1	0
6TU28-B	< LOD	0.000049	0.011507	3.09	0.72	0.29841	< LOD	1	0
6TU50-A	< LOD	0.0043	0.0070683	4.06	0.48	0.15341	< LOD	0.000017	0
6TU50-B	< LOD	0.0036	0.0061593	4.31	0.66	0.13368	< LOD	0.000014	0
6TU77-A	< LOD	0.000072	0.01072	10	14	0.16629	0.059	0.037	0
6TU77-B	< LOD	0.000056	0.010346	2.67	0.62	0.16048	0.048	0.033	0
6TU90-A	< LOD	0.0095	0.010496	4.87	0.77	0.15893	< LOD	1	0
6TU90-B	< LOD	0.0018	0.0082614	3.54	0.46	0.1251	0.0043	0.006	0
6TU90-C	< LOD	0.009	0.01057	10	10	0.16005	0.02	0.04	0
6TU92-A	< LOD	0.000014	0.0048697	3.63	0.71	0.2016	0.171	0.077	0
6TU92-B	0.006	0.0099	0.0043816	6	2.1	0.18139	0.24	0.13	0
T6-1-A	< LOD	0.0027	0.0040572	3.11	0.31	0.096425	0.028	0.011	0
T6-1-B	< LOD	0.0015	0.0018751	5.34	0.5	0.067687	0.0187	0.0065	0
7TU01-A	< LOD	0.0037	0.0136	7.2	3.8	0.11427	0.021	0.018	0
7TU01-B	0.104	0.048	0.011725	7.2	1.5	0.098514	0.041	0.023	0
7TU05-A	< LOD	0.0069	0.007723	3.99	0.7	0.15645	0.014	0.02	0
7TU05-B	< LOD	0.0026	0.0070129	60	110	0.14206	0.009	0.013	0
7TU14-A	< LOD	0.0052	0.0070811	3	1	0.17651	0.012	0.024	0
7TU14-B	< LOD	0.0073	0.0057926	3.86	0.67	0.14439	0.026	0.036	0
7TU14-C	< LOD	0.000038	0.0059347	4.17	0.92	0.14793	0.024	0.03	0
7TU14-D	< LOD	0.0016	0.0037812	3.57	0.37	0.094254	0.042	0.019	0
7TU27-A	< LOD	0.000048	0.0066619	3.47	0.82	0.13117	< LOD	1	0
7TU27-B	< LOD	0.0068	0.0063281	7.1	2.4	0.12459	0.0034	0.0067	0
7TU27-C	< LOD	0.000052	0.0092968	18	19	0.18304	< LOD	1	0
7TU47-A	< LOD	0.000047	0.01285	3.27	0.66	0.043788	0.017	0.017	0
7TU47-B	< LOD	0.0045	0.015019	3.24	0.88	0.05118	0.028	0.024	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Er	Er Stdev	Er LOD	Eu	Eu Stdev	Eu LOD	Fe	Fe Stdev	Fe LOD
5TU78-B	0.011	0.016	0	0.383	0.058	0	44560	690	3.718
T5-1CORE-A	0.066	0.016	0.0018576	0.069	0.014	0	63450	930	0.8302
T5-1RIM-A	0.029	0.013	0	0.062	0.014	0	66900	1.10E+03	1.3996
T5-2-A	0.0012	0.0018	0	0.109	0.018	0	50030	510	1.4293
T5-2-B	0.004	0.0046	0	0.115	0.02	0	49760	730	1.4387
T5-2-C	0.0017	0.0019	0	0.117	0.02	0	49100	1.10E+03	1.2049
6TU03-A	< LOD	1	0	0.288	0.051	0	59900	3.30E+03	4.3904
6TU03-B	0.029	0.025	0	0.361	0.065	0	61100	1.00E+03	4.0625
6TU03-C	0.0035	0.007	0	0.265	0.06	0	58350	840	3.8672
6TU12-A	0.0056	0.0078	0	0.12	0.038	0	56210	790	2.5096
6TU12-B	< LOD	1	0	0.259	0.059	0	55000	1.10E+03	2.7717
6TU24-A	< LOD	1	0	0.014	0.013	0	60330	870	3.5784
6TU24-B	< LOD	1	0	0.009	0.011	0	50400	1.10E+03	3.6766
6TU24-C	< LOD	1	0	0.017	0.013	0	55400	1.30E+03	3.4031
6TU28-A	< LOD	1	0	0.081	0.037	0	51300	1.10E+03	3.8155
6TU28-B	< LOD	1	0	0.07	0.026	0	51390	730	3.6046
6TU50-A	0.0012	0.0024	0	0.134	0.026	0	94100	1.10E+03	2.3246
6TU50-B	0.027	0.052	0	0.123	0.021	0	85200	1.70E+03	2.0257
6TU77-A	0.046	0.06	0	0.706	0.091	0	43340	600	4.3551
6TU77-B	0.013	0.016	0	0.65	0.11	0	42190	750	4.2029
6TU90-A	< LOD	1	0	0.108	0.033	0	66400	1.40E+03	3.1896
6TU90-B	0.022	0.015	0	0.053	0.023	0	62100	870	2.5106
6TU90-C	< LOD	1	0	0.076	0.027	0	65500	1.20E+03	3.2121
6TU92-A	0.62	0.17	0	0.058	0.022	0	63890	900	4.3936
6TU92-B	0.74	0.27	0	0.069	0.023	0	62100	3.30E+03	3.9532
T6-1-A	0.0093	0.0052	0	0.342	0.026	0	50670	410	1.3734
T6-1-B	0.0059	0.0036	0	0.303	0.021	0	50030	960	1.3899
7TU01-A	0.0077	0.009	0	0.604	0.065	0	40360	520	2.9252
7TU01-B	0.0129	0.0098	0	0.52	0.049	0	40330	690	2.5219
7TU05-A	0.0045	0.007	0	0.345	0.046	0	52100	670	2.7406
7TU05-B	0.0032	0.0056	0	0.407	0.068	0	52740	890	2.4886
7TU14-A	0.009	0.018	0	0.359	0.085	0	65300	1.40E+03	3.3303
7TU14-B	0.0032	0.0063	0	0.332	0.063	0	61780	830	2.7243
7TU14-C	0.01	0.015	0	0.387	0.087	0	61190	650	2.7911
7TU14-D	0.039	0.041	0	0.374	0.041	0	63070	660	1.7783
7TU27-A	< LOD	1	0	0.112	0.039	0	62300	3.00E+03	2.7749
7TU27-B	< LOD	1	0	0.068	0.022	0	57500	1.30E+03	2.6359
7TU27-C	< LOD	1	0	0.065	0.043	0	59800	1.90E+03	3.8724
7TU47-A	0.017	0.018	0	0.418	0.07	0	57940	660	2.4281
7TU47-B	0.007	0.014	0	0.369	0.085	0	57700	1.00E+03	2.838

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Gd	Gd Stdev	Gd LOD	Hf	Hf Stdev	Hf LOD
5TU78-B	44.7	1.4	0	0.124	0.054	0	0.016	0.015	0
T5-1CORE-A	22.99	0.59	0	0.054	0.017	0	0.031	0.011	0
T5-1RIM-A	25.19	0.66	0	0.046	0.017	0	0.025	0.012	0
T5-2-A	24.59	0.62	0	0.0071	0.0065	0	0.0168	0.0081	0
T5-2-B	21.55	0.55	0	0.0035	0.0039	0	0.0048	0.0049	0
T5-2-C	21.9	0.63	0	0.0042	0.0049	0	0.0122	0.0064	0
6TU03-A	34.1	2.4	0	0.14	0.21	0	< LOD	1	0
6TU03-B	33.2	1.4	0	0.046	0.046	0	0.012	0.017	0
6TU03-C	34.4	1.3	0	0.051	0.048	0	0.008	0.01	0
6TU12-A	52.9	1.7	0	< LOD	0.024	0.028103	0.018	0.018	0
6TU12-B	50.9	1.7	0	0.134	0.097	0.031039	0.0045	0.0091	0
6TU24-A	30	1.2	0	< LOD	1	0	< LOD	1	0
6TU24-B	23.57	0.92	0	0.011	0.022	0	0.007	0.015	0
6TU24-C	25.6	1.3	0	< LOD	1	0	< LOD	1	0
6TU28-A	21.7	1.3	0	< LOD	1	0	0.0039	0.0077	0
6TU28-B	22.59	0.81	0	< LOD	1	0	0.017	0.024	0
6TU50-A	35.31	0.93	0	0.015	0.013	0	0.018	0.011	0
6TU50-B	34.2	1	0	0.01	0.01	0	0.0123	0.0093	0
6TU77-A	43	2.8	0	0.063	0.032	0	2	2.9	0
6TU77-B	43.1	1.8	0	0.078	0.042	0	0.07	0.04	0
6TU90-A	38.5	1.5	0	0.009	0.013	0	0.008	0.012	0
6TU90-B	36.6	1.3	0	0.0025	0.005	0	0.126	0.037	0
6TU90-C	37.2	1.3	0	< LOD	1	0	0.01	0.011	0
6TU92-A	37.2	1.6	0	0.054	0.038	0	6.7	1.5	0
6TU92-B	31.5	1.6	0	0.045	0.034	0	8.5	2.5	0
T6-1-A	45.73	0.77	0	0.077	0.018	0	0.0101	0.0055	0
T6-1-B	43.5	1	0	0.067	0.017	0.0033605	0.0182	0.0061	0
7TU01-A	42.9	1.2	0	0.019	0.016	0	0.0062	0.006	0
7TU01-B	40.5	1.1	0	0.054	0.022	0	0.0082	0.0067	0
7TU05-A	39.1	2.1	0	0.032	0.026	0	0.0027	0.0053	0
7TU05-B	35.9	1.1	0	0.028	0.031	0	0.0045	0.0062	0
7TU14-A	56.4	3.1	0	0.105	0.07	0	0.009	0.018	0
7TU14-B	52.8	1.8	0	0.069	0.044	0	0.019	0.018	0
7TU14-C	53.4	2.2	0	0.034	0.032	0	0.0036	0.0071	0
7TU14-D	53	1.4	0	0.079	0.029	0	1.4	1.3	0
7TU27-A	24.3	1.1	0	< LOD	1	0	0.0028	0.0056	0
7TU27-B	21.41	0.86	0	< LOD	1	0	0.019	0.021	0
7TU27-C	23.2	1.1	0	< LOD	1	0	0.021	0.03	0
7TU47-A	44.2	1.3	0	0.118	0.048	0	0.041	0.024	0
7TU47-B	39.8	1.8	0	0.147	0.084	0	0.015	0.017	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ho	Ho Stdev	Ho LOD	K	K Stdev	K LOD	La	La Stdev	La LOD
5TU78-B	0.0049	0.0044	0	300	100	1.4553	2.55	0.16	0
T5-1CORE-A	0.0195	0.0044	0	110.7	1.8	0.43757	0.274	0.023	0
T5-1RIM-A	0.0086	0.0035	0	120	3.2	0.54338	0.24	0.078	0
T5-2-A	0.0012	0.0014	0	86	1.5	0.66994	0.044	0.011	0
T5-2-B	0.0007	0.0011	0	87.9	1.6	0.67437	0.096	0.02	0
T5-2-C	0.00018	0.00037	0	84.5	3.9	0.56478	0.042	0.012	0
6TU03-A	< LOD	0.0053	0.0030519	261	40	1.9027	1.47	0.13	0.01006
6TU03-B	0.0056	0.006	0.002824	283	13	1.7606	1.48	0.13	0.0093084
6TU03-C	0.0031	0.005	0.0026882	255	12	1.6759	1.24	0.15	0.0088609
6TU12-A	< LOD	1	0	262.2	8.2	1.9058	0.886	0.088	0
6TU12-B	0.0027	0.0037	0	247.6	4.3	2.1049	1.62	0.2	0
6TU24-A	0.001	0.002	0	96.7	7	1.5345	0.044	0.018	0
6TU24-B	< LOD	1	0	60	2.3	1.5766	0.054	0.02	0
6TU24-C	< LOD	1	0	75.5	3.4	1.4594	0.016	0.014	0
6TU28-A	< LOD	1	0	82.1	6.3	1.678	0.036	0.024	0
6TU28-B	0.0011	0.0023	0	57.5	2	1.5853	0.026	0.021	0
6TU50-A	< LOD	1	0	259.1	5.5	1.259	0.41	0.035	0
6TU50-B	< LOD	1	0	249.5	8.4	1.0971	0.642	0.059	0
6TU77-A	0.016	0.014	0	336.9	6.1	1.7639	2.71	0.2	0
6TU77-B	0.0021	0.003	0	411	18	1.7022	3.26	0.19	0
6TU90-A	< LOD	0.000023	0.004446	109.6	4.3	1.3784	0.102	0.041	0
6TU90-B	< LOD	0.0038	0.0034995	77.8	2.1	1.0849	0.063	0.024	0
6TU90-C	< LOD	0.000015	0.0044773	92.2	4.2	1.3881	0.109	0.053	0
6TU92-A	0.067	0.027	0	59	5.2	1.7539	0.294	0.08	0
6TU92-B	0.114	0.041	0	80	23	1.5781	0.227	0.075	0
T6-1-A	0.0037	0.0019	0	298	18	0.73272	2.544	0.076	0
T6-1-B	0.0043	0.0019	0	263.2	5.3	0.50771	2.368	0.092	0
7TU01-A	0.0031	0.0032	0	185	11	1.442	3.8	0.24	0
7TU01-B	0.0065	0.0041	0	179	19	1.2432	3.03	0.11	0
7TU05-A	0.0009	0.0017	0	86.1	2.4	1.8011	1.55	0.12	0
7TU05-B	0.0008	0.0015	0	77.8	2.9	1.6355	1.293	0.098	0
7TU14-A	0.0057	0.0064	0	411	49	1.7472	4.53	0.32	0
7TU14-B	< LOD	1	0	393	16	1.4293	4.33	0.26	0
7TU14-C	0.0071	0.0096	0	369.6	7.3	1.4643	4.12	0.25	0
7TU14-D	0.0117	0.0084	0	406.2	4.1	0.93296	6.02	0.19	0
7TU27-A	< LOD	1	0	35.7	2.1	1.457	0.049	0.017	0
7TU27-B	< LOD	1	0	30.9	1.3	1.384	0.0102	0.0099	0
7TU27-C	< LOD	1	0	30.8	2.5	2.0333	0.029	0.024	0
7TU47-A	0.0028	0.0034	0	456	60	1.1374	3.94	0.19	0
7TU47-B	0.0067	0.0065	0	336	28	1.3294	3.7	0.33	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Li	Li Stdev	Li LOD	Lu	Lu Stdev	Lu LOD	Mg	Mg Stdev	Mg LOD
5TU78-B	18.3	1.5	0.22747	< LOD	0.0029	0.0042188	41680	800	0.051083
T5-1CORE-A	17.7	0.87	0.065875	0.0233	0.0047	0	44870	610	0.011282
T5-1RIM-A	17.5	1.7	0.084975	0.0136	0.0053	0	45140	480	0.031401
T5-2-A	10.48	0.43	0.076727	0.0013	0.0013	0	45850	230	0.026209
T5-2-B	11.01	0.58	0.077234	0.0009	0.0019	0	44790	310	0.026382
T5-2-C	12.3	0.52	0.064682	0.00033	0.00046	0	44100	1.10E+03	0.022095
6TU03-A	15.2	1.4	0.23127	0.0039	0.0056	0	42900	1.40E+03	0.085955
6TU03-B	18.5	1.8	0.214	0.0069	0.0059	0	40410	460	0.079534
6TU03-C	14.3	1.2	0.20371	< LOD	1	0	40420	820	0.075711
6TU12-A	12.1	1.2	0.15444	< LOD	1	0	34400	330	0.034694
6TU12-B	15.8	1.7	0.17057	< LOD	1	0	35710	400	0.038317
6TU24-A	7.59	0.85	0.15344	0.0019	0.0038	0	50220	470	0.059577
6TU24-B	8	1.1	0.15765	< LOD	1	0	53010	580	0.061212
6TU24-C	5.58	0.98	0.14593	< LOD	1	0	51180	700	0.056659
6TU28-A	8.1	1	0.13683	< LOD	1	0	46600	1.10E+03	0.068347
6TU28-B	8.19	0.85	0.12927	0.002	0.004	0	47100	420	0.064569
6TU50-A	14.3	0.7	0.13917	0.0008	0.0015	0	46970	260	0
6TU50-B	17.9	1.1	0.12127	0.00034	0.00069	0	47460	890	0
6TU77-A	11.42	0.93	0.15222	0.051	0.074	0	41610	350	0.065327
6TU77-B	12.79	0.91	0.1469	0.0031	0.0045	0	41880	340	0.063044
6TU90-A	11.6	0.9	0.14592	0.0017	0.0024	0	42310	360	0.081679
6TU90-B	10.44	0.64	0.11485	0.126	0.032	0	42250	270	0.064291
6TU90-C	9.77	0.86	0.14694	0.003	0.0044	0	42440	440	0.082254
6TU92-A	7.21	0.95	0.2031	0.283	0.058	0	41650	480	0.073066
6TU92-B	8	1	0.18274	0.36	0.11	0	40000	410	0.065742
T6-1-A	12.45	0.43	0.10949	0.0023	0.0015	0	36590	190	0.025524
T6-1-B	13.04	0.42	0.064495	0.00102	0.00089	0	34890	560	0.045351
7TU01-A	11.54	0.71	0.19499	0.0015	0.0022	0	45810	290	0.075668
7TU01-B	9.34	0.57	0.1681	0.0015	0.0021	0	44560	510	0.065236
7TU05-A	16.6	1.1	0.16419	0.0024	0.005	0	39430	330	0.090645
7TU05-B	15.6	1.2	0.14909	< LOD	0.0000036	0	39050	970	0.08231
7TU14-A	22.9	1.4	0.20212	0.0056	0.0077	0	38400	1.00E+03	0.16127
7TU14-B	20.8	1.4	0.16534	0.002	0.0028	0	39350	290	0.13193
7TU14-C	20	1.1	0.1694	< LOD	1	0	40450	510	0.13516
7TU14-D	20.88	0.88	0.10793	0.025	0.018	0	38600	280	0.086117
7TU27-A	16	1.7	0.10903	< LOD	1	0	44340	550	0.23614
7TU27-B	19.3	1.2	0.10357	0.0016	0.0023	0	42500	320	0.22431
7TU27-C	16.8	1.7	0.15215	0.0037	0.0074	0	42890	770	0.32953
7TU47-A	14.32	0.93	0.14489	< LOD	1	0	43180	310	0.097728
7TU47-B	14.8	1.8	0.16935	0.0021	0.0029	0	43450	470	0.11423

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Mn	Mn Stdev	Mn LOD	Mo	Mo Stdev	Mo LOD	Na	Na Stdev	Na LOD
5TU78-B	102.3	6.2	1.6397	< LOD	1	0	13090	130	1.7058
T5-1CORE-A	271	12	0.43482	0.018	0.025	0	12680	170	0.68736
T5-1RIM-A	271	14	0.49411	0.035	0.031	0	12610	150	0.77237
T5-2-A	121.1	2.8	0.54666	0.013	0.018	0	14390	140	0.86604
T5-2-B	115.3	2	0.55027	0.007	0.01	0	13960	380	0.87177
T5-2-C	111.9	2.8	0.46085	0.015	0.023	0	14130	620	0.7301
6TU03-A	86	12	1.453	< LOD	1	0	14910	970	2.8008
6TU03-B	192.8	5.2	1.3445	0.036	0.072	0	14300	1.90E+03	2.5916
6TU03-C	184.8	9.2	1.2798	< LOD	1	0	13580	210	2.467
6TU12-A	269.3	5.5	1.7505	< LOD	1	0	13800	230	2.9057
6TU12-B	214	10	1.9333	0.02	0.041	0	12660	160	3.2092
6TU24-A	173.5	8.1	1.4081	< LOD	1	0	13900	200	2.4854
6TU24-B	141.4	2.8	1.4468	< LOD	1	0	11900	180	2.5536
6TU24-C	152.2	3.5	1.3392	0.031	0.063	0	12950	260	2.3637
6TU28-A	115	3.5	1.74	< LOD	1	0	13900	3.50E+03	2.6751
6TU28-B	112.7	2.8	1.6439	< LOD	1	0	12010	120	2.5272
6TU50-A	239.3	3.8	0.87631	0.022	0.027	0	13730	150	1.665
6TU50-B	191.2	4.9	0.76362	0.021	0.025	0	13480	630	1.4509
6TU77-A	74.9	2.2	1.5087	0.015	0.029	0	13130	140	2.8563
6TU77-B	63.4	1.9	1.4559	< LOD	1	0	13770	180	2.7565
6TU90-A	147.4	4.9	1.5223	< LOD	1	0	15360	130	2.031
6TU90-B	152.4	3.1	1.1982	0.016	0.032	0	15220	130	1.5986
6TU90-C	148.5	3.7	1.533	0.032	0.065	0	14940	210	2.0453
6TU92-A	155.3	3	1.5015	< LOD	0.00011	0	12720	230	2.8967
6TU92-B	150.4	2.3	1.351	< LOD	0.000085	0	12080	110	2.6064
T6-1-A	125.8	1.3	0.62365	0.01	0.014	0	12390	95	1.0108
T6-1-B	126	3.2	0.47552	0.013	0.012	0	12580	290	0.856
7TU01-A	91.5	4	1.3032	0.024	0.027	0	13050	150	2.1304
7TU01-B	77.2	2.4	1.1235	< LOD	1	0	12890	590	1.8367
7TU05-A	111	2.7	1.5889	< LOD	1	0	11920	200	2.1825
7TU05-B	105.2	2.5	1.4428	0.023	0.032	0	11320	150	1.9818
7TU14-A	701	23	1.5378	< LOD	1	0	14400	550	2.5495
7TU14-B	611	12	1.258	0.045	0.066	0	14530	150	2.0855
7TU14-C	677.6	6.7	1.2888	< LOD	1	0	14760	210	2.1367
7TU14-D	648.8	8.1	0.82116	0.05	0.04	0	14370	110	1.3614
7TU27-A	112.7	3.7	1.2335	< LOD	0.00041	0.070765	14250	240	1.9933
7TU27-B	140	8.5	1.1717	< LOD	0.053	0.067219	13860	130	1.8934
7TU27-C	125.4	8.6	1.7214	< LOD	0.0004	0.098753	13300	290	2.7817
7TU47-A	168.7	6.2	1.2284	0.043	0.06	0	14900	210	1.788
7TU47-B	192.1	4.3	1.4357	0.018	0.036	0	14230	160	2.0899

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Nb	Nb Stdev	Nb LOD	Nd	Nd Stdev	Nd LOD	Ni	Ni Stdev	Ni LOD
5TU78-B	0.087	0.042	0	1.55	0.19	0	101.7	4.5	0
T5-1CORE-A	0.086	0.019	0	0.259	0.052	0	32.32	0.98	0
T5-1RIM-A	0.034	0.012	0	0.234	0.083	0	31.3	1.3	0.01915
T5-2-A	0.05	0.011	0	0.035	0.02	0	51	12	0
T5-2-B	0.045	0.011	0	0.051	0.023	0	45.6	1.7	0
T5-2-C	0.049	0.012	0	0.025	0.014	0	50.3	1.7	0
6TU03-A	0.015	0.014	0	0.82	0.21	0	122	11	0.072745
6TU03-B	0.036	0.028	0	0.71	0.19	0	127.3	6	0.067312
6TU03-C	0.039	0.042	0	0.59	0.18	0	120.6	5.3	0.064076
6TU12-A	0.108	0.031	0	0.59	0.18	0	40.5	4.3	0.14152
6TU12-B	0.116	0.058	0	0.95	0.26	0	93.8	8.9	0.1563
6TU24-A	0.0026	0.0052	0	0.027	0.032	0	106.7	8.5	0
6TU24-B	< LOD	1	0	0.047	0.047	0	118.6	5.2	0
6TU24-C	< LOD	1	0	0.03	0.035	0	113.7	4.5	0
6TU28-A	0.045	0.028	0	0.045	0.073	0	58.2	6.4	0
6TU28-B	0.063	0.03	0	0.016	0.022	0	61.9	3.4	0
6TU50-A	0.02	0.015	0	0.271	0.083	0	63.8	2.6	0
6TU50-B	0.019	0.013	0	0.409	0.093	0	69.2	2.7	0
6TU77-A	0.054	0.023	0	1.71	0.24	0	49.1	3.2	0.13324
6TU77-B	0.063	0.026	0	2.16	0.22	0	45.5	3	0.12858
6TU90-A	0.107	0.048	0	0.064	0.05	0	37.7	3	0
6TU90-B	0.063	0.025	0	0.071	0.038	0	46.4	2.1	0
6TU90-C	0.132	0.047	0	0.063	0.07	0	36.6	2.5	0
6TU92-A	0.031	0.018	0	0.076	0.062	0	140.7	4.7	0
6TU92-B	0.042	0.026	0	0.091	0.05	0	143.4	4.9	0
T6-1-A	0.085	0.015	0	1.475	0.088	0	65.9	1.4	0
T6-1-B	0.0645	0.0095	0	1.174	0.088	0	72	3.7	0
7TU01-A	0.072	0.03	0	1.18	0.16	0	31.1	1.8	0.045434
7TU01-B	0.081	0.019	0	1.05	0.14	0	32.6	1.8	0.03917
7TU05-A	0.024	0.018	0	0.86	0.2	0	197.9	5.3	0
7TU05-B	0.025	0.018	0	0.8	0.15	0	190.5	5.4	0
7TU14-A	0.47	0.14	0	2.28	0.41	0	167.6	4.8	0
7TU14-B	0.323	0.063	0	2.31	0.33	0	185.5	5.2	0
7TU14-C	0.268	0.06	0	2	0.23	0	143.1	6.8	0
7TU14-D	0.507	0.063	0	2.86	0.24	0	178.1	3.5	0
7TU27-A	0.031	0.027	0	0.029	0.034	0	75.1	2.9	0.054071
7TU27-B	0.027	0.02	0	0.025	0.029	0	79.6	3.7	0.051361
7TU27-C	< LOD	1	0	< LOD	1	0	72.5	4.4	0.075456
7TU47-A	0.045	0.022	0	2.56	0.32	0	106.9	4.2	0.12003
7TU47-B	0.022	0.017	0	2.31	0.34	0	105.9	5.2	0.14029

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Pb	Pb Stdev	Pb LOD	Pr	Pr Stdev	Pr LOD	Rb	Rb Stdev	Rb LOD
5TU78-B	5.51	0.26	0.010022	0.467	0.037	0	0.8	0.64	0.019478
T5-1CORE-A	11.68	0.36	0.0076624	0.059	0.011	0	0.024	0.011	0.0090136
T5-1RIM-A	8.36	0.34	0.0061304	0.049	0.024	0	0.075	0.032	0.016224
T5-2-A	3.79	0.13	0.0046378	0.0118	0.0048	0	< LOD	0.0071	0.010384
T5-2-B	3.82	0.24	0.0046685	0.0179	0.0066	0	0.011	0.014	0.010453
T5-2-C	3.89	0.22	0.0039098	0.0118	0.0045	0	< LOD	0.008	0.0087539
6TU03-A	5.54	0.53	0.0063075	0.249	0.053	0.0036474	< LOD	0.00032	0.035485
6TU03-B	3.99	0.35	0.0058364	0.248	0.049	0.0033749	0.042	0.047	0.032834
6TU03-C	6.1	3.3	0.0055558	0.189	0.034	0.0032127	0.057	0.059	0.031256
6TU12-A	9.32	0.43	0.014786	0.18	0.046	0	0.05	0.038	0.032368
6TU12-B	9.9	0.46	0.01633	0.251	0.05	0	< LOD	0.033	0.035748
6TU24-A	7.82	0.41	0.005268	0.0081	0.0094	0	< LOD	0.03	0.022717
6TU24-B	5.21	0.4	0.0054125	0.0068	0.0067	0	< LOD	0.026	0.02334
6TU24-C	6	0.62	0.00501	0.005	0.0059	0	< LOD	0.011	0.021604
6TU28-A	5.19	0.66	0.008464	0.011	0.01	0	< LOD	0.012	0.018366
6TU28-B	3.75	0.27	0.0079962	0.0038	0.0056	0	< LOD	0.012	0.017351
6TU50-A	5.97	0.33	0.0070389	0.081	0.015	0	0.033	0.019	0.013008
6TU50-B	5.81	0.44	0.0061337	0.113	0.021	0	0.023	0.017	0.011336
6TU77-A	5.15	0.47	0.013465	0.553	0.046	0	0.038	0.042	0.026675
6TU77-B	4.96	0.32	0.012995	0.601	0.082	0	< LOD	0.02	0.025743
6TU90-A	12.19	0.72	0.010194	0.02	0.013	0	0.015	0.018	0
6TU90-B	8.73	0.35	0.0080238	0.016	0.0078	0	0.015	0.014	0
6TU90-C	9.14	0.47	0.010266	0.017	0.021	0	0.013	0.02	0
6TU92-A	4.24	0.37	0.015027	0.03	0.015	0	< LOD	0.035	0.030728
6TU92-B	3.98	0.4	0.013521	0.021	0.01	0	0.12	0.13	0.027648
T6-1-A	4.06	0.42	0.0073502	0.428	0.021	0.0010844	0.035	0.022	0.0097322
T6-1-B	4.74	0.31	0.0062856	0.405	0.028	0	0.018	0.012	0.0081287
7TU01-A	7.01	0.35	0.014941	0.413	0.037	0	< LOD	0.004	0.016988
7TU01-B	6.68	0.49	0.012881	0.36	0.033	0	0.39	0.16	0.014646
7TU05-A	5.79	0.33	0.013103	0.279	0.054	0	< LOD	0.0097	0.036051
7TU05-B	7	1.4	0.011898	0.214	0.033	0	< LOD	0.026	0.032736
7TU14-A	7.49	0.85	0.014302	0.71	0.13	0	< LOD	0.026	0.026761
7TU14-B	8.56	0.63	0.0117	0.692	0.061	0	< LOD	0.019	0.021891
7TU14-C	7.74	0.65	0.011987	0.628	0.058	0	< LOD	0.00011	0.022428
7TU14-D	8.41	0.3	0.007637	0.895	0.054	0	< LOD	0.0096	0.01429
7TU27-A	6.96	0.6	0.013827	0.0124	0.0084	0	< LOD	0.034	0.03801
7TU27-B	6.18	0.54	0.013134	0.0061	0.0068	0	< LOD	0.024	0.036105
7TU27-C	6.7	1.2	0.019296	0.0027	0.0054	0	< LOD	0.022	0.053043
7TU47-A	4.24	0.33	0.013829	0.701	0.048	0	< LOD	0.0098	0.027836
7TU47-B	4.03	0.31	0.016163	0.679	0.081	0	< LOD	0.029	0.032535

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Sm	Sm Stdev	Sm LOD	Sn	Sn Stdev	Sn LOD
5TU78-B	27.88	0.93	0.03399	0.133	0.047	0	1.48	0.17	0.052747
T5-1CORE-A	13.7	0.38	0.017386	0.043	0.016	0	0.357	0.067	0.022065
T5-1RIM-A	11.97	0.43	0.020705	0.034	0.012	0	0.234	0.065	0.025092
T5-2-A	95.5	2.6	0.021851	0.0043	0.0037	0	0.433	0.069	0.023684
T5-2-B	70.8	2.3	0.021995	0.0116	0.007	0	0.355	0.05	0.023841
T5-2-C	86.2	3.3	0.018421	0.0085	0.0063	0	0.45	0.083	0.019966
6TU03-A	18.9	1.8	0.064654	0.099	0.044	0	0.33	0.12	0.045025
6TU03-B	31.8	1.3	0.059825	0.092	0.057	0	0.5	0.12	0.041662
6TU03-C	28.1	1.9	0.056949	0.038	0.036	0	0.42	0.11	0.039659
6TU12-A	14.91	0.7	0.025068	0.046	0.036	0	5.07	0.47	0.059565
6TU12-B	19.5	1.7	0.027686	0.182	0.084	0	2.74	0.5	0.065787
6TU24-A	36.3	1.5	0.078824	0.011	0.016	0	0.097	0.062	0.089227
6TU24-B	21.9	1.3	0.080987	< LOD	1	0	0.121	0.079	0.091676
6TU24-C	25.63	0.96	0.074963	< LOD	1	0	0.088	0.059	0.084857
6TU28-A	71	5.2	0.087742	0.01	0.02	0	0.8	1.2	0.058671
6TU28-B	106.9	3.2	0.082892	0.009	0.012	0	0.137	0.084	0.055428
6TU50-A	15.37	0.78	0.053514	0.016	0.011	0	0.392	0.072	0.029056
6TU50-B	7.9	0.47	0.046632	0.021	0.013	0	0.426	0.068	0.025319
6TU77-A	29.73	0.92	0.054037	0.218	0.079	0	1.69	0.27	0.02716
6TU77-B	29.4	1.5	0.052148	0.281	0.078	0	1.58	0.27	0.02621
6TU90-A	31.4	2.9	0.068745	0.0037	0.0074	0	0.144	0.073	0.051524
6TU90-B	122.6	9.4	0.05411	0.013	0.015	0	0.29	0.086	0.040555
6TU90-C	41.8	2.3	0.069228	0.01	0.019	0	0.163	0.09	0.051887
6TU92-A	42.7	1.4	0.033972	< LOD	1	0	0.7	0.2	0.027377
6TU92-B	40.2	1.3	0.030567	0.012	0.018	0	0.63	0.14	0.024633
T6-1-A	23.11	0.39	0.016495	0.18	0.024	0.0036131	1.21	0.084	0.022989
T6-1-B	18.41	0.36	0.018776	0.126	0.018	0	1.229	0.076	0.017949
7TU01-A	38.9	1.9	0.011492	0.069	0.031	0	2.19	0.28	0.046449
7TU01-B	30.1	1.1	0.0099078	0.096	0.032	0	1.55	0.15	0.040045
7TU05-A	23.8	0.82	0.038225	0.091	0.047	0	0.59	0.16	0.070942
7TU05-B	24.8	1	0.03471	0.06	0.038	0	0.63	0.15	0.064419
7TU14-A	24.9	1.5	0.055157	0.27	0.12	0	5.86	0.56	0.074094
7TU14-B	24.79	0.84	0.045121	0.206	0.061	0	4	0.55	0.060612
7TU14-C	25.8	1.1	0.046227	0.171	0.053	0	4.08	0.44	0.062098
7TU14-D	26.72	0.73	0.029453	0.235	0.045	0	6.48	0.33	0.039565
7TU27-A	7.49	0.74	0.04942	0.011	0.017	0	0.108	0.065	0.038264
7TU27-B	13.27	0.79	0.046944	0.0035	0.0069	0	0.094	0.08	0.036346
7TU27-C	13.4	1.8	0.068966	< LOD	1	0	0.14	0.076	0.053397
7TU47-A	36.9	1.3	0.032975	0.302	0.073	0	1.02	0.17	0.060721
7TU47-B	38.6	1.7	0.038542	0.181	0.068	0	1.03	0.2	0.070971

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sr	Sr Stdev	Sr LOD	Ta	Ta Stdev	Ta LOD	Tb	Tb Stdev	Tb LOD
5TU78-B	124.7	2.2	0	0.0085	0.005	0	0.0072	0.0053	0
T5-1CORE-A	189.7	2.7	0.0017524	0.004	0.0016	0	0.0149	0.0043	0
T5-1RIM-A	222.8	5.5	0	0.0013	0.0013	0	0.0045	0.0026	0
T5-2-A	123.1	1.9	0	0.0229	0.0056	0	0.0009	0.0011	0
T5-2-B	127.4	1.9	0	0.0057	0.0027	0	0.0025	0.0017	0
T5-2-C	109	3.6	0	0.011	0.003	0	0.001	0.0011	0
6TU03-A	122.5	5.8	0	< LOD	1	0	0.0039	0.0044	0
6TU03-B	93	2.1	0	0.0012	0.0024	0	0.0109	0.0083	0
6TU03-C	91.9	6	0	0.0033	0.0066	0	< LOD	1	0
6TU12-A	35.4	1.9	0	0.135	0.034	0	0.0054	0.0079	0
6TU12-B	71.2	5.8	0	0.04	0.016	0	0.0028	0.0056	0
6TU24-A	322.2	8	0	< LOD	1	0	< LOD	1	0
6TU24-B	262.3	5.9	0	0.0021	0.0042	0	< LOD	1	0
6TU24-C	287	11	0	< LOD	1	0	0.0011	0.0022	0
6TU28-A	160.5	8.7	0	0.0056	0.0054	0	< LOD	1	0
6TU28-B	116	3.4	0	0.018	0.01	0	< LOD	1	0
6TU50-A	1137	23	0	0.0007	0.0013	0	0.0008	0.0012	0
6TU50-B	958	20	0	0.00065	0.00091	0	0.0008	0.0015	0
6TU77-A	170.3	5.8	0	0.0074	0.0063	0	0.0056	0.0057	0
6TU77-B	154.3	5.4	0	0.002	0.0028	0	0.0088	0.0069	0
6TU90-A	402	28	0	0.021	0.01	0	< LOD	1	0
6TU90-B	165.9	6.8	0	0.0359	0.0091	0	0.001	0.0014	0
6TU90-C	285.5	9.7	0	0.041	0.017	0	< LOD	1	0
6TU92-A	45.4	2.6	0	0.0143	0.0073	0	0.0094	0.0078	0
6TU92-B	32.9	2.5	0	0.026	0.014	0	0.0178	0.0082	0
T6-1-A	92.4	1.3	0	0.0275	0.0047	0	0.0084	0.0031	0
T6-1-B	82.7	1.4	0	0.0196	0.0036	0	0.0058	0.0019	0
7TU01-A	240.4	9.8	0	0.0164	0.0095	0	0.0043	0.0043	0
7TU01-B	190.8	4	0	0.0142	0.0053	0	0.0024	0.0019	0
7TU05-A	131.4	2.9	0	0.0025	0.0038	0	0.0033	0.0039	0
7TU05-B	121.6	2.7	0	0.0036	0.0036	0	0.003	0.0029	0
7TU14-A	85.5	2	0	0.366	0.048	0	0.0015	0.0029	0
7TU14-B	92.2	2.5	0	0.214	0.039	0	0.0065	0.0063	0
7TU14-C	114.6	2.4	0	0.174	0.034	0	0.0035	0.005	0
7TU14-D	99.9	1.9	0	0.415	0.036	0	0.0103	0.0038	0
7TU27-A	171	12	0	0.0108	0.0071	0	< LOD	1	0
7TU27-B	110.6	3.8	0	0.0133	0.0093	0	< LOD	1	0
7TU27-C	125.6	8.7	0	0.016	0.012	0	< LOD	1	0
7TU47-A	193.7	3.8	0	0.0077	0.0066	0	0.0049	0.0048	0
7TU47-B	194	4.9	0	0.0044	0.004	0	0.0069	0.0059	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Th	Th Stdev	Th LOD	Ti	Ti Stdev	Ti LOD	Tm	Tm Stdev	Tm LOD
5TU78-B	0.0015	0.003	0	4217	74	0.16457	< LOD	1	0
T5-1CORE-A	0.0494	0.0085	0	3527	80	0	0.0079	0.0033	0
T5-1RIM-A	0.052	0.021	0	3900	140	0	0.0029	0.0016	0
T5-2-A	0.004	0.0024	0	3336	50	0	0.00039	0.00055	0
T5-2-B	0.0171	0.006	0	2465	37	0	0.00021	0.00041	0
T5-2-C	0.0052	0.0035	0	2770	110	0	< LOD	1	0
6TU03-A	< LOD	1	0	2880	160	0	< LOD	1	0
6TU03-B	0.0014	0.0028	0	2065	40	0	0.0023	0.0031	0
6TU03-C	0.013	0.016	0	2340	130	0	< LOD	1	0
6TU12-A	< LOD	0.000015	0	2157	56	0	< LOD	1	0
6TU12-B	0.0027	0.0061	0	2630	140	0	< LOD	1	0
6TU24-A	0.0011	0.0021	0	1964	80	0	0.0034	0.0047	0
6TU24-B	< LOD	1	0	1510	110	0	< LOD	1	0
6TU24-C	< LOD	1	0	1793	46	0	< LOD	1	0
6TU28-A	< LOD	1	0	3340	120	0	< LOD	1	0
6TU28-B	< LOD	1	0	3891	66	0	< LOD	1	0
6TU50-A	0.0004	0.0008	0	5138	62	0	< LOD	1	0
6TU50-B	< LOD	1	0	5280	100	0	< LOD	1	0
6TU77-A	0.031	0.045	0	4423	57	0.2116	0.013	0.023	0
6TU77-B	< LOD	1	0	4334	83	0.2042	< LOD	1	0
6TU90-A	0.001	0.0019	0	1830	130	0	< LOD	1	0
6TU90-B	0.011	0.007	0	451	38	0	0.0086	0.0045	0
6TU90-C	0.0046	0.0053	0	1419	92	0	< LOD	1	0
6TU92-A	0.142	0.048	0	2780	130	0	0.121	0.037	0
6TU92-B	0.57	0.2	0	2220	240	0	0.178	0.063	0
T6-1-A	0.00053	0.0006	0	3240	27	0	0.001	0.001	0
T6-1-B	0.029	0.02	0	3013	46	0	0.00146	0.00092	0
7TU01-A	< LOD	0.0016	0.0019237	5327	85	0	0.001	0.002	0
7TU01-B	0.0147	0.0088	0.0016585	5071	74	0	0.00034	0.00069	0
7TU05-A	< LOD	0.0036	0.0053102	4365	88	0.39399	< LOD	1	0
7TU05-B	< LOD	0.0032	0.004822	4240	96	0.35776	< LOD	1	0
7TU14-A	< LOD	1	0	4610	100	0	0.0013	0.0026	0
7TU14-B	< LOD	1	0	4629	74	0	< LOD	1	0
7TU14-C	< LOD	1	0	4480	110	0	0.0022	0.0043	0
7TU14-D	0.025	0.037	0	5047	65	0	0.0087	0.0086	0
7TU27-A	< LOD	1	0	3250	370	0	< LOD	1	0
7TU27-B	0.002	0.004	0	1280	100	0	< LOD	1	0
7TU27-C	0.007	0.013	0	2160	390	0	< LOD	1	0
7TU47-A	0.0016	0.0022	0	2427	36	0	0.0006	0.0013	0
7TU47-B	0.0037	0.0073	0	2548	53	0	< LOD	1	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	U	U Stdev	U LOD	V	V Stdev	V LOD	Y	Y Stdev	Y LOD
5TU78-B	0.0045	0.0041	0	526.1	6.2	0.079976	0.089	0.038	0
T5-1CORE-A	0.0163	0.0051	0	389.8	6.8	0.031707	0.628	0.041	0
T5-1RIM-A	0.0125	0.006	0	426.4	6.4	0.032277	0.237	0.029	0
T5-2-A	0.002	0.0019	0	867	14	0.044391	0.0239	0.0088	0
T5-2-B	0.0029	0.0026	0	771	14	0.044684	0.031	0.012	0
T5-2-C	0.00074	0.00084	0	870	28	0.037422	0.0227	0.0089	0
6TU03-A	< LOD	1	0	359	13	0.10541	0.039	0.026	0
6TU03-B	0.0022	0.0044	0	338.5	6.2	0.097534	0.126	0.062	0
6TU03-C	< LOD	1	0	340.2	6.1	0.092844	0.054	0.029	0
6TU12-A	< LOD	1	0	162.5	4.5	0.13809	0.031	0.019	0
6TU12-B	< LOD	1	0	186.7	9.9	0.15252	0.028	0.021	0
6TU24-A	0.0036	0.0042	0	551.6	8.5	0.11791	0.048	0.028	0
6TU24-B	< LOD	1	0	409	19	0.12115	0.023	0.023	0
6TU24-C	< LOD	1	0	515	14	0.11214	0.0027	0.0055	0
6TU28-A	0.0019	0.0039	0	614	20	0.107	0.0032	0.0063	0
6TU28-B	< LOD	1	0	747	11	0.10109	< LOD	1	0
6TU50-A	0.00035	0.00071	0	323.4	3.9	0.054936	0.0051	0.006	0
6TU50-B	< LOD	1	0	336.8	9.8	0.047871	0.0075	0.0063	0
6TU77-A	0.3	0.41	0	404.7	9.3	0.12013	0.31	0.39	0
6TU77-B	0.0029	0.0043	0	398.9	7.5	0.11593	0.094	0.043	0
6TU90-A	< LOD	0.000021	0.0038848	267.3	5.6	0.083819	0.008	0.014	0.0079186
6TU90-B	< LOD	0.0024	0.0030578	252.1	4.7	0.065975	0.045	0.025	0.0062328
6TU90-C	< LOD	0.002	0.0039122	260.7	6	0.084408	0.018	0.017	0.0079743
6TU92-A	0.98	0.25	0	529	11	0.15956	2.77	0.55	0
6TU92-B	1.37	0.42	0	490	21	0.14357	4	1.2	0
T6-1-A	0.0043	0.0019	0	261	3.3	0.041772	0.096	0.018	0
T6-1-B	0.032	0.015	0	274.3	5.6	0.036839	0.093	0.016	0
7TU01-A	0.0031	0.0031	0	392.4	9.5	0.079987	0.047	0.02	0
7TU01-B	0.0041	0.0023	0	448	16	0.068959	0.094	0.028	0
7TU05-A	< LOD	1	0	392.2	5.6	0.11852	0.0066	0.0073	0
7TU05-B	0.0013	0.0018	0	397.9	6.8	0.10762	0.012	0.011	0
7TU14-A	0.0014	0.0027	0	140.2	7.5	0.080553	0.053	0.035	0
7TU14-B	0.0009	0.0019	0	278	7.4	0.065895	0.061	0.027	0
7TU14-C	< LOD	1	0	209	16	0.067512	0.082	0.047	0
7TU14-D	0.41	0.38	0	285.6	3.4	0.043014	0.31	0.19	0
7TU27-A	< LOD	1	0	271.2	6.1	0.092257	< LOD	1	0
7TU27-B	0.0008	0.0016	0	245.4	4.7	0.087634	0.017	0.016	0
7TU27-C	< LOD	1	0	278	10	0.12875	0.022	0.03	0
7TU47-A	0.0007	0.0013	0	411.6	6.1	0.096306	0.114	0.033	0
7TU47-B	0.0044	0.006	0	425.5	7.5	0.11256	0.184	0.046	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Yb	Yb Stdev	Yb LOD	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
5TU78-B	< LOD	1	0	116.9	4.1	0.33925	0.28	0.11	0
T5-1CORE-A	0.132	0.029	0	126.3	4.1	0.13126	0.355	0.049	0
T5-1RIM-A	0.049	0.024	0	131.5	4.4	0.1745	0.24	0.06	0
T5-2-A	0.0018	0.0036	0	97	2.6	0.1581	0.077	0.022	0
T5-2-B	0.0076	0.0094	0	100	12	0.15914	0.046	0.019	0
T5-2-C	0.0015	0.0031	0	94.1	3.7	0.13328	0.093	0.027	0
6TU03-A	< LOD	0.000017	0	160	60	0.47374	0.086	0.076	0
6TU03-B	0.02	0.023	0	90.5	4.5	0.43835	0.116	0.066	0
6TU03-C	< LOD	0.000014	0	88.3	4	0.41728	0.174	0.082	0
6TU12-A	0.0043	0.0086	0	330	14	0.38164	0.179	0.081	0
6TU12-B	< LOD	1	0	200	12	0.4215	0.207	0.099	0
6TU24-A	0.0043	0.0087	0	140	5.1	0.40556	0.016	0.023	0
6TU24-B	< LOD	1	0	113.2	7	0.41669	0.006	0.012	0
6TU24-C	< LOD	1	0	118.2	5.4	0.38569	< LOD	1	0
6TU28-A	< LOD	1	0	79.3	4.8	0.35478	0.08	0.13	0
6TU28-B	< LOD	1	0	75.2	3.5	0.33517	0.028	0.028	0
6TU50-A	0.0017	0.0035	0	152.8	4	0.30225	0.099	0.034	0
6TU50-B	< LOD	1	0	153	10	0.26338	0.148	0.04	0
6TU77-A	0.17	0.25	0	130.2	4.5	0.33337	70	100	0
6TU77-B	< LOD	1	0	128	5	0.32172	2.28	0.47	0
6TU90-A	0.008	0.016	0	123.2	6.7	0.41723	0.058	0.039	0
6TU90-B	0.205	0.074	0	119.9	3.5	0.32841	0.86	0.18	0
6TU90-C	0.023	0.026	0	114.6	4.9	0.42017	0.118	0.073	0
6TU92-A	1.43	0.41	0	104.5	9.2	0.45018	219	41	0
6TU92-B	1.81	0.54	0	89.7	3.3	0.40505	260	78	0
T6-1-A	0.0007	0.0014	0	130.9	2.6	0.21985	0.161	0.035	0
T6-1-B	0.0107	0.0057	0	127.7	3.7	0.12423	0.53	0.15	0
7TU01-A	< LOD	1	0	117.7	3.7	0.36341	0.232	0.069	0
7TU01-B	0.0049	0.0071	0	111	3.2	0.31331	0.405	0.086	0
7TU05-A	< LOD	1	0	135.7	5.9	0.31304	0.036	0.032	0
7TU05-B	< LOD	1	0	113.2	6.7	0.28426	0.19	0.18	0
7TU14-A	0.006	0.013	0	310.3	9.1	0.45209	0.172	0.093	0
7TU14-B	0.009	0.018	0	293.1	8.2	0.36983	0.137	0.068	0
7TU14-C	< LOD	1	0	310	10	0.3789	0.148	0.065	0
7TU14-D	0.113	0.087	0	283.5	4.8	0.24141	57	55	0
7TU27-A	< LOD	1	0	83.9	4.1	0.34763	0.102	0.049	0
7TU27-B	< LOD	1	0	86.2	4.5	0.33021	0.35	0.18	0
7TU27-C	< LOD	1	0	89.7	9.2	0.48513	0.25	0.26	0
7TU47-A	0.021	0.023	0	92.3	3.5	0.2418	0.45	0.1	0
7TU47-B	0.02	0.023	0	88.2	4.3	0.28262	0.73	0.41	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Site	Al	Al Stdev	Al LOD	B	B Stdev	B LOD
7TU47-C	Till 07	164300	3.30E+03	0.26539	27200	1.30E+03	1.2596
7TU50-A	Till 07	176200	2.40E+03	0.23492	28900	3.40E+03	1.6368
7TU50-B	Till 07	174800	1.30E+03	0.1906	27010	280	1.328
7TU55-A	Till 07	177770	930	0.25958	26900	220	1.0519
7TU55-B	Till 07	178130	910	0.21514	26630	190	0.87179
7TU63	Till 07	171560	770	0.17319	27100	170	1.1005
7TU74-A	Till 07	157770	800	0.11261	25230	220	0.96094
7TU74-B	Till 07	158600	5.70E+03	0.13995	25390	280	1.1943
7TU90-A	Till 07	166800	2.70E+03	0.21716	27800	1.70E+03	1.5477
7TU90-B	Till 07	169300	1.50E+03	0.20612	26430	330	1.469
7TU90-C	Till 07	169300	1.70E+03	0.21192	26620	340	1.5103
A608B	Tiriganiaq	128100	3.20E+03	0.56266	25930	380	2.0346
A620T	Tiriganiaq	172700	2.80E+03	1.2388	23240	440	4.1827
M626T	Tiriganiaq	146100	2.60E+03	0.76502	24560	840	4.4826
T526T	Pump	140000	8.10E+03	1.0305	18860	880	6.1688
T536B	F-Zone	137100	4.10E+03	0.69921	27270	400	3.0934
T537T-A	F-Zone	150500	3.30E+03	0.66247	26650	610	4.7226
T537T-B	F-Zone	132500	2.50E+03	0.6655	25700	510	4.7442
T538T1-A	Tiriganiaq	183700	5.10E+03	1.7961	23230	660	7.5416
T538T1-B	Tiriganiaq	179000	5.40E+03	1.8049	24200	2.50E+03	7.5787
T538T2	Tiriganiaq	183000	3.30E+03	0.96672	24410	440	4.9056
T559B1-A	Tiriganiaq	138100	2.90E+03	0.72704	26200	430	2.1859
T559B2-A	Tiriganiaq	135800	3.90E+03	0.67169	26430	730	2.5393
T559T1-B	Tiriganiaq	169800	3.40E+03	0.78996	24400	1.10E+03	4.6738
T559T2-A	Tiriganiaq	165100	2.70E+03	0.73163	23280	410	5.1948
T559T2-B	Tiriganiaq	165000	3.60E+03	0.58235	24900	1.70E+03	4.1349
T606T-A	Tiriganiaq	170100	3.60E+03	0.9491	22170	680	6.4933
T610T1-A	Tiriganiaq	191800	3.20E+03	1.4244	24900	970	6.7587
T610T2-A	Tiriganiaq	7.10E+03	1.81E+05	2.3463	24000	2.00E+03	7.7825
T611T1B2	Tiriganiaq	172500	3.60E+03	0.63429	25630	780	3.1823
TD12-A	EPD Tiri	166900	1.10E+03	0.20886	27260	320	1.7469
TD12-B	EPD Tiri	166500	1.60E+03	0.20942	26360	310	1.7515
TD12-C	EPD Tiri	169000	1.50E+03	0.21234	26360	250	1.7759
TD18-A	EPD Tiri	166800	1.60E+03	0.77834	26550	390	1.2812
TD18-B	EPD Tiri	166100	3.20E+03	0.76464	25770	440	1.2587
TD2-A	Mustang Host rock	161900	1.40E+03	0.13081	26170	340	1.166
TD2-B	Mustang Host rock	161800	1.90E+03	0.16348	27780	460	1.4573
TD7-A	Showing 503	148000	1.20E+03	0.14978	27590	350	1.4602
TD7-B	Showing 503	149300	1.10E+03	0.13746	27090	330	1.3402
TD7-C	Showing 503	144400	1.90E+03	0.094611	27600	460	0.92241
TD7-D	Showing 503	141200	3.40E+03	0.12113	26850	810	1.1809

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ba	Ba Stdev	Ba LOD	Be	Be Stdev	Be LOD	Ca	Ca Stdev	Ca LOD
7TU47-C	2.6	2.6	0	0.37	0.51	0	6910	320	16.12
7TU50-A	0.79	0.28	0	0.35	0.35	0	6060	160	17.158
7TU50-B	0.42	0.18	0	0.22	0.26	0	6360	120	13.921
7TU55-A	0.3	0.14	0	0.46	0.29	0	5800	1.50E+03	16.106
7TU55-B	0.52	0.15	0	0.56	0.28	0	5189	66	13.348
7TU63	0.287	0.086	0	0.62	0.28	0	5170	110	13.848
7TU74-A	1.31	0.23	0	0.036	0.071	0	5799	62	11.265
7TU74-B	0.6	0.21	0	< LOD	1	0	5790	180	14
7TU90-A	0.4	0.26	0	6.4	1.9	0	5370	190	15.488
7TU90-B	0.23	0.16	0	2.2	1.7	0	4090	160	14.701
7TU90-C	0.37	0.24	0	5	1.6	0	4650	190	15.114
A608B	0.75	0.29	0	1.24	0.71	0	2030	130	52.811
A620T	0.32	0.43	0	1.6	1.6	0	798	95	87.454
M626T	1.69	0.64	0	6.1	2.4	0	6350	190	67.714
T526T	0.42	0.35	0	3.1	2.5	0	18000	1.00E+04	83.651
T536B	1.77	0.79	0	< LOD	1	0	3440	240	68.198
T537T-A	< LOD	1	0	0.37	0.73	0	1660	230	78.229
T537T-B	< LOD	1	0	< LOD	1	0	670	100	78.587
T538T1-A	0.13	0.26	0	< LOD	1	0	4610	460	128.23
T538T1-B	< LOD	1	0	< LOD	1	0	1180	200	128.86
T538T2	0.18	0.27	0	0.7	1	0	3870	530	107.28
T559B1-A	6	2.1	0	0.46	0.54	0	27000	1.10E+04	56.246
T559B2-A	4.1	2.3	0	0.38	0.53	0	13000	1.40E+04	46.028
T559T1-B	32	20	0	0.6	0.51	0	2100	160	65.033
T559T2-A	6.1	1.7	0	0.2	0.4	0	4270	250	91.853
T559T2-B	25	17	0	0.32	0.39	0	1705	81	73.112
T606T-A	0.15	0.31	0	< LOD	1	0	6500	1.80E+03	118.35
T610T1-A	0.2	0.43	0	1	1.9	0	4070	480	125.22
T610T2-A	< LOD	0.56	0.2453	< LOD	1	0	3060	240	115.61
T611T1B2	0.98	0.4	0	2.5	1.2	0	13600	7.80E+03	67.856
TD12-A	0.34	0.22	0	< LOD	1	0	6580	570	21.263
TD12-B	0.11	0.11	0	< LOD	1	0	4530	240	21.319
TD12-C	0.076	0.089	0	0.15	0.3	0	3560	320	21.617
TD18-A	0.14	0.085	0	0.37	0.27	0	1091	78	11.302
TD18-B	0.069	0.087	0	0.21	0.24	0	820	31	11.103
TD2-A	8.9	2.6	0	< LOD	1	0	7760	560	11.189
TD2-B	0.87	0.27	0	< LOD	1	0	11060	520	13.984
TD7-A	6.47	0.65	0	0.41	0.32	0	5120	200	14.862
TD7-B	6.02	0.55	0	0.08	0.11	0	4185	77	13.64
TD7-C	6.27	0.48	0	0.5	0.24	0	4516	80	9.3878
TD7-D	7.14	0.63	0	0.1	0.11	0	4126	81	12.019

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ce	Ce Stdev	Ce LOD	Co	Co Stdev	Co LOD	Cr	Cr Stdev	Cr LOD
7TU47-C	4.07	0.35	0	24.1	1.8	0.013692	1046	44	1.229
7TU50-A	2.35	0.29	0	28.6	1.1	0	916	41	1.2398
7TU50-B	1.34	0.21	0	29	0.99	0	833	19	1.0059
7TU55-A	6.79	0.2	0	20.64	0.5	0	3.04	0.84	0.88917
7TU55-B	7.03	0.2	0	20.71	0.61	0	17.7	1.9	0.73695
7TU63	3	0.2	0	21.1	0.57	0	< LOD	0.39	0.85222
7TU74-A	0.049	0.012	0	29.74	0.65	0	11.6	1.3	0.7371
7TU74-B	0.025	0.017	0	32.5	1	0	54	25	0.91609
7TU90-A	2.39	0.61	0	31.1	1.1	0.058509	718	72	1.1618
7TU90-B	2.24	0.18	0	33.5	1.4	0.055535	627	22	1.1027
7TU90-C	1.88	0.15	0	33.3	1.5	0.057097	789	35	1.1338
A608B	0.119	0.04	0	0.281	0.088	0	< LOD	1.5	2.0896
A620T	0.058	0.05	0	7.3	1.3	0	704	59	5.5368
M626T	0.009	0.019	0	45.1	2.1	0	4.5	2.8	3.8511
T526T	3.2	1.4	0	26.7	2.3	0	4.4	3.6	4.0463
T536B	< LOD	1	0	37.5	1.7	0	6.3	4.2	3.5635
T537T-A	0.051	0.061	0	13.1	1.4	0	137	19	3.6233
T537T-B	0.017	0.02	0	12.6	1.3	0	104	13	3.6399
T538T1-A	0.012	0.025	0	57.3	4.5	0.08465	680	210	9.5586
T538T1-B	< LOD	1	0	73.3	5.5	0.085067	834	88	9.6057
T538T2	0.34	0.18	0	68.5	4	0	828	75	6.0004
T559B1-A	0.169	0.07	0	5.75	0.52	0.05722	255	22	2.3411
T559B2-A	0.053	0.033	0	5.79	0.54	0	203	12	2.9155
T559T1-B	0.06	0.035	0	10.08	0.73	0	223	16	4.7484
T559T2-A	0.161	0.074	0	6.94	0.86	0.10684	187	22	5.2615
T559T2-B	0.065	0.029	0	8.74	0.74	0.08504	70	6.1	4.188
T606T-A	0.63	0.38	0	9.7	1.1	0	1010	100	6.1242
T610T1-A	0.023	0.032	0	48.4	4	0	269	52	5.8901
T610T2-A	0.019	0.038	0	50.7	5.8	0	494	57	6.7022
T611T1B2	0.35	0.21	0	27	1.8	0	304	38	3.6128
TD12-A	0.061	0.028	0	57.8	1.6	0	19.5	3	1.1127
TD12-B	0.023	0.012	0	58.2	1.6	0	16.2	2.4	1.1156
TD12-C	0.037	0.022	0	55.9	1.9	0	77	11	1.1312
TD18-A	0.084	0.022	0	40.4	1.1	0	5.7	1.3	0.81069
TD18-B	0.072	0.024	0	39.7	1.3	0	5.9	1.8	0.79642
TD2-A	0.123	0.02	0	4.88	0.22	0	3.66	0.82	0.88915
TD2-B	0.195	0.061	0	4.87	0.37	0	5.5	1.3	1.1113
TD7-A	0.0096	0.0089	0	33.97	0.94	0	4.56	0.88	0.82219
TD7-B	0.015	0.012	0	33.92	0.99	0	4.7	1.2	0.7546
TD7-C	0.0114	0.005	0	33.64	0.78	0	4.32	0.67	0.51936
TD7-D	0.0054	0.0054	0	33	1.2	0	4.1	0.95	0.66491

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Cs	Cs Stdev	Cs LOD	Cu	Cu Stdev	Cu LOD	Dy	Dy Stdev	Dy LOD
7TU47-C	< LOD	0.011	0.015732	17	11	0.053608	0.048	0.045	0
7TU50-A	0.0069	0.0096	0.0042007	1.98	0.7	0.15037	0.0043	0.0086	0
7TU50-B	< LOD	0.0026	0.0034082	2.28	0.5	0.122	0.0027	0.0054	0
7TU55-A	< LOD	0.0049	0.0065272	3.45	0.57	0.15103	0.019	0.013	0
7TU55-B	< LOD	0.0013	0.0054097	4.1	0.59	0.12518	0.34	0.14	0
7TU63	< LOD	0.0035	0.0065879	3.29	0.91	0.19843	0.013	0.01	0
7TU74-A	< LOD	0.0053	0.0052191	3.99	0.52	0.089784	0.005	0.006	0
7TU74-B	< LOD	0.000022	0.0064865	4.4	0.77	0.11159	0.069	0.034	0
7TU90-A	< LOD	0.00023	0.018905	0.84	0.37	0.2321	0.01	0.014	0
7TU90-B	< LOD	0.006	0.017944	1.13	0.4	0.2203	0.015	0.021	0
7TU90-C	< LOD	0.011	0.018448	7.4	7.9	0.22649	0.028	0.032	0
A608B	< LOD	0.013	0.013212	0.71	0.42	0.3639	0.03	0.027	0
A620T	< LOD	0.032	0.029131	1.7	1.1	0.85082	0.062	0.06	0
M626T	< LOD	0.011	0.08405	< LOD	0.65	0.69758	0.018	0.036	0
T526T	< LOD	0.039	0.042476	6.6	4	0.69913	0.95	0.38	0
T536B	< LOD	0.027	0.033292	< LOD	0.56	0.62202	< LOD	1	0
T537T-A	< LOD	0.014	0.039883	0.81	0.74	0.55583	< LOD	1	0
T537T-B	< LOD	0.00061	0.040066	< LOD	0.38	0.55837	< LOD	1	0
T538T1-A	< LOD	0.081	0.062834	2.7	4.5	0.79906	0.08	0.15	0
T538T1-B	0.065	0.099	0.063144	1.7	1.7	0.80299	< LOD	1	0
T538T2	< LOD	0.03	0.031621	1	1.1	0.88595	0.27	0.17	0
T559B1-A	< LOD	0.015	0.023083	2	1.7	0.22789	0.29	0.18	0
T559B2-A	< LOD	0.029	0.026411	3.5	4.4	0.25705	0.069	0.061	0
T559T1-B	< LOD	0.016	0.048139	13.9	3	0.38905	< LOD	1	0
T559T2-A	< LOD	0.045	0.043997	6.4	1.7	0.60987	< LOD	1	0
T559T2-B	< LOD	0.024	0.03502	11.5	3.4	0.48544	0.015	0.022	0
T606T-A	< LOD	0.00022	0.023362	< LOD	0.99	0.73918	0.22	0.22	0
T610T1-A	< LOD	0.025	0.06397	0.98	0.96	0.87726	< LOD	1	0
T610T2-A	< LOD	0.0022	0.10326	< LOD	0.78	0.66799	< LOD	1	0
T611T1B2	< LOD	0.014	0.04192	1.97	0.82	0.30533	0.21	0.18	0
TD12-A	0.009	0.011	0.0071591	3.23	0.88	0.16089	0.095	0.038	0
TD12-B	0.01	0.01	0.0071781	3.84	0.79	0.16132	0.0047	0.0094	0
TD12-C	< LOD	0.0043	0.0072783	4.5	1.1	0.16357	< LOD	1	0
TD18-A	< LOD	0.0057	0.0093969	4.86	0.88	0.20175	0.038	0.027	0
TD18-B	< LOD	0.0026	0.0092316	4.45	0.57	0.19819	0.056	0.032	0
TD2-A	1.9	0.73	0.0038244	4.8	1.1	0.13313	0.027	0.014	0
TD2-B	< LOD	0.0045	0.0047798	4.01	0.93	0.16639	0.021	0.021	0
TD7-A	0.015	0.012	0.0072684	5.18	0.68	0.21914	0.016	0.016	0
TD7-B	0.015	0.012	0.0066709	5.15	0.9	0.20113	0.011	0.013	0
TD7-C	0.0124	0.0068	0.0045913	6.31	0.81	0.13843	0.005	0.0052	0
TD7-D	0.017	0.011	0.005878	5.63	0.99	0.17722	0.014	0.016	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Er	Er Stdev	Er LOD	Eu	Eu Stdev	Eu LOD	Fe	Fe Stdev	Fe LOD
7TU47-C	0.017	0.019	0	0.34	0.065	0	57200	1.20E+03	2.9726
7TU50-A	0.009	0.01	0	0.397	0.081	0	46890	820	2.4923
7TU50-B	0.004	0.0056	0	0.325	0.058	0	46460	590	2.0221
7TU55-A	0.003	0.0059	0	0.139	0.021	0	50040	480	2.4789
7TU55-B	0.212	0.086	0	0.166	0.028	0	49750	440	2.0545
7TU63	0.002	0.0039	0	0.217	0.031	0	76100	860	2.7578
7TU74-A	0.084	0.039	0	0.112	0.018	0	59030	610	1.8895
7TU74-B	0.57	0.13	0	0.106	0.03	0	60880	970	2.3483
7TU90-A	0.0037	0.0074	0	0.35	0.11	0	48100	1.10E+03	3.0875
7TU90-B	< LOD	1	0	0.375	0.082	0	47990	820	2.9305
7TU90-C	0.0039	0.0078	0	0.307	0.058	0	48030	940	3.0129
A608B	0.0065	0.0074	0	0.058	0.026	0	45780	870	7.5579
A620T	0.034	0.039	0	0.053	0.044	0	88500	1.80E+03	21.279
M626T	0.15	0.2	0	< LOD	1	0	101800	2.50E+03	15.8
T526T	0.31	0.15	0	0.112	0.079	0	56300	3.60E+03	12.305
T536B	< LOD	1	0	< LOD	0.00011	0.014776	92000	2.20E+03	12.07
T537T-A	< LOD	1	0	0.086	0.059	0	57000	1.90E+03	14.489
T537T-B	0.028	0.056	0	0.009	0.019	0	53200	1.30E+03	14.555
T538T1-A	0.25	0.22	0	< LOD	1	0	69100	2.20E+03	22.548
T538T1-B	< LOD	1	0	< LOD	1	0	66800	4.60E+03	22.659
T538T2	0.19	0.14	0	0.039	0.041	0	80000	4.10E+03	18.549
T559B1-A	0.21	0.12	0	0.3	0.15	0	69600	4.30E+03	12.32
T559B2-A	0.011	0.022	0	0.117	0.056	0	64300	3.40E+03	8.8831
T559T1-B	0.009	0.017	0	0.142	0.048	0	72200	2.00E+03	11.134
T559T2-A	0.011	0.021	0	0.22	0.11	0	75600	1.40E+03	8.7044
T559T2-B	0.008	0.011	0	0.064	0.032	0	70300	2.20E+03	6.9284
T606T-A	0.19	0.16	0	0.114	0.09	0	55600	1.50E+03	9.7921
T610T1-A	< LOD	1	0	0.053	0.074	0	78100	3.30E+03	20.251
T610T2-A	< LOD	1	0	0.035	0.049	0	71300	4.80E+03	24.336
T611T1B2	0.073	0.067	0	0.367	0.094	0	65100	1.60E+03	13.639
TD12-A	0.037	0.035	0	0.05	0.022	0	75100	1.10E+03	2.667
TD12-B	0.013	0.021	0	0.038	0.023	0	72600	1.20E+03	2.6741
TD12-C	< LOD	1	0	0.03	0.021	0	68100	1.30E+03	2.7114
TD18-A	0.023	0.018	0	0.036	0.016	0	60700	1.20E+03	3.0196
TD18-B	0.028	0.018	0	0.031	0.015	0	61000	1.30E+03	2.9665
TD2-A	0.09	0.024	0	0.09	0.017	0	48400	600	3.0715
TD2-B	0.132	0.068	0	0.126	0.036	0	51940	840	3.8389
TD7-A	0.023	0.02	0	0.0058	0.0069	0	104400	1.40E+03	3.2925
TD7-B	0.029	0.022	0	0.0074	0.0074	0	100500	1.40E+03	3.0218
TD7-C	0.0124	0.0082	0	0.0061	0.0043	0	102800	1.80E+03	2.0798
TD7-D	0.022	0.016	0	0.0063	0.0055	0	98700	3.30E+03	2.6627

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ga	Ga Stdev	Ga LOD	Gd	Gd Stdev	Gd LOD	Hf	Hf Stdev	Hf LOD
7TU47-C	38.4	1.9	0	0.092	0.048	0	0.018	0.016	0
7TU50-A	42.5	6.9	0	0.089	0.059	0	0.0069	0.0095	0
7TU50-B	38	1.5	0	0.013	0.015	0	0.009	0.011	0
7TU55-A	55.3	1.1	0	0.179	0.042	0	0.051	0.021	0
7TU55-B	56.5	1.2	0	0.53	0.16	0	0.87	0.35	0
7TU63	59.3	1.2	0.021279	0.04	0.019	0	0.0114	0.0082	0
7TU74-A	28.1	0.69	0	0.0015	0.003	0	0.259	0.043	0
7TU74-B	28.36	0.98	0	< LOD	1	0	0.6	0.11	0
7TU90-A	43.4	2.1	0	0.036	0.035	0	< LOD	0.0000078	0
7TU90-B	41.2	1.3	0	0.045	0.041	0	0.0035	0.0075	0
7TU90-C	42.6	1.5	0	0.035	0.035	0	< LOD	0.000012	0
A608B	32.5	1.4	0	0.033	0.03	0	0.0025	0.005	0
A620T	25.1	2.3	0	0.053	0.079	0	0.022	0.045	0
M626T	9.53	0.98	0	< LOD	1	0	1.4	1.8	0
T526T	30.5	2.6	0	0.82	0.46	0	< LOD	1	0
T536B	28.7	2	0	< LOD	1	0	0.011	0.021	0
T537T-A	33.5	3.6	0	< LOD	1	0	< LOD	1	0
T537T-B	27.9	2.7	0	< LOD	1	0	< LOD	1	0
T538T1-A	25.4	3.2	0	0.08	0.17	0	1.5	1.1	0
T538T1-B	18.2	3	0	< LOD	1	0	< LOD	1	0
T538T2	22.6	2.1	0.16536	0.22	0.19	0	0.013	0.025	0
T559B1-A	35.5	2.2	0	0.25	0.19	0	< LOD	1	0
T559B2-A	34.4	1.8	0.077272	< LOD	1	0	< LOD	1	0
T559T1-B	24.2	1.2	0	0.02	0.03	0	0.0043	0.0087	0
T559T2-A	28.7	2.3	0	0.033	0.066	0	< LOD	1	0
T559T2-B	23.9	1.4	0	0.012	0.017	0	0.019	0.027	0
T606T-A	37	2.9	0	0.14	0.23	0	0.066	0.092	0
T610T1-A	29.2	3.2	0	0.13	0.15	0	0.06	0.11	0
T610T2-A	30.3	4.9	0	< LOD	1	0	< LOD	1	0
T611T1B2	34.7	2.5	0	0.11	0.14	0	< LOD	1	0
TD12-A	32.2	1.4	0	0.103	0.059	0	0.0032	0.0065	0
TD12-B	30.4	1.5	0	0.027	0.035	0	< LOD	1	0
TD12-C	26.1	1.2	0	< LOD	1	0	0.0036	0.0072	0
TD18-A	25.5	1.2	0	0.024	0.019	0	0.0022	0.0043	0
TD18-B	24.91	0.91	0	0.02	0.017	0	0.0081	0.0094	0
TD2-A	26.49	0.8	0	0.026	0.015	0	2.11	0.6	0
TD2-B	32.1	1.4	0	0.008	0.011	0	3.5	1.4	0
TD7-A	28.52	0.91	0.023474	0.0035	0.0071	0	0.113	0.04	0
TD7-B	24.6	1.2	0.021544	0.006	0.012	0	0.04	0.021	0
TD7-C	25.96	0.92	0.014828	< LOD	1	0	0.033	0.012	0
TD7-D	25.52	0.96	0.018984	0.009	0.013	0	0.062	0.024	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Ho	Ho Stdev	Ho LOD	K	K Stdev	K LOD	La	La Stdev	La LOD
7TU47-C	0.0056	0.0049	0	278	30	1.3925	2.03	0.2	0
7TU50-A	< LOD	1	0	300	190	1.6614	1.42	0.18	0
7TU50-B	0.0035	0.0041	0	188.3	3.6	1.3479	0.82	0.13	0
7TU55-A	0.0025	0.0021	0	406	12	1.2019	3.77	0.16	0
7TU55-B	0.07	0.032	0	415.6	3.8	0.99614	3.93	0.16	0
7TU63	0.0016	0.0019	0	317.5	9.7	0.95916	2.06	0.13	0
7TU74-A	0.011	0.0061	0	39.8	1.4	0.8988	0.0208	0.0083	0
7TU74-B	0.052	0.018	0	40.4	1.8	1.1171	0.0086	0.0075	0
7TU90-A	0.0013	0.0026	0	132	13	1.8159	1.43	0.42	0
7TU90-B	0.0047	0.0065	0	111.6	4.4	1.7236	1.2	0.15	0
7TU90-C	0.0013	0.0025	0	132.4	6.2	1.7721	1.128	0.087	0
A608B	0.0053	0.0051	0	92	16	3.9063	0.045	0.022	0
A620T	0.004	0.008	0	54.6	9.7	8.3169	0.019	0.028	0
M626T	0.026	0.032	0	87	34	6.7818	0.01	0.02	0
T526T	0.114	0.067	0	43.5	5.5	7.0005	2.1	1	0
T536B	< LOD	1	0	230	140	6.6456	< LOD	1	0
T537T-A	< LOD	1	0	44.6	4.5	5.7492	0.036	0.036	0
T537T-B	< LOD	1	0	37.7	4.5	5.7755	0.042	0.048	0
T538T1-A	0.018	0.037	0	39.8	8.2	12.193	0.035	0.07	0
T538T1-B	< LOD	1	0	23.7	9.4	12.253	< LOD	1	0
T538T2	0.069	0.043	0	38.2	6.9	7.8356	0.072	0.058	0
T559B1-A	0.044	0.031	0	128	9.8	4.6899	0.056	0.03	0
T559B2-A	< LOD	1	0	118	11	3.8906	0.031	0.03	0
T559T1-B	0.0026	0.0051	0	84	10	6.095	0.039	0.025	0
T559T2-A	< LOD	1	0	99.3	8.1	8.4021	0.067	0.043	0
T559T2-B	0.0014	0.0028	0	89	14	6.6877	0.028	0.022	0
T606T-A	0.047	0.045	0	43.1	8.6	9.3989	0.26	0.18	0
T610T1-A	0.02	0.029	0	54	11	10.578	< LOD	1	0
T610T2-A	< LOD	1	0	38.8	6.6	10.874	< LOD	1	0
T611T1B2	0.03	0.026	0	117.2	8	4.4321	0.139	0.072	0
TD12-A	0.0112	0.0077	0	50.6	2	1.3655	0.034	0.027	0
TD12-B	< LOD	0.0000061	0	40.1	2.3	1.3691	0.029	0.022	0
TD12-C	0.0033	0.0051	0	34.2	2.2	1.3883	0.012	0.01	0
TD18-A	0.0095	0.0065	0	25.8	1.1	1.3112	0.033	0.013	0
TD18-B	0.0109	0.0059	0	27.4	1.3	1.2881	0.037	0.016	0
TD2-A	0.0115	0.0052	0	1080	300	1.0205	0.064	0.014	0
TD2-B	0.0126	0.0084	0	48	2.8	1.2755	0.118	0.036	0
TD7-A	0.0061	0.0052	0	210.9	4	1.1509	0.017	0.013	0
TD7-B	0.002	0.003	0	206.9	3.5	1.0563	0.0036	0.0071	0
TD7-C	0.0022	0.0023	0	221	6.8	0.72702	0.0045	0.0038	0
TD7-D	0.0057	0.0056	0	212.7	7.3	0.93076	0.002	0.0028	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Li	Li Stdev	Li LOD	Lu	Lu Stdev	Lu LOD	Mg	Mg Stdev	Mg LOD
7TU47-C	16.1	2.1	0.17738	0.0013	0.0027	0	43590	840	0.11964
7TU50-A	10.7	1.7	0.11055	0.0061	0.0067	0	44060	710	0.028403
7TU50-B	9.13	0.93	0.089695	0.0013	0.0026	0	44660	470	0.023044
7TU55-A	18.2	1.5	0.11062	< LOD	1	0	38960	290	0.044133
7TU55-B	18.85	0.86	0.091683	0.045	0.024	0	38490	280	0.036577
7TU63	17.99	0.77	0.12287	0.0006	0.0013	0	31960	180	0.048379
7TU74-A	18.2	1	0.12394	0.074	0.034	0	45120	270	0.054024
7TU74-B	11.2	1	0.15403	0.514	0.071	0	45070	560	0.067143
7TU90-A	30.4	3.7	0.1457	< LOD	1	0	43900	1.20E+03	0.10407
7TU90-B	26.2	2.1	0.1383	< LOD	1	0	40510	400	0.098779
7TU90-C	25.8	2.1	0.14218	0.0037	0.0053	0	41490	510	0.10156
A608B	10.4	1	0.42528	< LOD	0.000051	0	30670	810	0
A620T	13.8	1.8	0.64528	< LOD	1	0	25500	1.50E+03	0.28559
M626T	4.3	1.1	0.6573	0.15	0.19	0	40760	700	0
T526T	14.2	2.7	0.63715	0.098	0.056	0.010881	27200	1.50E+03	0.2916
T536B	15.7	1.6	0.60734	0.0033	0.0067	0	30050	820	0
T537T-A	12.9	2	0.69056	< LOD	1	0	27990	950	0.11362
T537T-B	11.2	2	0.69372	< LOD	1	0	22420	420	0.11414
T538T1-A	15.2	6.2	1.3335	0.087	0.087	0	34440	820	0.60352
T538T1-B	7.8	3	1.3401	< LOD	1	0	33280	980	0.6065
T538T2	11.2	2.3	0.78496	< LOD	1	0	37950	730	0.31006
T559B1-A	13.4	1.7	0.59745	0.013	0.016	0	31410	840	0
T559B2-A	8.5	1.2	0.40501	0.0031	0.0043	0	29880	730	0.16297
T559T1-B	9.9	1.5	0.48883	< LOD	1	0	35800	1.00E+03	0.22411
T559T2-A	8.9	1.6	0.88193	< LOD	1	0	36980	650	0.27222
T559T2-B	9.8	1.3	0.70198	0.0015	0.0029	0	34510	910	0.21668
T606T-A	12.2	4.3	0.70564	0.011	0.015	0	39800	2.20E+03	0.16039
T610T1-A	10.8	2.4	0.83178	< LOD	1	0	40400	4.00E+03	0.19806
T610T2-A	10.6	3.1	1.0715	< LOD	1	0	3.60E+04	1.40E+03	0
T611T1B2	13	1.4	0.48711	0.021	0.017	0	44590	990	0
TD12-A	12.7	1.4	0.18261	0.0081	0.0076	0	33620	420	0
TD12-B	10.6	1.2	0.18309	< LOD	1	0	33560	290	0
TD12-C	12.4	1	0.18565	0.0011	0.0022	0	34400	410	0
TD18-A	8.78	0.73	0.13114	0.0062	0.0044	0	35170	350	0.047816
TD18-B	8.48	0.74	0.12883	0.0052	0.0045	0	34920	620	0.046974
TD2-A	37.4	2.2	0.12773	0.074	0.02	0	44390	530	0.036925
TD2-B	20	2	0.15964	0.106	0.059	0	47930	590	0.04615
TD7-A	9.51	0.79	0.15575	0.043	0.015	0	32810	320	0.022146
TD7-B	8.58	0.79	0.14295	0.0217	0.0098	0	33100	320	0.020325
TD7-C	8.97	0.57	0.098387	0.007	0.003	0	33020	630	0.013989
TD7-D	11	1.7	0.12596	0.0133	0.0053	0	31700	710	0.017909

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Mn	Mn Stdev	Mn LOD	Mo	Mo Stdev	Mo LOD	Na	Na Stdev	Na LOD
7TU47-C	200.3	8.7	1.5039	0.022	0.044	0	14310	310	2.189
7TU50-A	156	22	1.4489	0.017	0.033	0	13540	210	2.5464
7TU50-B	86.2	3.2	1.1755	0.01	0.02	0	13810	130	2.066
7TU55-A	92	2.6	1.1513	0.015	0.031	0	13370	120	1.9087
7TU55-B	94.9	3.2	0.95417	0.021	0.026	0	13379	99	1.5819
7TU63	142.1	1.9	1.0949	0.01	0.019	0	13770	140	1.4215
7TU74-A	144.3	2.1	0.84387	< LOD	0.0086	0.038261	13720	110	1.3034
7TU74-B	155.8	3	1.0488	< LOD	0.043	0.047552	14730	180	1.62
7TU90-A	137	15	1.4637	< LOD	1	0	14200	1.10E+03	3.2117
7TU90-B	210.4	5.9	1.3893	0.018	0.037	0	13310	190	3.0484
7TU90-C	185.3	4.6	1.4284	0.043	0.085	0	13660	160	3.1342
A608B	46	2.4	3.0177	0.028	0.055	0	13180	250	4.9459
A620T	26.3	5.1	6.3145	< LOD	0.12	0.30704	12800	290	11.253
M626T	340	11	5.6617	< LOD	1	0	15790	280	8.652
T526T	182	37	6.5012	< LOD	1	0	12660	560	9.7434
T536B	232.2	8.2	4.4242	< LOD	1	0	21180	350	6.1055
T537T-A	32.3	2.8	6.1435	< LOD	1	0	14360	660	9.1462
T537T-B	31.9	4.4	6.1716	< LOD	1	0	11390	240	9.1881
T538T1-A	93	12	7.8237	< LOD	1	0	17000	1.20E+04	15.88
T538T1-B	88	11	7.8622	< LOD	1	0	9110	450	15.958
T538T2	120.9	9.2	8.1151	< LOD	1	0	14900	2.20E+03	10.915
T559B1-A	320	190	3.8606	0.049	0.068	0	17150	280	6.3053
T559B2-A	96	29	3.0469	< LOD	1	0	16570	390	5.2163
T559T1-B	72.6	3.9	5.5986	< LOD	1	0	13660	670	10.85
T559T2-A	54.6	4.5	7.6114	< LOD	1	0	14040	260	12.417
T559T2-B	59	3.5	6.0584	< LOD	1	0	13600	1.20E+03	9.8836
T606T-A	117	25	7.9902	< LOD	1	0	11280	390	12.243
T610T1-A	66.8	6.3	8.2263	< LOD	1	0	12000	1.70E+03	13.215
T610T2-A	70.4	9.2	9.4006	< LOD	1	0	13700	4.10E+03	14.271
T611T1B2	151	48	4.2606	< LOD	1	0	14340	320	5.5813
TD12-A	196	23	1.5252	0.031	0.062	0	13190	200	2.3534
TD12-B	97.6	7.9	1.5292	< LOD	1	0	12380	180	2.3596
TD12-C	81.4	1.9	1.5505	0.018	0.035	0	11750	280	2.3926
TD18-A	90.4	2.2	1.2454	< LOD	1	0	16310	250	1.7945
TD18-B	73.3	3.3	1.2235	0.04	0.055	0	15800	210	1.763
TD2-A	132.8	2.8	0.89779	< LOD	1	0	13260	280	1.3326
TD2-B	127.5	2.8	1.1221	< LOD	1	0	12910	200	1.6655
TD7-A	288.7	3.4	1.1495	0.022	0.044	0	18490	230	1.5163
TD7-B	286.6	4.1	1.0551	0.009	0.018	0	18210	220	1.3917
TD7-C	296.6	6.9	0.72615	0.013	0.016	0	18470	430	0.95783
TD7-D	289	10	0.92965	0.017	0.024	0	20000	2.00E+03	1.2263

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Nb	Nb Stdev	Nb LOD	Nd	Nd Stdev	Nd LOD	Ni	Ni Stdev	Ni LOD
7TU47-C	0.03	0.025	0	1.44	0.28	0	102.1	4	0.14694
7TU50-A	0.02	0.019	0	0.72	0.18	0	142.1	8.7	0
7TU50-B	0.021	0.013	0	0.58	0.17	0	139.5	5.8	0
7TU55-A	0.113	0.027	0	2.26	0.25	0	50.6	2.3	0
7TU55-B	0.077	0.022	0	2.6	0.27	0	51	1.6	0
7TU63	0.092	0.02	0	0.78	0.13	0	33.1	1.1	0
7TU74-A	0.17	0.033	0	0.029	0.018	0	45.1	1.4	0
7TU74-B	0.21	0.066	0	0.02	0.019	0	48.3	2.4	0
7TU90-A	0.097	0.04	0	0.98	0.31	0	148.6	8.4	0.070753
7TU90-B	0.043	0.024	0	0.64	0.22	0	148	7.3	0.067156
7TU90-C	0.046	0.029	0	0.51	0.23	0	161.3	6.8	0.069044
A608B	0.01	0.012	0	0.019	0.021	0	7.9	1.2	0
A620T	0.038	0.053	0	< LOD	1	0	154	14	0
M626T	< LOD	1	0	< LOD	1	0	79.2	6.4	0
T526T	0.067	0.069	0	2.2	1.1	0	68.3	7.1	0
T536B	0.026	0.038	0	0.024	0.048	0	28.5	4.8	0
T537T-A	< LOD	1	0	< LOD	1	0	172	12	0
T537T-B	< LOD	1	0	< LOD	1	0	158.4	9.5	0
T538T1-A	0.26	0.23	0	< LOD	1	0	217	20	0
T538T1-B	< LOD	1	0	< LOD	1	0	282	24	0
T538T2	< LOD	1	0	0.3	0.23	0	266	14	0
T559B1-A	0.021	0.02	0	0.19	0.16	0	186.2	7.6	0.25912
T559B2-A	0.011	0.021	0	0.058	0.08	0	216	11	0.11494
T559T1-B	0.02	0.021	0	< LOD	1	0	176.3	8.8	0
T559T2-A	0.02	0.028	0	0.11	0.13	0	171	11	0
T559T2-B	0.03	0.021	0	0.021	0.042	0	170.4	8.7	0
T606T-A	< LOD	1	0	0.24	0.22	0	184	12	0.27313
T610T1-A	< LOD	1	0	0.047	0.093	0	179	30	0
T610T2-A	< LOD	1	0	< LOD	1	0	136	14	0
T611T1B2	0.059	0.04	0	0.3	0.27	0	108.9	7.3	0.37293
TD12-A	< LOD	1	0	0.077	0.063	0	242.6	8.2	0.16282
TD12-B	0.003	0.0061	0	0.049	0.053	0	208.2	9.5	0.16325
TD12-C	< LOD	1	0	0.026	0.037	0	199.4	6.5	0.16553
TD18-A	0.012	0.012	0	0.024	0.024	0	92.6	3.9	0.043953
TD18-B	0.051	0.072	0	0.045	0.041	0	92.3	4	0.04318
TD2-A	0.0135	0.0079	0	0.052	0.028	0.011156	9.48	0.84	0
TD2-B	0.028	0.016	0	0.031	0.037	0.013943	8.09	0.86	0
TD7-A	0.047	0.026	0	0.022	0.027	0	15.6	1.9	0
TD7-B	0.017	0.014	0	0.014	0.02	0	17.3	1.3	0
TD7-C	0.027	0.011	0	0.0048	0.0059	0	17.4	1	0
TD7-D	0.041	0.019	0	0.015	0.022	0	16.7	1.1	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Pb	Pb Stdev	Pb LOD	Pr	Pr Stdev	Pr LOD	Rb	Rb Stdev	Rb LOD
7TU47-C	5.8	1.3	0.01693	0.33	0.062	0	0.14	0.19	0.034078
7TU50-A	6.18	0.48	0.011146	0.205	0.046	0	< LOD	0.018	0.035717
7TU50-B	7.06	0.43	0.0090434	0.144	0.036	0	< LOD	0.018	0.028978
7TU55-A	4.52	0.24	0.0090734	0.657	0.047	0	0.022	0.017	0.01763
7TU55-B	5.33	0.26	0.00752	0.772	0.062	0	0.021	0.018	0.014612
7TU63	4.54	0.18	0.012455	0.24	0.027	0	< LOD	0.0095	0.015309
7TU74-A	6.04	0.27	0.0067781	0.0031	0.0026	0	< LOD	0.0073	0.019542
7TU74-B	8.08	0.45	0.008424	0.0036	0.0042	0	< LOD	0.018	0.024287
7TU90-A	6.13	0.59	0.008592	0.219	0.057	0	< LOD	0.02	0.024357
7TU90-B	5.42	0.42	0.0081552	0.214	0.047	0	< LOD	0.028	0.023118
7TU90-C	6.74	0.83	0.0083845	0.162	0.052	0	0.024	0.03	0.023768
A608B	16	1.2	0.032542	0.014	0.01	0	< LOD	0.023	0.019284
A620T	4.51	0.56	0.089266	< LOD	1	0	< LOD	0.084	0.12135
M626T	6.06	0.55	0.0574	< LOD	1	0	0.079	0.084	0
T526T	3.14	0.59	0.031048	0.55	0.27	0	0.086	0.083	0.040912
T536B	1.82	0.4	0.072488	< LOD	1	0	< LOD	0.00024	0.02824
T537T-A	3.83	0.56	0.062789	0.009	0.018	0	< LOD	0.033	0.060032
T537T-B	1.87	0.39	0.063076	< LOD	1	0	0.08	0.11	0.060306
T538T1-A	2.15	0.45	0.070413	0.019	0.038	0	< LOD	0.0057	0.19154
T538T1-B	0.49	0.25	0.07076	< LOD	1	0	< LOD	0.16	0.19249
T538T2	1.84	0.42	0.058021	0.056	0.039	0	< LOD	0.11	0.14857
T559B1-A	18.5	4.8	0.046976	0.036	0.028	0	0.136	0.092	0.023593
T559B2-A	16.7	5.2	0.057994	0.0014	0.0034	0	0.066	0.096	0.057173
T559T1-B	15.1	1.1	0.026482	0.0018	0.0036	0	< LOD	0.073	0.12597
T559T2-A	21	1.5	0.062766	0.014	0.016	0	< LOD	0.067	0.13058
T559T2-B	10.4	1	0.04996	0.0073	0.0089	0	< LOD	0.035	0.10393
T606T-A	10.6	1.9	0.069724	0.037	0.053	0	< LOD	0.1	0.12017
T610T1-A	4.06	0.84	0.098367	< LOD	1	0	< LOD	0.21	0.18949
T610T2-A	2.01	0.53	0	0.021	0.041	0	0.17	0.3	0.13019
T611T1B2	29.2	2.6	0.018473	0.051	0.036	0	< LOD	0.051	0.15405
TD12-A	3.64	0.36	0.0085602	0.0091	0.0077	0	< LOD	0.0082	0.012631
TD12-B	2.74	0.23	0.0085829	0.0026	0.0051	0	< LOD	0.0093	0.012664
TD12-C	2.3	0.27	0.0087027	0.0028	0.0055	0	< LOD	0.0095	0.012841
TD18-A	3.5	0.38	0.01041	0.0038	0.0044	0	< LOD	0.0051	0.015131
TD18-B	3.48	0.29	0.010227	0.0083	0.0059	0	< LOD	0.00022	0.014865
TD2-A	7.94	0.27	0.012098	0.0142	0.0053	0	4.3	1.2	0.012963
TD2-B	11.39	0.58	0.015121	0.0169	0.0093	0	0.025	0.035	0.016201
TD7-A	3.38	0.27	0.012077	0.0018	0.0036	0	< LOD	0.019	0.024598
TD7-B	2.94	0.26	0.011084	< LOD	1	0	< LOD	0.019	0.022576
TD7-C	2.62	0.14	0.0076288	0.0025	0.0023	0	< LOD	0.009	0.015538
TD7-D	2.62	0.2	0.0097667	0.0014	0.0028	0	0.028	0.022	0.019893

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Sm	Sm Stdev	Sm LOD	Sn	Sn Stdev	Sn LOD
7TU47-C	35.9	2.3	0.04037	0.091	0.051	0	0.46	0.13	0.074338
7TU50-A	24.1	1.5	0.052947	0.076	0.046	0	0.96	0.23	0.051551
7TU50-B	20.3	1	0.042957	0.056	0.037	0	1.08	0.17	0.041825
7TU55-A	18.11	0.69	0.041585	0.346	0.064	0	1.24	0.15	0.053076
7TU55-B	17.3	0.5	0.034465	0.53	0.1	0	1.32	0.15	0.043989
7TU63	26.63	0.71	0.024959	0.091	0.03	0	2.2	0.18	0.028186
7TU74-A	23.9	1.6	0.034437	0.0025	0.0035	0	0.379	0.059	0.032128
7TU74-B	47.2	1.9	0.042799	< LOD	1	0	0.92	0.11	0.039929
7TU90-A	16.7	1.5	0.076896	0.021	0.02	0	1.37	0.34	0.052326
7TU90-B	20.41	0.98	0.072987	0.094	0.075	0	1.7	0.27	0.049666
7TU90-C	19	1.2	0.075039	0.073	0.042	0	1.85	0.26	0.051063
A608B	22.6	1.5	0.1291	0.013	0.015	0	1.3	0.18	0.08008
A620T	31.1	2.6	0.23887	0.03	0.061	0	< LOD	0.23	0.31726
M626T	26.5	3.6	0.15014	< LOD	1	0	0.41	0.26	0.20193
T526T	60.8	7.7	0.17072	0.48	0.26	0	0.82	0.31	0.14601
T536B	143	25	0.16392	< LOD	0.000096	0	0.16	0.11	0.092294
T537T-A	38.6	3.4	0.24182	0.037	0.052	0	0.48	0.3	0.13044
T537T-B	31.5	2.2	0.24292	< LOD	1	0	0.52	0.32	0.13103
T538T1-A	78.5	8.1	0.50752	0.08	0.16	0	< LOD	0.3	0.43832
T538T1-B	46.1	4.8	0.51002	< LOD	1	0	< LOD	0.32	0.44048
T538T2	106.6	6.7	0.27416	0.16	0.12	0	< LOD	0.2	0.31208
T559B1-A	18.7	2.2	0.14074	0.19	0.12	0	0.73	0.27	0.091704
T559B2-A	6.82	0.86	0.11468	0.035	0.035	0	0.37	0.11	0.069176
T559T1-B	51.1	2.5	0	< LOD	0.031	0.080584	0.48	0.2	0.20544
T559T2-A	10.6	1.2	0.27846	< LOD	0.00029	0	1.09	0.45	0.28607
T559T2-B	12.3	1.3	0.22164	0.014	0.038	0	0.8	0.23	0.2277
T606T-A	291	38	0.29167	0.14	0.15	0	0.85	0.48	0.14348
T610T1-A	95.1	6.1	0.2215	0.031	0.061	0	0.65	0.49	0.41997
T610T2-A	84.9	7.7	0.37925	< LOD	1	0	0.77	0.62	0.41204
T611T1B2	241	22	0.18563	0.022	0.027	0	2.68	0.41	0.095805
TD12-A	106.1	2	0.055765	0.055	0.04	0	0.39	0.14	0.023689
TD12-B	96.7	4.6	0.055913	0.0046	0.0093	0	0.28	0.13	0.023752
TD12-C	48.6	2.8	0.056693	< LOD	1	0	0.276	0.089	0.024083
TD18-A	177.9	3.7	0.036419	0.0052	0.0073	0	0.9	1	0.017912
TD18-B	210.2	4.7	0.035778	0.011	0.013	0	0.29	0.1	0.017597
TD2-A	0.97	0.12	0.040925	0.026	0.016	0	0.165	0.046	0.046105
TD2-B	1.06	0.2	0.051149	0.011	0.016	0	0.163	0.091	0.057624
TD7-A	119.4	9.6	0.025353	0.006	0.013	0	0.84	0.21	0.068882
TD7-B	91	2.5	0.023269	0.005	0.011	0	0.39	0.1	0.06322
TD7-C	63.6	2.6	0.016015	0.0032	0.0048	0	0.331	0.054	0.043512
TD7-D	62.2	3.8	0.020503	< LOD	1	0	0.382	0.087	0.055706

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Sr	Sr Stdev	Sr LOD	Ta	Ta Stdev	Ta LOD	Tb	Tb Stdev	Tb LOD
7TU47-C	235	12	0	0.0066	0.0074	0	0.011	0.011	0
7TU50-A	216.8	4.6	0	< LOD	1	0	0.0043	0.005	0
7TU50-B	236.6	5.5	0	0.0013	0.0027	0	0.0014	0.0027	0
7TU55-A	45.99	0.84	0	0.032	0.01	0	0.0159	0.0087	0
7TU55-B	46.69	0.76	0	0.0284	0.008	0	0.061	0.023	0
7TU63	79.1	1.3	0	0.0301	0.0066	0	0.0053	0.0034	0
7TU74-A	128.8	2.2	0	0.051	0.013	0	< LOD	0.002	0.0027496
7TU74-B	126.7	4.6	0	0.115	0.022	0	< LOD	0.0028	0.0034172
7TU90-A	210	19	0	0.036	0.022	0	0.0012	0.0025	0
7TU90-B	124.7	8.8	0	0.0056	0.0064	0	0.0047	0.0065	0
7TU90-C	139.8	8.5	0	0.0123	0.0084	0	0.008	0.0087	0
A608B	229	12	0	< LOD	1	0	0.0047	0.0056	0
A620T	169	10	0	0.0022	0.0061	0	0.012	0.018	0
M626T	200	8.1	0	< LOD	0.011	0.008155	< LOD	1	0
T526T	164	15	0	< LOD	0.00015	0.0092932	0.081	0.041	0
T536B	153	7.1	0	< LOD	1	0	< LOD	0.000012	0
T537T-A	70.4	9.2	0	< LOD	1	0	< LOD	1	0
T537T-B	31.4	4.4	0	< LOD	1	0	< LOD	1	0
T538T1-A	142	13	0	0.1	0.11	0	< LOD	1	0
T538T1-B	43.4	4.5	0	< LOD	1	0	< LOD	1	0
T538T2	144	11	0	< LOD	1	0	0.022	0.023	0
T559B1-A	1050	120	0	0.0076	0.0089	0	0.052	0.041	0
T559B2-A	530	58	0	< LOD	1	0	< LOD	1	0
T559T1-B	550	26	0	< LOD	1	0	0.0014	0.0028	0
T559T2-A	1251	67	0	0.0032	0.0065	0	< LOD	1	0
T559T2-B	478	15	0	0.0043	0.0065	0	< LOD	1	0
T606T-A	70.9	8.3	0	< LOD	1	0	0.041	0.044	0
T610T1-A	80	12	0	< LOD	1	0	0.009	0.017	0
T610T2-A	55.5	6.7	0	< LOD	1	0	< LOD	1	0
T611T1B2	451	37	0	0.0057	0.0056	0	0.039	0.035	0
TD12-A	114.5	3.8	0	0.001	0.002	0	0.0087	0.0059	0
TD12-B	99.7	2.2	0	< LOD	1	0	< LOD	1	0
TD12-C	86.6	7.2	0	< LOD	1	0	0.0011	0.0023	0
TD18-A	49.1	1.6	0	< LOD	0.0000065	0	0.003	0.0035	0
TD18-B	51.2	2.1	0	0.0011	0.0026	0	0.0052	0.0063	0
TD2-A	164.8	4.5	0	0.0066	0.0035	0	0.0024	0.002	0
TD2-B	251	14	0	0.0089	0.0072	0	0.0019	0.0039	0
TD7-A	261.3	4.9	0	0.0014	0.0019	0	0.0016	0.0031	0
TD7-B	256.9	5.3	0	0.0006	0.0011	0	0.0013	0.0018	0
TD7-C	270.5	5.8	0	0.00044	0.00062	0	0.00025	0.0005	0
TD7-D	244.4	6.9	0	0.0015	0.0017	0	0.0006	0.0012	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Th	Th Stdev	Th LOD	Ti	Ti Stdev	Ti LOD	Tm	Tm Stdev	Tm LOD
7TU47-C	0.017	0.023	0	2590	58	0	< LOD	1	0
7TU50-A	0.0012	0.0023	0	3571	63	0	< LOD	1	0
7TU50-B	< LOD	1	0	3812	67	0	< LOD	1	0
7TU55-A	0.0005	0.0011	0	4063	51	0	< LOD	1	0
7TU55-B	0.094	0.041	0	4102	48	0	0.043	0.019	0
7TU63	0.0021	0.0022	0	3502	45	0	< LOD	1	0
7TU74-A	< LOD	0.00067	0.0013735	1107	25	0	0.024	0.012	0
7TU74-B	< LOD	0.0000041	0.001707	1517	90	0	0.177	0.033	0
7TU90-A	0.0012	0.0023	0	4110	99	0	0.002	0.004	0
7TU90-B	< LOD	1	0	3890	150	0	< LOD	1	0
7TU90-C	0.0027	0.0037	0	3776	76	0	0.0025	0.0034	0
A608B	0.0135	0.009	0	813	86	0	0.002	0.003	0
A620T	0.023	0.025	0	3350	330	0	< LOD	1	0
M626T	0.0022	0.0043	0	2860	120	0.76153	0.059	0.061	0
T526T	0.0033	0.0066	0	1320	120	0	0.04	0.031	0
T536B	< LOD	1	0	1270	280	0	< LOD	1	0
T537T-A	< LOD	0.00011	0.0092623	2050	290	0.74973	< LOD	1	0
T537T-B	< LOD	0.00006	0.0093046	670	130	0.75316	< LOD	1	0
T538T1-A	< LOD	1	0	3700	1.20E+03	0	0.041	0.04	0
T538T1-B	0.01	0.02	0	932	99	0	< LOD	1	0
T538T2	< LOD	1	0	4520	220	0	0.015	0.015	0
T559B1-A	0.028	0.023	0	2260	190	0	0.014	0.012	0
T559B2-A	0.014	0.013	0	534	55	0	< LOD	1	0
T559T1-B	0.022	0.02	0	657	50	0	< LOD	1	0
T559T2-A	0.012	0.018	0	4790	320	0	< LOD	1	0
T559T2-B	0.081	0.048	0	769	63	0	< LOD	1	0
T606T-A	< LOD	1	0	1550	310	0	0.053	0.066	0
T610T1-A	0.007	0.014	0	1780	330	0	< LOD	1	0
T610T2-A	< LOD	1	0	1150	120	0	< LOD	1	0
T611T1B2	0.0014	0.0028	0	1750	260	0.63394	0.006	0.0085	0
TD12-A	0.001	0.0022	0	2952	40	0	0.0048	0.0047	0
TD12-B	< LOD	0.0000066	0	2783	67	0	< LOD	1	0
TD12-C	< LOD	0.0000055	0	2280	240	0	0.0011	0.0021	0
TD18-A	0.0048	0.0051	0	1099	25	0	0.0064	0.0042	0
TD18-B	0.0072	0.0055	0	1054	22	0	0.0031	0.005	0
TD2-A	0.0045	0.0032	0	1888	52	0	0.023	0.0096	0
TD2-B	0.0018	0.004	0	4000	300	0	0.019	0.012	0
TD7-A	0.0016	0.0031	0	2880	160	0	0.0134	0.0071	0
TD7-B	< LOD	1	0	1763	45	0	0.0053	0.0045	0
TD7-C	0.0012	0.0015	0	2113	40	0	0.0027	0.0019	0
TD7-D	< LOD	1	0	1970	59	0	0.0041	0.0033	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	U	U Stdev	U LOD	V	V Stdev	V LOD	Y	Y Stdev	Y LOD
7TU47-C	0.031	0.051	0	424.6	8.6	0.1179	0.132	0.051	0
7TU50-A	< LOD	1	0	464	10	0.11445	0.025	0.022	0
7TU50-B	< LOD	1	0	442.4	4.6	0.092857	0.042	0.025	0
7TU55-A	< LOD	0.00084	0.0029743	149	2.1	0.05379	0.074	0.024	0
7TU55-B	1.93	0.79	0.0024651	138.4	4.1	0.044581	2.19	0.85	0
7TU63	0.00029	0.00057	0	92.6	1.3	0.10107	0.033	0.012	0
7TU74-A	0.0029	0.0029	0	325.7	5	0.054431	0.32	0.13	0
7TU74-B	0.0006	0.0013	0	372.8	5.2	0.067649	2.05	0.26	0
7TU90-A	0.0011	0.0023	0	410	14	0.12779	0.031	0.019	0
7TU90-B	< LOD	1	0	416.7	8	0.1213	0.047	0.03	0
7TU90-C	0.0024	0.0048	0	420.1	8	0.12471	0.027	0.018	0
A608B	0.0075	0.006	0	418	13	0.24294	0.113	0.052	0
A620T	0.0067	0.0094	0	701	38	0.65071	0.2	0.12	0
M626T	0.0049	0.0098	0	386	14	0.36438	0.46	0.64	0
T526T	0.0031	0.0061	0	455	26	0.42345	3.15	0.95	0
T536B	0.0065	0.0089	0	1360	140	0.27746	< LOD	1	0
T537T-A	< LOD	1	0	479	27	0.26537	0.024	0.049	0
T537T-B	0.01	0.015	0	323	11	0.26658	0.011	0.022	0
T538T1-A	0.14	0.17	0	1243	48	0.51389	0.96	0.64	0
T538T1-B	< LOD	1	0	829	47	0.51642	< LOD	1	0
T538T2	< LOD	1	0	1588	43	0.4791	0.75	0.25	0
T559B1-A	0.031	0.022	0	1758	82	0.22589	1.9	1.2	0
T559B2-A	0.0033	0.0053	0	1732	42	0.22009	0.26	0.39	0
T559T1-B	0.0031	0.0061	0	1200	27	0.31031	0.136	0.083	0
T559T2-A	< LOD	1	0	2040	75	0.34794	0.07	0.058	0
T559T2-B	0.013	0.013	0	1226	61	0.27695	0.054	0.038	0
T606T-A	< LOD	1	0	2176	83	0.56883	1.24	0.86	0
T610T1-A	< LOD	0.000059	0	873	74	0.63558	0.32	0.22	0
T610T2-A	< LOD	0.00019	0.015021	675	31	0.64537	< LOD	1	0
T611T1B2	0.0056	0.0078	0	1488	65	0.26789	1.12	0.94	0
TD12-A	0.001	0.0019	0	1362	18	0.09757	0.368	0.069	0
TD12-B	< LOD	1	0	1298	29	0.097829	0.06	0.029	0
TD12-C	< LOD	1	0	1102	54	0.099194	0.044	0.042	0
TD18-A	< LOD	1	0	1164	20	0.073616	0.214	0.056	0
TD18-B	0.0007	0.0013	0	1319	37	0.072321	0.211	0.042	0
TD2-A	0.052	0.017	0	107.4	2.1	0.063715	0.431	0.066	0
TD2-B	0.052	0.022	0	148.4	5.9	0.079632	0.43	0.16	0
TD7-A	0.0021	0.003	0	1469	29	0.072713	0.171	0.044	0
TD7-B	0.0011	0.0023	0	1362	20	0.066736	0.101	0.024	0
TD7-C	0.0019	0.0016	0	1380	26	0.045932	0.054	0.02	0
TD7-D	0.0026	0.003	0	1265	41	0.058804	0.072	0.029	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-6 LA-ICP-MS tourmaline data (continued).

Sample	Yb	Yb Stdev	Yb LOD	Zn	Zn Stdev	Zn LOD	Zr	Zr Stdev	Zr LOD
7TU47-C	0.018	0.026	0	86.4	5.2	0.29602	0.48	0.16	0
7TU50-A	< LOD	1	0	118	4	0.4432	0.086	0.052	0
7TU50-B	< LOD	1	0	110.9	3.4	0.35959	0.154	0.062	0
7TU55-A	0.0062	0.007	0	211.1	7.8	0.2942	0.522	0.081	0
7TU55-B	0.27	0.12	0	204.7	4.3	0.24383	25.2	9.9	0
7TU63	0.0014	0.0028	0	199	4.6	0.27093	0.117	0.042	0
7TU74-A	0.34	0.14	0	78.7	2.4	0.20538	2.36	0.51	0
7TU74-B	2.12	0.25	0	78.9	4.4	0.25526	9.35	0.77	0
7TU90-A	< LOD	0.022	0.02583	140.2	7.8	0.61247	0.1	0.11	0
7TU90-B	< LOD	0.01	0.024517	161.9	7	0.58134	0.055	0.045	0
7TU90-C	< LOD	0.000072	0.025207	145.6	8.5	0.59768	0.168	0.086	0
A608B	< LOD	0.0092	0.050376	121.7	7.2	1.0572	0.137	0.067	0
A620T	0.036	0.073	0	195	16	1.4308	0.3	0.26	0
M626T	0.56	0.7	0	65.4	6.2	1.4667	100	140	0
T526T	0.4	0.25	0	63.9	6.7	1.7312	0.61	0.24	0
T536B	0.015	0.03	0	117.3	9.9	1.4384	0.17	0.12	0
T537T-A	< LOD	1	0	183	12	1.3779	< LOD	1	0
T537T-B	< LOD	1	0	150	11	1.3842	< LOD	1	0
T538T1-A	0.51	0.64	0	68	10	1.7152	43	28	0
T538T1-B	< LOD	1	0	65.1	9.5	1.7236	0.25	0.29	0
T538T2	0.18	0.16	0	82	13	0.68677	0.26	0.19	0
T559B1-A	0.18	0.15	0	120	11	1.0023	0.057	0.064	0
T559B2-A	0.038	0.051	0	136	12	1.0705	0.015	0.031	0
T559T1-B	0.013	0.018	0	100.6	6.4	1.6552	0.22	0.13	0
T559T2-A	< LOD	1	0	86.5	6.8	1.5638	0.25	0.15	0
T559T2-B	0.019	0.038	0	99	10	1.2447	0.66	0.25	0
T606T-A	0.16	0.17	0	122	10	1.9004	< LOD	1	0
T610T1-A	< LOD	1	0	133	24	1.2395	0.35	0.31	0
T610T2-A	< LOD	1	0	112	15	2.5687	< LOD	1	0
T611T1B2	0.087	0.067	0	83.7	6.6	0.95274	0.119	0.083	0
TD12-A	0.034	0.038	0	83.4	4.6	0.43528	0.039	0.034	0
TD12-B	< LOD	1	0	70.8	3.6	0.43643	< LOD	1	0
TD12-C	< LOD	1	0	68.3	5.1	0.44252	< LOD	1	0
TD18-A	0.025	0.016	0	58.4	2.5	0.28609	0.02	0.02	0
TD18-B	0.05	0.028	0	54.9	3.4	0.28105	0.026	0.038	0
TD2-A	0.29	0.082	0	105.1	3.1	0.26355	83	17	0
TD2-B	0.47	0.16	0	105.6	3.8	0.32938	135	63	0
TD7-A	0.142	0.06	0	128.6	5.5	0.26653	0.77	0.13	0
TD7-B	0.094	0.042	0	113.1	3	0.24462	0.511	0.095	0
TD7-C	0.024	0.015	0	119.4	3.6	0.16836	0.207	0.057	0
TD7-D	0.023	0.018	0	123.3	7.7	0.21555	0.26	0.085	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data.

Sample	Site	Ag	Ag Stdev	Ag LOD	As	As Stdev	As LOD
SCD10	Showing 506	0.013	0.015	0.012	18.4	3.7	10.746
SCD12	Showing 506	< LOD	0.008	0.01587	14.8	2.8	6.7152
SCD13	Showing 506	< LOD	0.0051	0.0063741	16.1	2.5	5.6743
SCD8BAS	Showing 506	< LOD	0.011	0.01999	< LOD	18	171.86
SCD8HAU	Showing 506	0.024	0.023	0.017381	< LOD	5.2	26.054
SCH13-A	Till 05	< LOD	0.01	0.014476	3.9	1	2.4962
SCH13-B	Till 05	< LOD	0.0096	0.012606	3.3	1.2	2.1738
SCH14	Till 06	0.0061	0.0048	0.0034723	1.52	0.48	1.4715
SCH15	Till 06	< LOD	0.0039	0.0069821	7.4	1	2.1281
SCH1-A	Till 01	< LOD	0.0063	0.0066861	5.23	0.87	2.1488
SCH1-B	Till 01	< LOD	0.0027	0.0061009	4.38	0.78	1.9607
SCH1-C	Till 01	< LOD	0.004	0.0052986	4.21	0.6	1.7029
SCH2-A	Till 02	0.009	0.0086	0.0036155	3.1	1.2	2.2038
SCH2-B	Till 02	0.0055	0.0076	0.0036655	< LOD	1.4	2.2343
SCH3	Till 01	< LOD	0.0051	0.0057877	< LOD	0.92	2.1774
SCH4	Till 01	< LOD	0.011	0.013052	14.7	2.5	5.2798
SCH5	Till 01	< LOD	0.01	0.0099052	25.1	2	3.7215
SCH6	Till 01	< LOD	0.005	0.010409	15.1	1	1.7374
SCH8-A	Till 02	< LOD	0.0063	0.012658	3.1	1.2	2.0345
SCH8-B	Till 02	< LOD	0.006	0.014212	2.9	1.3	2.2842
SCH9-A	Till 02	< LOD	0.0094	0.010335	26.3	2.8	2.7355
SCH9-B	Till 02	< LOD	0.0087	0.0096615	41.6	2	2.5573

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	B	B Stdev	B LOD	Ba	Ba Stdev	Ba LOD	Ca	Ca Stdev	Ca LOD
SCD10	0.93	0.28	0.22948	0.24	0.16	0	139800	1.40E+03	64.487
SCD12	0.86	0.29	0.22076	0.206	0.071	0	140800	1.80E+03	48.331
SCD13	0.87	0.24	0.34336	0.105	0.052	0	140900	2.00E+03	65.213
SCD8BAS	0.92	0.25	0.23737	0.72	0.14	0	141800	2.10E+03	74.914
SCD8HAU	0.56	0.2	0.27749	0.234	0.07	0	140600	1.60E+03	86.311
SCH13-A	1.07	0.43	0.27285	0.22	0.14	0	136200	7.60E+03	60.165
SCH13-B	0.97	0.29	0.23761	0.081	0.039	0	140300	4.60E+03	52.393
SCH14	0.89	0.13	0.16272	0.252	0.035	0	140300	1.20E+03	38.556
SCH15	0.89	0.19	0.18292	0.573	0.084	0	139700	1.90E+03	58.349
SCH1-A	1.1	0.27	0.22536	0.135	0.056	0	141600	3.00E+03	59.836
SCH1-B	0.88	0.27	0.20563	0.263	0.079	0	139400	2.20E+03	54.598
SCH1-C	0.97	0.17	0.17859	0.264	0.056	0	142200	3.20E+03	47.419
SCH2-A	3.1	1	0.21585	5.98	0.57	0	142800	6.40E+03	60.662
SCH2-B	3.2	2.5	0.21884	5.56	0.45	0	136100	5.80E+03	61.501
SCH3	0.97	0.19	0.23398	1.15	0.13	0.0090438	142600	3.50E+03	48.684
SCH4	1.2	0.23	0.24761	0.083	0.049	0	140600	1.30E+03	76.733
SCH5	3.3	2.6	0.33509	0.247	0.09	0	140500	1.10E+03	71.039
SCH6	0.96	0.19	0.22156	0.315	0.081	0	139100	1.40E+03	37.356
SCH8-A	1.03	0.28	0.18785	0.306	0.084	0	140700	2.10E+03	44.234
SCH8-B	1.12	0.33	0.2109	0.64	0.13	0	141000	2.90E+03	49.662
SCH9-A	0.84	0.39	0.23811	0.116	0.063	0	139800	3.60E+03	54.329
SCH9-B	0.99	0.31	0.22259	0.127	0.059	0	142000	4.30E+03	50.788

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Ce	Ce Stdev	Ce LOD	Co	Co Stdev	Co LOD	Cr	Cr Stdev	Cr LOD
SCD10	4.86	0.18	0	0.0031	0.0062	0	< LOD	0.28	0.62221
SCD12	10.89	0.41	0	< LOD	1	0	< LOD	0.31	0.53942
SCD13	3.01	0.13	0.00091298	0.0055	0.0056	0	< LOD	0.2	0.54004
SCD8BAS	6.22	0.21	0.0019393	0.0012	0.0023	0	< LOD	0.28	0.74574
SCD8HAU	8.49	0.24	0	0.0057	0.0069	0	< LOD	0.33	0.58156
SCH13-A	13.4	0.86	0.00095448	0.008	0.011	0	1.3	1.6	0.63475
SCH13-B	15.96	0.83	0.00083118	0.0043	0.0063	0	< LOD	0.25	0.55275
SCH14	0.604	0.02	0	0.0066	0.0035	0	< LOD	0.27	0.48427
SCH15	1.25	0.35	0	0.035	0.026	0.0032038	< LOD	0.21	0.44685
SCH1-A	27.1	1.7	0	0.004	0.0057	0.0039259	< LOD	0.24	0.48403
SCH1-B	18.8	2.1	0	< LOD	0.004	0.0035823	< LOD	0.23	0.44166
SCH1-C	37.6	1.4	0	0.0044	0.004	0.0031112	< LOD	0.2	0.38358
SCH2-A	0.52	0.11	0	0.0071	0.0082	0	< LOD	0.26	0.56813
SCH2-B	0.51	0.13	0	0.0041	0.0082	0	< LOD	0.39	0.57599
SCH3	0.0107	0.0028	0	0.005	0.0035	0	< LOD	0.2	0.45254
SCH4	49.9	1.5	0	0.0038	0.0075	0	< LOD	0.37	0.65564
SCH5	53.9	1.3	0	0.0043	0.0065	0	< LOD	0.38	0.61067
SCH6	5.12	0.37	0	0.0034	0.0029	0	< LOD	0.15	0.47145
SCH8-A	10.07	0.75	0	0.0062	0.0058	0	0.98	0.75	0.39668
SCH8-B	9.6	1	0	0.0088	0.009	0	< LOD	0.25	0.44536
SCH9-A	327	42	0	0.0036	0.0072	0	< LOD	0.25	0.54408
SCH9-B	916	33	0	0.0015	0.0029	0	< LOD	0.3	0.50862

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Cu	Cu Stdev	Cu LOD	Dy	Dy Stdev	Dy LOD	Er	Er Stdev	Er LOD
SCD10	< LOD	0.031	0.069497	80	2.6	0	27.61	0.94	0
SCD12	< LOD	0.03	0.046182	135.7	5.3	0	35.9	1.5	0
SCD13	< LOD	0.027	0.051304	202.8	6.1	0	68.3	2.1	0
SCD8BAS	< LOD	0.035	0.07177	78.1	2.6	0	28.91	0.98	0
SCD8HAU	< LOD	0.05	0.073508	114	3.4	0	33.5	1	0
SCH13-A	3.17	0.83	0.050972	56.8	4.3	0	23	1.8	0.0022966
SCH13-B	3.2	0.66	0.044387	64.3	2.6	0	25.2	1.1	0.0019999
SCH14	2.54	0.35	0.030422	3.718	0.081	0	3.395	0.076	0
SCH15	4.45	0.78	0.040046	3.24	0.11	0	3.64	0.13	0
SCH1-A	4.2	1.5	0.048318	12.55	0.71	0	6.58	0.41	0
SCH1-B	3.5	0.66	0.044089	15.63	0.59	0	9.36	0.49	0
SCH1-C	3.09	0.51	0.038291	13.01	0.39	0	6.66	0.23	0
SCH2-A	3.62	0.95	0.046282	0.814	0.082	0	0.786	0.085	0
SCH2-B	3.48	0.7	0.046922	0.318	0.043	0	0.436	0.044	0
SCH3	4.1	0.8	0.053469	0.713	0.043	0	1.812	0.064	0
SCH4	260	520	0.051938	189.3	5.2	0	57.2	1.4	0
SCH5	0.37	0.61	0.062879	179.1	4.2	0	50.2	1.2	0
SCH6	2.46	0.39	0.031851	13.78	0.42	0	9.45	0.23	0
SCH8-A	3.63	0.77	0.043395	6.19	0.23	0	4	0.19	0
SCH8-B	3.19	0.9	0.04872	7.37	0.4	0	4.62	0.34	0
SCH9-A	4.1	1.4	0.049698	268	38	0	115	17	0
SCH9-B	2.95	0.69	0.046459	617	26	0	261.7	9.6	0

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Eu	Eu Stdev	Eu LOD	Fe	Fe Stdev	Fe LOD	Gd	Gd Stdev	Gd LOD
SCD10	5.83	0.22	0	12.9	2.2	1.5675	71.3	2.4	0
SCD12	16.67	0.66	0	17.2	8.3	1.8841	189	8.1	0
SCD13	11.36	0.36	0	26	26	1.3921	150.6	5	0
SCD8BAS	5.28	0.21	0	14.2	2.3	1.512	68.1	2.8	0
SCD8HAU	10.85	0.35	0	26	21	1.459	138.7	4	0
SCH13-A	2.58	0.21	0.0011571	14.2	3.3	2.2636	67.8	5	0
SCH13-B	2.78	0.17	0.0010076	12.5	2	1.9712	76.6	2.9	0
SCH14	0.432	0.015	0	13.1	1.3	1.0621	1.899	0.069	0
SCH15	0.152	0.012	0	14.5	1.9	1.0143	1.59	0.077	0
SCH1-A	2.78	0.15	0	12.8	2	1.7713	13.77	0.62	0.0036175
SCH1-B	2.41	0.14	0	11.4	2.3	1.6162	13.28	0.41	0.0033009
SCH1-C	3.193	0.095	0	12	1.5	1.4037	14.76	0.38	0.0028669
SCH2-A	0.042	0.01	0	20.3	3.2	1.3352	0.464	0.061	0
SCH2-B	0.0259	0.0083	0	20.5	4.2	1.3537	0.178	0.049	0
SCH3	0.025	0.0053	0	12.3	1.3	1.5363	0.094	0.018	0
SCH4	29.34	0.75	0	17	2.4	1.518	180.5	5.1	0
SCH5	26.06	0.57	0	22.3	9.8	2.2778	177.9	4	0
SCH6	1.61	0.12	0.0015862	16.6	2.5	1.0544	6.63	0.41	0
SCH8-A	2.577	0.084	0.00090259	13.3	1.7	1.3096	7.13	0.28	0
SCH8-B	2.79	0.2	0.0010134	12.5	2.5	1.4703	8.56	0.35	0
SCH9-A	63.4	5.6	0.0011213	14.5	2.9	1.8275	262	30	0
SCH9-B	150.9	5.7	0.0010482	18.1	3.1	1.7084	641	26	0

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Ho	Ho Stdev	Ho LOD	K	K Stdev	K LOD	La	La Stdev	La LOD
SCD10	13.68	0.46	0	< LOD	0.52	0.88995	0.746	0.053	0
SCD12	19.51	0.78	0	< LOD	0.38	0.90855	1.455	0.081	0
SCD13	35.3	1.2	0	< LOD	0.39	0.73413	0.466	0.03	0
SCD8BAS	13.98	0.48	0	< LOD	0.36	0.77972	1.216	0.056	0
SCD8HAU	17.55	0.53	0	< LOD	0.4	0.74474	1.388	0.073	0
SCH13-A	10.53	0.85	0	1.28	0.96	0.93478	1.67	0.13	0
SCH13-B	11.7	0.48	0	1	0.83	0.81402	2.08	0.1	0
SCH14	0.99	0.021	0	2.4	1.7	0.51429	0.1228	0.0074	0
SCH15	1.006	0.037	0	1.39	0.4	0.60028	0.515	0.09	0
SCH1-A	2.52	0.14	0	2.2	2.6	0.73011	5.56	0.39	0
SCH1-B	3.29	0.13	0	< LOD	0.33	0.66621	3.58	0.42	0
SCH1-C	2.569	0.088	0	0.9	1	0.5786	8.03	0.37	0
SCH2-A	0.219	0.027	0	4.4	4.5	0.80428	0.199	0.064	0
SCH2-B	0.104	0.013	0	2.4	1.8	0.8154	0.252	0.062	0
SCH3	0.366	0.013	0	3.9	3.8	0.6606	0.0072	0.0035	0
SCH4	29.39	0.83	0	< LOD	0.36	0.94337	11.23	0.32	0
SCH5	26.93	0.66	0	9	11	0.89188	11.68	0.43	0
SCH6	3.381	0.089	0.00038889	1.43	0.65	0.61706	1.262	0.059	0
SCH8-A	1.427	0.063	0	< LOD	0.34	0.78394	2.12	0.21	0
SCH8-B	1.649	0.097	0	< LOD	0.54	0.88014	1.97	0.21	0
SCH9-A	48.2	7.1	0	1.31	0.47	0.9366	60	10	0
SCH9-B	109.1	4.5	0	60	120	0.87556	169	6.8	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Li	Li Stdev	Li LOD	Lu	Lu Stdev	Lu LOD	Mg	Mg Stdev	Mg LOD
SCD10	< LOD	0.044	0.069741	0.906	0.048	0.0011203	2.69	0.27	0.010835
SCD12	< LOD	0.045	0.0995	1.119	0.055	0	2.64	0.22	0.020446
SCD13	< LOD	0.042	0.083634	1.567	0.056	0	2.5	0.23	0.019997
SCD8BAS	< LOD	0.047	0.094792	1.179	0.069	0	2.88	0.2	0
SCD8HAU	< LOD	0.048	0.12729	1.13	0.045	0	2.76	0.24	0.011018
SCH13-A	< LOD	0.071	0.10596	0.679	0.062	0	99	6.3	0.010453
SCH13-B	< LOD	0.069	0.09227	0.778	0.04	0	88.5	4.8	0.0091024
SCH14	< LOD	0.027	0.048903	0.458	0.013	0	3.03	0.13	0.0065846
SCH15	< LOD	0.029	0.07601	0.462	0.019	0	3.8	1.3	0
SCH1-A	< LOD	0.036	0.059165	0.591	0.048	0	2.98	0.28	0.0088526
SCH1-B	< LOD	0.044	0.053986	0.895	0.063	0	2.8	0.2	0.0080777
SCH1-C	0.09	0.16	0.046887	0.57	0.023	0	3.11	0.15	0.0070155
SCH2-A	0.39	0.18	0.069291	0.1	0.011	0	41.8	1.5	0.030048
SCH2-B	0.38	0.49	0.07025	0.074	0.011	0	38.8	2.5	0.030463
SCH3	< LOD	0.035	0.062979	0.233	0.011	0	4.62	0.83	0.020178
SCH4	< LOD	0.077	0.082818	1.381	0.054	0	2.8	0.21	0.033337
SCH5	< LOD	0.048	0.1019	1.291	0.046	0.00056547	4.4	1.4	0.027995
SCH6	< LOD	0.027	0.055578	0.536	0.019	0	12.1	5.6	0
SCH8-A	< LOD	0.046	0.059359	0.338	0.019	0.00084302	4.1	0.8	0
SCH8-B	0.089	0.072	0.066643	0.441	0.033	0.00094648	3.33	0.27	0
SCH9-A	0.62	0.25	0.088162	4.67	0.6	0	110.9	4.9	0.014145
SCH9-B	2.42	0.24	0.082417	11.66	0.49	0	203.8	7.2	0.013223

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Mn	Mn Stdev	Mn LOD	Mo	Mo Stdev	Mo LOD	Na	Na Stdev	Na LOD
SCD10	8.64	0.4	0.60851	49.3	2	0	54.7	1.7	1.4995
SCD12	8.85	0.49	0.53269	8.28	0.49	0	108.2	2.9	1.2731
SCD13	10.65	0.37	0.54746	88.5	2.7	0	174.3	8.1	1.0776
SCD8BAS	8.77	0.4	0.65363	83.9	3.1	0	56.5	2.5	1.2691
SCD8HAU	10.1	0.49	0.55524	12.71	0.86	0	82.2	2.1	1.2091
SCH13-A	12.7	1.1	0.66462	126.8	8.9	0	37	13	1.3103
SCH13-B	14.9	1.2	0.57876	124.2	5.9	0	26.8	1.2	1.1411
SCH14	13.31	0.25	0.30624	5687	99	0	7.6	1.9	0.81239
SCH15	15.04	0.6	0.3858	197.2	5	0	3.47	0.47	0.9698
SCH1-A	19.56	0.54	0.51851	384	29	0.030327	29	27	0.99199
SCH1-B	20.56	0.8	0.47313	452	15	0.027673	26	16	0.90516
SCH1-C	20.88	0.55	0.41091	474	19	0.024034	20.1	3.7	0.78614
SCH2-A	23.2	1.1	0.50634	1068	35	0.011744	4.7	1.8	1.0197
SCH2-B	22.6	1.3	0.51334	1179	62	0.011906	10	11	1.0338
SCH3	16.72	0.59	0.4033	1617	39	0.017724	6.6	4.9	0.93838
SCH4	47.8	2.1	0.56614	683	19	0	175	3.8	1.0531
SCH5	33.7	2.9	0.61035	735	19	0	230	100	1.0293
SCH6	31.16	0.82	0.43843	431.8	8.4	0	10.98	0.49	0.79183
SCH8-A	12.4	0.37	0.47827	231.5	7.4	0	9.77	0.53	0.86733
SCH8-B	13.07	0.84	0.53696	229	10	0	10.36	0.99	0.97377
SCH9-A	55	5.4	0.55532	1150	52	0.02485	384	26	1.1973
SCH9-B	92.5	2.2	0.51913	1214	46	0.023231	697	29	1.1193

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Nb	Nb Stdev	Nb LOD	Nd	Nd Stdev	Nd LOD	Pb	Pb Stdev	Pb LOD
SCD10	79.6	3.2	0	16.65	0.72	0	16.56	0.6	0.0094817
SCD12	72.4	2.1	0	60.5	2	0	17.9	0.71	0.0082005
SCD13	66.2	1.7	0.0022331	15.81	0.6	0	21.07	0.88	0.0034497
SCD8BAS	58.1	2.1	0	17.96	0.67	0	18.17	0.73	0.006801
SCD8HAU	92.2	2.3	0	37.7	1.2	0	17.63	0.55	0.0076031
SCH13-A	117.6	7.5	0	53.8	3.9	0	4.21	0.68	0.005303
SCH13-B	170.9	7.6	0	57.4	1.9	0	5.26	0.9	0.004618
SCH14	0.727	0.033	0	1.176	0.051	0	11.84	0.93	0.0045514
SCH15	0.751	0.046	0	1.26	0.13	0	19.46	0.88	0.0028684
SCH1-A	45.8	1.8	0	36.1	1.7	0	7.9	1	0.0051941
SCH1-B	41.7	1.3	0	27.3	2	0	8.35	0.74	0.0047395
SCH1-C	47	1.1	0	43.1	1.2	0	7.93	0.58	0.0041163
SCH2-A	6.1	0.32	0	0.58	0.082	0	26.8	1.6	0.0033033
SCH2-B	4.47	0.28	0	0.41	0.09	0	23	1.7	0.0033489
SCH3	0.798	0.038	0	0.0124	0.0088	0	10.01	0.86	0.0058316
SCH4	272.6	7.8	0.00487	117	3.3	0	30.8	1.5	0.0089616
SCH5	271.3	7.1	0	120.3	2.9	0	9.67	0.53	0.010043
SCH6	16.64	0.48	0	5.41	0.69	0	7.78	0.62	0.0052123
SCH8-A	10.57	0.4	0	17.59	0.81	0	16.5	1.1	0.0035675
SCH8-B	15.6	1.1	0	18.4	1.7	0	19.6	1.6	0.0040053
SCH9-A	79.7	4.3	0	528	54	0	110.6	7.4	0.0056877
SCH9-B	102.9	3.5	0	1525	74	0	186	13	0.0053171

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Pr	Pr Stdev	Pr LOD	S	S Stdev	S LOD	Si	Si Stdev	Si LOD
SCD10	1.537	0.075	0	430	110	29.159	< LOD	160	243.55
SCD12	4.38	0.17	0	403	47	32.609	< LOD	140	233.39
SCD13	1.143	0.055	0	371	42	30.306	< LOD	130	253.03
SCD8BAS	1.81	0.061	0	344	47	34.847	< LOD	150	292.53
SCD8HAU	2.936	0.09	0.00075514	392	59	31.693	340	150	238.68
SCH13-A	4.93	0.34	0	213	35	31.989	510	180	288.97
SCH13-B	5.53	0.25	0	290	30	27.857	590	250	251.64
SCH14	0.1434	0.0071	0	271	17	23.57	343	60	141.05
SCH15	0.189	0.03	0	279	20	17.598	< LOD	83	239.75
SCH1-A	5.78	0.36	0	243	41	29.538	< LOD	170	207.34
SCH1-B	4.07	0.37	0	283	23	26.952	< LOD	97	189.19
SCH1-C	7.2	0.23	0	307	24	23.408	< LOD	91	164.32
SCH2-A	0.12	0.028	0	258	37	31.184	280	93	227.21
SCH2-B	0.101	0.031	0	260	48	31.615	340	140	230.35
SCH3	0.0033	0.0019	0	236	27	26.1	< LOD	110	241.63
SCH4	13.47	0.46	0	415	40	32.098	580	150	343.48
SCH5	14.1	0.38	0	417	47	31.328	590	170	319.02
SCH6	0.943	0.094	0	256	23	24.787	464	78	172.75
SCH8-A	2.39	0.16	0	283	28	23.677	630	130	227.9
SCH8-B	2.37	0.24	0	275	39	26.583	770	160	255.87
SCH9-A	77.1	8.7	0	263	48	31.073	360	200	337.41
SCH9-B	220.8	8.8	0	323	39	29.048	730	200	315.42

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Sm	Sm Stdev	Sm LOD	Sn	Sn Stdev	Sn LOD	Sr	Sr Stdev	Sr LOD
SCD10	17.81	0.76	0	0.024	0.017	0.012974	293.6	7.5	0
SCD12	71.3	2.5	0	< LOD	0.013	0.018975	495	15	0
SCD13	25.85	0.81	0	0.019	0.015	0.016931	468	11	0
SCD8BAS	16.3	0.77	0	0.02	0.019	0.017982	298.2	8.6	0
SCD8HAU	44.2	1.3	0	< LOD	0.014	0.02913	340.8	9	0
SCH13-A	36.2	2.7	0	< LOD	0.022	0.032751	76.5	5.1	0
SCH13-B	40.2	1.6	0	0.029	0.05	0.02852	74.7	3.4	0
SCH14	0.782	0.04	0	0.069	0.021	0.021351	154.6	2.4	0
SCH15	0.687	0.056	0	0.047	0.022	0.012019	134	2.9	0.0016952
SCH1-A	10.45	0.54	0	0.031	0.018	0.01624	135.9	5.3	0
SCH1-B	8.53	0.46	0	0.027	0.016	0.014819	137.9	5	0
SCH1-C	11.35	0.38	0	0.019	0.0095	0.01287	137.1	3.1	0
SCH2-A	0.258	0.06	0	< LOD	0.0091	0.016464	403	16	0.0044931
SCH2-B	0.09	0.037	0	0.033	0.025	0.016691	359	18	0.0045552
SCH3	0.0123	0.0059	0	0.18	0.2	0.013076	49.1	1	0
SCH4	83.3	2.2	0	0.034	0.023	0.020641	371	13	0.0025583
SCH5	84.5	1.9	0	< LOD	0.018	0.030542	256.3	8.4	0
SCH6	2.34	0.26	0.0060743	0.15	0.21	0.017054	122.6	2.9	0
SCH8-A	5.43	0.24	0	< LOD	0.016	0.027579	103.2	2.8	0
SCH8-B	6.09	0.43	0	< LOD	0.021	0.030963	122.3	5.5	0
SCH9-A	214	19	0	0.032	0.028	0.025966	343	17	0
SCH9-B	545	22	0	< LOD	0.016	0.024274	354.1	9.4	0

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Ta	Ta Stdev	Ta LOD	Tb	Tb Stdev	Tb LOD	Th	Th Stdev	Th LOD
SCD10	0.662	0.033	0	12.73	0.43	0	0.0054	0.0055	0
SCD12	0.528	0.029	0	27	1.1	0	0.0022	0.0017	0
SCD13	0.53	0.029	0	30.25	0.92	0	0.0013	0.0013	0
SCD8BAS	0.427	0.023	0	12.23	0.49	0	0.0055	0.0034	0
SCD8HAU	0.554	0.028	0	21.06	0.69	0.00060693	0.0067	0.0028	0.0020162
SCH13-A	9.42	0.81	0	9.86	0.71	0.00057578	0.0015	0.0023	0.00095635
SCH13-B	15.31	0.74	0	11.17	0.46	0.0005014	0.0059	0.0052	0.00083281
SCH14	0.0175	0.0019	0	0.419	0.011	0	0.0033	0.0018	0
SCH15	0.0182	0.0031	0	0.339	0.013	0.00039794	0.025	0.012	0
SCH1-A	0.253	0.022	0	1.949	0.098	0	0.011	0.012	0
SCH1-B	0.235	0.017	0	2.141	0.066	0	0.0041	0.0029	0
SCH1-C	0.314	0.032	0	2.014	0.055	0	0.015	0.01	0
SCH2-A	0.0304	0.0048	0	0.096	0.012	0	0.0072	0.0042	0.00087596
SCH2-B	0.0276	0.0088	0	0.041	0.0064	0	0.024	0.019	0.00088807
SCH3	0.0152	0.0024	0	0.0423	0.0038	0	0.0075	0.005	0
SCH4	3.46	0.13	0	31.25	0.93	0.00060055	0.164	0.015	0
SCH5	2.595	0.083	0	30.35	0.59	0	0.174	0.02	0.0010008
SCH6	0.0308	0.0035	0	1.565	0.061	0	0.0032	0.0025	0
SCH8-A	0.0399	0.0045	0	0.975	0.04	0	0.0174	0.0084	0.00074601
SCH8-B	0.068	0.011	0	1.126	0.063	0	0.057	0.036	0.00083756
SCH9-A	0.894	0.079	0	42	5.5	0	0.06	0.029	0
SCH9-B	1.328	0.077	0	98.7	3.7	0	0.235	0.023	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Ti	Ti Stdev	Ti LOD	Tm	Tm Stdev	Tm LOD	U	U Stdev	U LOD
SCD10	0.08	0.1	0	2.384	0.088	0	0.0015	0.0015	0.00084508
SCD12	< LOD	0.12	0.41036	2.88	0.12	0	0.01	0.015	0
SCD13	< LOD	0.063	0.13378	5.25	0.17	0	0.0025	0.0025	0
SCD8BAS	1.11	0.45	0	2.499	0.096	0	0.0108	0.0033	0
SCD8HAU	0.41	0.22	0	2.838	0.09	0.00054728	0.0065	0.0029	0
SCH13-A	0.66	0.37	0	1.78	0.14	0	0.0062	0.0028	0
SCH13-B	0.87	0.74	0	1.961	0.082	0	0.0103	0.0035	0
SCH14	0.036	0.03	0	0.433	0.011	0	< LOD	0.00058	0.0010271
SCH15	0.164	0.089	0	0.467	0.019	0	0.002	0.0013	0
SCH1-A	0.2	0.36	0	0.76	0.06	0.00087943	0.0143	0.0048	0
SCH1-B	0.064	0.074	0	1.108	0.069	0.00080245	0.021	0.0053	0
SCH1-C	0.054	0.051	0	0.713	0.031	0.00069693	0.0199	0.0038	0
SCH2-A	0.23	0.23	0.1281	0.124	0.015	0	0.0032	0.0023	0
SCH2-B	< LOD	0.098	0.12987	0.077	0.012	0	0.0066	0.0039	0
SCH3	0.116	0.081	0	0.3	0.014	0	0.0023	0.0011	0
SCH4	0.051	0.073	0	4.73	0.14	0	0.0721	0.0089	0
SCH5	0.22	0.17	0	4.24	0.12	0	0.145	0.03	0
SCH6	0.2	0.11	0	0.961	0.028	0.00071176	0.0348	0.0039	0
SCH8-A	0.032	0.063	0	0.431	0.021	0	0.0256	0.0051	0
SCH8-B	0.1	0.11	0	0.509	0.047	0	0.054	0.01	0
SCH9-A	0.3	0.18	0.067766	11.5	1.6	0	0.028	0.017	0
SCH9-B	0.57	0.29	0.06335	27.2	1.1	0	0.145	0.013	0

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	V	V Stdev	V LOD	W	W Stdev	W LOD	Y	Y Stdev	Y LOD
SCD10	0.24	0.084	0.040751	752000	2.60E+04	0	198.5	4.8	0
SCD12	0.439	0.049	0.044119	739000	2.90E+04	0.023102	234.5	7.2	0.0029572
SCD13	0.303	0.061	0.04182	726000	2.50E+04	2.5844	488	11	0.0028922
SCD8BAS	0.433	0.063	0.050679	734000	2.20E+04	0	205.4	6.3	0.010799
SCD8HAU	0.483	0.073	0.047866	745000	2.40E+04	0	229.4	5.6	0.0022824
SCH13-A	0.288	0.055	0.040215	694000	5.60E+04	0.0077251	117.8	7.7	0
SCH13-B	0.305	0.053	0.03502	682000	2.10E+04	0.0067272	135.5	6.1	0
SCH14	0.545	0.037	0.021539	683000	1.20E+04	0	21.93	0.33	0
SCH15	0.214	0.029	0.033203	695000	1.90E+04	5.8096	19.6	0.48	0
SCH1-A	0.217	0.042	0.032248	688000	3.10E+04	0	57.6	3.3	0.0018338
SCH1-B	0.216	0.038	0.029426	690000	2.30E+04	0	75.6	4.2	0.0016733
SCH1-C	0.239	0.037	0.025556	708000	2.60E+04	0	58.3	1.8	0.0014533
SCH2-A	0.058	0.038	0.02941	693000	2.80E+04	0.025216	5.28	0.29	0
SCH2-B	0.036	0.038	0.029816	653000	2.60E+04	0.025564	3.35	0.3	0
SCH3	0.048	0.017	0.028903	699000	2.80E+04	0.0053395	8.12	0.22	0
SCH4	0.85	0.1	0.044173	747000	2.40E+04	0.023629	565	16	0.0022584
SCH5	1.183	0.082	0.049991	732000	2.30E+04	0.016168	512	13	0.0022659
SCH6	0.071	0.021	0.023894	697000	1.50E+04	0.0073943	65.4	1.4	0
SCH8-A	0.06	0.026	0.028409	690000	1.90E+04	2.8767	29.14	0.89	0
SCH8-B	0.085	0.031	0.031895	708000	3.00E+04	3.2297	31.6	1.8	0
SCH9-A	2.24	0.18	0.041601	671000	2.10E+04	0.0074861	680	100	0
SCH9-B	3.59	0.27	0.03889	696000	3.00E+04	0.0069983	1455	42	0

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-7 LA-ICP-MS scheelite data (continued).

Sample	Yb	Yb Stdev	Yb LOD	Zn	Zn Stdev	Zn LOD
SCD10	9.36	0.37	0	< LOD	0.098	0.21979
SCD12	11.39	0.56	0	3.4	6.9	0.15808
SCD13	17.72	0.64	0	< LOD	0.085	0.20583
SCD8BAS	10.43	0.41	0	< LOD	0.085	0.2371
SCD8HAU	11.27	0.44	0	< LOD	0.087	0.26388
SCH13-A	6.04	0.5	0	0.64	0.33	0.17958
SCH13-B	6.9	0.28	0	0.64	0.23	0.15639
SCH14	2.664	0.079	0	0.73	0.2	0.12003
SCH15	2.82	0.11	0	0.83	0.18	0.1562
SCH1-A	4.26	0.37	0	0.6	0.24	0.22445
SCH1-B	6.46	0.45	0	0.32	0.14	0.20481
SCH1-C	4.11	0.16	0	0.55	0.14	0.17788
SCH2-A	0.679	0.067	0	0.49	0.21	0.16669
SCH2-B	0.505	0.077	0	0.67	0.21	0.169
SCH3	1.933	0.066	0	2.6	1.9	0.16879
SCH4	17.7	0.71	0	31	61	0.20175
SCH5	16.28	0.46	0.0025056	< LOD	0.14	0.26247
SCH6	4.38	0.12	0	0.56	0.12	0.11919
SCH8-A	2.27	0.1	0	0.39	0.17	0.18569
SCH8-B	2.82	0.19	0	0.34	0.16	0.20847
SCH9-A	49.9	6.5	0	0.65	0.24	0.18624
SCH9-B	121.4	5.7	0	24	47	0.1741

All values are in ppm, n.d.: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data.

Sample	Site	Mg	Mg Stdev	Mg LOD	Al	Al Stdev	Al LOD
A535A1-A	F-Zone	47	55	0	5.6	4.3	0
A535A1-B	F-Zone	0.42	0.16	0.0098323	0.096	0.052	0.093783
A574A1-A	Tiriganiaq	0.67	0.22	0.0093334	0.209	0.048	0.048982
A574A1-B	Tiriganiaq	157	85	0.011227	0.062	0.041	0.058917
A574A1-C	Tiriganiaq	1.5	1.3	0.011384	0.15	0.18	0.059745
A574A1-D	Tiriganiaq	0.042	0.03	0.011272	< LOD	0.033	0.059158
A574A1-E	Tiriganiaq	2.2	1.9	0.018278	0.33	0.29	0.064636
A598A1-A	Pump	900	260	0.010594	23	18	0.071555
A598A1-B	Pump	2.1	1	0.009156	0.48	0.24	0.061839
A598A1-C	Pump	0.81	0.65	0	0.43	0.21	0.073712
A600A2-A	Pump	73	27	0.01015	0.76	0.26	0.047848
A600A2-B	Pump	234	52	0.012168	1.55	0.37	0.057358
A600A2-C	Pump	61	18	0.010092	1.37	0.85	0.047575
A613A-A	Tiriganiaq	1.8	1.8	0.010747	11.1	8.5	0.086174
A613A-B	Tiriganiaq	0.45	0.34	0.011444	1.18	0.91	0.091762
A613A-C	Tiriganiaq	22	11	0.01169	43	31	0.093738
A628A-A	Tiriganiaq	0.314	0.079	0	0.39	0.15	0.066957
A628A-B	Tiriganiaq	0.4	0.57	0	< LOD	0.048	0.074438
A628A-C	Tiriganiaq	61	23	0.017194	73	28	0.084896
A669A-A	Discovery	7.1	5.7	0.025449	340	130	0.12566
A669A-B	Discovery	6.7	1.2	0.023004	560	130	0.11358
A669A-C	Discovery	0.065	0.059	0.028081	0.35	0.3	0.13866
A669A-D	Discovery	5.7	2.5	0.023846	0.58	0.24	0.11774
A669A-E	Discovery	44	14	0.022532	50	15	0.091839
A669A-F	Discovery	0.73	0.57	0.030197	89	87	0.12308
G640A	Tiriganiaq	9.5	5.7	0	14.6	8.9	0.082297
MU02AA-A	Mustang	0.324	0.088	0.0089271	0.221	0.06	0.079365
MU02AA-B	Mustang	1.81	0.85	0	2.9	1.1	0
T557AA	Tiriganiaq	79	83	0.02273	2.5	2.7	0.082505
T557AB	Tiriganiaq	0.062	0.054	0.024561	0.2	0.1	0.089233
T557AC	Tiriganiaq	35	18	0.037241	7.9	5.1	0.11003

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Si	Si Stdev	Si LOD	K	K Stdev	K LOD	Ca	Ca Stdev	Ca LOD
A535A1-A	1900	850	0	4.8	2.5	0	12.3	9.2	0
A535A1-B	1480	110	204.16	2.67	0.54	0.80033	< LOD	2.5	6.18
A574A1-A	< LOD	71	216.59	1.41	0.32	0.61803	< LOD	1.9	5.1279
A574A1-B	< LOD	160	260.52	< LOD	0.32	0.74339	16.9	9.4	6.168
A574A1-C	< LOD	140	264.18	< LOD	0.5	0.75384	< LOD	8	6.2547
A574A1-D	< LOD	130	261.58	< LOD	0.42	0.74643	< LOD	2.7	6.1933
A574A1-E	< LOD	54	219.89	< LOD	0.58	0.67501	9	11	6.0307
A598A1-A	500	130	246.19	1.39	0.37	0.78621	79	28	6.8994
A598A1-B	484	94	212.76	1.07	0.31	0.67946	< LOD	2.1	5.9627
A598A1-C	670	110	231.75	1.41	0.3	0.62887	7.4	5.7	5.7947
A600A2-A	1360	190	301.29	1.93	0.47	0.72339	< LOD	3.4	6.8682
A600A2-B	2510	260	361.18	2.3	0.68	0.86717	< LOD	4.3	8.2333
A600A2-C	2360	200	299.58	1.8	0.46	0.71927	8.4	4.3	6.829
A613A-A	< LOD	240	351.75	6.4	3.9	0.76205	< LOD	4.1	6.7738
A613A-B	< LOD	230	374.56	< LOD	0.49	0.81147	< LOD	4.1	7.2131
A613A-C	< LOD	190	382.63	16	12	0.82894	3300	1.60E+03	7.3684
A628A-A	223	98	217.19	1.48	0.28	0.60963	10	17	5.4045
A628A-B	620	120	241.46	1.49	0.3	0.67775	< LOD	2.7	6.0084
A628A-C	950	79	180.62	2.05	0.23	0.60435	< LOD	2.2	5.3981
A669A-A	< LOD	200	267.35	128	51	0.89453	< LOD	3.4	7.9901
A669A-B	< LOD	220	241.66	219	52	0.80856	10800	4.70E+03	7.2222
A669A-C	< LOD	120	295	< LOD	0.42	0.98704	< LOD	3.6	8.8164
A669A-D	< LOD	170	250.51	< LOD	0.35	0.83818	15	10	7.4868
A669A-E	< LOD	280	216.75	37	12	0.7056	10.6	6.3	7.9282
A669A-F	< LOD	170	290.49	65	62	0.94564	< LOD	4.2	10.625
G640A	< LOD	130	206.85	3.9	1.4	0.65066	< LOD	3.7	5.6641
MU02AA-A	< LOD	130	230.39	0.86	0.26	0.57327	< LOD	2.1	5.3128
MU02AA-B	< LOD	120	0	1.84	0.45	0	2.1	2.5	0
T557AA	< LOD	230	279.02	13	20	0.8195	24	24	8.3601
T557AB	< LOD	190	267.22	< LOD	0.55	0.66154	< LOD	4.1	8.8768
T557AC	400	370	277.37	11.9	7.1	0.84616	59	33	7.2869

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Sc	Sc Stdev	Sc LOD	Ti	Ti Stdev	Ti LOD	V	V Stdev	V LOD
A535A1-A	< LOD	0.01	0	0.6	0.56	0	0.008	0.036	0
A535A1-B	< LOD	0.0089	0.023973	0.33	0.19	0	< LOD	0.016	0.031767
A574A1-A	< LOD	0.0042	0.021236	0.304	0.095	0.123	< LOD	0.011	0.029065
A574A1-B	< LOD	0.0089	0.025543	0.49	0.19	0.14795	< LOD	0.017	0.03496
A574A1-C	< LOD	0.0098	0.025902	3.9	7.1	0.15003	< LOD	0.02	0.035452
A574A1-D	< LOD	0.01	0.025648	0.3	0.17	0.14856	< LOD	0.016	0.035103
A574A1-E	< LOD	0.032	0.020021	0.281	0.071	0.15206	< LOD	0.0074	0.028647
A598A1-A	0.067	0.03	0.030742	0.48	0.19	0.066629	0.09	0.047	0.03651
A598A1-B	< LOD	0.0059	0.026568	0.43	0.13	0.057583	< LOD	0.015	0.031553
A598A1-C	< LOD	0.0064	0.016494	0.42	0.19	0	< LOD	0.019	0.035106
A600A2-A	0.029	0.019	0.019245	0.2	0.13	0	< LOD	0.014	0.034023
A600A2-B	0.046	0.024	0.02307	0.49	0.3	0	< LOD	0.021	0.040786
A600A2-C	0.025	0.017	0.019135	0.47	0.2	0	< LOD	0.02	0.033829
A613A-A	0.185	0.066	0.026344	128	62	0	0.29	0.14	0.037969
A613A-B	0.131	0.054	0.028052	0.86	0.37	0	< LOD	0.026	0.040432
A613A-C	1.19	0.47	0.028656	5800	2.80E+03	0	3	1.6	0.041302
A628A-A	< LOD	0.0072	0.016221	0.68	0.2	0.046632	< LOD	0.0099	0.025556
A628A-B	< LOD	0.0084	0.018033	0.69	0.22	0.051842	< LOD	0.016	0.028412
A628A-C	0.033	0.016	0.0098504	0.73	0.32	0	0.3	0.11	0.026544
A669A-A	0.023	0.012	0.01458	73	33	0	1.68	0.7	0.039289
A669A-B	0.035	0.016	0.013179	2.3	0.6	0	3.27	0.8	0.035513
A669A-C	< LOD	0.009	0.016088	0.43	0.26	0	< LOD	0.03	0.043352
A669A-D	< LOD	0.0092	0.013662	0.38	0.19	0	< LOD	0.017	0.036814
A669A-E	0.037	0.018	0.011378	1.57	0.51	0.12766	0.216	0.078	0.038282
A669A-F	0.024	0.022	0.015249	630	340	0.17109	1.33	0.92	0.051306
G640A	0.6	0.38	0.020852	3	2.6	0.065288	0.064	0.045	0.035577
MU02AA-A	< LOD	0.0063	0.016141	0.51	0.16	0	< LOD	0.013	0.032679
MU02AA-B	0.0105	0.0082	0	2.2	2.1	0	0.035	0.02	0
T557AA	0.027	0.04	0.021123	0.73	0.31	0	< LOD	0.038	0.038354
T557AB	< LOD	0.016	0.025145	0.26	0.2	0	< LOD	0.029	0.039566
T557AC	< LOD	0.014	0.025878	0.55	0.26	0.071499	< LOD	0.028	0.043357

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Cr	Cr Stdev	Cr LOD	Mn	Mn Stdev	Mn LOD	Co	Co Stdev	Co LOD
A535A1-A	0.08	0.38	0	24	27	0	1110	360	0
A535A1-B	< LOD	0.21	0.4514	1.74	0.45	0.84078	191	12	0.0041071
A574A1-A	< LOD	0.12	0.42807	0.74	0.25	0.69021	14.1	1.6	0
A574A1-B	< LOD	0.19	0.5149	66	35	0.8302	124	24	0
A574A1-C	< LOD	0.25	0.52214	4.1	5.2	0.84187	12.1	1.1	0
A574A1-D	< LOD	0.18	0.51701	< LOD	0.42	0.8336	136	25	0
A574A1-E	< LOD	0.11	0.40148	0.86	0.45	0.70162	9.42	0.68	0.0071074
A598A1-A	< LOD	0.46	0.51637	350	110	1.0048	30.7	3.6	0.008851
A598A1-B	< LOD	0.17	0.44626	1.64	0.39	0.86835	72.9	2.7	0.0076492
A598A1-C	< LOD	0.21	0.42084	1.37	0.41	0.83613	58.5	2.9	0
A600A2-A	< LOD	0.22	0.38799	25.6	9.5	0.77795	4250	300	0
A600A2-B	< LOD	0.25	0.46511	34.2	7.2	0.93257	1740	120	0
A600A2-C	< LOD	0.24	0.38578	17.2	4.4	0.77351	4350	370	0
A613A-A	< LOD	0.25	0.52762	< LOD	0.46	0.8499	111	14	0
A613A-B	< LOD	0.28	0.56184	< LOD	0.56	0.90501	521	74	0
A613A-C	< LOD	0.34	0.57394	37	18	0.9245	328	52	0
A628A-A	< LOD	0.18	0.38482	< LOD	0.31	0.91947	330	45	0
A628A-B	< LOD	0.23	0.42782	< LOD	0.43	1.0222	2630	280	0
A628A-C	< LOD	0.14	0.37534	< LOD	0.35	0.77503	326	21	0
A669A-A	0.76	0.46	0.55557	< LOD	0.86	1.1472	470	38	0
A669A-B	0.78	0.34	0.50218	< LOD	0.71	1.0369	892	46	0
A669A-C	< LOD	0.46	0.61303	< LOD	0.52	1.2658	286	15	0
A669A-D	< LOD	0.24	0.52057	11.4	5.7	1.0749	504	87	0
A669A-E	< LOD	0.25	0.54618	6.8	2.4	0.97423	1980	190	0
A669A-F	< LOD	0.46	0.732	< LOD	1.5	1.3057	1140	290	0
G640A	< LOD	0.32	0.48614	1.2	0.6	0.96562	130	21	0
MU02AA-A	< LOD	0.15	0.43981	< LOD	0.31	0.83859	1096	30	0
MU02AA-B	0.04	0.17	0	< LOD	0.33	0	1118	34	0
T557AA	< LOD	0.33	0.61236	25	33	1.0621	5.43	0.68	0
T557AB	< LOD	0.31	0.63786	< LOD	0.75	1.1318	66	4.6	0
T557AC	< LOD	0.32	0.56331	< LOD	0.53	0.92121	51.6	4.7	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Ni	Ni Stdev	Ni LOD	Cu	Cu Stdev	Cu LOD	Zn	Zn Stdev	Zn LOD
A535A1-A	36	12	0	19.9	5.7	0	0.28	0.19	0
A535A1-B	3.81	0.93	0.019992	20.6	3.4	0.044965	0.145	0.078	0.1282
A574A1-A	5.3	0.24	0.036138	4.89	0.72	0.041835	0.276	0.08	0.13338
A574A1-B	4.65	0.45	0.043468	5	1.6	0.05032	2.3	1.7	0.16043
A574A1-C	5.35	0.5	0.044079	5	1.7	0.051028	1.1	1.3	0.16269
A574A1-D	5.42	0.43	0.043646	4.2	2	0.050526	< LOD	0.082	0.16109
A574A1-E	5.3	0.18	0.035384	5.2	1.5	0.042887	0.2	0.28	0.18225
A598A1-A	25.1	2.1	0.030191	8.6	2	0.048068	6.2	1.9	0.1333
A598A1-B	20.9	1.6	0.026092	12	2.6	0.041541	0.163	0.079	0.1152
A598A1-C	16.95	0.91	0.02721	10.7	2.5	0.035356	0.152	0.077	0.10555
A600A2-A	206	13	0.042718	26.2	6.3	0.067198	1.5	0.52	0.13402
A600A2-B	221	11	0.051208	10.7	3.3	0.080554	2.25	0.46	0.16066
A600A2-C	169.4	6.4	0.042474	13.3	3.6	0.066815	1.09	0.26	0.13326
A613A-A	35.3	3.3	0.056235	18.2	4.2	0.065046	0.54	0.24	0.14391
A613A-B	90	10	0.059882	13.8	3.2	0.069264	< LOD	0.12	0.15325
A613A-C	46.6	3.5	0.061172	13.9	3.6	0.070755	7.5	3.7	0.15655
A628A-A	287	32	0.050305	15.8	2.2	0.034339	0.205	0.066	0.075002
A628A-B	2460	260	0.055926	13.2	2.4	0.038176	0.165	0.068	0.083383
A628A-C	278	17	0.037989	18	4.2	0.02958	0.38	0.11	0.10278
A669A-A	4.76	0.45	0.05623	4.2	1.4	0.043784	0.4	0.36	0.15213
A669A-B	4.47	0.38	0.050826	8.9	4.5	0.039576	0.3	0.12	0.13751
A669A-C	2.99	0.41	0.062046	3.4	1.3	0.048312	< LOD	0.091	0.16786
A669A-D	15.7	4.6	0.052688	4.8	1.5	0.041026	< LOD	0.095	0.14254
A669A-E	7	0.64	0.020637	7.5	1.7	0.032358	0.171	0.081	0.13931
A669A-F	3.7	0.58	0.027657	5.1	2	0.043366	0.5	0.34	0.1867
G640A	902	49	0.050993	18.3	2.7	0.034182	0.61	0.29	0.1191
MU02AA-A	234.8	8.6	0.036303	16.7	2.5	0.045676	0.123	0.053	0.1009
MU02AA-B	224.7	6.8	0	16.8	2.3	0	0.123	0.058	0
T557AA	23.5	1.6	0.040424	1.2	1.1	0.063944	1.4	1.8	0.17092
T557AB	27.5	2.3	0.2033	0.31	0.19	0.055508	< LOD	0.2	0.17676
T557AC	25.9	1.9	0.046232	0.41	0.35	0.044379	0.25	0.17	0.14958

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Se	Se Stdev	Se LOD	Sr	Sr Stdev	Sr LOD	Zr	Zr Stdev	Zr LOD
A535A1-A	21.4	5.5	0	0.122	0.077	0	0.033	0.026	0
A535A1-B	17.1	1.7	0.89345	0.0081	0.0046	0	0.0139	0.0071	0
A574A1-A	43.7	1.7	1.2112	0.129	0.038	0	0.83	0.47	0.0035985
A574A1-B	41.4	3.2	1.4569	0.0087	0.0058	0	0.98	0.98	0.0043283
A574A1-C	50.7	4.7	1.4774	4.4	4.2	0	0.25	0.29	0.0043892
A574A1-D	26.4	2.2	1.4628	0.028	0.04	0	1.04	0.91	0.0043461
A574A1-E	34.4	1.4	1.3266	0.014	0.0075	0	1.28	0.88	0
A598A1-A	6.3	1.6	1.018	0.23	0.15	0	0.022	0.011	0
A598A1-B	83.1	3.9	0.87977	0.0184	0.0099	0	0.1	0.12	0
A598A1-C	89.2	7	1.0361	0.027	0.009	0	0.09	0.098	0.0039933
A600A2-A	35.9	2.9	1.1873	0.0095	0.0048	0	0.0141	0.0068	0
A600A2-B	35.6	3.8	1.4233	0.017	0.02	0	0.019	0.015	0
A600A2-C	36.5	2.8	1.1806	0.268	0.069	0	0.0159	0.0094	0
A613A-A	9.9	1.7	1.4699	0.038	0.021	0	58	23	0
A613A-B	8.4	1.6	1.5652	0.021	0.015	0	58	16	0
A613A-C	8.1	1.9	1.5989	2.8	1.4	0	350	190	0
A628A-A	20.8	1.6	0.78655	0.109	0.033	0	0.0231	0.0091	0
A628A-B	26.5	2.3	0.87444	0.0174	0.0081	0	0.0156	0.0085	0
A628A-C	14.87	0.99	0.85133	0.0155	0.005	0	0.0229	0.0082	0.0032395
A669A-A	13.8	1.7	1.2601	1.62	0.72	0	1.1	1.1	0.0047949
A669A-B	10.1	1.3	1.139	96	40	0	0.021	0.011	0.0043341
A669A-C	16.5	2.1	1.3904	0.0062	0.0056	0	0.0097	0.009	0.0052908
A669A-D	10.7	1.4	1.1807	0.2	0.1	0	0.0066	0.007	0.0044929
A669A-E	6.77	0.94	1.5022	0.252	0.087	0	0.087	0.034	0.0084893
A669A-F	6.9	1.6	2.0132	0.1	0.11	0	0.021	0.015	0.011377
G640A	4.36	0.95	1.2465	0.33	0.23	0	260	150	0
MU02AA-A	64.8	5.1	1.0221	0.0059	0.0032	0	0.0166	0.0079	0.0037335
MU02AA-B	51.2	2.6	0	0.0155	0.0062	0	0.17	0.15	0
T557AA	55.1	4.1	1.0295	0.021	0.018	0	0.26	0.3	0
T557AB	58.7	6.1	1.0816	0.0082	0.0098	0	0.84	0.57	0
T557AC	61.1	5.2	1.3966	0.045	0.028	0	0.09	0.061	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Mo	Mo Stdev	Mo LOD	Rh	Rh Stdev	Rh LOD	Ag	Ag Stdev	Ag LOD
A535A1-A	7	1.4	0	0.004156864	0.0066	0	1.46	0.69	0
A535A1-B	3.11	0.82	0	0.005002583	0.0037	0.0018323	0.057	0.018	0.012398
A574A1-A	0.879	0.09	0	0.004520807	0.0018	0	0.105	0.016	0.023839
A574A1-B	0.68	0.53	0	0.005812277	0.0035	0	< LOD	0.016	0.028674
A574A1-C	0.53	0.11	0	0.003412277	0.0031	0	0.069	0.026	0.029077
A574A1-D	0.14	0.049	0	0.004674313	0.0034	0	0.035	0.018	0.028792
A574A1-E	0.52	0.049	0.010427	0.004296768	0.0015	0.0034431	0.087	0.012	0.023884
A598A1-A	9.3	1.7	0	0.003633117	0.0028	0	0.054	0.019	0.023881
A598A1-B	2.56	0.84	0	0.003869466	0.0022	0	0.146	0.024	0.020639
A598A1-C	4.2	0.41	0.022529	0.005370274	0.0037	0	0.106	0.019	0.010141
A600A2-A	3.68	0.51	0	0.003268333	0.0032	0	0.052	0.017	0.031722
A600A2-B	3.48	0.51	0	0.005070274	0.0073	0	29.2	8.3	0.038027
A600A2-C	2.02	0.21	0	0.004668658	0.0037	0	8.6	4.8	0.031541
A613A-A	0.033	0.031	0	0.00328869	0.0055	0	< LOD	0.019	0.036887
A613A-B	0.075	0.046	0	0.001129886	0.0022	0	< LOD	0.028	0.039279
A613A-C	0.084	0.055	0	0.004722131	0.0047	0	0.077	0.043	0.040125
A628A-A	0.469	0.099	0	0.006074797	0.003	0	0.172	0.033	0.013878
A628A-B	0.272	0.071	0	0.009276412	0.0044	0	2.24	0.76	0.015429
A628A-C	0.36	0.11	0	0.006504199	0.0025	0	0.079	0.017	0.015318
A669A-A	26.6	3.6	0	0.008074313	0.0053	0	0.18	0.12	0.022673
A669A-B	65.6	4.6	0	0.005809854	0.0042	0	0.308	0.067	0.020494
A669A-C	4.3	3	0	0.005036349	0.0045	0	0.057	0.03	0.025018
A669A-D	3.7	1.3	0	0.008027786	0.0059	0	2.07	0.73	0.021245
A669A-E	1.78	0.46	0	0.009218416	0.0043	0	4.8	1.9	0.018319
A669A-F	1.37	0.45	0	0.000504523	0.0019	0	0.095	0.053	0.024551
G640A	2.2	1.7	0	0.002380935	0.0042	0	0.189	0.051	0.020738
MU02AA-A	0.345	0.061	0	0.005205006	0.0029	0	0.05	0.015	0.019467
MU02AA-B	0.247	0.048	0	0.002397252	0.0024	0	0.052	0.014	0
T557AA	2.85	0.9	0	0.002706947	0.0035	0	0.076	0.028	0.018875
T557AB	5.3	3.7	0	0.008575961	0.0059	0	0.093	0.033	0.017976
T557AC	0.52	0.25	0	0.006368207	0.007	0.0042372	< LOD	0.027	0.021405

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Cd	Cd Stdev	Cd LOD	In	In Stdev	In LOD	Sb	Sb Stdev	Sb LOD
A535A1-A	0.025	0.03	0	1.02	0.11	0	45	14	0
A535A1-B	0.043	0.024	0.012173	0.995	0.048	0.01041	9.4	1.1	0.010273
A574A1-A	0.027	0.013	0	1.032	0.039	0.0047219	104.9	2.3	0.0087629
A574A1-B	0.022	0.016	0	1.016	0.047	0.0056797	181	10	0.010555
A574A1-C	0.029	0.021	0	0.983	0.05	0.0057595	227	10	0.010556
A574A1-D	0.018	0.016	0	0.996	0.045	0.0057029	136.7	7.8	0.01051
A574A1-E	0.0288	0.0084	0	1.028	0.021	0.0080107	92.5	1.5	0.0068327
A598A1-A	0.028	0.02	0	1.068	0.046	0.0091936	50	13	0.0060816
A598A1-B	0.026	0.015	0	1.074	0.036	0.0079453	123.2	6.8	0.0049482
A598A1-C	0.038	0.025	0	1.069	0.048	0.0097613	178	11	0.0043765
A600A2-A	0.032	0.02	0	0.934	0.042	0.0047498	207.4	7.6	0.010822
A600A2-B	0.017	0.016	0	0.913	0.055	0.0056939	193.4	9.9	0.012883
A600A2-C	0.041	0.024	0	0.984	0.053	0.0047228	220.9	8	0.010518
A613A-A	0.011	0.012	0	0.856	0.058	0.0021027	21.7	1.4	0.011648
A613A-B	0.015	0.018	0	0.914	0.065	0.0022391	18.44	0.77	0.011859
A613A-C	0.02	0.025	0	0.807	0.065	0.0022873	20	2.2	0.012373
A628A-A	0.038	0.018	0.012873	1.047	0.04	0.0019878	67.7	1.8	0.010768
A628A-B	0.106	0.042	0.014312	1.068	0.043	0.00221	138.4	6.3	0.011708
A628A-C	0.033	0.014	0	1.03	0.029	0.0054732	100.3	3.7	0.006176
A669A-A	0.029	0.021	0	1.152	0.069	0.0081013	15.57	0.69	0.0089119
A669A-B	0.072	0.065	0	1.192	0.056	0.0073227	15.63	0.68	0.0082488
A669A-C	0.0023	0.0086	0	1.162	0.08	0.0089391	15.58	0.83	0.0095022
A669A-D	0.054	0.033	0	1.161	0.057	0.0075909	9.96	0.42	0.0083894
A669A-E	0.039	0.024	0.025131	1.137	0.056	0.011329	11.82	0.56	0.005602
A669A-F	0.038	0.038	0.03368	1.155	0.09	0.015183	12.7	1.2	0.0074003
G640A	0.032	0.028	0	1.067	0.07	0.010625	53	1.9	0.0072717
MU02AA-A	0.029	0.014	0	1.04	0.041	0.0061542	59.1	2.2	0
MU02AA-B	0.027	0.015	0	1.042	0.034	0	61	1.6	0
T557AA	0.053	0.038	0	1.064	0.092	0.0037477	25.3	1.3	0.0064817
T557AB	0.024	0.028	0	1.13	0.08	0.0042398	37.5	2.4	0.0091456
T557AC	0.028	0.028	0	1.09	0.082	0.0023963	32.5	1.8	0.0072642

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Te	Te Stdev	Te LOD	Ba	Ba Stdev	Ba LOD	La	La Stdev	La LOD
A535A1-A	22.5	6.5	0	0.048	0.019	0	0.00078	0.00066	0
A535A1-B	4.6	1.4	0.10209	< LOD	1	0	0.0002	0.0004	0
A574A1-A	2.46	0.25	0.046193	< LOD	1	0	0.001	0.0014	0
A574A1-B	46.3	6.1	0.055641	0.3	0.24	0	0.22	0.1	0
A574A1-C	18.9	1.7	0.055647	0.034	0.018	0	0.0016	0.0017	0
A574A1-D	49.8	7.6	0.0554	0.031	0.056	0	0.0021	0.003	0
A574A1-E	1.74	0.18	0.097818	0.062	0.035	0	0.0018	0.0021	0
A598A1-A	6	1.4	0.15179	< LOD	1	0	< LOD	1	0
A598A1-B	54.6	6.1	0.1235	0.022	0.028	0	0.0028	0.0034	0
A598A1-C	33.3	7.5	0.10835	0.161	0.088	0	0.0051	0.0081	0
A600A2-A	252	20	0.13648	0.015	0.01	0	0.00068	0.00096	0
A600A2-B	145	21	0.16247	0.013	0.012	0	0.0004	0.0008	0
A600A2-C	302	24	0.13264	0.026	0.012	0	0.00009	0.00017	0
A613A-A	1.92	0.41	0.19447	5.2	2	0	0.00036	0.00072	0
A613A-B	1.63	0.45	0.19797	11	3	0	0.98	0.42	0
A613A-C	3.1	0.8	0.20656	< LOD	1	0	0.00048	0.00097	0
A628A-A	4.04	0.4	0.03597	0.048	0.034	0	4.5	3.6	0
A628A-B	11.7	1.7	0.039111	0.127	0.056	0	0.026	0.011	0
A628A-C	5.6	0.43	0.095114	1.11	0.96	0	0.0032	0.0052	0
A669A-A	39	4.5	0.13725	0.01	0.012	0	0.038	0.037	0
A669A-B	42.6	2.9	0.12704	0.01	0.0085	0	0.0011	0.0011	0
A669A-C	19	1.7	0.14634	0.014	0.013	0	0.0018	0.0019	0
A669A-D	30.9	2.8	0.1292	7.6	1.4	0	0.053	0.015	0
A669A-E	40	14	0.1665	12.47	0.95	0	0.116	0.024	0
A669A-F	37	10	0.21995	24.5	1.3	0	0.201	0.031	0
G640A	5.06	0.65	0.1219	28.2	1.8	0	0.224	0.023	0
MU02AA-A	7.5	1.1	0.079442	0.033	0.016	0	< LOD	1	0
MU02AA-B	3.66	0.4	0	0.108	0.05	0	0.0008	0.00071	0
T557AA	334	23	0.12174	0.081	0.047	0	0.0027	0.0022	0
T557AB	141	13	0	0.049	0.056	0	< LOD	1	0
T557AC	100.3	6.9	0.052232	0.031	0.02	0	0.0009	0.0013	0

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	W	W Stdev	W LOD	Re	Re Stdev	Re LOD	Au	Au Stdev	Au LOD
A535A1-A	0.0083	0.0035	0	0.00026	0.00037	0	0.69	0.046	0.0074777
A535A1-B	0.0025	0.004	0	0.0148	0.0056	0	0.68	0.11	0.0089944
A574A1-A	0.017	0.013	0	0.0107	0.0091	0	0.351	0.074	0
A574A1-B	3.2	1.7	0	0.0094	0.0059	0	0.302	0.071	0
A574A1-C	0.0072	0.0051	0	0.0026	0.0022	0	0.155	0.021	0
A574A1-D	0.0089	0.0093	0	0.0022	0.0033	0	0.297	0.035	0
A574A1-E	0.15	0.28	0	0.0012	0.0018	0	0.272	0.057	0
A598A1-A	< LOD	0.0071	0.008668	0.029	0.014	0.0043624	0.58	0.14	0.0057689
A598A1-B	0.009	0.011	0	0.0013	0.0018	0	0.191	0.039	0.0061016
A598A1-C	< LOD	1	0	0.0159	0.0084	0	0.197	0.045	0.0029641
A600A2-A	0.0014	0.0017	0	0.0074	0.0037	0	2.81	0.33	0
A600A2-B	0.0032	0.0031	0	0.081	0.017	0	2.49	0.35	0
A600A2-C	0.0046	0.0048	0	0.041	0.035	0	2.6	0.2	0.0020195
A613A-A	0.192	0.094	0	0.0056	0.0041	0	0.564	0.096	0.0029892
A613A-B	0.093	0.022	0	0.0066	0.0043	0	0.359	0.054	0.0027019
A613A-C	0.0042	0.0064	0	0.0008	0.0015	0	0.184	0.037	0.0032983
A628A-A	0.003	0.0047	0	0.138	0.031	0	0.245	0.065	0.0028009
A628A-B	0.0053	0.004	0.0035819	0.045	0.017	0	2.1	1.3	0.0074174
A628A-C	2	2.3	0.0048005	0.009	0.011	0	0.19	0.061	0.0099408
A669A-A	0.24	0.15	0	0.0012	0.0013	0	0.275	0.041	0
A669A-B	0.0107	0.0052	0	0.0028	0.0018	0	0.683	0.078	0
A669A-C	0.0155	0.0073	0	0.0012	0.0011	0	0.419	0.045	0.0024895
A669A-D	0.0023	0.0038	0	0.152	0.042	0	0.057	0.015	0.0033201
A669A-E	0.0066	0.0044	0	0.14	0.025	0	0.083	0.013	0.0027373
A669A-F	0.0105	0.0061	0.0082024	0.05	0.014	0.0022911	0.0202	0.007	0
G640A	0.0092	0.0063	0.0087944	0.17	0.049	0.0024565	0.049	0.011	0
MU02AA-A	0.0064	0.0036	0	0.0078	0.0031	0	0.173	0.024	0.0065241
MU02AA-B	0.041	0.041	0	0.0222	0.0059	0	0.102	0.016	0
T557AA	0.042	0.029	0	0.0017	0.0025	0	0.084	0.044	0
T557AB	0.027	0.028	0	0.3	0.12	0	0.154	0.043	0
T557AC	0.0015	0.0029	0	0.0024	0.002	0	0.13	0.021	0.0025635

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Hg	Hg Stdev	Hg LOD	Pb	Pb Stdev	Pb LOD
A535A1-A	1.147	0.062	0.15206	4.1	1.4	0.0040994
A535A1-B	1.04	0.1	0.18291	1.29	0.24	0.0049309
A574A1-A	1.09	0.13	0.16474	1.15	0.22	0.0057275
A574A1-B	1.19	0.19	0.16828	5.6	1.8	0.0058508
A574A1-C	0.862	0.093	0.11982	1.51	0.25	0.0068694
A574A1-D	0.77	0.15	0.14363	4.26	0.74	0.0082348
A574A1-E	0.805	0.096	0.11914	1.5	0.26	0.0068303
A598A1-A	0.44	0.1	0.12435	2.7	2.1	0.0094774
A598A1-B	0.44	0.1	0.13278	1.5	1.5	0.0056999
A598A1-C	0.33	0.12	0.11589	0.63	0.18	0.0032756
A600A2-A	0.887	0.064	0.080409	26.3	8.9	0.0045758
A600A2-B	0.94	0.13	0.089393	460	150	0.0050871
A600A2-C	0.751	0.051	0.12158	12.4	8.7	0.0036827
A613A-A	1.19	0.12	0.17995	0.93	0.21	0.0054509
A613A-B	1.14	0.12	0.16266	1.46	0.2	0.0049271
A613A-C	1.24	0.13	0.19856	0.088	0.022	0.0060146
A628A-A	1.1	0.11	0.16862	1.71	0.42	0.0051076
A628A-B	1.2	0.11	0.13613	6.6	1.9	0.0059109
A628A-C	1.15	0.15	0.18244	0.86	0.4	0.0079218
A669A-A	0.73	0.11	0.13438	5.5	1.1	0.0054025
A669A-B	0.715	0.066	0.11613	7.3	1.2	0.004669
A669A-C	0.594	0.071	0.11218	5.96	0.62	0.0039082
A669A-D	1.49	0.17	0.14961	13	1.5	0.0052122
A669A-E	1.348	0.085	0.12335	12.3	0.7	0.0042973
A669A-F	1.58	0.11	0.15504	15.36	0.77	0.0063334
G640A	1.35	0.1	0.16623	18	1.1	0.0067906
MU02AA-A	1.359	0.078	0.10321	1.11	0.11	0.0041474
MU02AA-B	1.187	0.076	0	0.948	0.08	0
T557AA	1.38	0.15	0.12447	31.2	7	0.0056731
T557AB	0.97	0.26	0	620	340	0
T557AC	0.881	0.083	0.10737	4.39	0.88	0.0070344

All values are in ppm, n.d: not determine, Stdev: standard deviation.

Table D-8 LA-ICP-MS arsenopyrite data (continued).

Sample	Bi	Bi Stdev	Bi LOD	U	U Stdev	U LOD
A535A1-A	1.89	0.16	0.0024487	0.0049	0.0023	0
A535A1-B	0.743	0.088	0.0029454	0.0068	0.0071	0
A574A1-A	0.57	0.11	0.0046259	0.107	0.034	0
A574A1-B	1.67	0.37	0.0047255	0.4	0.12	0
A574A1-C	3.03	0.38	0.0034239	0.00013	0.00025	0
A574A1-D	21.9	4.1	0.0041045	0.00041	0.00057	0
A574A1-E	5.7	1.2	0.0034044	0.0007	0.00074	0
A598A1-A	0.347	0.049	0.0034104	0.0045	0.0059	0
A598A1-B	0.3	0.11	0.002724	0.00047	0.00065	0
A598A1-C	0.7	1.1	0.0038895	0.0013	0.0012	0
A600A2-A	2.34	0.29	0.0017313	0.00009	0.00018	0
A600A2-B	9.8	1.9	0.0019247	< LOD	1	0
A600A2-C	1.56	0.33	0.0013588	0.00039	0.00033	0
A613A-A	10.3	5	0.0020112	0.8	1	0
A613A-B	8.8	1.2	0.0018179	0.35	0.071	0
A613A-C	2.57	0.19	0.0022192	0.0057	0.0063	0
A628A-A	11.3	3.1	0.0018845	0.0271	0.0087	0
A628A-B	150	92	0.002752	0.199	0.067	0
A628A-C	5.2	1	0.0036883	< LOD	1	0
A669A-A	2.06	0.46	0.0034599	0.00083	0.0008	0
A669A-B	3.71	0.47	0.0029901	0.0012	0.0011	0
A669A-C	3.22	0.22	0.0027671	0.001	0.0013	0
A669A-D	0.16	0.017	0.0036904	0.0083	0.0037	0
A669A-E	0.234	0.019	0.0030426	0.013	0.0031	0
A669A-F	0.121	0.013	0.0038971	0.0243	0.0044	0
G640A	5.9	2.8	0.0041784	0.0242	0.0044	0
MU02AA-A	1.25	0.11	0.00080528	0.00017	0.00034	0
MU02AA-B	1.035	0.063	0	0.00088	0.00094	0
T557AA	0.156	0.024	0.0024248	3.1	1.9	0
T557AB	13.6	6.6	0	0.0015	0.0021	0
T557AC	0.743	0.077	0.0036415	< LOD	1	0

All values are in ppm, n.d: not determined, Stdev: standard deviation.

Appendix E - Scheelite grains under cathodoluminescence.

Analytic conditions: 15 kV and 20 nA

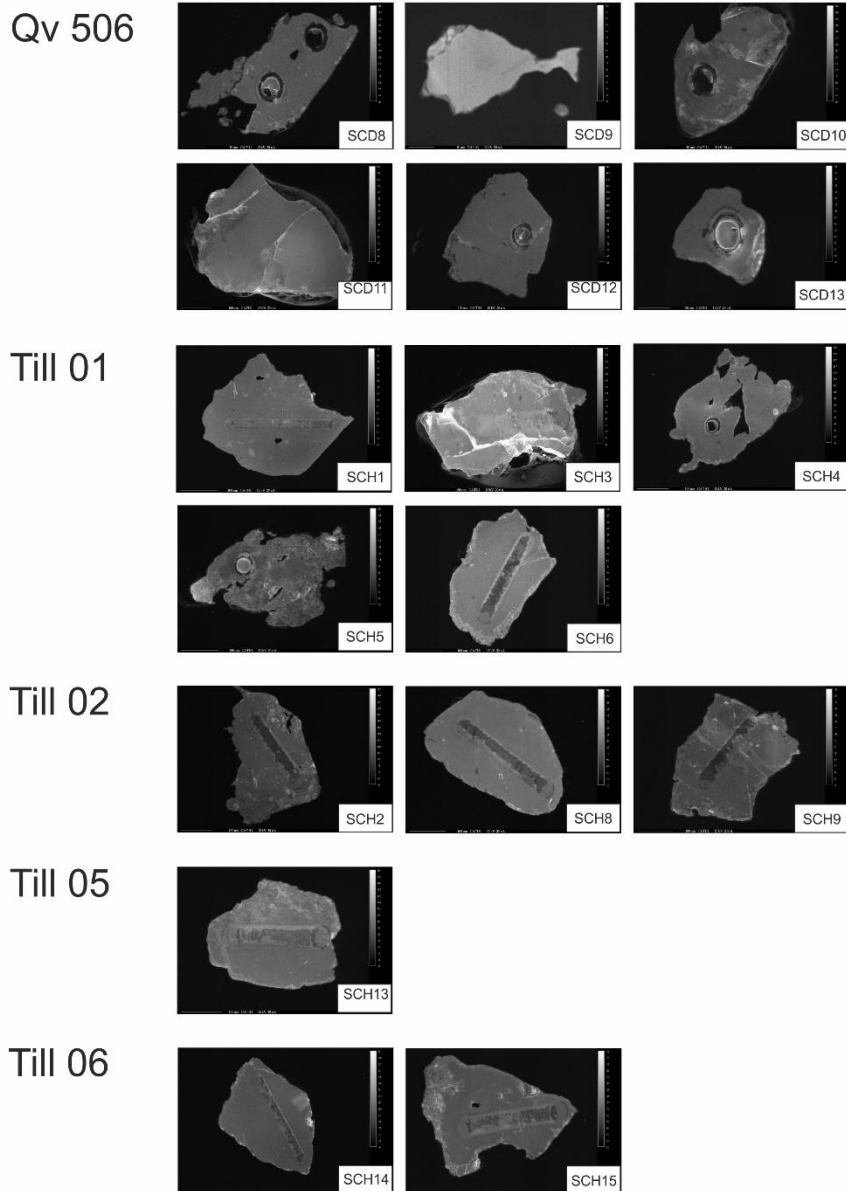


Fig. E-1 Cathodoluminescence of the scheelite grains from Qv 506 and till samples.