Structural Evolution, Geochemistry, and Geochronology of the Magino Gold Deposit, Michipicoten Greenstone Belt, Northern Ontario

by

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Abstract

The Magino gold mine is located approximately 40 km northeast of the town of Wawa within the Michipicoten greenstone belt of the Archean Wawa subprovince. Mineralization is hosted by the ca. 2724 Ma tonalitic Webb Lake stock within the Goudreau Lake Deformation Zone. The Magino deposit formed during two gold mineralization events. The first mineralizing event is coeval with the emplacement of the Webb Lake stock and is manifested by corridors of strong phengite/muscovite-quartz-pyrite alteration and saccharoidal quartz veins. The latter are dated at 2731 ± 6.9 Ma (Re-Os molybdenite) and overlap within error with the age of the host intrusion. The second gold mineralization event is associated with epigenetic quartz-tourmaline-carbonate veins, which were emplaced during the formation of the steep regional foliation along the Goudreau Lake Deformation Zone. The Magino deposit is an excellent example of an Archean intrusion-related gold system later overprinted by deformation, orogenic mineralization, and metamorphism.

Keyword

Wawa Subprovince, Superior Craton, Michipicoten Greenstone Belt, Magino gold mine, intrusion-related gold deposit, orogenic gold overprint

Co-Authorship Statement

The thesis is written as a manuscript for submission to a scientific journal. Although the manuscript benefited from revisions and suggestions by co-authors, I. Campos is responsible for all interpretations presented in the manuscripts and thesis.

The following contributions are made by the co-authors and the candidate in pursuit of this Master of Science Degree:

1. This project was developed by Dr. Ross Sherlock and Dr. Bruno Lafrance. These two co-authors visited the project area and reviewed all aspects of field data and sample collection made by the candidate.
2. Field work and sample collection was completed across the approximately 1 km by 0.5 km Magino mine open pit surface by the candidate with the assistance of Argonaut Gold Inc. field staff over two summer field seasons: 1) May-September 2021, and 2) May-September 2022.
3. A total of one hundred and seventeen (117) distinct rock samples were collected and prepared by the candidate from outcrop and drill core. Thin section billets were cut at Laurentian University using a tile saw and sent to Vancouver Petrographics (https://www.vanpetro.com/) and François Brunet at Laurentian University for preparation of polished thin sections. Whole rock lithogeochemical analysis and testing was done by ALS laboratories (https://www.alsglobal.com/). Two (2) molybdenite samples were prepared and sent to Dr. Robert Creaser at the University of Alberta for Re-Os geochronology isotopic analysis. Petrographic analysis was conducted on the samples by the candidate with consultation from Dr. Bruno Lafrance. Scanning electron microscopy

(SEM) and cathodoluminescence imaging (CL) was done by the candidate in consultation with Dr. Jeffrey Marsh and Dr. Kirk Ross.

4. Field mapping, sample collection, sample preparation, petrographic characterization, figure preparation, geochemical and structural data analysis, and all initial data interpretations were completed by I. Campos under the guidance of the co-authors, who provided intellectual input and reviews.
5. Mineral chemistry white mica indices were devised by I. Campos in collaboration with D. Leung.

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Chapter 1– Introduction

1.1 Research problem

Gold deposits in Archean greenstone belts can form and be subsequently modified by a variety of geological processes (see Robert, 2001; Robert et al., 2005; Goldfarb et al., 2005; Dubé and Mercier-Langevin, 2020; Sillitoe, 2020). These processes can be particularly difficult to resolve because many deposits, such as those in the Archean Abitibi (Canada) and Kalgoorlie (Australia) gold camps, are commonly overprinted by younger hydrothermal, deformation, and metamorphic events which can obscure clues to their initial formation (Sillitoe and Thompson, 1998; Robert and Poulsen, 2001; Groves et al., 2003; Duuring et al., 2007).

The Magino gold deposit is located approximately 40 km northeast of the town of Wawa within the Michipicoten greenstone belt, part of the Archean Wawa subprovince of the Superior Province. Magino is an example of an intrusion-hosted deposit which has been deformed and metamorphosed. Gold mineralization at Magino is primarily hosted in the Webb Lake stock, a steeply-dipping ca. 2724 Ma (Jellicoe et al., 2022) tabular multi-phase tonalitic intrusion, which is located within a major deformation corridor called the Goudreau Lake Deformation Zone (Heather and Arias, 1992). Because the deposit is hosted in an intrusion within a high strain corridor, both intrusion-related and orogenic gold deposit models have been proposed for the Magino gold deposit (Haroldson, 2014) and the nearby Island Gold mine (Jellicoe et al., 2022). As part of this thesis, the characteristics and overprinting relationships between mineralization, alteration, deformation, and metamorphism at the Magino mine are examined in order to resolve the timing and geological controls responsible for its formation.

1.2 Research objectives

The objectives of this thesis are to: 1) determine how the Magino gold deposit formed; 2) establish relevant discriminatory criteria to test previously proposed intrusion-related and orogenic ore deposit models for the Magino gold deposit; and, 3) resolve the geological controls on the emplacement and subsequent modification of the Magino gold deposit.

These goals are achieved through: 1) structural mapping and drill core logging, which established the distribution and relative timing relationships of gold with respect to its host structures; 2) whole rock geochemistry of rock units and auriferous alteration assemblages; and, 3) Re-Os geochronology on molybdenite-bearing auriferous veins, to constrain the absolute timing of mineralization.

1.3 Structure of the Thesis

This thesis is written as two separate chapters. Chapter 1 introduces the thesis and outlines the research problem, objectives, methodology, and structure of the thesis. Chapter 2 is written as a journal manuscript formatted for the journal of Economic Geology. Chapter 2 provides descriptions of field relationships, the host units, and mineralization, and discusses the alteration paragenesis and mineral chemistry, deformation history, deposit-scale geological controls on mineralization, and the age of the deposit. Chapter 2 is co-authored by:

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Analytical methodologies and additional information collected during the research are presented in the accompanying appendices. Appendix A describes the analytical methods used for mineral chemistry, lithogeochemistry, alteration mass balance, principal component analysis (PCA), and Re-Os molybdenite geochronology. Appendix B contains additional rock unit descriptions. Appendix C describes the new phengite and paragonite white mica mineral chemistry indices used in this study. Appendix D compiles all mineral chemical analyses, whole rock lithogeochemical analyses, and structural field measurements used and collected during the study.

Chapter 2– The Magino Gold Deposit, Ontario, Canada: An Archean Intrusion-Related Gold Deposit Overprinted by Deformation, Secondary Mineralization, and Metamorphism

Abstract

The Magino gold deposit is located within the Michipicoten greenstone belt of the Wawa subprovince of the Archean Superior Province, Canada. Magino is a past-producing underground mine which has recently begun operating as a large tonnage open pit gold mine with proven and probable reserves of 2.4 Moz of gold at a grade of 1.15 g/t Au. Gold mineralization is primarily hosted by the ca. 2724 Ma Webb Lake stock (WLS), which occurs as a steeply-dipping tabular multi-phase tonalitic intrusion parallel to the strong regional S_2 foliation along the Goudreau Lake deformation zone. The Magino deposit underwent two gold mineralization events (Au_1, Au_2), three episodes of ductile deformation (D_2, D_3, D_4), and late brittle faulting. The main gold event (Au_1) is coeval with the emplacement of the WLS and is expressed by pervasive phengite/muscovite-quartz-pyrite alteration of the stock and the emplacement of auriferous, molybdenite-bearing, sugary quartz veins. The latter have a molybdenite Re-Os age of 2731 ± 6.9 Ma, which overlaps within error with the age of the WLS. Cogenetic quartz-feldspar porphyry dikes cut across the veins and, together with the veins, are transposed, stretched, and folded within high strain foliated corridors in the WLS. These corridors formed during D_2 N–S shortening and the development of a strong foliation, which became localized along lithological contacts and earlier hydrothermally altered zones in the WLS. The Au_2 event is volumetrically minor and is associated with structurally controlled, syn-D_2, N–S-trending quartz-tourmaline-carbonate veins with alteration selvages of albite-paragonite/muscovite-ankerite-pyrite. The D_3 event resulted in dextral reactivation of the high strain corridors. D_4 vertical loading produced open to tight folds with an axial planar subhorizontal crenulation cleavage which is overprinted by chloritoid porphyroblasts that grew

during upper greenschist-facies peak metamorphism. Magino represents a paragenetically complex Archean intrusion-related gold deposit which was structurally modified and overprinted by a second, minor gold mineralization event during D_2 remobilization of gold from early intrusion-related gold zones or deposition from pulses of hydrothermal metamorphic orogenic fluids that migrated upwards along the high-strain corridors.

2.1 Introduction

Interpreting the geological processes responsible for the formation of ore deposits is often challenging in polydeformed and metamorphosed terranes such as Precambrian greenstone belts (Sillitoe and Thompson, 1998; Groves et al., 2003; Goldfarb and Groves, 2015). In these belts, intrusions can be spatially associated with major deformation zones which host both intrusion-related and orogenic gold mineralization, such as in the Côté Gold Au(-Cu) and Sigma-Lamaque deposits in the Abitibi-Swayze greenstone belt in Canada (Robert et al., 2005; Goldfarb et al., 2005; Dubé and Mercier-Langevin, 2020). As both deposit types may host similar veins, alteration assemblages and associated metals, all of which may be overprinted by subsequent deformation and metamorphism, differentiating between these two deposit types is often difficult (see Sillitoe and Thompson, 1998; Robert and Poulsen, 2001; Groves et al., 2003; Goldfarb and Groves, 2015).

Determining if a deposit is intrusion-related or orogenic is important as this informs the targeting and vectoring strategies used during mineral exploration (Robert and Poulsen, 2001; Groves et al., 2003). If the deposit is intrusion-related, the distribution and magmatic-hydrothermal evolution of fluids derived from intrusive units (e.g., the host intrusion and/or petrogenetically-related dikes and deeper intrusions) are expected to control mineralization and alteration zoning patterns (see Sillitoe, 1993; Lang et al., 2000; Seedorff et al., 2005; Carter et al., 2021). Conversely, if the deposit is orogenic, mineralization will be controlled by the orientation and kinematics of the faults and shear zones responsible for the emplacement of syn-deformational vein systems and the migration of hydrothermal fluids during regional deformation and metamorphism (see Sibson et al., 1988; Goldfarb et al., 2005; Phillips and Powell, 2010).

The timing constraints and features of these deposit types are explored at the Magino mine, located within the Goudreau Lake Deformation Zone in the Michipicoten greenstone belt of the Archean Wawa Subprovince (Fig. 1). It has been interpreted as an intrusion-related gold deposit (Haroldson, 2014) or, alternatively, as an orogenic gold deposit (Heather and Arias, 1992; Jellicoe et al., 2022). In contrast, detailed structural field mapping of the deposit together with geochemistry and geochronology suggest that the Magino deposit is an intrusion-related gold system which was overprinted by subordinate gold-bearing veins emplaced during regional deformation of the deposit.

2.2 Regional geologic setting

The Michipicoten greenstone belt is located in the Wawa Subprovince of the Archean Superior Province, Ontario, Canada (Fig. 1). Its volcanic stratigraphy is divided into three bimodal volcanic cycles: Hawk cycle I, Wawa cycle II, and Catfish cycle III (Sage, 1994). However, recent mapping and geochronological work by Vice et al. (2022) and Mole et al. (2021) suggests that volcanism may be more continuous and complex than previously interpreted. All supracrustal lithologies have been affected by regional greenschist to amphibolite-facies metamorphism (Sage, 1994); as such, the prefix “meta” is omitted for brevity. Hawk cycle I is Mesoarchean in age (ca. 2880 Ma) and consists of a lower ultramafic volcanic sequence overlain by upper mafic and felsic volcanic sequences, whereas Wawa cycle II and

Catfish cycle III are both Neoarchean in age (ca. 2750-2730 Ma and ca. 2730-2700 Ma, respectively; Sage, 1994) and consist of lower mafic and upper felsic volcanic sequences (Turek et al., 1992; Sage, 1994). The three volcanic cycles are cut by synvolcanic intrusions and are separated by chemical sedimentary rocks, including Algoma-type iron formations (Goodwin, 1962; Sage, 1994). The most prominent of these is the belt-wide Michipicoten Iron Formation at the base of the Catfish cycle III volcanic rocks. It is up to 300 m thick and was mined during the turn of the 20th century for iron ore (Goodwin, 1962; Sage, 1994). The volcanic cycles are unconformably overlain by the Doré sedimentary rocks, which occur as three northward-fining sedimentary belts and are interpreted as the youngest supracrustal sequence in the Michipicoten greenstone belt (Sage, 1994). They are bracketed in age between 2698 ± 2 Ma and 2680 ± 3 Ma (youngest detrital U-Pb zircon; Corfu and Sage, 1992) and comprise conglomerates, turbidites, and alluvial-fluvial sandstones, with the former conglomeratic facies being most common in the older, southernmost belt at the type locality of Michipicoten Harbour (Rice and Donaldson, 1992; Corfu and Sage, 1992).

Volcanic cycles I to III and the overlying Doré sedimentary rocks are folded by recumbent F_1 folds, which formed during an early regional D_1 deformation event (Arias and Helmstaedt, 1990; Corfu and Sage, 1992; Sage, 1994). These early structures are refolded and crenulated by tight to isoclinal upright F_2 folds with a steep penetrative regional S_2 cleavage (Arias and Helmstaedt, 1990; Corfu and Sage, 1992; Sage, 1994). Late- to post-tectonic ca. 2670 Ma alkalic (e.g., the 2672.2 ± 3.5 Ma monzodiorite dike at the Island Gold deposit; Jellicoe et al., 2022)) to calc-alkalic intrusions (e.g., the 2671 ± 2 Ma Maskinonge Lake Stock; Corfu and Sage, 1992) cut across the D_2 structures, constraining the age of the D_1 and D_2 deformation events between ca. 2680 Ma, the maximum depositional age of the Doré sedimentary rocks, and ca.

2669 Ma, the minimum crystallization age of the younger calc-alkalic to alkalic intrusions (Sage, 1994; Turek et al., 1996).

The eastern margin of the Michipicoten greenstone belt consists of deformed to gneissic felsic plutonic rocks of the Wawa gneiss domain, which is truncated to the east by the Kapuskasing structural zone and the Abitibi subprovince (Moser, 1994; Percival and West, 1994). Later Matachewan diabase dikes were emplaced along NE and NW-trending faults, and lamprophyre dikes and Proterozoic carbonatites intrude the folded and metamorphosed Michipicoten greenstone belt supracrustal rocks (Vandall and Symons, 1990; Sage, 1994).

2.3 Local geologic setting and deposit history

The Magino gold deposit is a past-producing underground gold mine located approximately 10 km southeast of the town of Dubreuilville, Ontario. It is currently owned and operated by Argonaut Gold Inc. as an open pit mine. From 1986 to 1992, the Magino underground mine produced 114 Koz of gold (from 0.8 Mt of ore at 4.43 g/t gold; Deevy, 1992; Independent Mining Consultants, 2022). The currently operating Magino open pit mine has proven and probable reserves of 2.4 Moz Au (65 Mt at 1.15 g/t gold) and 4.0 Moz Au of measured and indicated resources (132 Mt at 0.94 g/t gold, inclusive of reserves; Independent Mining Consultants, 2022).

The Magino gold deposit is hosted in the deformed tonalitic-trondhjemitic Webb Lake stock (WLS; Fig. 2), which is located along the north limb of the Goudreau Anticline in the Goudreau Lake deformation zone (Heather and Arias, 1992; Sage, 1993). The Goudreau Anticline is a ENE-trending regional synformal F_2 anticline which parallels the central Michipicoten greenstone belt orogenic trend (Heather and Arias, 1992; Sage, 1994). The Goudreau Lake deformation zone hosts several current and past-producing gold mines, including the Magino, Island Gold, Cline, Kremzar, and Edwards mines, and is defined by the intensification of the steep ENE-striking regional S_2 foliation (Arias and Helmstaedt, 1990; Heather and Arias, 1992). The WLS is a north-dipping, elongate polyphase intrusion that can be traced over 2 km along the Goudreau Lake deformation zone, where it varies in width from approximately 250 m to the west to less than 50 m to the east (Sage, 1993). The WLS has a crystallization age of 2724.1 ± 4.3 Ma (Jellicoe et al., 2022) and intrudes Wawa cycle II felsic-intermediate volcanic rocks, the Michipicoten Iron Fm, and Catfish cycle III mafic-intermediate volcanic rocks (Heather and Arias, 1992; Sage, 1994; Haroldson, 2014). Although the upper felsic-intermediate Catfish Cycle III volcanic rocks are ca. 2700 Ma in age (Turek et al., 1992; Sage, 1994), the emplacement of the WLS within the underlying, undated, lower Catfish cycle III mafic to intermediate volcanic rocks suggests that the latter unit must be older than ca. 2720 Ma at Magino.

Three styles of mineralization were previously recognized (see Deevy, 1992; Haroldson, 2014): 1) folded, cm-thick, saccharoidal or “sugary” pale grey quartz veins, which host visible gold within the veins and along white mica-quartz-pyrite alteration selvages surrounding the veins, 2) meter-wide bleached and deformed white mica-quartz-pyrite alteration zones, and 3) barren to weakly mineralized N-trending quartz-tourmaline-carbonate veins which cut the other mineralization styles. Historical stopes and ore zones are oriented either parallel to sub-parallel to the WSW-striking and steeply-dipping regional S_2 foliation (~250/70°), or parallel to the W to NW-trending felsic and gabbroic dikes that cut across the WLS in an en-echelon pattern (Fig. 2).

2.3.1 Description and lithogeochemistry of the Webb Lake Stock and later intrusions

Sixty-three samples were collected from surface exposures and drill core for petrographic, lithogeochemical, and mineral chemistry analysis. Analytical methods and results and additional rock unit descriptions are presented in Appendices A through D.

WLS intrusive phases: The WLS consists of a 100-200 m-wide marginal “melanotonalite”, an 80-100 m-wide lenticular “leucotonalite” core, and cross-cutting meter-thick quartz-feldspar porphyry (QFP) and aplite dikes. Melanotonalite (Fig. 3A) is grey-blue in color, or blue-green spotted white where altered. It is phaneritic to porphyritic and composed of fine- to medium-grained (0.5–3 mm) subhedral to euhedral, concentrically zoned and twinned plagioclase (60–75%) and rounded blue quartz eye (5–20%) phenocrysts within a fine-grained (10–50 µm) matrix of plagioclase and quartz, with minor subhedral primary igneous biotite, anhedral secondary biotite, and chlorite after biotite (5–15%). Leucotonalite (Fig. 3B) is grey to cream in color and pale grey to off-white where altered. It differs from melanotonalite by its lighter color, equigranular texture, coarser average grain size (2–3 mm), and lesser abundance of biotite and chlorite (1–5%). The contacts between these two phases are interdigitated and are largely obscured by strong alteration and deformation, however, rounded xenoliths of melanotonalite are present within the leucotonalite, suggesting that the latter represents a younger intrusive phase. Both melanotonalite and leucotonalite contain xenoliths of the surrounding volcanic and iron formation rocks. QFP dikes have irregular, jagged to lobate, diffuse contacts with both leucotonalite and melanotonalite (Fig. 3C), which suggests that these units were emplaced contemporaneously as comagmatic phases. They are similar in texture and mineralogy to melanotonalite but are consistently porphyritic in texture and contain coarser quartz and plagioclase phenocrysts (1–10 mm in size) than melanotonalite. Aplite dikes are more common in the southwestern portions of the stock where they are in sharp contact with their host melanotonalite. Aplite dikes are red to light grey in color, highly siliceous with a saccharoidal aphanitic texture and are finely layered perpendicular to their walls. They are composed of a very fine-grained mosaic groundmass (25–50 µm) of interlocking granoblastic polygonal plagioclase and quartz grains with minor fine-grained (50–200 µm) subhedral white mica, biotite, chlorite after biotite, and pyrite (1–5%). Melanotonalite, leucotonalite, and QFP and aplites dikes all contain accessory zircon, ilmenite, allanite, apatite, and epidote.

Least-altered melanotonalite and QFP dikes have near identical major and trace element geochemistry. Representative whole rock data of the different least-altered lithologies are presented in Table 1. Melanotonalite and QFP dikes have an average (n = 5 each) major element composition of 68.4 wt.% SiO_2, 15.5 wt.% Al_2O_3, 4.29 wt.% Fe_2O_3t (total), 3.69 wt.% CaO, 1.52 wt.% MgO, 4.71 wt.% Na_2O, 1.09 wt.% K_2O, and 0.003 wt.% Cr_2O_3. Both phases straddle the rhyodacite/dacite-andesite fields on a Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 diagram (Fig. 4A), are within the tonalite and trondhjemite fields on a normative Ab-An-Or diagram (Barker, 1979; Fig. 4B), plot in the tonalite and quartz-diorite fields on a modal Quartz-Alkali Feldspar-Plagioclase (QAP) ternary diagram (Streckeisen, 1974; Fig. 4C), and have a calc-alkaline magmatic affinity (Zr/Y>7) on a Zr versus Y binary diagram (Galley and Lafrance, 2014; Fig. 4D). Melanotonalite and QFP dikes have an identical, strongly fractionated REE pattern with La/Yb_{cn} = ~90 and high total REE abundance that are ~3–70 times greater than chondrite values on a chondrite-normalized rare earth element (REE) plot (Fig. 4E).
Least-altered leucotonalite differs from both melanotonalite by higher average concentrations (n = 6) in SiO_2 (72.1 wt.%), K_2O (1.80 wt.%), lower concentrations in Fe_2O_3t (2.96 wt.%), CaO

(2.40 wt.%), and MgO (0.72 wt.%), larger enrichment in total REE abundance (5–200 times greater than chondrite values), and plot mainly in the trachyandesite field on a Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 diagram (Fig. 4A, F). Aplite dikes are distinguished from all other phases by their much higher average concentrations (n = 3) in SiO_2 (76.9 wt.%), lower average concentrations in Fe_2O_3t (1.52 wt.%), Na_2O (3.65 wt.%), TiO_2 (0.07 wt.%) and P_2O_5 (0.03 wt.%), transitional magmatic affinity (Zr/Y≈7; Fig. 4D), and low average Zr (68 ppm) concentrations.

Mafic and ultramafic dikes: E- to SE-trending, steeply-dipping gabbroic dikes cut across the volcanic rocks and WLS (Fig. 2). They are 1–10 m thick, green in color, fine-grained, and texturally massive. Least-altered samples consist of twinned plagioclase (50–60%), subhedral to anhedral chlorite flakes and calcite (20–30%), coarse subhedral poikilitic ankerite (10–30%), and minor accessory rutile and ilmenite. They have sharp chilled to diffuse contact with leucotonalite and melanotonalite, which also occur as xenoliths within the dikes. SE-trending, steeply to moderately-dipping ultramafic dikes intrude the central core of the WLS (Fig. 2). They are 1–8 m thick, dark green in color, and in sharp chilled contact with their host rocks. Least-altered samples are composed of coarse-grained poikilitic ankerite after amphibole (30–40%) in a fine-grained chlorite groundmass (40–60%) with minor quartz and accessory rutile and apatite. Strongly altered ultramafic dikes are apple-green in color due to the presence of fuchsite.

Late undeformed subvertical NNW-trending diabase dikes and subhorizontal sills transect the WLS and surrounding volcanic rocks (Fig. 2). The dikes are 5–20 m wide and spaced 300 m to 600 m apart. They are massive and unfoliated, dark grey to black, and medium-grained with fine-grained chilled margins. They are composed of amphibole (10–20%), clinopyroxene (10–20%), and minor euhedral to subhedral magnetite set in a twinned plagioclase (50–60%) and quartz (5–10%) groundmass.

2.4 Mineralization and alteration

Two gold events are recognized within the WLS and adjacent volcanic rocks. The first event (Au_1) represents the dominant style of mineralization and alteration, and accounts for the majority of gold, whereas the second event (Au_2) represents a late, minor event. Representative whole rock data of the different alteration assemblages are presented in Table 3.

2.4.1 Type 1 alteration and mineralization event (Au_1)

Au_1 mineralization is associated with pervasive disseminated “Type 1” alteration assemblages and E–W to N–S-trending steeply-dipping sugary quartz (SQ) veins (Table 2; Fig. 5A, B). Type 1 alteration is locally more prevalent along QFP and aplite dikes, which coincide with tabular corridors of continuous mineralization (Fig. 6A, B). The mineralized corridors, namely, the Scotland Zone, 42 Zone, Sandy Zone, and South Zone, are characterized by closely-spaced SQ veins, strong Type 1 alteration, and strong deformation. They are 10’s of meters wide, steeply-dipping, and extend over 100’s of meters along strike and down dip.

Type 1 alteration is subdivided into two locally overlapping and vertically zoned (Fig. 6B) mineralized subtypes which vary in intensity. Type 1A biotite ± pyrite alteration assemblages (Fig. 7A) and stringers (Fig. 7B) occur at vertical depths greater than ~400 m, whereas Type 1B phengite/muscovite-quartz ± Mg chlorite ± pyrite alteration assemblages (Fig. 7C) overprint and predominate at shallower depths. Gold occurs as streaks and blebs within the SQ veins, as disseminated grains within the alteration assemblages, and as round inclusions within pyrite. Two textural types of pyrite are present within Type 1 assemblages and vary in abundance from 1% to 10%. Arsenian, porous pyrite (Py1a) is fine-grained (50–200 μm), anhedral to subhedral, and occurs with, and contains inclusions of chalcopyrite, scheelite, pyrrhotite, arsenopyrite, electrum, gold, Au/Ag-tellurides, sphalerite, galena, pentlandite, and gersdorffite in decreasing abundance. Py1a is overgrown by an inclusion and arsenic-poor, subhedral to euhedral pyrite (Py1b; Fig. 7D).

Type 1A alteration – Biotite ± pyrite: Type 1A alteration is characterized by biotite and pyrite occurring at depth in the deposit. Biotite forms irregular stringers, anhedral to subhedral clusters, and isolated fine-grained (10–100 μm) flakes occurring interstitially to and replacing primary igneous plagioclase grains. The biotite stringers are mm- to cm-wide and, in addition to biotite, are composed of minor phengite/muscovite, chlorite after biotite, and variable trace magnetite, tourmaline, and calcite.

Type 1B alteration – Phengite/muscovite-quartz ± pyrite ± Mg chlorite ± K-feldspar: This alteration forms the most common and predominant mineralized assemblage in the deposit. Type 1B alteration is grey-beige in appearance and characterized by replacement of primary igneous plagioclase grains by very fine-grained (10–100 μm) phengite/muscovite flakes, pyrite, quartz, ± Mg chlorite, and minor K-feldspar and calcite. Aplite dikes may have intense Type 1B alteration halos, as observed in the southwestern part of the deposit and along the South Zone, where a narrow corridor of these dikes transects melanotonalite and mafic volcanic rocks. Type 1B alteration within the mineralized mafic volcanic rocks in this zone is manifested by biotite, white mica, pyrite, pyrrhotite, and magnetite.

Sugary quartz (SQ) veins: SQ veins represent the most significant auriferous vein generation in the deposit. SQ veins (Fig. 7F) are centimeter-thick, planar, steeply-dipping pale grey quartz veins with parallel walls and narrow, intense Type 1B alteration selvages (Fig. 7G). They can be traced over 10's of meters and constitute volumetrically up to 5% of the WLS but are more abundant near felsic dikes and in the mineralized corridors, where they constitute up to 15% of these zones. SQ veins are composed of fine-grained (<100 μm) granular quartz grains with cuspate to lobate 120° triple-point sutured grain boundaries, giving the veins their distinct saccharoidal "sugary" texture. Wall-parallel laminae are typically defined by pyrite, molybdenite, and/or phengite/muscovite. Gold-bearing SQ veins are commonly associated with molybdenite, which may occur both within the veins and along their margins. In weakly-deformed portions of the stock outside the mineralized corridors, SQ veins occur as closely-spaced (<20 cm), mutually-overprinting E–W-trending sheeted veins or E-, NNW-, and NNE-trending conjugate stockworks (Fig. 8A, B). The veins are transected by QFP dikes (Fig. 8C) that are affected by weak Type 1B phengite/muscovite alteration (Fig. 8D). Both aplite and QFP dikes are locally cut by mineralized SQ veins. SQ veins are also cross-cut by gabbroic dikes.

Type 1 alteration mineral chemistry: In samples grouped by gold grade, the Mg number (Mg# = Mg/[Mg+Fe]*100) of Type 1A biotite increases with increasing gold concentrations from 39 to 45 in weakly altered zones with less than 15% biotite, to 45 to 60 in strongly altered zones with more than 15% biotite. Primary igneous plagioclase grains overprinted by Type 1A and 1B alteration retain their primary oligoclase-andesine composition (An20–45; Fig. 9B). White mica and chlorite, which both overprint Type 1A biotite, plot as phengite with high phengite indices (PhI; 0.20–0.35 PhI), and as diabantite, pychnochlorite, and ripidolite, respectively (Fig. 9C–E). Type 1B white mica in intensely altered zones characterized by complete feldspar destruction record lower paragonitic indices (PaI; 0 to ~0.20 PaI) than in weakly altered zones containing less than 15% white mica (0 to ~0.30 PaI; Fig. 9C, D). SQ vein-related alteration and intense Type 1B alteration mineral compositions are largely indistinguishable.

2.4.2 Type 2 alteration and mineralization event (Au_2)

Type 2 alteration is subdivided into Type 2A and Type 2B alteration. Red Type 2A alteration consisting of hematite-Fe chlorite-ankerite ± pyrite assemblages are associated with steep to flat-lying quartz-carbonate (QC) veins (Fig. 10A), whereas Type 2B albite-paragonite/muscovite-ankerite-tourmaline ± pyrite alteration assemblages occur as texturally-destructive, white to pink alteration halos around steep, N-trending quartz-tourmaline-carbonate (QTC) veins (Fig. 10B) and, less commonly, QC veins. Pyrite (Py2) associated with Type 2 alteration is coarse (up to cm-wide) and occurs as subhedral to euhedral semi-massive aggregates within and immediately along QC and QTC veins, and in association with chalcopyrite and pyrrhotite. Gold associated with the minor Au_2 event occurs as a late infilling phase within QTC veins (Fig. 10C), and as inclusions and overgrowths in Py2 grains in association with bismuth-tellurides (Fig. 10D). Both vein types cut across Type 1 alteration assemblages, biotite stringers, and SQ veins.

Type 2A alteration – Hematite-Fe chlorite-ankerite ± pyrite: Type 2A alteration occurs as a halo around QC veins, is typically barren, and consists of hematite, Fe chlorite, ankerite, and minor pyrite. QC veins are systematically distributed across the WLS as millimeter to centimeter-scale fibrous veinlets composed of quartz, calcite, ankerite, Fe-rich chlorite, with lesser kaolinite/dickite, anhydrite, barite, magnetite, and monazite. QC veins and Type 2A alteration are more abundant at contacts between melanotonalite and leucotonalite, as well as along a roughly 25 m wide zone located between the 42 Zone and the Sandy Zone (Fig. 6B).

Type 2B alteration – Albite-paragonite/muscovite-ankerite-tourmaline ± pyrite: Type 2B alteration occurs along QTC vein margins and consists of albite, paragonite/muscovite, ankerite, tourmaline, pyrite, and minor monazite and xenotime. QTC veins are typically a few centimeters thick and composed of quartz, ankerite, tourmaline, and minor biotite replaced by chlorite. The veins have fibrous, laminated textures and occur as arrays of extensional veins, ladder veins perpendicular to deformed dikes, or as complex networks of veinlets and breccia which form pervasive Type 2B alteration zones along the contacts between leucotonalite and melanotonalite (Fig. 6B). Larger, meter-scale QTC veins containing randomly-oriented, foliated, and ankerite-fuchsite altered wall rock clasts are found along mafic and ultramafic dike margins. Late, relatively undeformed flat-lying QTC veins cut across boudin necks of deformed, steep QTC veins.

Type 2 alteration mineral chemistry: Feldspar associated with Type 2A alteration is of oligoclase composition (An10–30), whereas feldspar associated with Type 2B alteration is primarily albite (An0–17) (Fig. 9B). Type 2A white mica straddle the phengite and muscovite fields, whereas Type 2B white mica vary from muscovite to near end-member paragonite compositions (~0.65–0.95 PaI; Fig. 9C, D). Type 2A chlorites plot predominantly in the ripidolite field, whereas chlorite grains which infill QTC and QC veins plot across the pseudothuringite, daphnite, ripidolite, and brunsvigite fields (Fig. 9E). The composition of alteration minerals within high strain zones, described further below, is highly variable and reflects the superposition of Type 1 and Type 2 alteration, and metamorphism. In these settings, plagioclase is of albite to andesine composition (An0–45), white mica compositions range between phengite to near-endmember muscovite and paragonite (Fig. 9B–D), chlorites plot in the ripidolite and daphnite fields (Fig.

9E), and are, therefore, collectively broadly more similar in composition to Type 2 rather than Type 1 alteration minerals.

2.4.3 Alteration mass balance

Sampling and results: Mass balance calculations were done using Grant (1986)'s single precursor isocon-correction method (Appendix A) for the two most commonly auriferous alteration types, that is, Type 1B (Au_1) and Type 2B (Au_2). Samples MA-CP-S10 and MA-CP-S12 are Type 1B and Type 2B-altered leucotonalite samples, respectively, whereas sample MA-CP-S13 represents the least-altered protolith (Table 3). Mass balance results are displayed as isocon diagrams and isocon-corrected histograms showing absolute and relative elemental enrichment/depletion. Elements which record absolute changes less than their detection limits or relative changes less than 20% are deemed inconclusive or insignificant and are not discussed.

Type 1B alteration: Type 1B alteration records overall mass gain, as indicated by the shallower slope of the isocon (1:1.17) with respect to the 1:1 constant mass line (Fig. 11A). The sample underwent moderate (>20% relative change) mass gains in SiO_2, significant (>100% relative change) mass gains in Rb, K_2O, Ba, W, Mo, Cu, Au, Ag, Bi, As, Te, S, and F, moderate (>20% relative change) mass losses in CaO and C, and significant mass losses (>80% relative change) in Na_2O (Fig. 11B).

Type 2B alteration: Type 2B alteration records overall mass loss (1:0.71 isocon slope; Fig. 11C), moderate (>20% relative change) mass gains in Na_2O, Sr, and ΣLREE, with significant (>100% relative change) mass gains in W, Au, Bi Te, and S, moderate (>20% relative change) mass losses in SiO_2, CaO, MgO, Fe_2O_3t, TiO_2, C, F, and LOI, and significant mass losses (>80% relative change) in Rb, K_2O, Ba, and Cu (Fig. 11D).

2.4.4 Principal Component Analysis (PCA)

Sampling and results: Principal Component Analysis (PCA) was done on multi-element geochemical data from five drill holes (from west to east, MA22-131, MA22-145W1, MA22-142W1, MA22-130, and MA22-129) to assess predominant deposit-scale geochemical trends. A summary of the PCA method and its implementation in this study is presented in Appendix A. The drill holes are spaced approximately 150 m apart and were drilled from north to south across the central (i.e., near section A–A') to eastern portion of the deposit. The drill holes begin near or within the surrounding volcanic rocks along the northern margin of the deposit and terminate in the WLS at various depths.

The resultant principal components (PCs) PC1 (32%), PC2 (14%), and PC3 (13%), together account for 59% of dataset variance (Fig. 12A) and form the basis of the results presented here. Mafic-ultramafic units and compatible elements (e.g., Fe, Ca, Cu, Cr, Mg, Ni, Co) record negative PC1 loadings, whereas felsic units and incompatible rock-forming elements (e.g., LILEs, HFSEs, Zr, U, Th) record positive PC1 loadings (Fig. 12B, C). Negative PC2 loadings are associated with intervals containing large QTC veins, along with Re and Mo (Fig. 12B, D). PC3 is most strongly correlated with Au (0.72 coefficient of correlation) compared to PC1 (0.19) and PC2 (0.17; Table 4). Higher Au groupings within each lithology are also positively correlated with PC3 (Fig. 12C, D). Type 1B alteration-associated elemental enrichments (K, Rb, Ba, Rb, As, S, Ag, Bi, Te, Mo, W) are positively correlated to PC1, PC3, and Au (>0.10 correlation factor). Among these, W, Ag, As, and Bi are strongly positively correlated with both PC3 and Au (>0.50 correlation factor; Table 4). Mg, Sc, Fe, Zn, P are positively correlated with PC3 but are directly negatively correlated with Au (<0.10). These results are consistent with alteration mass balance calculations, and suggest that PC1, PC2, and PC3 describe the geochemical associations related to lithological differentiation, veining, and auriferous hydrothermal alteration, respectively.

2.5 Structural geology and metamorphism

The WLS is overprinted by three ductile deformation events (D_2, D_3, D_4,) and one late brittle faulting event (Table 5; Fig. 13A). D_1 structures are observed in other parts of the Michipicoten greenstone belt (see Arias and Helmstaedt, 1989; Heather and Arias, 1992) but are not recognized in the Magino mine area.

2.5.1 D_2 deformation event

The D_2 deformation event is characterized by a regional cleavage (S_2), which is the most prominent structural feature in the deposit area. S_2 is a steep, WSW-striking, penetrative cleavage (~250°/70°) which overprints all lithological units other than the late diabase dikes. S_2 is more pronounced within the volcanic rocks surrounding the WLS but is weakly expressed within the WLS as a spaced anastomosing cleavage defined by fine-grained biotite, white mica, chlorite, and rutile. In felsic lapilli tuff units, S_2 is a continuous cleavage defined by flattened quartzo-feldspathic clasts and feldspar phenocrysts which typically have equal elongation of 2 to 40 mm along S_2 cleavage planes (Fig. 13B, C). In mafic volcanic rocks, S_2 is expressed as a slaty cleavage defined by fine-grained (~50 µm) chlorite and rutile needles oriented parallel to strongly flattened meter-scale pillows. In iron formation, S_2 is expressed as an axial planar cleavage to tight to isoclinal upright WSW-striking F_2 folds which plunge ~5–10° to the W (Fig. 13D). North of the WLS, F_2 folds show an S-facing-east vergence. D_2 high strain zones occur immediately along the outer margins of the WLS and, within the WLS, follow strongly altered zones, such as the mineralized corridors and lithological contacts (e.g., Fig. 13E). These zones are characterized by a strong, continuous S_2 cleavage and transposition (Fig. 14A), folding, and stretching of veins and dikes.

Key overprinting relationships are observed in weakly deformed melanotonalite in the eastern part of the Magino mine area, where a SQ vein stockwork and cross-cutting QFP dike are both overprinted by a weak S_2 spaced cleavage and narrow shears (Fig. 8A, C). This suggests that the vein stockwork formed before the emplacement of the QFP dike and the development of the S_2 cleavage. The veins are folded and dragged in both clockwise and anticlockwise manner into parallelism with the S_2 cleavage in a nearby D_2 high strain zone with strong sericitic (phengite)-pyrite alteration, which is consistent with a strong pure shear component of shortening across the high strain zone. In other D_2 high strain zones within the WLS, SQ veins are stretched into subhorizontal boudins (Fig. 14B) and folded parallel to an axial planar sericitic S_2 cleavage (Fig. 14C). This collectively suggests that the mineralized veins, QFP dikes, and Type 1B alteration pre-date the formation of these deformation zones.

QC and QTC veins, in contrast, cut across the S_2 cleavage but are also overprinted by D_2 structures. This is well illustrated on a detailed inclined outcrop map shown in Fig. 15A of a D_2 high strain zone hosted by mafic volcanic rocks along the northern margin of the WLS. On this outcrop, iron formation beds, QFP dikes, and QC veins are tightly folded and transposed parallel to the S_2 cleavage and axial plane of F_2 folds (Fig. 15A–C). North-trending QTC veins with Type 2B alteration selvages transect the folds and S_2 foliation but are also gently F_2 folded (Fig. 15D), suggesting that these veins were emplaced late during the development of the D_2 high strain zone.

2.5.2 D_3 deformation event

D_3 structures are best developed within the volcanic rocks and are primarily represented by a moderately-dipping SW-striking S_3 cleavage (~235°/50°). S_3 is generally oriented anticlockwise to the S_2 cleavage and is axial planar to crenulations defined by the microfolded S_2 cleavage and lithological contacts, and to outcrop-scale asymmetric Z-shaped F_3 folds. Dextral transcurrent shear zones formed during the D_3 deformation event. One such shear zone mapped in detail occurs along juxtaposed gabbroic and QFP dikes oriented parallel to a strong S_2 cleavage within felsic volcanic rocks 50 m north of the WLS (Fig. 16A). Within the sheared gabbroic dike, a S_3 crenulation cleavage is axial planar to F_3 microfolds defined by the crenulated S_2 cleavage. The S_3 cleavage spans the width of the dike and is oriented ~45° anticlockwise to it and the crenulated, contact-parallel S_2 cleavage within the adjacent QFP dike (Fig. 16B). The S_3 cleavage is axial planar to Z-shaped folds that plunge ~35° to the SW. Similar Z-shaped folds are defined by the folded S_2 cleavage and folded contact between the QFP dike and volcanic rocks (Fig. 16C) and occur as flanking structures adjacent to steep, N-trending QTC veins which cut across the units (Fig. 16D). These veins can be traced from the volcanic rocks into the QFP dike, and across the sheared gabbroic dike, where the veins are dextrally deflected and offset, boudinaged, and folded by F_3 folds (Fig. 16B). Within the WLS, D_3 structures and dextral shear fabrics are preferentially observed along D_2 high strain zones, E-trending dikes, and Type 1B alteration zones. A NE-trending sericitic S_3 cleavage within these zones is deflected clockwise along dextral shear bands and asymmetric quartz porphyroclasts (Fig. 16E), and is overgrown by randomly-oriented chlorite porphyroblasts, suggesting post-kinematic growth of these minerals with respect to the S_3 cleavage. Along these zones, dikes and veins are tightly folded by Z-shaped F_3 folds.

2.5.3 D_4 deformation event and peak metamorphism

During the D_4 deformation event, the S_2 and S_3 cleavages were crenulated with the formation of a new, flat-lying, S_4 crenulation cleavage defined by white mica, chlorite, and tourmaline. The S_4 cleavage has an average strike of 205° and dip of 15° and is axial planar to open F_4 folds with subhorizontal fold axes plunging 0°–10° to the W to SW. F_4 folding resulted in local reorientation of the S_2 foliation from north-dipping to south-dipping and the formation of broad, gentle recumbent folds (Fig. 17A). F_4 fold axes are parallel to a pervasive shallowly-plunging L_4 crenulation lineation which overprints the S_2 cleavage and is expressed as a fine, overprinting, crinkle lineation within D_3 dextral shear zones.

Within Type 1B-altered and S_4-foliated volcanic rocks south and north of the WLS, chlorite, chloritoid, and biotite porphyroblasts contain internal quartz and rutile inclusion trails continuous with the external F_4-crenulated S_2 cleavage in the rock matrix (Fig. 17B), suggesting that the D_4 structures formed prior to peak metamorphism and the growth of the porphyroblasts. Chloritoid occurs along SQ veins and felsic dike contacts, and thus grow in rocks that were hydrothermally altered prior to metamorphism. Garnet porphyroblasts which overgrow the S_2 cleavage are variably found within the surrounding proximal chlorite-magnetite-hematite altered mafic and felsic volcanic rocks; however, the porphyroblasts' relationship to the S_3 and S_4 cleavages is unclear.

2.5.4 Late brittle faulting event

Decimeter left-lateral offset of lithological units are observed in plan view along NNW-trending subvertical diabase dikes emplaced across the WLS. A more significant, roughly 100 meter, E-side-up offset of a flat-lying diabase sill is observed in vertical section along its contact with the diabase dike located in the central part of the WLS. This suggests that the dike acted either as a plane of weakness that localized the formation of E-side-up sinistral faults or, alternatively, was emplaced during faulting. A similar sense of movement is observed in the eastern part of the WLS at the contact between another diabase dike and carbonate-facies iron formation. Along the faulted contact, the dike and iron formation are strongly oxidized and contain elevated (up to 5%) fine-grained disseminated pyrite. The S_2 cleavage in the iron formation is deflected in anticlockwise manner along both horizontal and vertical surfaces along the faulted contact (Fig. 17C), suggesting sinistral, oblique E-side-up movement.

2.6 Re-Os molybdenite geochronology (ID-TIMS)

Sampling and results: Two molybdenite-bearing samples were selected for Re-Os isotope dilution-thermal ionization mass spectrometry (ID-TIMS) dating to provide absolute timing constraints on the predominant Type 1B auriferous alteration event (Au_1). The methodology and results of the Re-Os age determination are presented in Appendix A and Table 6, respectively. The selected samples (LU-MA20-045B and LU-MA21-063) consist of molybdenite-bearing SQ veins collected from mineralized drill core intervals.

Sample LU-MA21-063 (Fig. 18A) was obtained from drill hole MA21-063 at 460 m downhole depth (36.8 g/t Au over 1 m interval) and consists of a gold-bearing SQ vein with a thin, intense Type 1B phengite/muscovite-quartz-pyrite alteration selvage (Fig. 18B) within weakly deformed melanotonalite. Molybdenite occurs within the vein and along the vein alteration halo as discontinuous ribbons in association with gold (Fig. 18C), rutile, and pyrite, and as inclusions with gold in pyrite grains. Two analyses of this sample yielded ages of 2727 ± 12 Ma and 2730 ± 12 Ma. Sample LU-MA20-045B (Fig. 18D) was obtained from drill hole MA20-045 at 340 m downhole depth (2.76 g/t Au interval) and consists of several boudinaged SQ veins within strongly deformed and intensely Type 1B-altered melanotonalite within a mineralized corridor. Molybdenite occurs within the veins and as matrix-disseminated flakes with a preferred orientation parallel to the S_2 cleavage. Foliation in the sample is defined by alternating microdomains of aligned phengite/muscovite and fine-grained recrystallized quartz showing undulatory extinction, sutured grain boundaries and triple junctions. Molybdenite also occurs as inclusions and overgrowths in inclusion-poor pyrite (Py1b) which mantles inclusion-rich arsenian pyrite (Py1a; Fig. 18E), suggesting that molybdenite and Py1b formed concurrently. Analysis of this sample yielded an age of 2737 ± 12 Ma, which is the same age within error as that of the previous sample. Collectively, these results and intergrowth of gold and molybdenite observed across the deposit (Fig. 18F) indicate a weighted mean Re-Os molybdenite age of 2731 ± 6.9 Ma (mean square of weighted deviates [MSWD] = 0.73; $n = 3$) for the main Au_1 gold mineralization event at the Magino deposit.

2.7 Discussion

2.7.1 Alteration systematics

The Au_1 event is characterized by the pervasive replacement of primary igneous plagioclase by biotite-phengite-muscovite, Si- and Mg-rich chlorite, K-feldspar, and quartz (Type 1B alteration). This resulted in mass gains in K_2O, SiO_2, Rb, Ba, and F, and mass losses in Na_2O and CaO. In contrast, the later Au_2 event is characterized by the presence of albite and the replacement of muscovite/phengite by paragonite in QTC vein alteration halos (Type 2B alteration). These mineralogical changes were accompanied by mass gains in Na_2O and Sr and losses in K_2O, Rb, and Ba. The correlation between Au and Mo, Cu, Ag, As, and felsic rock-forming elements, as shown by mass balance calculations on felsic Type 1B-altered samples and PCA on all samples, may be explained by the association between Au_1 pyrite (Py1a, Py1b) with molybdenite, chalcopyrite, electrum, arsenopyrite, and Ag/Au-tellurides present in

Type 1B-altered melanotonalite, leucotonalite, and QFP dikes. Thus, the Au_1 event is the dominant gold event at Magino and is associated with Type 1B phengitic alteration and felsic lithologies.

2.7.2 Relative and absolute chronology of mineralization events

The QFP dikes share irregular, jagged contacts with the main tonalitic phases of the WLS. They have similar geochemistry and mineralogy, which together with their irregular contacts suggest that they were emplaced broadly contemporaneously as part of the same magmatic episode. The association between SQ veins with the Au_1 event and Type 1B alteration selvages, and the mutually-overprinting relationship between SQ veins and QFP dikes that subsequently underwent similar Type 1B alteration, further suggest that the SQ veins were emplaced, and the host rocks were altered, during the same magmatic and hydrothermal event. This is corroborated by the weighted mean Re-Os age of 2731 ± 6.9 Ma of molybdenite associated with gold in the SQ veins (Table 6), which overlaps in age within error with the WLS (2724.1 ± 4.3 Ma; Jellicoe et al., 2022). This indicates that the Au_1 gold event pre-dates regional deformation and metamorphism but is coeval with the emplacement of the WLS (Fig. 19).

During the D_2 deformation event, the SQ veins were folded and boudinaged, and Type 1 alteration zones were overprinted by the S_2 cleavage. QC and QTC veins are fibrous, show mutually-overprinting relationships with the S_2 cleavage and F_2 folds, contain S_2-foliated and altered wall rock fragments, and are oriented roughly perpendicular to the S_2 cleavage. This indicates that they were emplaced as extensional veins during the D_2 deformation event subparallel to a bulk N-S shortening direction. The association between these veins and Au_2 mineralization further implies that the Au_2 event occurred during the D_2 deformation event (Fig. 19). Metamorphic minerals completely overgrow both Au_1, Au_2 alteration assemblages and the

D_2, D_3, D_4 fabrics recorded in the WLS and surrounding altered felsic volcanic rocks. This suggests that the deposit reached peak upper greenschist facies conditions after its deformation across three events.

2.7.3 Controls on mineralization

The spatial association between QFP and aplite dikes, SQ veins, and Type 1 alteration assemblages and corridors of mineralization strongly suggests that these dikes represent the primary structural-lithological control on gold mineralization at Magino. The syn- to post-Au_1 timing of the dikes suggests that they exploited similar favourable structural pathways as the hydrothermal fluids which produced the main auriferous Type 1 alteration assemblages. The resulting rheologically weak, mica-rich alteration zones acted as mechanical anisotropies which facilitated strain localization during deformation. Such competency contrasts strongly influence the nucleation and growth of shear zones (Segall and Simpson, 1986; Nguyen et al., 1998; Cox, 2020), which at Magino resulted in the formation of the localized and strongly deformed mineralized corridors. Although shear zones also formed along the mafic-ultramafic dikes which cut the WLS, the dikes are typically unaltered and unmineralized, except where cut by QTC veins. The preferential and localized occurrence of Type 2B alteration and QTC veins and breccia along lithological unit contacts suggests that competency contrasts promoted the emplacement of Au_2 alteration and mineralization during the D_2 deformation event. As such, the distribution and orientation of dikes and tonalite intrusive phase contacts represent second-order controls that influenced the superposition and overall geometry of mineralization. Later D_3 dextral reactivation and F_4 folding along these zones represent third-order structural modifications that resulted in localized buckled and shallowly dipping geometries.

2.7.4 Nature of the Au_2 event

QTC veins at Magino are analogous to quartz-carbonate ± tourmaline vein systems that form orogenic gold deposits along major crustal-scale structural corridors like the Cadillac-Larder Lake deformation zone, such as those classically described in the Val d'or gold camp in the Abitibi greenstone belt, Canada (see Robert, 1994; Dubé and Gosselin, 2007; Beaudoin and Chiaradia, 2016). The similar structural setting of the Magino gold deposit within the Goudreau Lake deformation zone, which has been interpreted as the westward extension of the Cadillac-Larder Lake deformation zone (Leclair et al., 1993), suggests that the QTC veins and associated Au_2 mineralization, although a minor event at Magino, may have formed from similar processes. Two notable differences between the Magino deposit and those of the Val d'or camp are (see Robert, 1994; Herzog et al., 2023): 1) the pre-peak metamorphic timing of the QTC veins at Magino, and; 2) the absence of a nearby major unconformity and sedimentary rocks, which are typical of orogenic quartz-carbonate vein deposits (Robert and Poulsen, 2001; Robert et al., 2005).

Recent work has emphasized the importance of discriminating between primary versus secondary (i.e., remobilization) gold deposition processes to explain the formation of paragenetically late, high-grade gold common in Archean orogenic deposits (Voisey et al., 2020; Hastie et al., 2020; Wehrle et al., 2022). This is particularly relevant for the Magino deposit, given the superposition of two clearly distinguished pre- and syn-regional deformation gold events, Au_1 and Au_2, respectively. The paragenesis of Au_1 pyrite provides textural evidence that early gold and metals were either incorporated as inclusions within Py1a or directly liberated and precipitated through coupled dissolution reprecipitation reactions (Putnis, 2002; Hastie et al., 2021). Later Au_2 pyrite and gold is closely associated with coarse bismuth telluride minerals, which comprise low melting point chalcophile elements, that can form fluid-mediated polymetallic melts that scavenge and transport gold at greenschist-facies metamorphic conditions (Frost et al., 2002; Tomkins et al., 2007; Tooth et al., 2011; Hastie et al., 2020). This coarse gold-bismuth telluride association was also noted during a previous study at Magino (see Haroldson, 2014) involving electron microprobe analysis of vein-hosted free gold, which obtained Au fineness values ranging between 812 to 957. These are considered common features of remobilized gold (Tooth et al., 2011; Hastie et al., 2021), as described in deposits both elsewhere in the Michipicoten greenstone belt (e.g., Wawa gold corridor; Wehrle et al., 2022; Fig. 1) and in orogenic systems worldwide (Morrison et al., 1991; Voisey et al., 2020; Hastie et al., 2020). Thus, given the structural setting of Magino, and the textures and associations described above, it is unclear whether the Au_2 event involved the introduction of minor "new" metamorphic-orogenic gold, or the local remobilization of earlier gold sourced from Au_1 pyrite elevated in Au, Bi, and Te during deformation and metamorphism.

2.7.5 Regional implications

The interpretation of Magino as an intrusion-related deposit contrasts with that of the neighboring Island Gold deposit (Jellicoe et al., 2022), located less than 1 km east and along strike of Magino (Fig. 2). The Island Gold deposit is the largest operating underground gold mine in the Michipicoten greenstone belt and is hosted by Wawa cycle II felsic to intermediate volcanic rocks. It shares many similarities with the Magino deposit, as described by Jellicoe et al. (2022), including: 1) a close spatial association with the WLS; 2) early, strongly deformed and locally folded auriferous grey quartz veins (SQ veins at Magino); 3) auriferous K-rich white mica-biotite-chlorite-quartz-pyrite alteration (Type 1 alteration at Magino) and; 4) overprinting quartz-tourmaline veins (QTC veins at Magino). Jellicoe et al. (2022) describe the Island Gold deposit as an atypical orogenic gold deposit which formed from magmatic fluids which flowed into the strain shadow of the WLS during D_2 sinistral transpression. Although we also propose a magmatic-hydrothermal origin for the main gold mineralization event at the Magino deposit, its formation was coeval with the emplacement of the WLS and, in contrast, deformation fabrics were subsequently superposed on the deposit and localized within hydrothermally altered zones. The more competent host intrusive rocks at the Magino deposit likely contributed to the preservation of early pre-regional deformation features, whereas the weaker volcanic host rocks at Island Gold may have been more strongly overprinted by deformation to produce a closer shear zone association. Thus, the Magino deposit and, possibly, the Island Gold deposit given its proximity and similarities, are intrusion-related gold deposits that were structurally modified during regional deformation. The WLS did not simply act as a physical host for mineralization as implied by Jellicoe et al. (2022); rather, it was a key component of the magmatic-hydrothermal mineral system that produced the Magino deposit.

The Magino deposit bears many similarities to the Renabie deposit located in the eastern Michipicoten greenstone belt (Fig. 1). The Renabie deposit is hosted by the 2720 ±1.4 Ma Missinaibi Lake Batholith and, like the Magino deposit, is a pre-regional deformation, intrusion-related deposit consisting of auriferous saccharoidal quartz veins and associated quartz-white mica-pyrite hydrothermal alteration (McDivitt et al., 2017, 2018, 2020). Thus, the Renabie and Magino deposits, and perhaps the Island gold deposit, formed during a belt-wide ca. 2725–2720 Ma magmatic-hydrothermal metallogenic event (Fig. 19), which is, notably, coincident with a peak in volcanism and plutonism recorded across the Wawa and Abitibi subprovinces at ca. 2725–2720 Ma (Mole et al., 2021).

2.7.6 Comparison to intrusion-related gold deposits

While the classification of modern intrusion-related gold deposit models is relatively well defined and largely based on differences in oxidation state, tectonic setting of the host intrusions, vein textures, and sulfide and alteration mineralogy (Sillitoe, 2020), there are often uncertainties and disagreements when applying these genetic models to deposits in Precambrian metamorphic terranes (Sillitoe and Thompson, 1998). Despite this, Magino shares features common to both modern intrusion-related systems and their Archean analogues, such as the Côté Gold (Katz et al., 2020), Flavrian–St-Jude (Galley, 2003; Meng et al., 2021), Windfall (Choquette and Kontak, 2023), and Renabie deposits (McDivitt et al., 2017). These similarities include (see Meyer, 1965; Beane, 1974; Jacobs and Parry, 1979; Sillitoe, 1993; Seedorff et al., 2005): 1) syn-intrusion mineralization; 2) spatially and temporally-related porphyritic and aplite dikes which bracket mineralization; 3) stockwork to sheeted quartz veins; and 4) chemical zoning and telescoping of main ore-stage (e.g., Type 1A potassic and Type 1B phengitic) alteration mineral assemblages.

As exemplified by Magino, the difficulty in distinguishing overprinted Archean intrusion-related gold deposits from orogenic deposits and relating them to their undeformed and unmetamorphosed modern counterparts likely contributes to their underrepresentation in the literature. Overprinting metamorphic-hydrothermal events can introduce similar veins, fluid types, ore minerals, and metal associations as those common in orogenic deposits, and also reset important geochronometers (e.g., $^{40}Ar/^{39}Ar$ dating of K-feldspar, sericite, clay alteration) and generate greenschist facies mineral assemblages that are largely indistinguishable from propylitic alteration assemblages associated with intrusion-related systems. Most notably, deformation may become localized within strongly altered zones, resulting in mineralization seemingly associated with shear zones, as is typical of orogenic deposits (Robert and Poulsen, 2001). At Magino, detailed field mapping of the deposit, together with geochronology and geochemistry, were essential for resolving the chronology of the main magmatic, mineralization, and deformation events. Collectively, these findings indicate that the Magino deposit is an Archean intrusion-related system which formed prior to regional deformation but was overprinted by veins that were emplaced during a second, minor hydrothermal event, and late peak metamorphism.

2.7.7 Model for the formation of the Magino deposit

The formation and modification of the Magino deposit can be divided into four major stages. During Stage 1 (Fig. 20), the ca. 2724 Ma WLS was emplaced into its host supracrustal rocks. Ascending fluids derived from the magmatic-hydrothermal devolatilization of the WLS or deeper cogenetic or synchronous intrusions resulted in potassic alteration of the WLS and emplacement of biotite stringers (Type 1A alteration). Subsequently, as the system cooled, this early biotite alteration was overprinted by the main ore-stage phengitic alteration (Type 1B alteration) and associated gold-bearing SQ veins across the WLS and within mineralized corridors, which developed broadly coevally with the emplacement of QFP and aplite dikes (Au_1 event).

During Stage 2 at ca. 2680 Ma to ca. 2670 Ma, the host volcanic rocks, WLS, and post-Au_1 mafic-ultramafic dikes were overprinted by the regional S_2 cleavage and folded and boudinaged parallel to this cleavage during N–S-directed shortening. D_2 high strain zones developed along rheologically weak phengitic alteration zones and lithological contacts, which localized strain during deformation, forming the strong foliation within the mineralized corridors. New pulses of auriferous hydrothermal fluids (Au_2) were injected along the mineralized corridors and across the WLS, forming structurally controlled QTC veins and depositing gold sourced from orogenic metamorphic fluids or remobilized from Stage 1 mineralized zones.

During Stage 3 and the D_3 deformation event, the D_2 high strain zones were reactivated as dextral N-side-down shear zones, producing a SW-striking S_3 cleavage, and asymmetric F_3 Z-shaped folds. Finally, during Stage 4 and the D_4 deformation event, open, flat-lying recumbent F_4 folds with a subhorizontal S_4 differentiated crenulation cleavage overprinted all earlier structures and further modified the deposit. The flat-lying geometry and late timing of the D_4 structures suggests that they may have formed during bulk vertical loading and relaxation of the thickened crust following the earlier D_2-D_3 shortening events.

The deposit was subsequently overprinted by peak upper greenschist-grade metamorphism, as evidenced by the growth of chloritoid and garnet across the older cleavages. Roughly 100 to 200 Ma later during the Paleoproterozoic, Matachewan diabase dikes and sills were emplaced across the WLS and were displaced by sinistral, E-side-up, brittle-ductile faults, offsetting mineralization and exposing deeper erosional levels of the deposit to the east.

2.8 Conclusion

Relative and absolute chronological constraints, together with detailed structural field mapping, mineral and alteration paragenesis and geochemistry, indicate that the Magino deposit formed during two geologically and temporally distinct mineralization events (Au_1 and Au_2). The main Au_1 event represents an intrusion-related style of mineralization that occurred during the emplacement of the WLS and significantly pre-dates regional deformation and metamorphism in the Michipicoten greenstone belt. During deformation, strain was preferentially localized within early, strongly altered zones and along spatially-associated porphyry dikes in response to weakening of the host rocks due to alteration. Subsequent overprinting deformation events modified the deposit and introduced structurally controlled gold-bearing QTC veins during a second, minor Au_2 gold event.

The similar timing and styles of mineralization of the Magino, Island Gold, and Renabie deposits suggest a widespread magmatic-hydrothermal mineralizing event at ca. 2725–2720 Ma across the Michipicoten greenstone belt. The Magino deposit serves as an excellent example of an Archean intrusion-related gold deposit which was subsequently modified during regional deformation events. Similar deposits are likely underrepresented in the literature due to the difficulty in distinguishing them, when deformed, from orogenic deposits.

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Tables

Table 1. Lithogeochemical data for major (wt.%) and minor/trace (ppm) element chemistry of least-altered lithologies

Element	Felsic volcanic	Mafic volcanic	Leuco-tonalite	Melano-tonalite	QFP dike	Aplite dike	Gabbroic dike	Ultramafic dike	Diabase dike
(wt.%)									
SiO_2 (0.01)[1]	66.7	53.3	71.6	68.9	67.8	76.2	50.2	49.0	50.3
Al_2O_3 (0.01)[1]	16.7	14.1	15.3	15.8	16.1	14.0	14.6	10.3	13.3
Fe_2O_3t (0.01)[1]	7.14	13.8	2.93	3.94	4.44	1.40	13.9	10.2	18.2
CaO (0.01)[1]	3.24	8.11	2.99	3.39	3.64	3.18	10.2	11.6	8.30
MgO (0.01)[1]	0.48	5.30	0.91	1.23	1.36	0.23	7.66	17.4	4.36
Na_2O (0.01)[1]	2.22	3.40	3.53	4.96	4.81	2.56	2.24	0.085	2.34
K_2O (0.01)[1]	2.64	0.06	2.26	1.07	1.03	2.13	0.02	0.01	0.79
Cr_2O_3 (0.002)[1]	0.005	0.009	0.003	0.003	0.002	0.002	0.039	0.237	0.008
TiO_2 (0.01)[1]	0.52	1.61	0.31	0.46	0.51	0.08	0.87	0.65	1.85
MnO (0.01)[1]	0.15	0.22	0.03	0.04	0.05	0.12	0.21	0.16	0.25
P_2O_5 (0.01)[1]	0.16	0.08	0.09	0.13	0.14	0.05	0.06	0.27	0.25
(ppm)									
Sc (1)[2]	9	43	5	7	8	1	44	27	42
Th (0.05)[3]	3.64	0.41	4.74	2.07	1.91	4.64	0.30	6.64	3.93
U (0.05)[3]	0.60	0.10	0.90	0.40	0.43	1.15	0.09	1.18	0.90
Zr (1)[3]	142	86	148	114	141	75	41	167	197
Hf (0.05)[3]	3.86	2.40	3.98	3.19	3.58	2.88	1.26	4.26	5.12
Ta (0.1)[3]	0.4	0.2	0.5	0.2	0.3	0.3	0.1	0.4	0.6
Nb (0.05)[3]	3.97	3.27	5.97	2.90	3.63	4.03	1.49	7.58	9.31
La (0.1)[3]	22.8	3.38	22.8	15.4	16.0	28.5	3.00	55.1	20.1
Ce (0.1)[3]	46.3	9.6	47.3	28.5	31.4	61.1	6.9	120.7	45.0
Pr (0.02)[3]	5.12	1.47	5.12	3.31	3.69	6.93	1.03	13.6	5.56
Nd (0.1)[3]	18.3	8.1	17.9	13.7	14.9	24.7	5.4	48.9	24.3
Sm (0.03)[3]	3.15	2.88	2.77	2.17	2.35	3.80	1.71	7.96	6.46
Eu (0.02)[3]	0.90	0.80	0.72	0.51	0.85	0.83	0.60	1.47	1.72
Gd (0.05)[3]	2.48	4.06	1.93	2.03	2.52	2.07	2.41	5.05	7.13
Tb (0.01)[3]	0.28	0.73	0.23	0.24	0.35	0.31	0.39	0.65	1.17
Dy (0.05)[3]	1.75	4.93	1.50	1.50	1.98	1.46	2.64	3.10	7.87
Ho (0.01)[3]	0.31	1.00	0.24	0.31	0.36	0.41	0.58	0.52	1.59
Er (0.03)[3]	0.86	3.33	0.79	0.75	1.18	0.81	1.71	1.56	4.91
Yb (0.03)[3]	0.85	3.28	0.72	0.69	0.89	0.84	1.76	1.41	4.95
Lu (0.01)[3]	0.13	0.50	0.09	0.06	0.12	0.19	0.26	0.18	0.72
Y (0.1)[3]	8.2	27.8	7.5	7.6	9.6	8.7	15.4	14.8	44.2

Fe_2O_3t = total Fe_2O_3; QFP = Quartz-feldspar porphyry. Laboratory analytical concentrations determination method: [1] = ME-ICP06, lithium borate fusion, acid digestion and ICP-AES; [2] = ME-4ACD8, four acid digestion and ICP-AES; [3] = ME-MS81, lithium borate fusion, acid digestion and ICP-MS. Detection limits reported in parentheses.

Table 2. Summary of major vein types

Vein type	Alteration	Texture, distribution, and geometry	Orientation (*refer Fig. 5A)	Mineralogy
Au_1 veins				
Biotite stringers	Type 1A	Fibrous mm to cm-scale stringers and stockworks	Irregular	Biotite ± Tourmaline ± Magnetite ± Calcite
Sugary Quartz (SQ) veins	Type 1B	Systematic cm-scale saccharoidal, laminated, conjugate to orthogonal stockwork to sheeted veins	*Steep, N- to E-trending	Quartz-Phengite>Muscovite-Pyrite (Py1) ± K-Feldspar ± Calcite
Au_2 veins				
Quartz-Carbonate (QC) veins	Type 2A and 2B	Systematic closely-spaced mm- to cm-scale ladder veins and tension gashes	*Irregular, steep to flat-lying	Quartz-Ankerite/Calcite-Chlorite ± Kaolinite/Dickite ± Anhydrite ± Barite
Quartz-Tourmaline-Carbonate (QTC) veins	Type 2B	Coarse, fibrous laminated cm- to m-scale ladder veins, tension gashes, and breccia. Late flat-lying veins along boudin necks	Typically *Steep, N–S-trending	Quartz-Ankerite-Biotite-Chlorite after biotite-Pyrite (Py2)

Table 3. Whole-rock major (wt.%) and trace element (ppm) concentration data of representative alteration types

Alteration type	Type 1A weak	Type 1A intense	Type 1B weak		Type 1B intense	SQ vein	Type 2A	Type 2B	Type 1B Shear zone
Sample	LU-MA21-080W1A	LU-MA21-071A-1	MA-CP-S13	MA-EP-S02	LU-MA21-071A-2	MA-CP-S10	LU-MA20-050A	MA-CP-S12	MA-EP-S08
Unit	Leuco-tonalite	Melano-tonalite	Leuco-tonalite	Melano-tonalite	Melano-tonalite	Leuco-tonalite	Melano-tonalite	Leuco-tonalite	Leuco-tonalite
(wt.%)									
SiO_2 (0.01)[1]	72.1	67.7	71.5	71.5	73.0	75.5	68.4	69.0	71.5
Al_2O_3 (0.01)[1]	14.7	15.3	15.0	13.9	14.5	14.3	16.3	17.1	14.5
Fe_2O_3t (total) (0.01)[1]	2.74	3.93	3.27	3.76	4.01	3.26	3.62	2.41	3.32
CaO (0.01)[1]	2.83	5.30	2.71	3.75	2.32	1.39	3.86	2.10	3.28
MgO (0.01)[1]	0.86	1.91	0.80	1.12	0.65	0.61	1.07	0.65	1.60
Na_2O (0.01)[1]	4.48	3.49	4.35	4.78	2.54	0.57	3.59	8.06	3.13
K_2O (0.01)[1]	1.87	1.68	1.78	0.61	2.43	3.82	2.53	0.09	2.16
Cr_2O_3 (0.002)[1]	0.004	0.005	0.003	0.004	0.005	0.003	0.006	0.002	0.003
TiO_2 (0.01)[1]	0.27	0.44	0.33	0.36	0.38	0.32	0.40	0.31	0.32
MnO (0.01)[1]	0.04	0.09	0.03	0.03	0.031	0.02	0.04	0.03	0.05
P_2O_5 (0.01)[1]	0.08	0.12	0.11	0.10	0.09	0.10	0.09	0.13	0.10
Total*	100.80	99.75	98.73	100.55	98.95	99.96	99.84	98.91	98.66
LOI(0.01)[2]	1.63	3.97	3.42	3.51	2.72	3.25	4.79	2.07	4.75
H_2O (0.01)[3]	0.62	1.48	1.52	1.51	1.43	1.86	1.33	0.46	1.40
S (0.01)[4]	0.06	0.27	0.06	0.09	1.37	1.56	1.13	0.28	0.96
C (0.02)[5]	0.31	0.77	0.57	0.70	0.24	0.25	0.89	0.39	1.12
(ppm)									
Th (0.05)[6]	4.82	1.94	4.69	2.69	2.39	3.72	2.67	6.93	4.00
U (0.05)[6]	1.32	0.50	1.06	0.44	0.58	1.24	0.44	1.65	1.12
Zr (1)[6]	141	133	160	126	116	136	131	224	145
Hf (0.05)[6]	3.97	3.54	4.30	3.50	3.22	3.72	3.16	5.37	3.99
Ta (0.1)[6]	0.6	0.3	0.5	0.3	0.3	0.5	0.2	0.4	0.6
Nb (0.05)[6]	7.64	3.44	6.50	3.09	4.15	6.61	3.78	4.75	7.11
Rb (0.2)[6]	48.3	34.8	40.1	12.5	38.5	72.8	58.1	1.7	38.8
Ba (0.5)[6]	342	281	302	232	426	569	415	30.6	310

Sr (0.1)[6]	228	294	231	333	210	184	343	468	153
W (0.5)[6]	2.8	7.3	5.2	1.0	15.6	10.3	19.6	31.0	12.7
Mo (1)[7]	1	1	b.d.l	4	2	3	2	1	6
Cu (1)[7]	3	8	17	241	5	49	7	3	307
Pb (2)[7]	5	6	3	2	3	3	3	4	3
Zn (2)[7]	29	68	36	48	31	14	23	17	43
Sc (1)[7]	4	7	5	5	6	5	6	3	5
Au (0.001)[8]	0.015	0.025	0.008	0.004	1.417	1.183	0.278	0.617	1.279
Ag (0.2)[9]	0.2	b.d.l	b.d.l	0.4	0.3	0.3	0.3	b.d.l	1.6
Sb(0.05)[10]	b.d.l	0.10	b.d.l	b.d.l	0.06	0.07	b.d.l	b.d.l	0.09
Bi (0.01)[10]	0.01	0.04	0.02	0.03	0.17	0.28	0.31	4.64	0.10
As (0.1)[10]	0.3	12.2	1.8	1.2	69.6	42.5	8.3	1.5	20.3
Te (0.01)10	b.d.l	b.d.l	0.03	0.02	0.30	0.13	0.25	2.92	0.26
Cl (50)[11]	171	145	115	113	114	144	1571	103	106
F (20)[12]	282	437	388	319	311	671	398	402	499
La (0.1)[6]	26.1	13.2	31.5	14.7	22.2	22.0	15.2	50.6	22.6
Ce (0.1)[6]	54.8	27.8	58.6	29.9	46.5	47.0	29.7	117	49.3
Pr (0.02)[6]	6.12	3.10	6.50	3.21	5.07	5.34	3.26	13.3	5.52
Nd (0.1)[6]	23.1	11.6	22.6	11.5	17.7	18.8	14.0	45.9	19.5
Sm (0.03)[6]	3.59	2.17	3.86	2.07	3.03	3.09	2.47	7.00	3.29
Eu (0.02)[6]	0.90	0.58	0.93	0.57	0.82	0.81	0.71	1.74	0.85
Gd (0.05)[6]	2.63	1.66	2.64	1.52	2.12	2.05	2.13	4.50	2.50
Tb (0.01)[6]	0.34	0.20	0.31	0.17	0.23	0.26	0.24	0.65	0.31
Dy (0.05)[6]	1.96	1.47	2.00	1.26	1.50	1.63	1.76	3.35	2.00
Ho (0.01)[6]	0.38	0.21	0.35	0.20	0.21	0.25	0.28	0.62	0.30
Er (0.03)[6]	1.00	0.81	1.12	0.70	0.70	0.84	0.72	1.55	1.02
Tm (0.01)[6]	0.13	0.09	0.14	0.09	0.09	0.10	0.08	0.22	0.13
Yb (0.03)[6]	1.07	0.76	0.95	0.69	0.74	0.82	0.67	1.40	0.99
Lu (0.01)[6]	0.16	0.10	0.16	0.10	0.09	0.10	0.09	0.21	0.13
Y (0.1)[6]	10.0	7.7	11.3	6.8	6.9	8.4	7.8	16.9	9.9
∑LREE	117	60.3	126	63.4	97.4	99.1	67.5	240	103
∑HREE+Y	15.0	11.4	16.3	10.0	10.4	12.4	11.6	24.9	14.7

WLS = Webb Lake Stock; SQ = sugary quartz; b.d.l = below detection limit (reported in parentheses); Total* = non-normalized raw analytical total; LOI = loss on ignition; ∑LREE = (La + Ce + Pr + Nd + Sm + Eu + Gd); ∑HREE+Y = (Tb + Dy + Ho + Er + Tm + Yb + Lu + Y).

Laboratory analytical concentration determination method: [1] = ME-ICP06, lithium borate fusion, acid digestion and ICP-AES; [2] = OA-GRA05, LOI at 1000°C; [3] = OA-IR06, combustion furnace and IR spectrometry; [4] = S-IR08, induction furnace and IR spectrometry; [5] = C-IR07, induction furnace and IR spectrometry; [6] = ME-MS81, lithium borate fusion, acid digestion and ICP-MS; [7] = ME-4ACD8, four acid digestion and ICP-AES; [8] = Au-ICP21, fire assay and ICP-AES; [9] = Ag-AA45, aqua regia digestion and AAS; [10] = ME-MS42, aqua regia digestion and ICP-MS; [11] = Cl-IC881, KOH fusion and ion chromatography; [12] = F-IC881, KOH fusion and ion chromatography.

Table 4. Principal component analysis (PCA) loadings and elemental correlations filtered by element-Au loading values less than -0.10 and greater than 0.10.

	PC1	PC2	PC3	Au
Au	0.19	0.17	0.72	1.00
K	0.77	-0.08	0.18	0.25
Rb	0.75	-0.09	0.16	0.22
Cs	0.67	-0.18	0.20	0.27
Mg	-0.82	-0.39	0.16	-0.11
Sr	0.35	-0.51	-0.24	-0.16
Ba	0.85	-0.13	-0.03	0.10
Y	-0.34	-0.74	-0.01	-0.19
Sc	-0.82	-0.46	0.15	-0.12
Nb	0.59	-0.07	0.43	0.31
Ta	0.51	-0.04	0.50	0.35
Fe	-0.80	-0.48	0.22	-0.10
Cu	-0.19	0.00	0.54	0.27
Zn	-0.51	-0.63	0.14	-0.13
Mo	0.43	0.24	0.39	0.32
Pb	0.47	-0.27	0.07	0.12
W	0.42	0.17	0.70	0.63
Re	0.25	0.16	0.30	0.21
Ag	0.13	0.11	0.73	0.59
As	0.13	0.20	0.69	0.62
Bi	0.17	0.02	0.61	0.52
Te	0.24	0.15	0.60	0.47
Tl	0.55	-0.23	0.32	0.28
Sb	0.18	0.04	0.63	0.38
Ge	-0.39	-0.16	-0.23	-0.20
Sn	0.40	-0.23	0.40	0.25
P	0.19	-0.74	-0.08	-0.12
S	0.11	0.13	0.84	0.69
Se	0.04	-0.06	0.19	0.14

Table 5. Summary of deformational structures

Deformation event	Heather and Arias (1992) (Central to east-central belt)	Jellicoe (2019); Jellicoe et al. (2022) (Island Gold mine)	This study (Magino mine)
D_1	F_1: Recumbent folds S_1: Local bedding-parallel cleavage	F_1: E-trending upright folds (Goudreau Anticline) S_1: Axial-planar cleavage	Not observed
D_2 (dominant map pattern)	F_2: Upright folds (Goudreau Anticline) S_2: Steep E-ENE cleavage L_2: Steep lineation	S_2: Steep ENE-trending cleavage L_2: Steep mineral stretching lineation	F_2: ENE-trending upright tight to isoclinal folds S_2: Steep ENE-trending axial planar cleavage
D_3	F_3: Crenulations S_3: Moderate, SW-striking axial planar cleavage	F_3: Flat-lying "Z"-shaped folds S_3: Steep, SW-striking axial planar cleavage	F_3: Inclined "Z"-shaped folds S_3: Moderate, SW-striking axial planar cleavage
D_4		L_4+: Moderate N-plunging crenulation lineation	F_4: Flat-lying recumbent folds S_4: Subhorizontal crenulation cleavage L_4: Subhorizontal W-plunging crenulation lineation
Late faulting	Apparent sinistral offset along diabase dikes		Sinistral, E-side-up faults along diabase dikes

Table 6. Re-Os isotopic and age data of molybdenite

Sample	Re ppm	± 2σ	^{187}Re ppb	± 2σ	^{187}Os ppb	± 2σ	Model Age (Ma)	± 2σ with λ (Ma)
LU-MA20-045B-340m	44.07	0.12	27.70	0.08	1292.0	0.1	2737	12
LU-MA21-063-460m*	1.596	0.004	1.003	2.801	46.624	0.017	2727	12
LU-MA21-063-460m*-R	2.297	0.006	1.444	4.032	67.176	0.113	2730	12

ppb = parts per billion, ppm = parts per million. All uncertainties are quoted at the 2σ level of precision and includes all known analytical uncertainty.
Age uncertainty includes a ~0.31% uncertainty in the decay constant of ^{187}Re.
* contains silicate impurities which dilute Re and Os abundances, but typically do not affect Re-Os age.
R = replicate analysis of existing molybdenite mineral separate

Figures

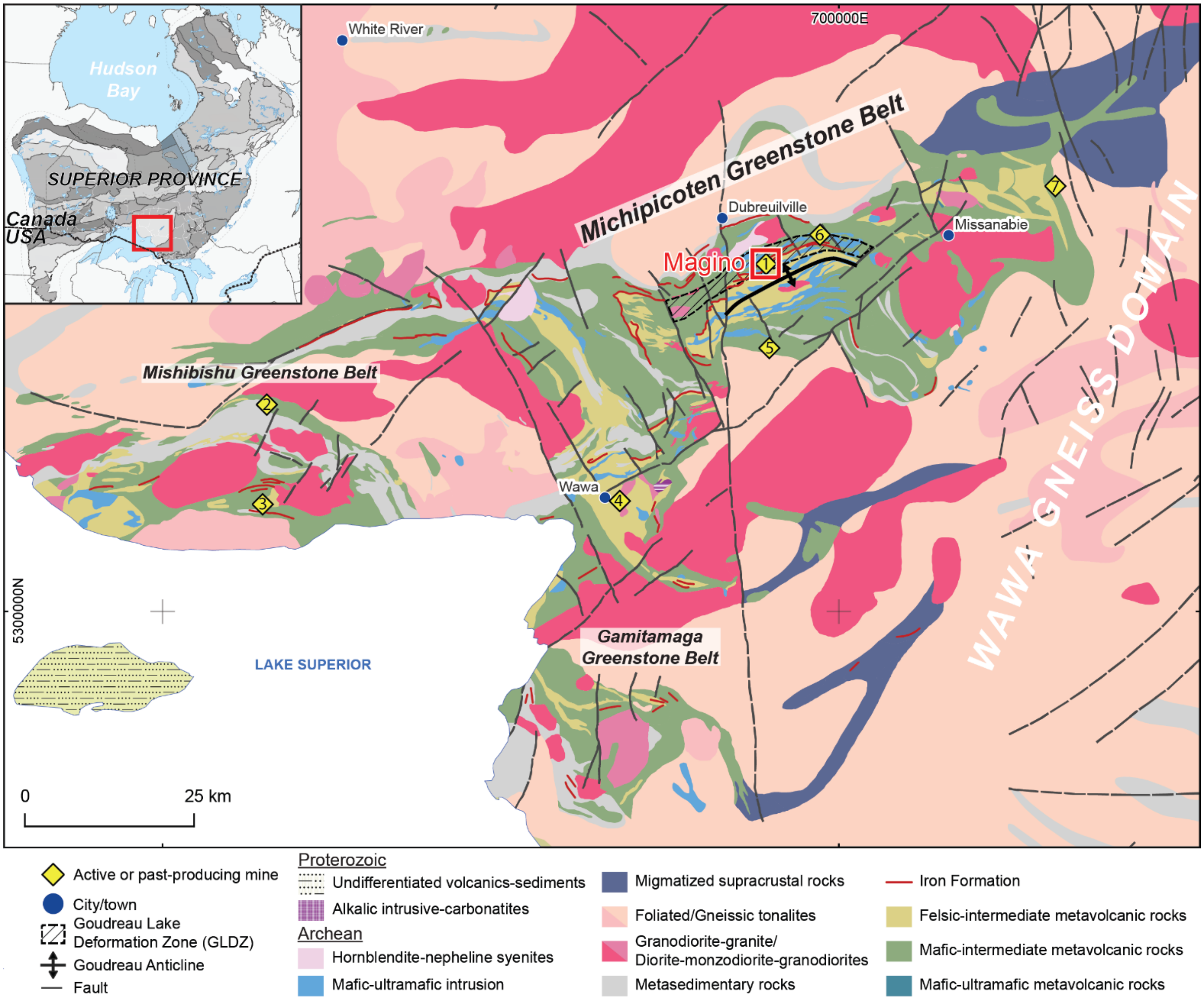


Figure 1. Simplified regional geological map of the Wawa subprovince, compiled after Sage, (1994), Stott et al. (2010), and Ontario Geological Survey (2011). Inset shows map position within the Superior province, modified after Montsion et al. (2018). Active or past-producing gold mines: 1) Magino, Island Gold; 2) Mishi, Magnacon; 3) Eagle River; 4) Wawa Gold Corridor (Jubilee-Surluga-Minto); 5) Forge Lake; 6) Cline, Edwards; 7) Renabie. Coordinates in NAD83 UTM zone 16N.

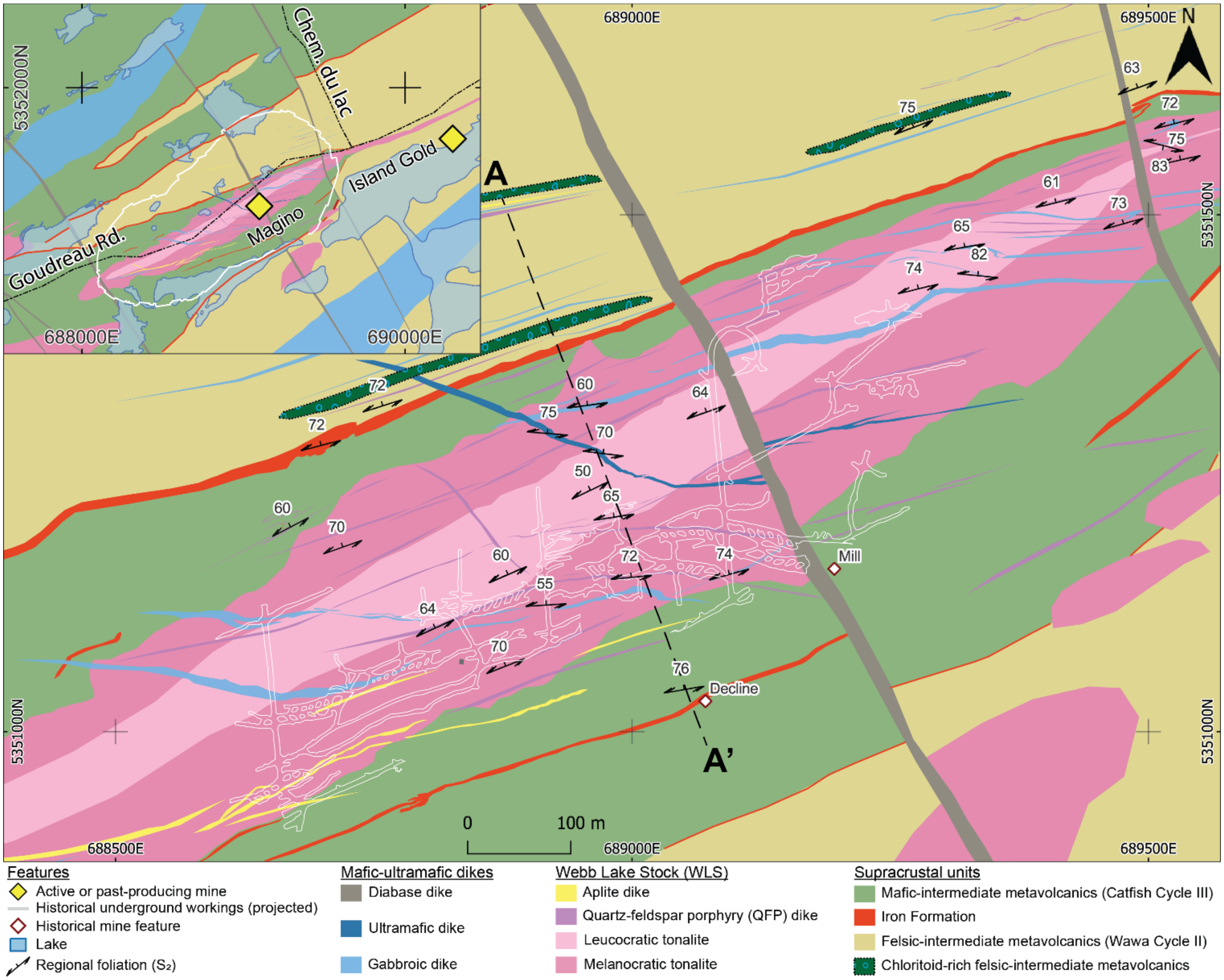


Figure 2. Geological map of the Magino deposit area compiled after Ontario Geological Survey (2011) and Argonaut Gold (unpublished). Cross section A–A' is represented by the dashed black line. Historical underground mine features are compiled after Deevy (1993). Inset map shows the location of the Magino reserve pit outline in white and the nearby Island Gold mine. Coordinates in NAD83 UTM zone 16N.

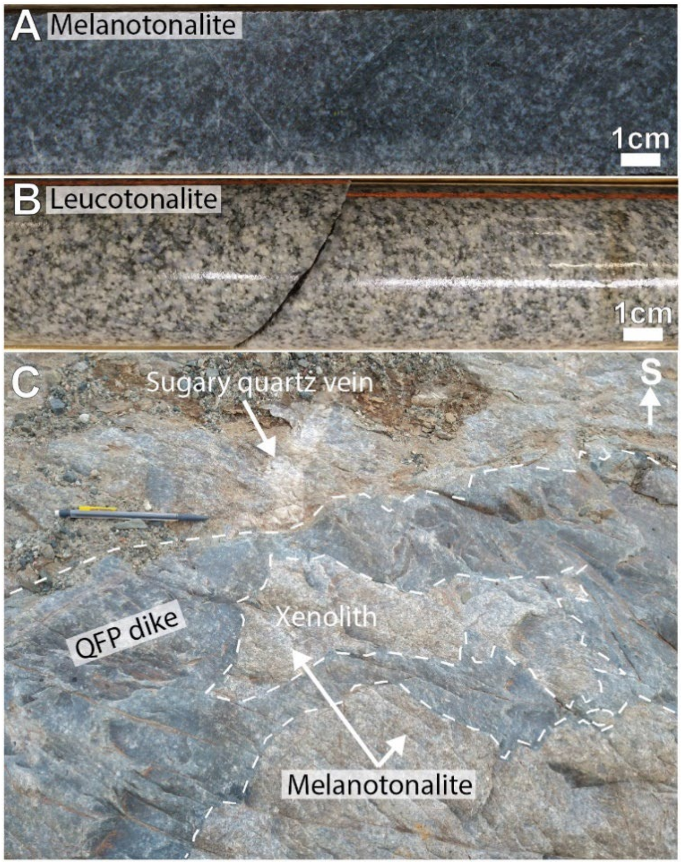


Figure 3. Webb Lake Stock tonalite intrusive phases. (A) Melanotonalite. (B) Leucotonalite. (C) Inclined surface showing contact between melanotonalite and cross-cutting quartz-feldspar porphyry (QFP) dike. Note the truncated sugary quartz vein.

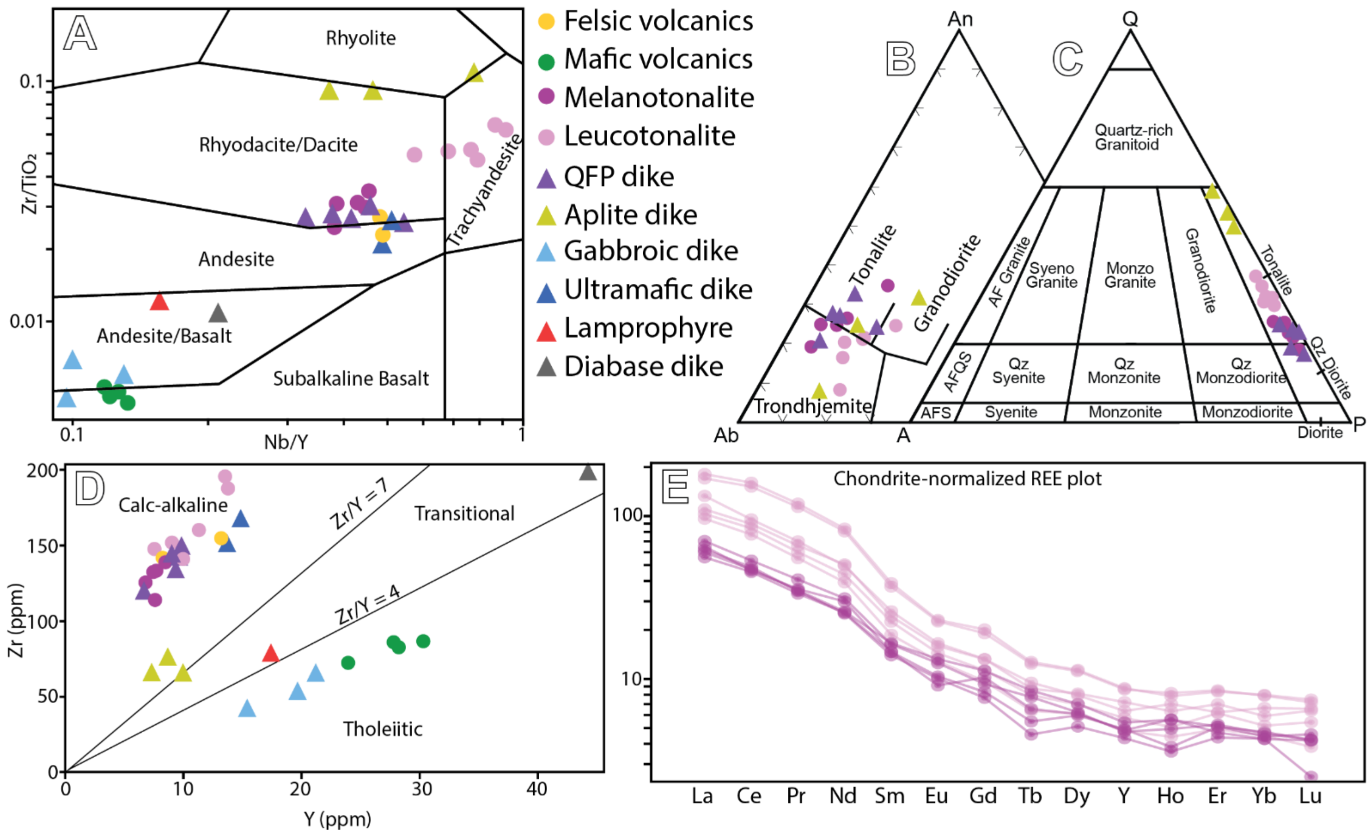


Figure 4. Geochemical plots of least-altered lithologies. (A) Nb/Y vs. Zr/TiO_2 immobile element rock type classification diagram (Winchester and Floyd, 1977). (B) Normative three-feldspar Albite-Anorthite-Orthoclase (Ab-An-Or) ternary diagram (Barker, 1979). (C) Modal Quartz-Alkali Feldspar-Plagioclase (QAP) ternary diagram (Streckeisen, 1974). (D) Y vs. Zr bivariate immobile trace element plot with magmatic affinity fields from Galley and Lafrance (2014). (E) REE chondrite-normalized (McDonough and Sun, 1995) plots for Webb Lake Stock tonalites. Abbreviations: QFP = Quartz-feldspar porphyry, AFS = Alkali Feldspar Syenite, AFQS = Alkali Feldspar Quartz Syenite, AF = Alkali Feldspar, Qz = Quartz.

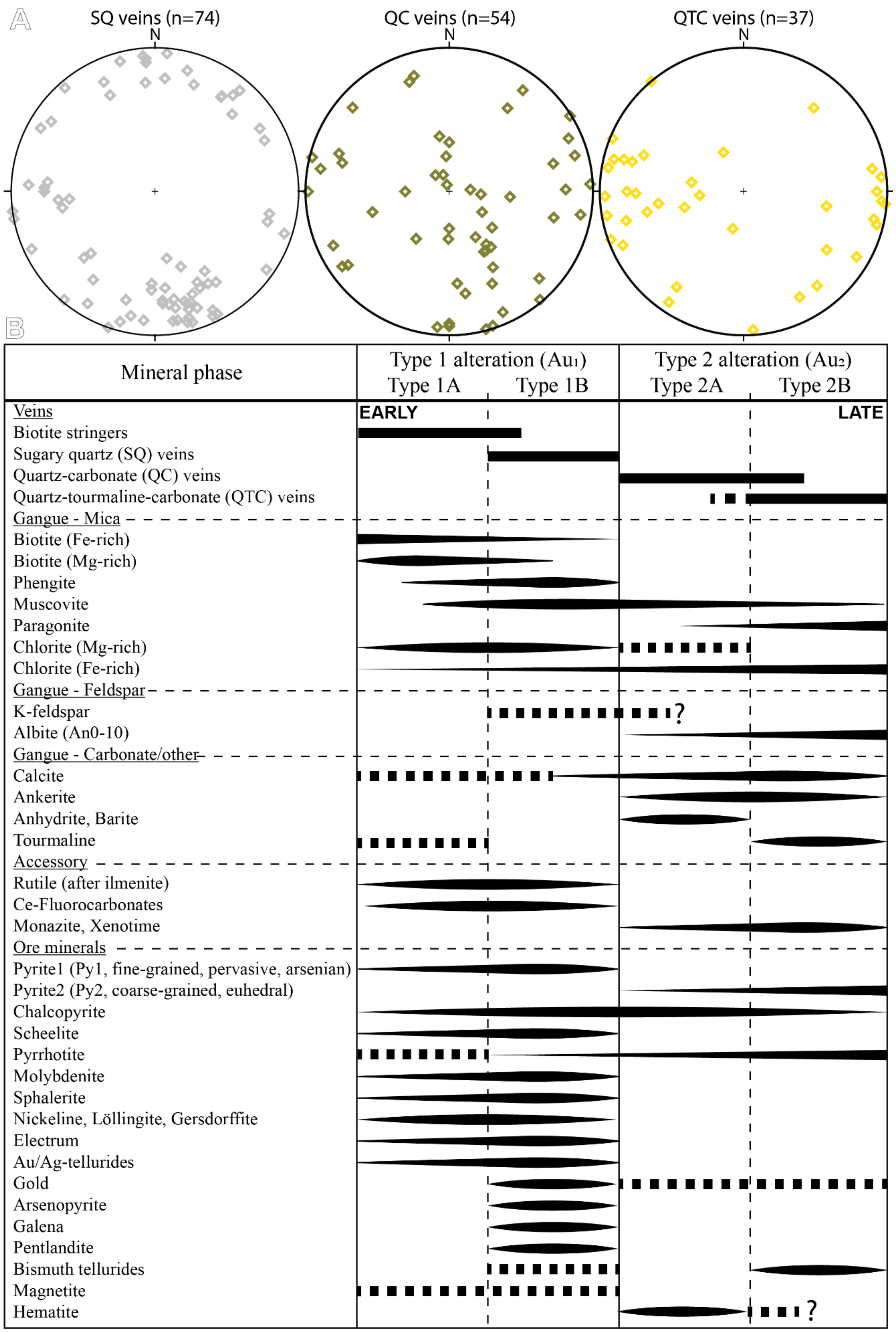

A
SQ veins (n=74)
QC veins (n=54)
QTC veins (n=37)
N
B
Mineral phase
Type 1 alteration (Au1)
Type 1A
Type 1B
Type 2 alteration (Au2)
Type 2A
Type 2B
EARLY
LATE
Veins
Biotite stringers
Sugary quartz (SQ) veins
Quartz-carbonate (QC) veins
Quartz-tourmaline-carbonate (QTC) veins
Gangue - Mica
Biotite (Fe-rich)
Biotite (Mg-rich)
Phengite
Muscovite
Paragonite
Chlorite (Mg-rich)
Chlorite (Fe-rich)
Gangue - Feldspar
K-feldspar
?
Albite (An0-10)
Gangue - Carbonate/other
Calcite
Ankerite
Anhydrite, Barite
Tourmaline
Accessory
Rutile (after ilmenite)
Ce-Fluorocarbonates
Monazite, Xenotime
Ore minerals
Pyrite1 (Py1, fine-grained, pervasive, arsenian)
Pyrite2 (Py2, coarse-grained, euhedral)
Chalcopyrite
Scheelite
Pyrrhotite
Molybdenite
Sphalerite
Nickeline, Löllingite, Gersdorffite
Electrum
Au/Ag-tellurides
Gold
Arsenopyrite
Galena
Pentlandite
Bismuth tellurides
Magnetite
Hematite
?

Figure 5. Vein orientations and alteration paragenesis. (A) Lower-hemisphere, equal-area stereonet plot of poles to sugary quartz (SQ), quartz-carbonate (QC), and quartz-tourmaline-carbonate (QTC) veins. n = number of measurements. (B) Mineral paragenesis table. Line thickness indicates relative abundance. Dashed lines indicate trace (~1%) occurrences.

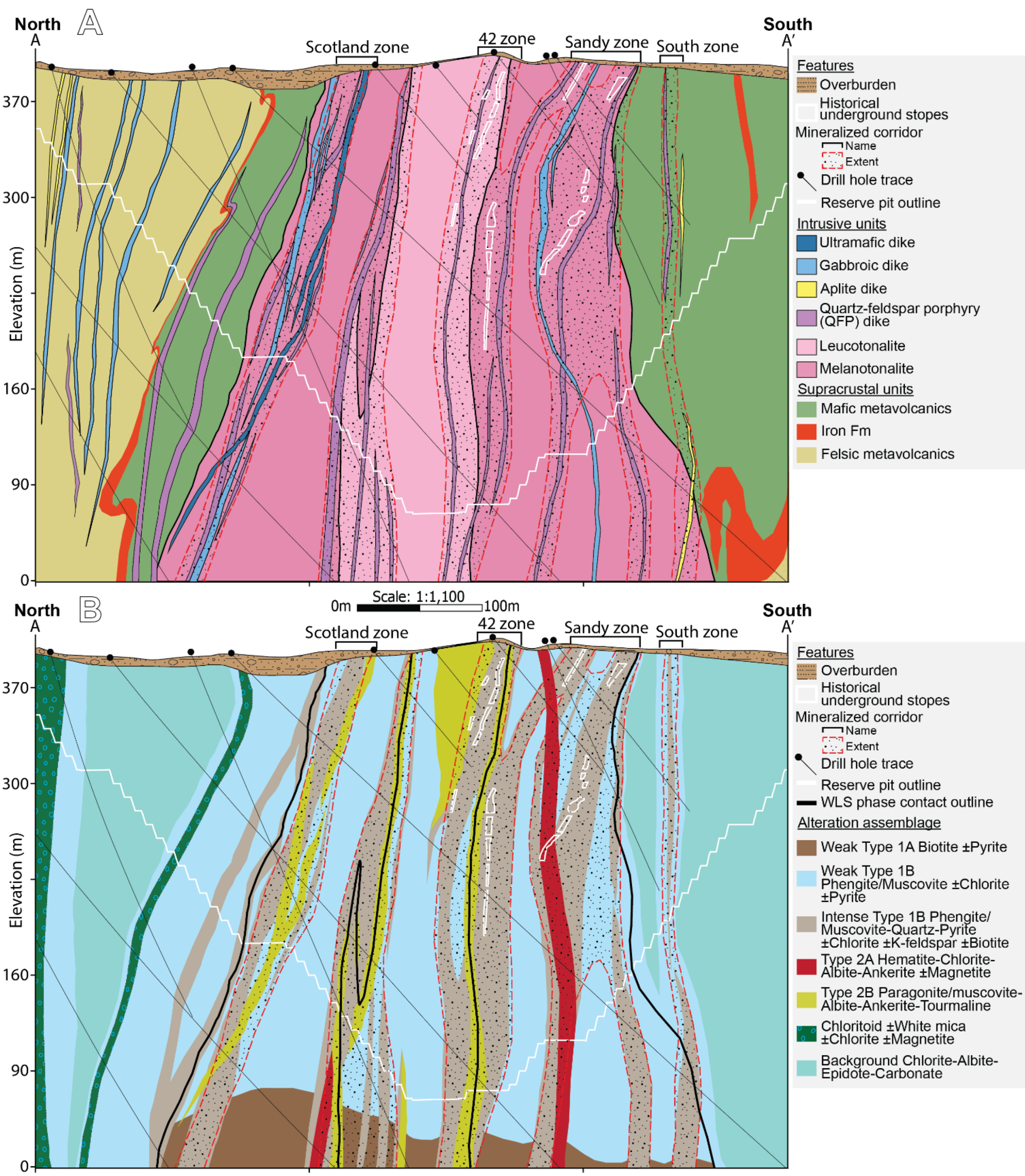

North
A
South
A′
Scotland zone
42 zone
Sandy zone
South zone
Elevation (m)
370
300
160
90
0
Features
Overburden
Historical underground stopes
Mineralized corridor
Name
Extent
Drill hole trace
Reserve pit outline
Intrusive units
Ultramafic dike
Gabbroic dike
Aplite dike
Quartz-feldspar porphyry (QFP) dike
Leucotonalite
Melanotonalite
Supracrustal units
Mafic metavolcanics
Iron Fm
Felsic metavolcanics
0m
Scale: 1:1,100
100m
North
A
South
A′
Scotland zone
42 zone
Sandy zone
South zone
Elevation (m)
370
300
160
90
0
Features
Overburden
Historical underground stopes
Mineralized corridor
Name
Extent
Drill hole trace
Reserve pit outline
WLS phase contact outline
Alteration assemblage
Weak Type 1A Biotite ±Pyrite
Weak Type 1B Phengite/Muscovite ±Chlorite ±Pyrite
Intense Type 1B Phengite/ Muscovite-Quartz-Pyrite ±Chlorite ±K-feldspar ±Biotite
Type 2A Hematite-Chlorite-Albite-Ankerite ±Magnetite
Type 2B Paragonite/muscovite-Albite-Ankerite-Tourmaline
Chloritoid ±White mica ±Chlorite ±Magnetite
Background Chlorite-Albite-Epidote-Carbonate

Figure 6. Vertical cross-section A–A' looking east along central part of the Magino deposit showing lithologies (A) and alteration (B) with overlaid mineralization zones. See Figure 2 for cross section location.

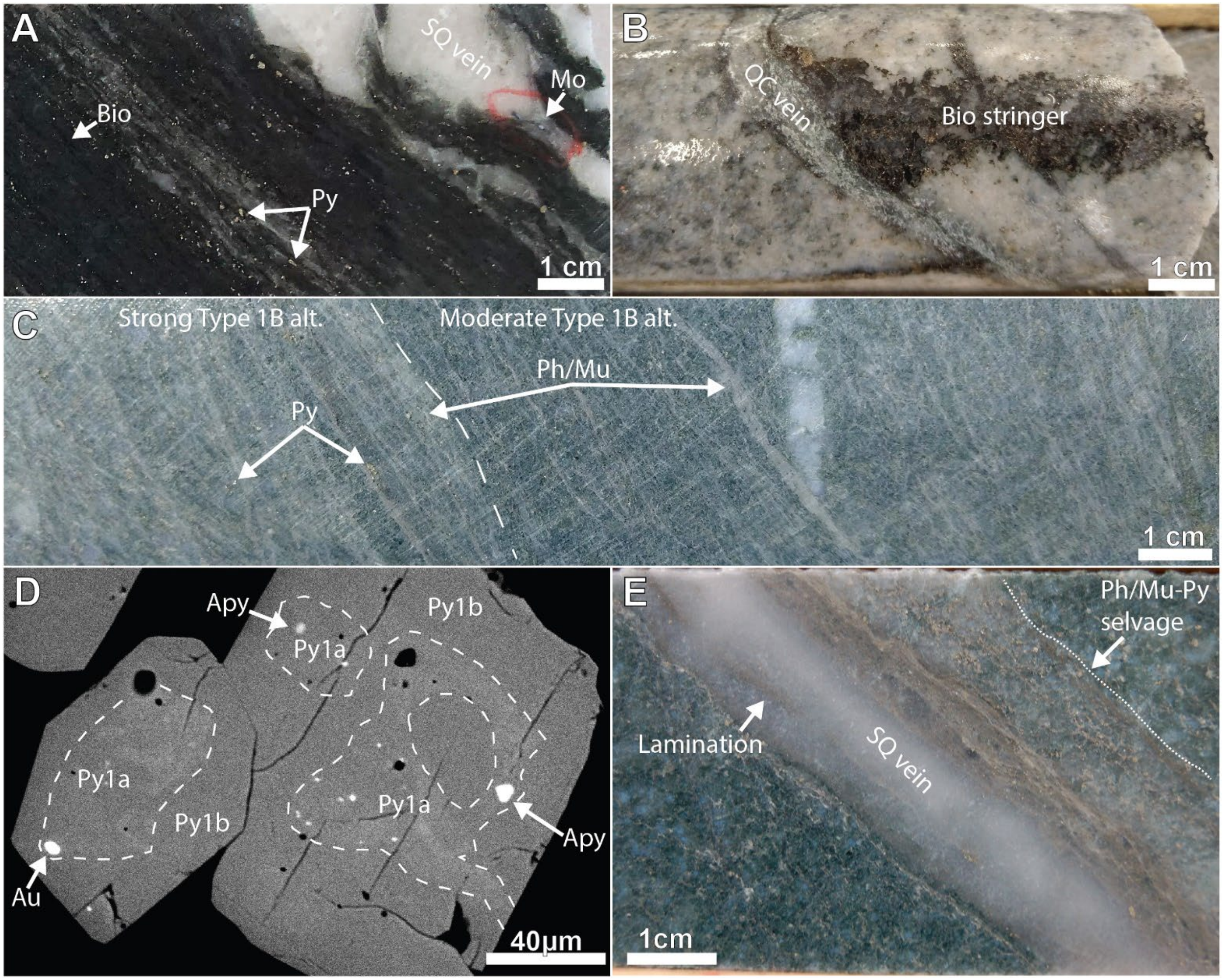


Figure 7. Mineralogy of Type 1A (A, B) and Type 1B (C-E) alteration and veins. (A) Drill core showing disseminated biotite, pyrite, and boudinaged molybdenite-bearing sugary quartz (SQ) vein in strongly deformed melanotonalite. (B) Drill core showing biotite stringer cut by quartz-carbonate (QC) vein. (C) Drill core showing moderate and strong Type 1B alteration (alt.). (D) SEM-BSE image of Type 1B alteration pyrite showing porous, arsenian pyrite (Py1a) overgrown by inclusion-poor pyrite (Py1b). (E) Laminated SQ vein with Type 1B alteration selvage. Bio = Biotite, Chl = Chlorite, Plg = Plagioclase, Ph = Phengite, Mu = Muscovite Py = Pyrite, Mo = Molybdenite, Au = Gold, Apy = Arsenopyrite.

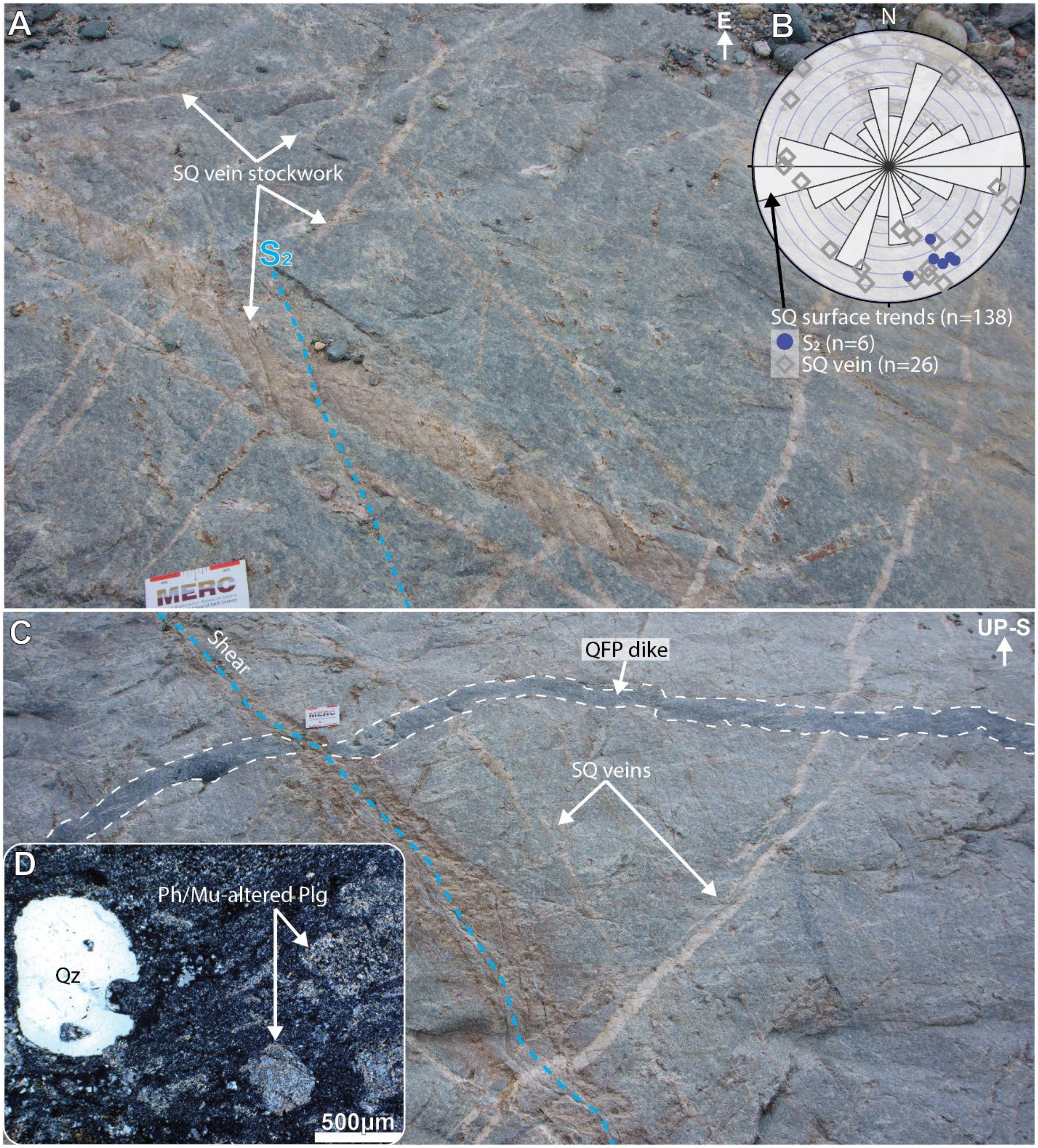


Figure 8. Sugary quartz (SQ) vein field relationships. (A) SQ vein stockwork in weakly deformed melanotonalite. (B) Combined plot of SQ vein surface trends (rose diagram) and poles to S_2 cleavage and

SQ veins (lower hemisphere, equal area stereonet). n = number of measurements. (C) Stockwork SQ veins cut by a quartz-feldspar porphyry (QFP) dike. (D) Photomicrograph of QFP dike shown in (C) under cross-polarized light (XPL) showing plagioclase phenocrysts affected by weak Type 1B alteration. Scale card is 10 cm in length. Abbreviations: Ph = Phengite, Mu = Muscovite, Qz = Quartz, Plg = Plagioclase.

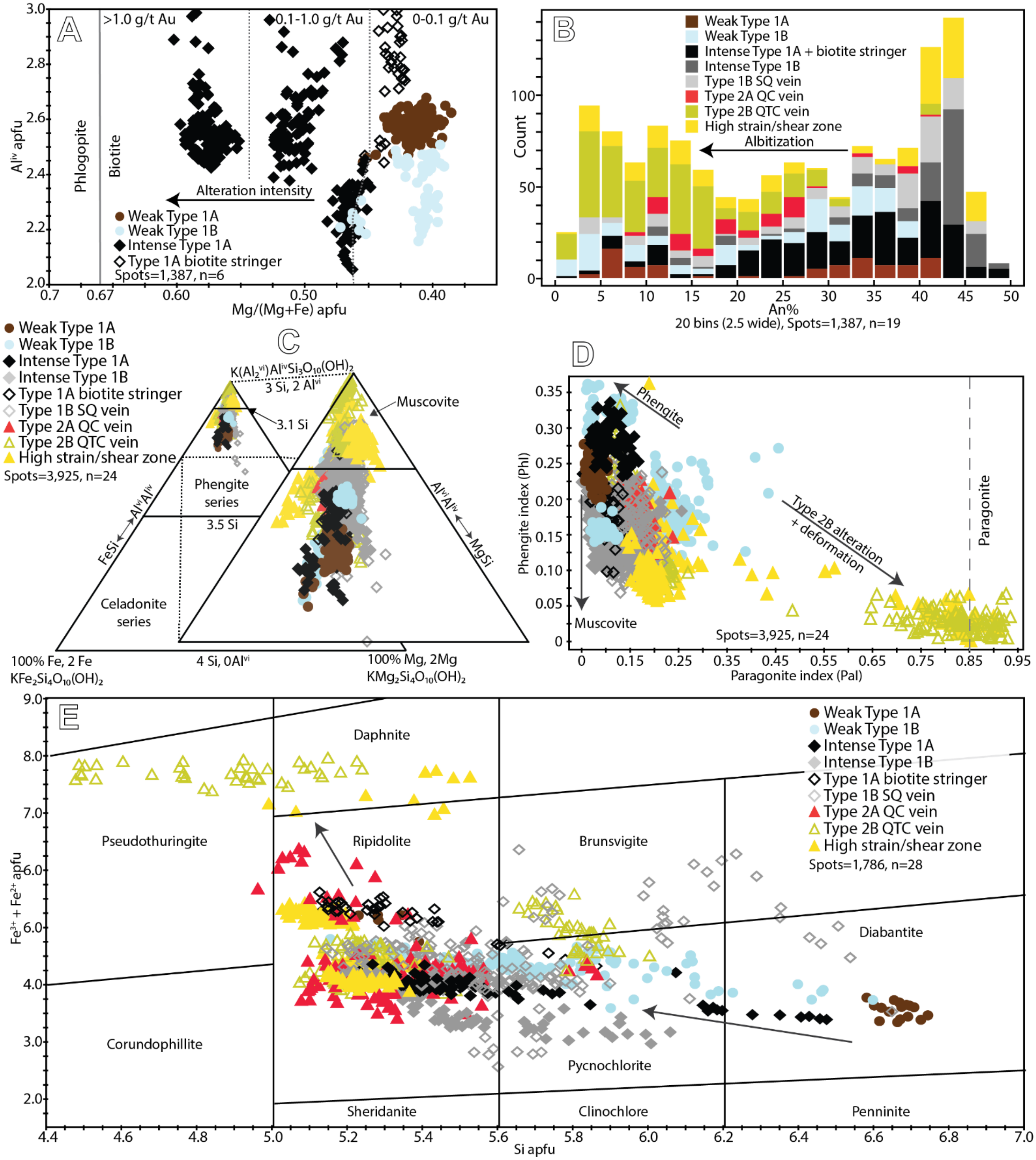


Figure 9. Alteration mineral chemistry diagrams. (A) Biotite composition diagram modified after Deer et al. (1992) grouped by gold grade (Au g/t) of samples determined from lithogeochemical analysis. (B)

Feldspar anorthite (An%) composition histogram. (C) White mica composition diagram modified after Tappert et al. (2013). (D) White mica composition plot using calculated phengite and paragonite indices. Phengite index = $[(Fe^{2+}+Mn^{2+}+Mg^{2+})+(Si^{4+}+Ti^{4+})-(Al^{iv}+Al^{vi})]/4$, Paragonite index = $[(Na^{+}/(Na^{+}+K^{+})]$ in apfu. (E) Chlorite composition diagram modified after Hey (1954). Arrows indicate paragenetic trends. Spots = number of individually-acquired spectra. n = number of analyzed thin sections. SQ = Sugary quartz.

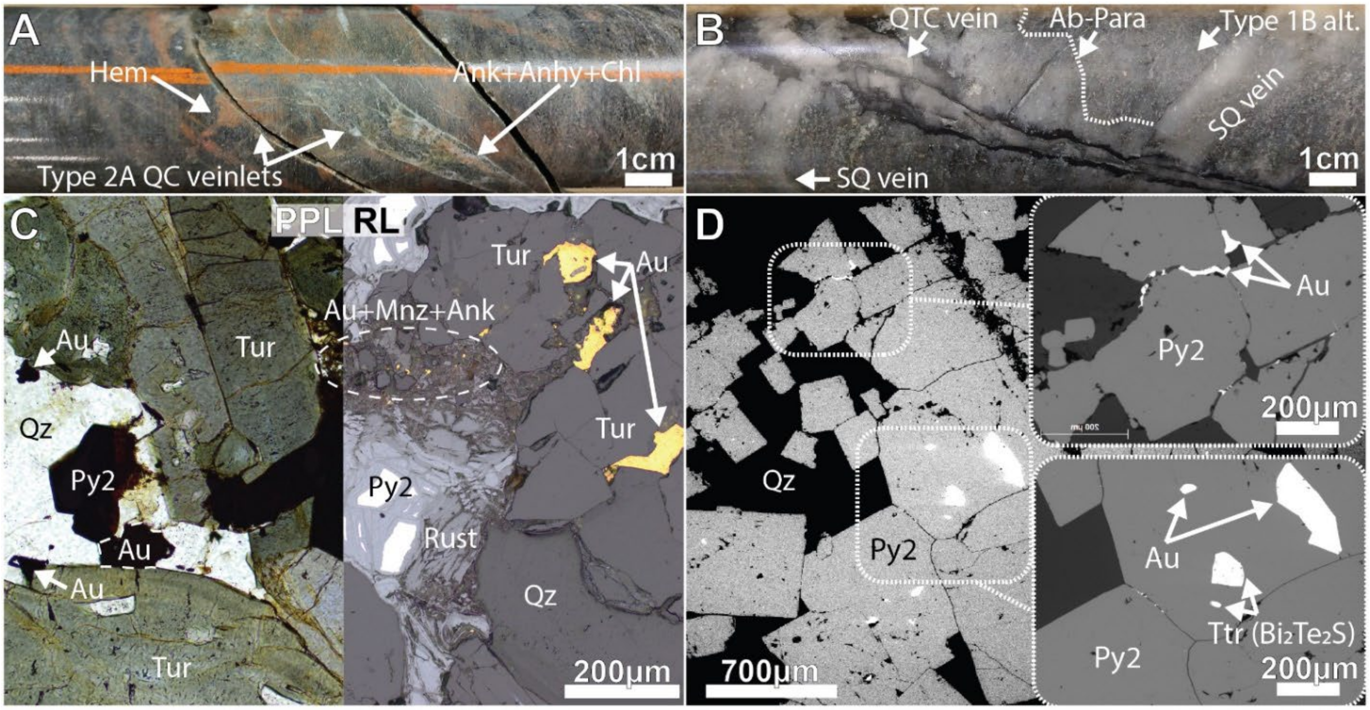
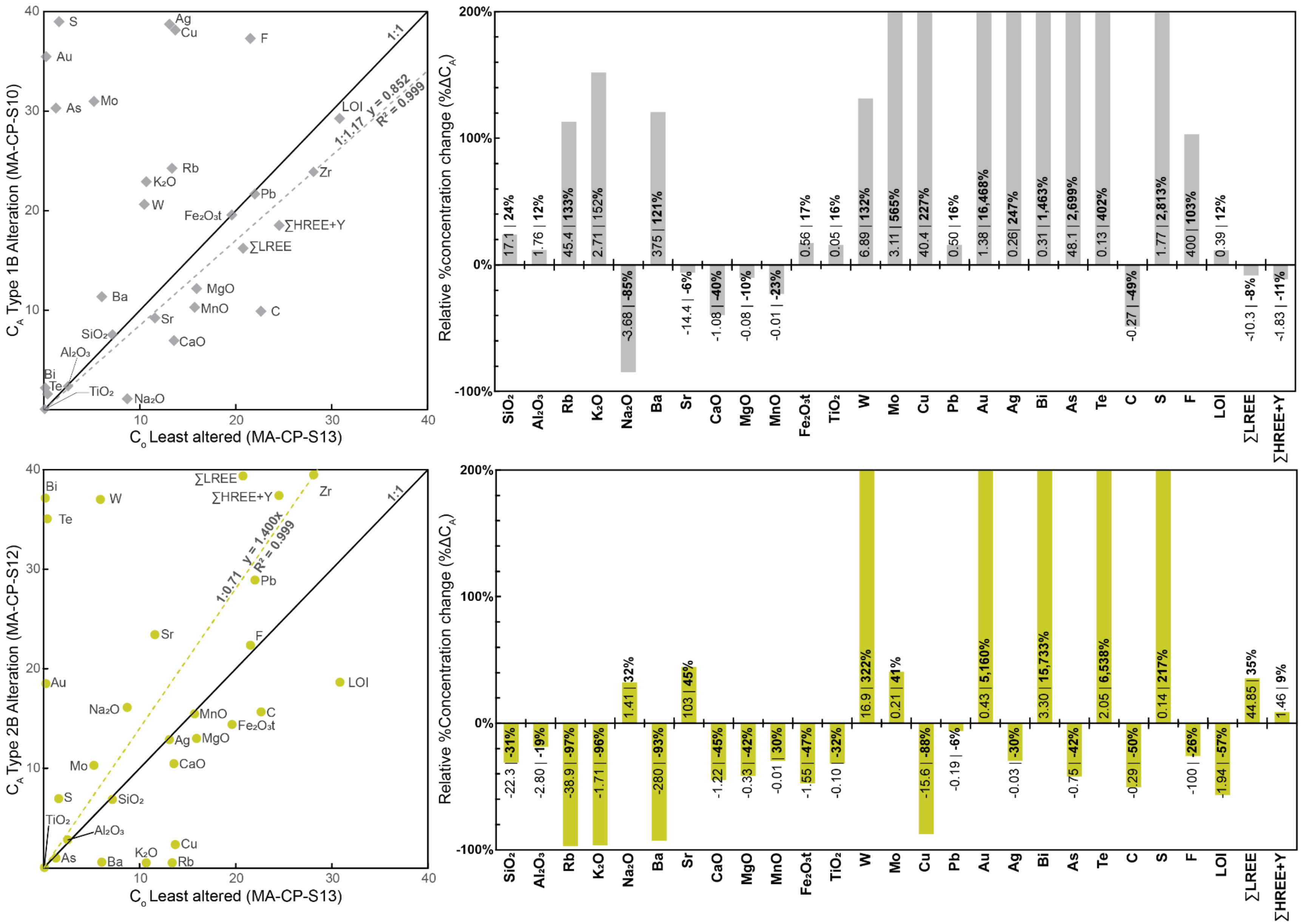


Figure 10. Type 2A (A) and 2B alteration (B-D) drill core photographs and photomicrographs. (A) Drill core showing melanotonalite cut by quartz-carbonate (QC) veinlets with Type 2A alteration selvages. (B) Drill core showing Type 1B-altered (alt.) melanotonalite cut by quartz-tourmaline-carbonate (QTC) vein. (C) Photomicrograph under plane-polarized light (PPL; left) and reflected light (RL; right) of pyrite (Py2) and gold occurring along fractures in QTC vein tourmaline. (D) Scanning electron microscopy-backscattered electron (SEM-BSE) image of QTC vein pyrite (Py2). Inset photos show inclusions and overgrowths of gold and tetradymite (Bi_2Te_2S). Abbreviations: Hem = Hematite, Ank = Ankerite, Anhy = Anhydrite, Chl = Chlorite, Ab = Albite, Para = Paragonite, Tur = Tourmaline, Au = Gold, Mnz = Monazite, Ttr = Tetradymite, Qz = Quartz.



C_A Type 1B Alteration (MA-CP-S10)
C_o Least altered (MA-CP-S13)
S
Ag
Cu
F
Au
As
Mo
1:1
LOI
1:1.17
y = 0.852
R² = 0.999
Rb
K₂O
Zr
Pb
W
Fe₂O₃t
∑HREE+Y
∑LREE
MgO
Ba
MnO
C
Sr
SiO₂
CaO
Al₂O₃
Bi
Te
TiO₂
Na₂O
Relative %concentration change (%ΔC_A)
200%
100%
0%
-100%
17.1 | 24%
1.76 | 12%
45.4 | 133%
2.71 | 152%
-3.68 | -85%
375 | 121%
-14.4 | -6%
-1.08 | -40%
-0.08 | -10%
-0.01 | -23%
0.56 | 17%
0.05 | 16%
6.89 | 132%
3.11 | 565%
40.4 | 227%
0.50 | 16%
1.38 | 16,468%
0.26| 247%
0.31 | 1,463%
48.1 | 2,699%
0.13 | 402%
-0.27 | -49%
1.77 | 2,813%
400 | 103%
0.39 | 12%
-10.3 | -8%
-1.83 | -11%
SiO₂ Al₂O₃ Rb K₂O Na₂O Ba Sr CaO MgO MnO Fe₂O₃t TiO₂ W Mo Cu Pb Au Ag Bi As Te C S F LOI ∑LREE ∑HREE+Y
C_A Type 2B Alteration (MA-CP-S12)
C_o Least altered (MA-CP-S13)
Bi
W
∑LREE
∑HREE+Y
Zr
Te
1:0.71
y = 1.400x
R² = 0.999
Pb
Sr
F
Au
LOI
Na₂O
MnO
C
Fe₂O₃t
Ag
MgO
CaO
Mo
S
SiO₂
TiO₂
Al₂O₃
Cu
K₂O
As
Ba
Rb
Relative %Concentration change (%ΔC_A)
-22.3 | -31%
-2.80 | -19%
-38.9 | -97%
-1.71 | -96%
1.41 | 32%
-280 | -93%
103 | 45%
-1.22 | -45%
-0.33 | -42%
-0.01 | 30%
-1.55 | -47%
-0.10 | -32%
16.9 | 322%
0.21 | 41%
-15.6 | -88%
-0.19 | -6%
0.43 | 5,160%
-0.03 | -30%
3.30 | 15,733%
-0.75 | -42%
2.05 | 6,538%
-0.29 | -50%
0.14 | 217%
-100 | -26%
-1.94 | -57%
44.85 | 35%
1.46 | 9%

Figure 11. Grant (1986) mass balance results for Type 1B (upper diagrams) and Type 2B (lower diagrams) alteration. (A, C) Isocon diagrams showing scaled elemental changes (unitless) between least and altered sample pairs. Isocons (dashed lines) are defined by linear least-squares regression through origin of Zr, Al_2O_3, TiO_2, Th, U, Zr, Hf, Ta, Nb, and P_2O_5. Th, U, Zr, Hf, Ta, Nb, P_2O_5 are omitted from the graphs for clarity. (B, D) Histograms showing absolute (in ppm or wt.% for oxides) and relative changes ($\%\Delta C_A$ – in bold). ΣLREE = (La + Ce + Pr + Nd + Sm + Eu + Gd). ΣHREE+Y = (Tb + Dy + Ho + Er + Tm + Yb + Lu + Y).

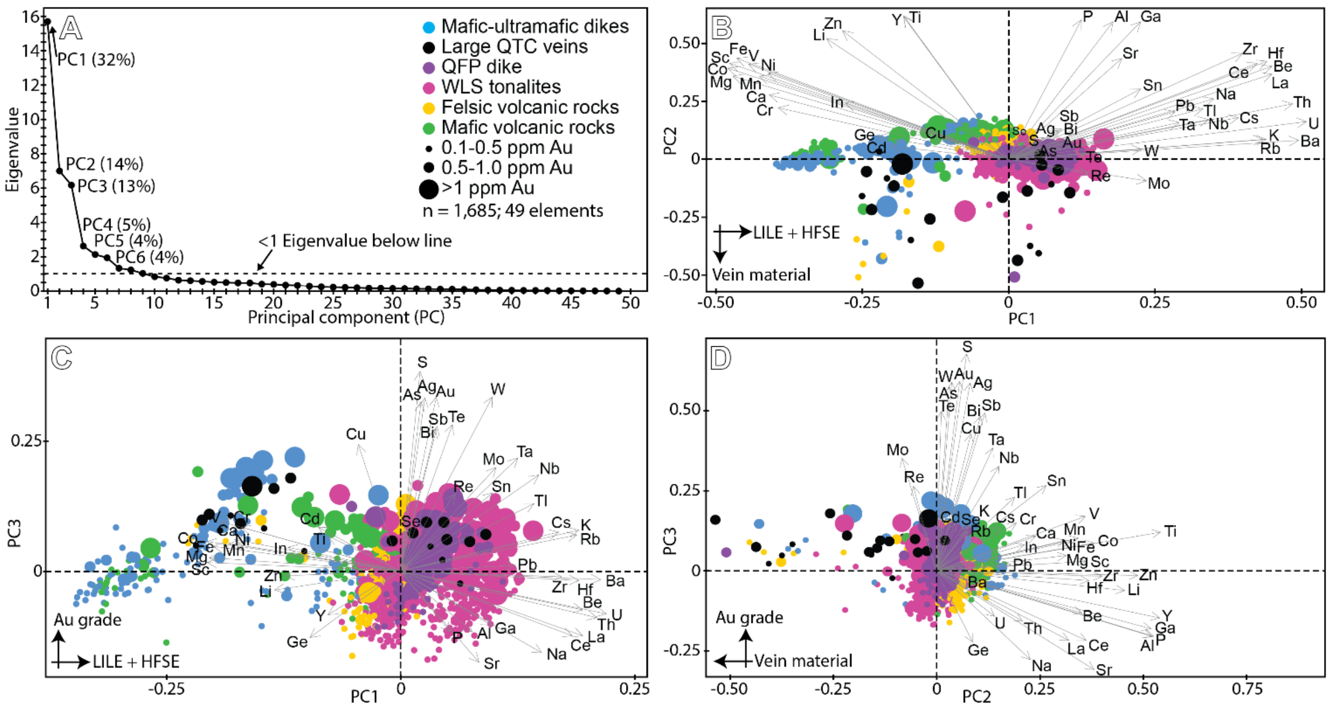


Figure 12. Principal component analysis (PCA) results. (A) Scree plot of principal components (PC). % values in brackets indicate associated dataset variation. n = number of assays. (B) PC1 vs. PC2 biplot. (C) PC1 vs. PC3 biplot. (D) PC2 vs. PC3 biplot. Arrows indicate general geochemical trends. Abbreviations: QFP dike = Quartz-feldspar porphyry dike, WLS = Webb Lake Stock, QTC vein = Quartz-tourmaline-carbonate vein, LILE = Large ion lithophile element, HFSE = High field strength element.

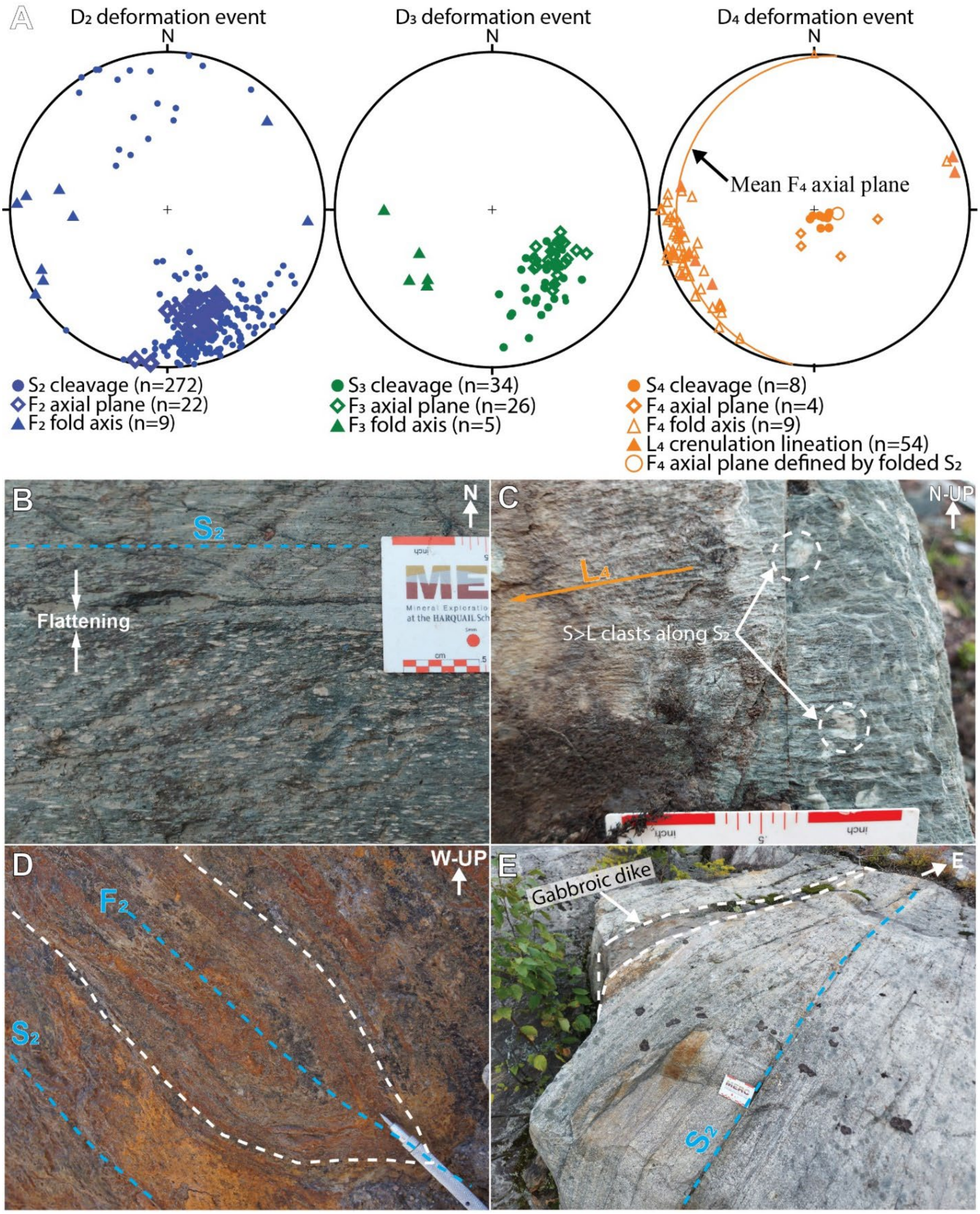


Figure 13. Summary of deformation structures and fabrics (A) and D_2 field relationships (B-E). (A) Lower-hemisphere, equal-area stereonet plots showing the orientations of D_2, D_3, and D_4 lineations

and poles to planar structures. (B) Horizontal surface showing S_2 cleavage in felsic lapilli tuff with schematic shortening direction. (C) Vertical surface showing flattened shape of quartzo-feldspathic lapilli clasts along S_2 cleavage plane. Note subhorizontal L_4 crenulation lineation. (D) Vertical surface showing regional S_2 cleavage axial planar to F_2-folded chemical sediment layers. (E) Horizontal surface showing continuous S_2 in leucotonalite within D_2 high strain zone. Scale card is 10 cm in length.

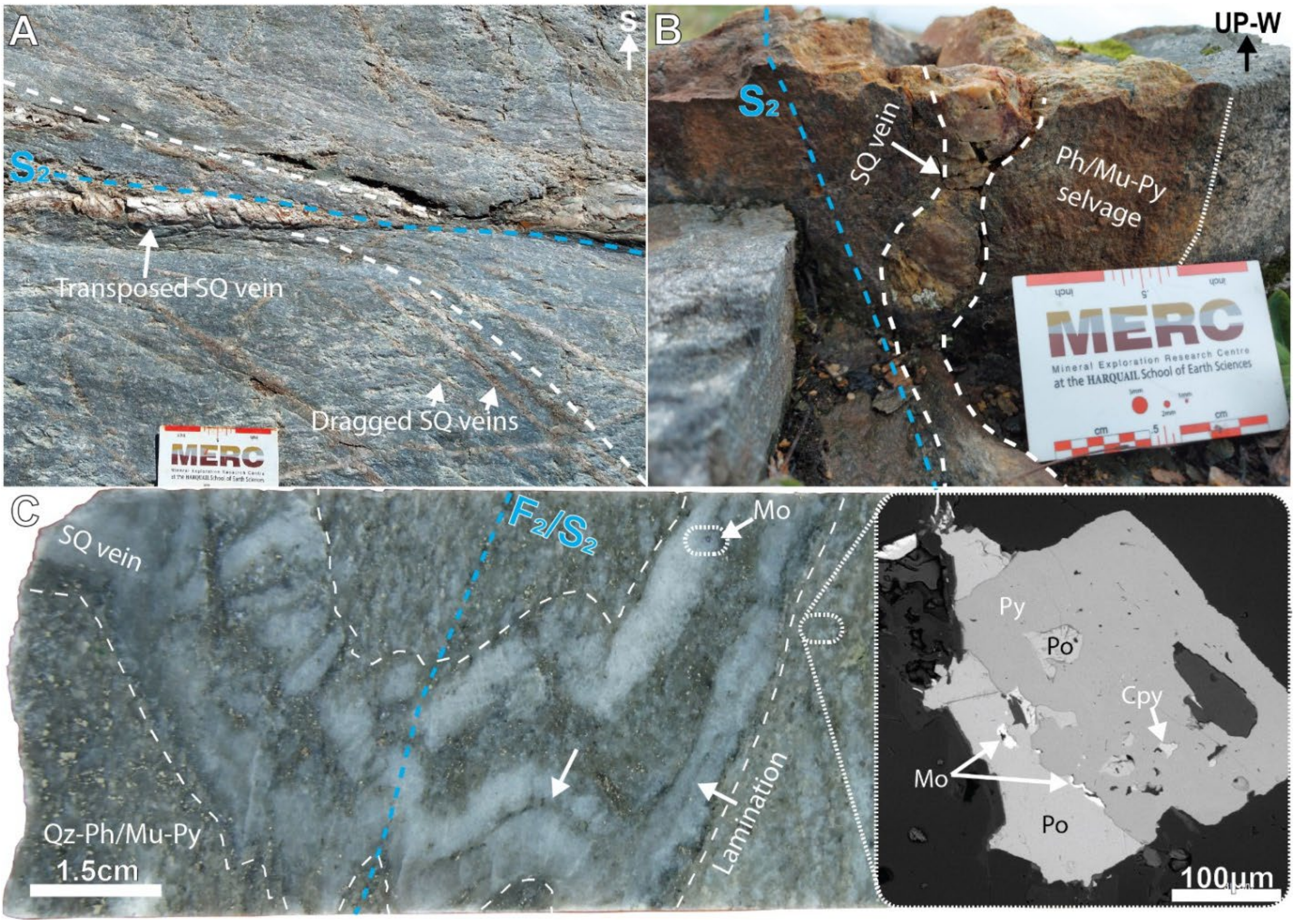


Figure 14. Structural features associated with sugary quartz (SQ) veins. (A) Inclined surface showing dragging of SQ veins into parallelism with a S_2 cleavage. (B) Vertical surface showing boudinaged SQ vein with Type 1B alteration selvage. (C) Drill core showing folded laminated molybdenite-bearing SQ vein in Type 1B-altered D_2 high strain zone. Inset shows scanning electron microscopy-backscattered electron (SEM-BSE) image of disseminated intergrown molybdenite-pyrrhotite-chalcopyrite-pyrite. Scale card is 10 cm in length. Abbreviations: Ph = Phengite, Mu = Muscovite, Qz = Quartz, Py = Pyrite, Mo = Molybdenite, Po = Pyrrhotite, Cpy = Chalcopyrite.

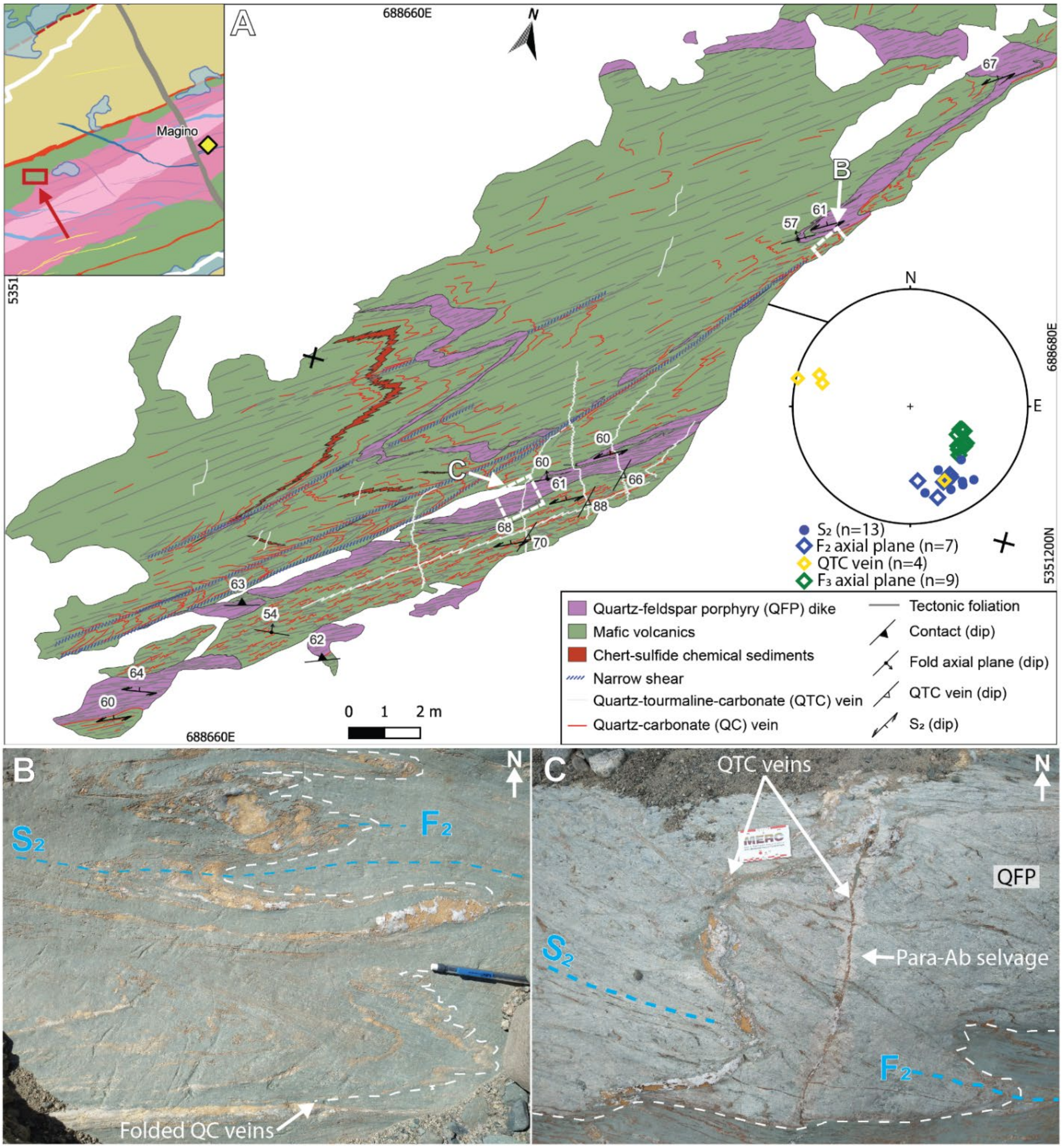
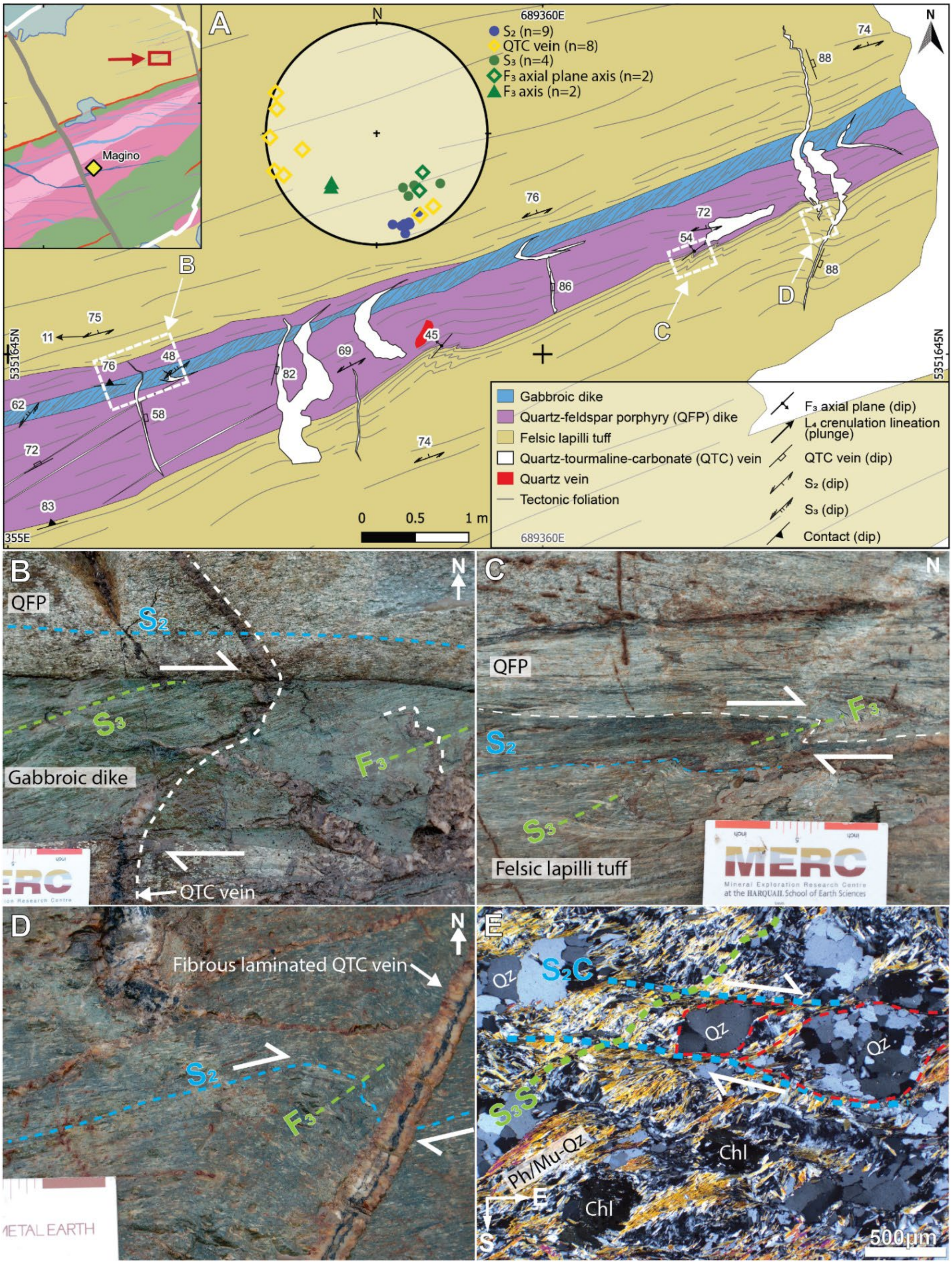


Figure 15. Structural features associated with quartz-carbonate (QC) and quartz-tourmaline-carbonate (QTC) veins. (A) Detailed outcrop map of D_2 high strain zone along northern flank of the Webb Lake stock. Inset map shows relative position of outcrop using the same symbology and scale as Figure 2. Lower-hemisphere, equal-area stereonet plot of poles to S_2 cleavage, F_2 axial planes, QTC veins, and F_3 axial planes. n = number of measurements. (C) Folded and transposed QC veins in mafic metavolcanic rocks. Pencil for scale. (D) Folded QTC veins with paragonite-albite (Para-Ab) Type 2B

alteration selvages cutting folded QFP dike. Scale card is 10 cm in length. Coordinates in NAD83 UTM zone 16N.



A
B
C
D
E
N
689360E
5351645N
S2 (n=9)
QTC vein (n=8)
S3 (n=4)
F3 axial plane axis (n=2)
F3 axis (n=2)
Magino
Gabbroic dike
Quartz-feldspar porphyry (QFP) dike
Felsic lapilli tuff
Quartz-tourmaline-carbonate (QTC) vein
Quartz vein
Tectonic foliation
F3 axial plane (dip)
L4 crenulation lineation (plunge)
QTC vein (dip)
S2 (dip)
S3 (dip)
Contact (dip)
0 0.5 1 m
QFP
S2
S3
F3
Gabbroic dike
QTC vein
Felsic lapilli tuff
MERC
Mineral Exploration Research Centre
at the HARQUAIL School of Earth Sciences
Fibrous laminated QTC vein
METAL EARTH
Qz
S2C
S3S
Ph/Mu-Qz
Chl
500µm

Figure 16. D_3 shear zone field relationships. (A) Detailed outcrop map. Inset map shows relative position of outcrop using the same symbology and scale as Figure 2. Lower-hemisphere, equal-area stereonet plots of F_3 fold axes and poles to S_2 cleavage, QTC veins, S_3 cleavage, and F_3 axial planes. n = number of measurements (B) F_3 micro-folds and axial planar S_3 cleavage along gabbroic dike. Note apparent dextral offset of QTC vein. (C) Asymmetric Z-shaped F_3 folds and axial-planar S_3 cleavage along QFP dike contact. (D) Asymmetric Z-shaped F_3 flanking structure along the margins of a QTC vein in felsic lapilli tuff. (E) Oriented photomicrograph in XPL showing dextral shear bands overgrown by chlorite (Chl) porphyroblasts in Type 1B-altered leucotonalite. Scale card is 10 cm in length. Coordinates in NAD83 UTM zone 16N.

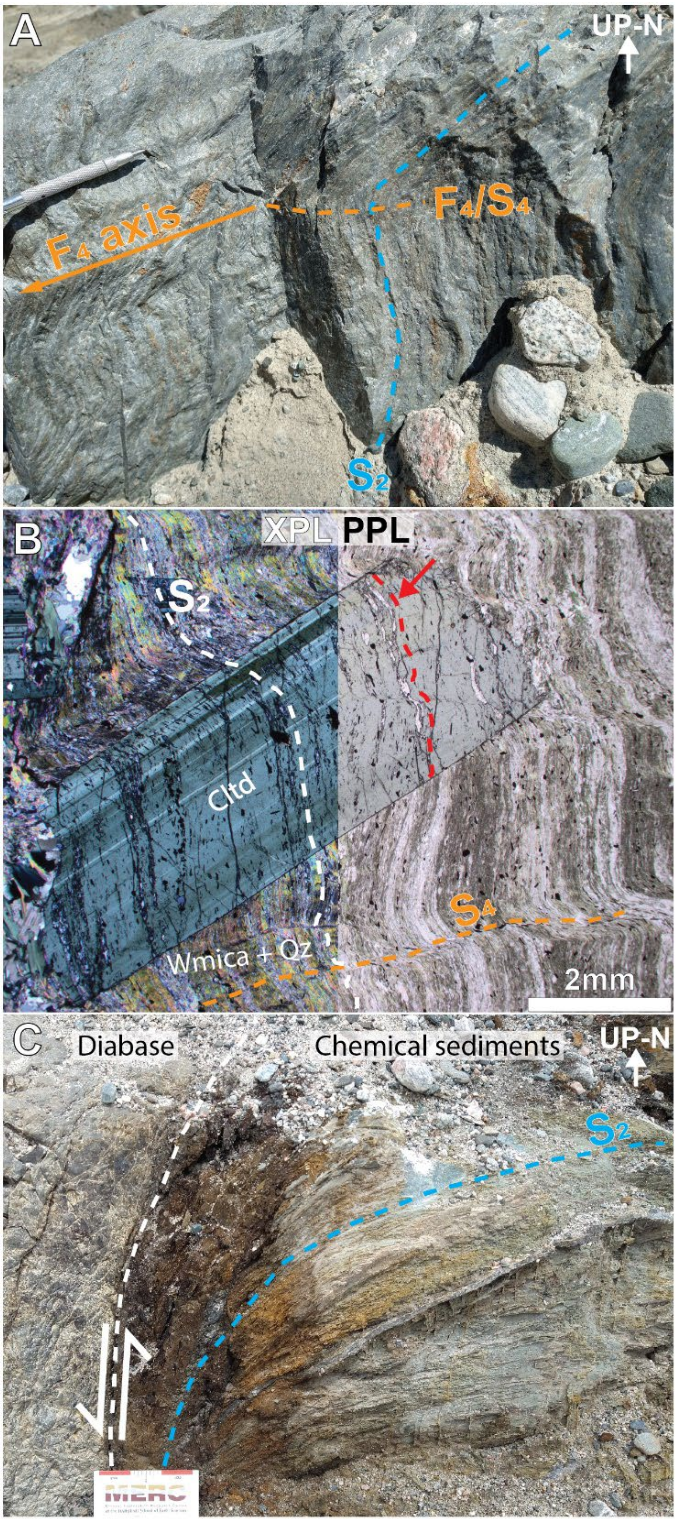


Figure 17. S_4 fabric – porphyroblast textural relationships and late fault structures. (A) Vertical surface showing F_4-folds with an axial planar S_4 cleavage in strongly deformed melanotonalite. (B) Photomicrograph in cross-polarized light (XPL) and plane-polarized light (PPL) showing chloritoid porphyroblasts with crenulated quartz inclusion trails (red dashed line) in Type 1B-altered felsic volcanic rocks. (C) Vertical surface showing anti-clockwise steepening of S_2 cleavage along diabase

contact. Scale card is 10 cm in length. Abbreviations: Cltd = Chloritoid, Wmica = white mica, Qz = quartz.

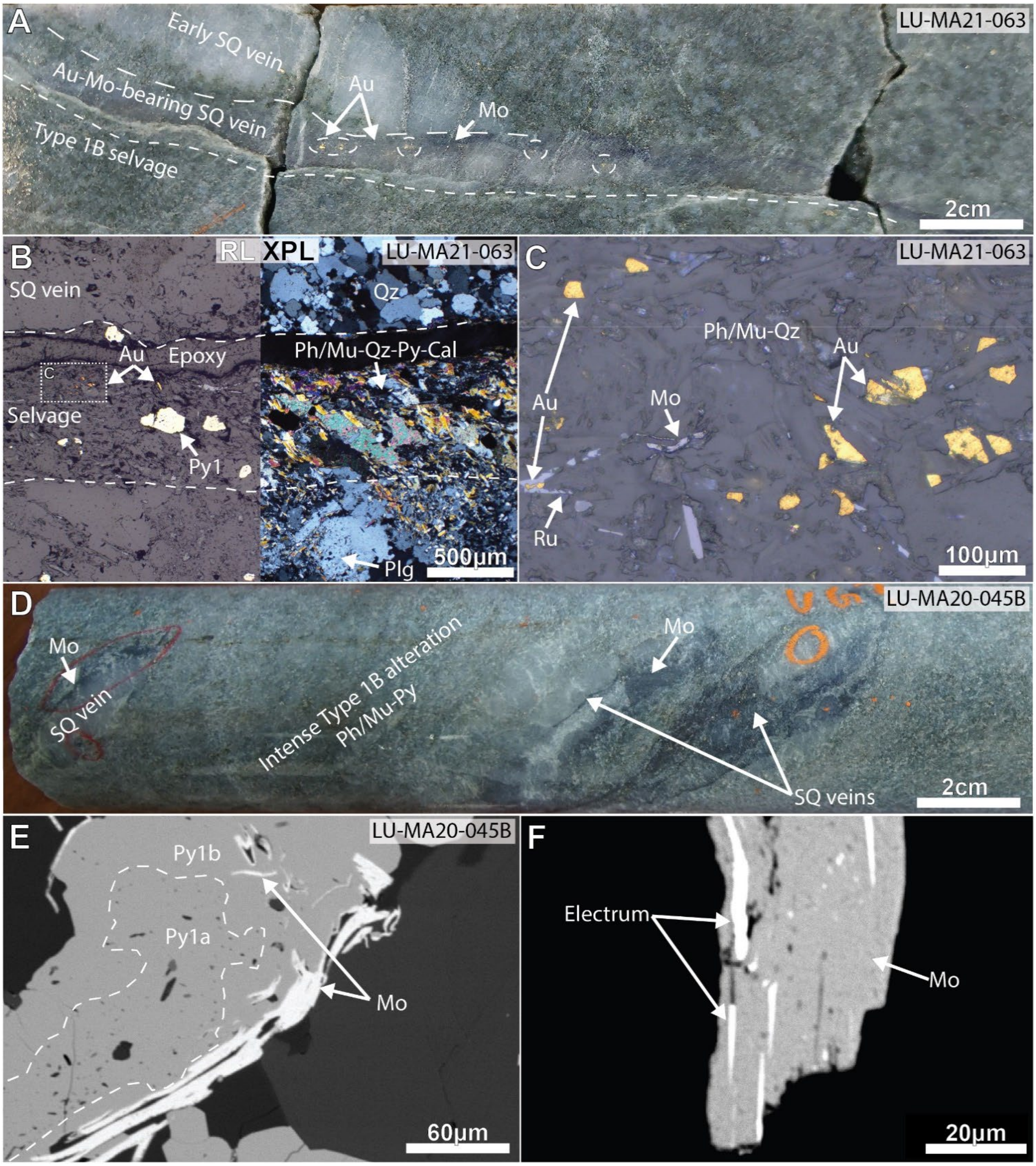


Figure 18. Molybdenite-bearing sugary quartz (SQ) vein characteristics. (A) Drillcore sample LU-MA20-063 comprising auriferous molybdenite-bearing SQ vein cutting melanotonalite. Photomicrograph (LU-MA20-063) under reflected light (RL; left) and cross-polarized light (XPL; right) showing SQ vein Type 1B selvage (C) Photomicrograph (LU-MA20-063) under RL showing disseminated gold, molybdenite, and rutile along selvage. (D) Drillcore sample LU-MA20-045B

comprising boudinaged molybdenite-bearing SQ veins cutting tonalite affected by intense Type 1B alteration. (E) Scanning electron microscopy-backscattered electron (SEM-BSE) image (LU-MA20-045B) showing molybdenite occurring as inclusions and overgrowths in pyrite Py1b. (F) SEM-BSE image showing electrum intergrown along molybdenite cleavage planes. Abbreviations: Au = Gold, Mo = Molybdenite, Ph = Phengite, Mu = Muscovite, Qz = Quartz, Cal = Calcite, Ru = Rutile, Py = Pyrite.

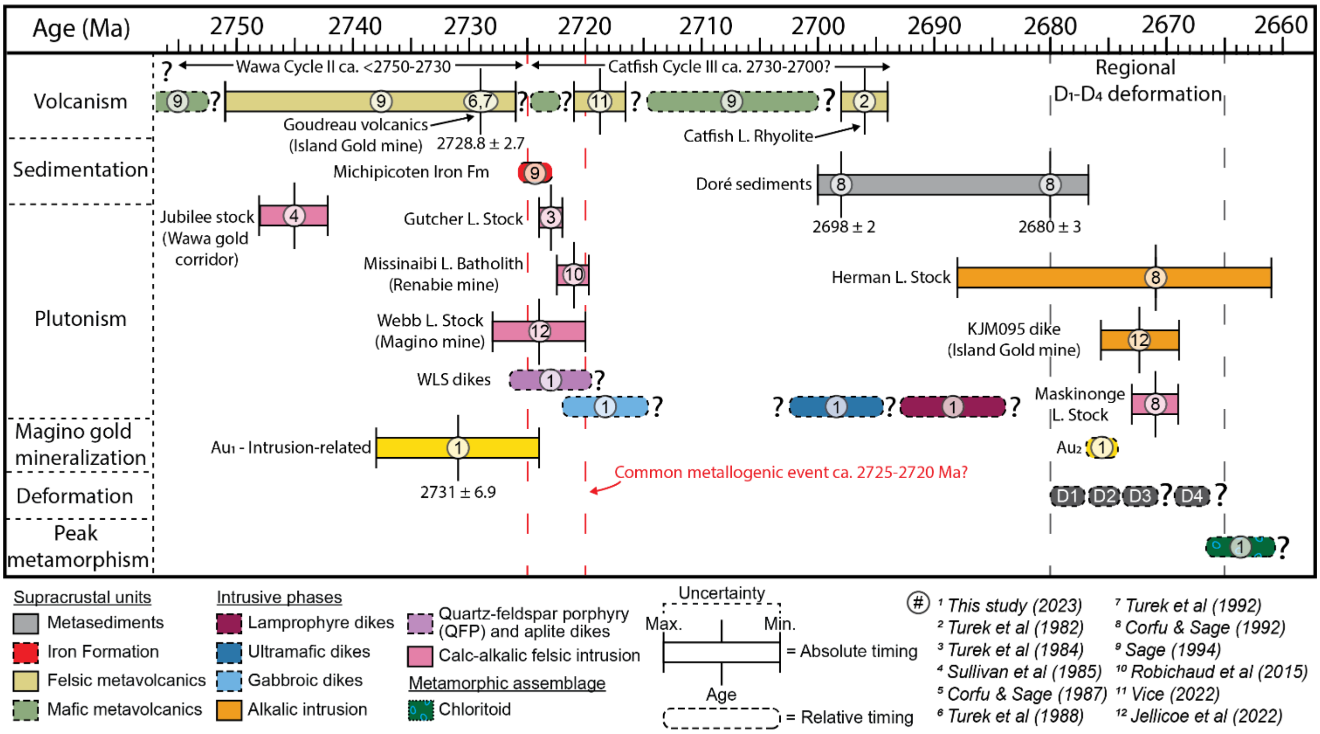


Figure 19. Simplified geochronology diagram of the Michipicoten greenstone belt, compiled after Sage, 1994; McDivitt et al., 2017; Vice et al., 2022; Jellicoe et al., 2022, and references therein. Keyed units and ages: 1) This study; 2) Turek et al., 1982; 3) Turek et al., 1984; 4) Sullivan et al., 1985; 5) Corfu and Sage, 1987; 6) Turek et al., 1988; 7) Turek et al., 1992; 8) Corfu and Sage, 1992; 9) Sage, 1994 and references therein; 10) Robichaud et al., 2015; 11) Vice et al., 2022; and 12) Jellicoe et al., 2022.

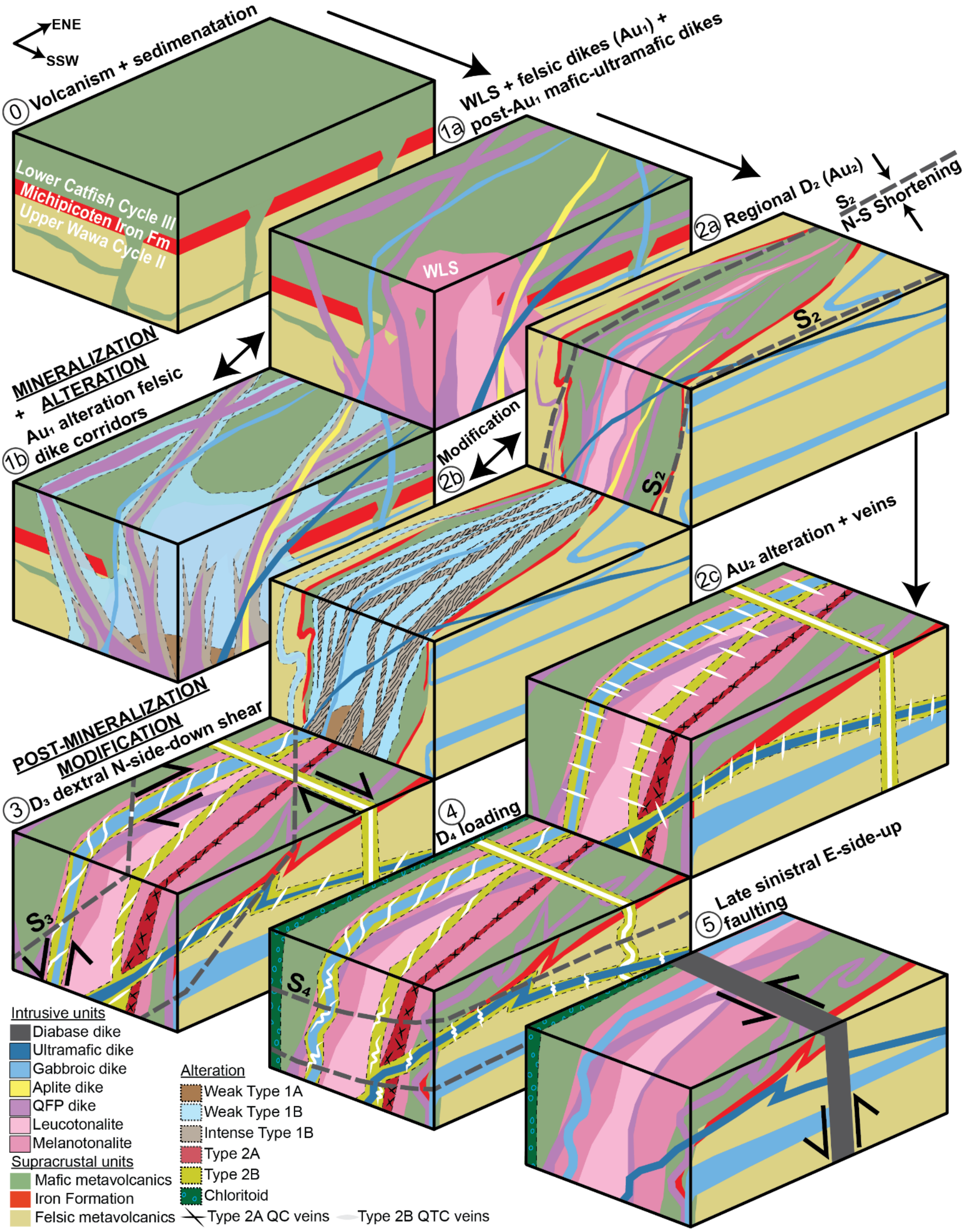


Figure 20. Simplified schematic evolutionary block model for the Magino deposit. Stage 0: Emplacement of supracrustal units. Stage 1a: Emplacement of the Webb Lake Stock (WLS) and

associated felsic dikes (Au_1 event), and post-Au_1 mafic-ultramafic dikes. Stage 1b: Type 1 alteration. Stage 2a: Regional D_2 N–S shortening and development of D_2 structures. Stage 2b: Modification of intrusion-related architecture and Type 1 alteration during D_2. Stage 2c: Type 2 alteration and vein emplacement (Au_2 event). Stage 3: Modification by D_3 dextral N-side-down deformation and development of D_3 structures. Stage 4: Modification by D_4 loading and development of D_4 structures. Stage 5: Modification by D_5 sinistral E-side-up oblique faulting. Not to scale.

Appendices

Appendix A – Analytical methods

Sampling, petrography, and mineral chemistry

Representative samples for petrographic (92 samples), lithogeochemical (63 samples), and geochronological (2 samples) characterization and analysis were collected from mechanically-stripped outcrops and pre-split NQ-sized exploration drill core. Weathered surfaces were cut and discarded, and samples were oriented relative to magnetic north using X, Y, Z, coordinates denoting East, Up, and the direction perpendicular to the dominant foliation, respectively, to preserve geometry. To constrain microstructure kinematics, samples were cut perpendicular to the foliation plane and parallel to its associated lineation. Thin section billets were cut at Laurentian University using a tile saw and sent to Vancouver Petrographics (https://www.vanpetro.com/) and François Brunet at Laurentian University for preparation of polished thin sections.

Polished thin sections were examined under transmitted and reflected light and imaged and analyzed using a Tescan Vega 3 scanning electron microscope (SEM) equipped with a Bruker Quantax 400 energy-dispersive spectrometer (EDS) system at the Mineral Exploration Research Centre (MERC) Isotope Geochemistry Laboratory, Laurentian University. Mineral chemistry SEM-EDS analytical results and QA/QC are presented in Appendix D. Samples examined under the SEM were imaged at a working distance of ~15 mm with electron beam settings at 15 kV accelerating voltage and ~1 nA beam current. EDS spectrometer counting times were set to accumulate 275,000 X-ray counts per analysis (Precise mode). The EDS spectra quantification method utilized a Series-fit peak deconvolution scheme Phi (Rho, Z) model with concentration standardization to Smithsonian reference materials and energy calibration. Kakanui hornblende (NMNH 143965) and Pyrope (NMNH 143968) were used as a check standard during calibration to ensure accurate quantification and assess instrument drift; however, individual spectra results were not normalized to the check standard values as part of mineral chemistry calculations. Selected elements were excluded from the quantification method to eliminate erroneous concentration assignments associated with X-ray energy peak overlaps. The quantified EDS spectra chemical results were screened for anomalous values and categorized and interpreted with reference to published mineral chemical data. EDS spot frequency and locations were selected to provide representative spectra data for the associated alteration and structure types as part of mineral chemistry analysis. Individual mineral grains were analyzed an average of 3 times to ensure consistency and valid measurement. Biotite and white mica formulae and atoms per formula unit (apfu) were calculated on a 22 oxygen and 11 oxygen basis, respectively, whereas chlorite was calculated on a 28 oxygen basis using the methods described by (Deer et al., 2013) and plotted on mineral composition diagrams. Feldspar anorthite (An0-100) compositions were calculated on a molar basis and plotted on a categorized histogram.

Lithogeochemistry

In total, sixty-three samples of least-altered and altered protoliths comprising felsic volcanic rocks, chloritoid-rich felsic volcanic rocks, mafic volcanic rocks, Webb Lake Stock tonalites, quartz-feldspar porphyry (QFP) dikes, aplite dikes, gabbroic dikes, ultramafic dikes, diabase dikes, and lamprophyre dikes, were obtained from surface and drillcore for the purpose of lithogeochemical analysis, rock unit characterisation, and mass balance calculation of hydrothermal alteration products. Lithogeochemistry laboratory analytical results and QA/QC are presented in Appendix D. Rock sample preparation involved cutting and discarding sample weathered surfaces, with the remaining material subsequently sent to ALS Laboratories (https://www.alsglobal.com/en-ca). Samples were then weighed and dried, crushed to 70% finer than 2 mm, of which 250 g was split and subsequently pulverized to 85% passing 75 µm (method code: PREP-31). In between samples, crushers and pulverisers were cleaned using barren material (method code: WSH-21, WSH-22, respectively). For whole rock lithogeochemistry, a complete research-grade analytical characterization package (method code: CCP-PKG01) was used, which includes measurement of major, rare earth, and trace elements, metals, halogens, volatile loss on ignition (LOI), and Carbon and Sulfur concentrations by lithium borate fusion (ICP-AES/ICP-MS) followed by aqua regia digestion, four acid digestion (ICP-AES), KOH fusion and ion chromatography, ignition, and induction furnace (LECO) on separates (method codes: ME-4ACD81, ME-MS81, ME-ICP06, ME-IC881, OA-IR06, ME-MS42, and ME-IR08, respectively). Gold and silver were measured by fire assay (ICP-AES) and aqua regia digestion (ICP-AES; method code: Au-ICP21, Ag-AA45, respectively). Specific gravity was measured on select pulps using a pycnometer (method code: OA-GRA08b). The results were filtered for anomalously high LOI (over ~4.00 wt.%), S (over ~0.5 wt.%), and metals (significantly greater than crustal abundance values) during categorization of least-altered and altered samples in combination with petrographic analysis. For data presentation and calculations, concentrations were normalized to 100% LOI-free and subsequently rounded up to three digits, depending on detection limits. Values obtained below analytical detection were censored to one half the detection limit.

Internal quality assurance and control (QA/QC) comprised insertion and analysis of blanks (N=2), mineralized field duplicates (N=2 sets), as well as external whole rock standards (ORCA1 rhyolite, N=2; and, LK-NIP-1 diabase, N=1) and gold standards (CDN-GSP-6, N=3) rotated in every 10^{th} sample. Analytical precision and accuracy were determined by the methods outlined in Piercey (2010) and references therein for calculation of the relative standard deviations (%RSD, precision) and relative difference (%RD, accuracy) of each analyte. QA/QC results are presented in Appendix D.

For major elements (ME-ICP06, including SiO_2, Al_2O_3, Fe_2O_3t (total iron), CaO, MgO, Na_2O, K_2O, Cr_2O_3, TiO_2, MnO, P_2O_5), precision and accuracy were generally excellent (<3% RSD and RD), except for Cr_2O_3 and P_2O_5 (good; <7% RSD, and acceptable; <10% RD, respectively) in reference to rhyolite standard ORCA-1. For LOI and Totals (OA-GRA05 and TOT-ICP06, respectively), precision and accuracy were both excellent (<3% RSD and RD). For trace elements and REEs (ME-MS81, including Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Ge, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sm, Sn, Sr, Ta, Tb, Th, Tm, U, V, W, Y, Yb, Zr), precision and accuracy in reference to rhyolite standard ORCA-1 were generally excellent (<3% RSD and RD), except for Cs, Dy, Eu, Gd, Sn, Ta (good; 3-7% RSD and/or RD), Cr (acceptable; <10% RSD, and poor; >10% RD), and Sn, V, and W, (>10% RSD and/or RD; concentrations near detection limit). The latter elements recorded excellent precision (<3% RSD) in duplicate mineralized samples MA-CP-S10 and MA-EP-S08. Au (Au-ICP21) precision was excellent (<3% RSD) but accuracy was poor (>10% RD) with reference to gold standard CDN-GS-P6. Ag (Ag-AA45) precision was acceptable (<10% RSD) in duplicate mineralized sample MA-CP-S10 and poor (>10% RSD) in duplicate mineralized sample MA-EP-S08. The precision and accuracy for other metals determined using internal standards (ME-4ACD81 for Cd, Co, Cu, Li, Mo, Ni, Pb, Sc, Zn; and method ME-MS42 for As, Bi, Hg, In, Re, Sb, Se, Te, Tl) were generally acceptable (~ or <10% RSD) in reference to ORCA-1; however, most concentrations were near or below the detection limits. The latter elements generally recorded good (3-7% RSD) to acceptable (<10% RSD) precision in duplicate mineralized samples MA-CP-S10 and MA-EP-S08. Using laboratory standards (MRGeo08 for ME-4ACD81), the latter elements recorded excellent (<3% RSD) precision except for Sc (acceptable; <10% RSD). C (C-IR07) precision varied from good (3-7% RSD) to poor (>10% RSD) in duplicate mineralized samples MA-CP-S10 and MA-EP-S08, while precision for S (S-IR08), H_2O (OA-IR06), Cl and F (Cl-IC881 and F-IC881, respectively) were generally excellent to good (<3 and 3-7% RSD) for all standards and duplicates.

Mass balance

The Grant (1986)-type isocon illustrates the total mass change between least and altered samples and is defined by the linear least-squares regression through origin of major and trace elements typically considered to be immobile during hydrothermal alteration (e.g., high field strength elements such as Zr, Al_2O_3, TiO_2, Th, U, Zr, Hf, Ta, Nb, P_2O_5, and REE's). These elements were used to calculate isocons for both precursor-altered pairs; however, REE's were excluded during calculation due to the presence of REE-bearing hydrothermal minerals such as monazite and xenotime found in Type 2B-associated alteration assemblages, which suggests that these elements may have been mobile during hydrothermal alteration. An isocon with a slope of 1:1 represents no change in mass, whereas an isocon with a shallower slope indicates overall mass gain (due to dilution of immobile elements by addition of mobile alteration-derived elements), with the opposite being true for mass losses (i.e., steeper isocon slope). The reciprocal of the isocon slope is used to calculate the relative enrichment and depletion of individual elements in order to correct the isocon slope back to the 1:1 constant mass reference line, such that individual elements which plot above and below the isocon are considered to have gained or lost mass, respectively.

Principal component analysis (PCA)

PCA is a widely-used multivariate statistical technique which seeks to reduce, simplify, and analyze the structure of a dataset comprising an inter-correlated set variables (Abdi and Williams, 2010). In a broad sense, compared to a simple correlation method such as a least-squares linear regression between two variables, the PCA method instead uses a matrix transformation to evaluate the co-correlation between each set of variables to output eigenvector Principal Components (PCs) which describe portions of the total variation in a dataset (refer to Abdi and Williams, 2010, and reference therein for a more complete overview). The PCs are then sequenced on a "scree" plot in descending order in terms of their significance in the dataset (e.g., PC1, PC2, PC3…) and can then be evaluated against each other as PC biplots or against individual variables as scaled coordinates (Abdi and Williams, 2010). In practical terms, PCs in geological datasets typically represent a geological process, such as magmatic differentiation/fractionation (which may account for the variability of protoliths with different geochemical compositions), mineralization, alteration, weathering, etc. (Grunsky, 2010). PCs may be selectively examined depending on the goals of the investigation; however, PCs with eigenvalues less than 1 are typically considered to be insignificant (Kaiser, 1961), although this is not universally true (O'Toole et al., 1993). PC biplots compare the scaled PC loadings (i.e., coefficient of correlation), such that plotted vectors with positive values reflect positive correlation with that PC and negative values reflect anti-correlation. As such, in a graphical sense, variables which plot together are considered to be correlated and the angle between them reflects the degree of correlation, with acute angles reflect higher correlation, perpendicular angles reflect no correlation, and obtuse angles reflect anti-correlation.

The PCA was done using ioGAS 7.4.2 with a Log 10 transformation on continuous multi-element geochemical data from five drill holes (from west to east, MA22-131, MA22-145W1, MA22-142W1, MA22-130, and MA22-129). The geochemical dataset comprises major and trace element data (49 total elements, excluding most REEs) from ~1 meter intervals of exploration split drill core which were logged and sampled by Argonaut Gold (*https://www.argonautgold.com/*) geological staff in accordance with industry best practice. Chemical analyses were undertaken at Actlabs (*https://actlabs.com/*) using 4-acid digest method UT-6M in parallel with Au concentration determination through fire assay methods. Within the investigated dataset, gold concentrations were filtered to above 100 ppb Au (>0.1 ppm) and lithologies were grouped into WLS tonalites, QFP dikes, mafic-ultramafic dikes, large meter-scale QTC veins, and felsic and mafic volcanic rocks. Diabase dikes were excluded from the analysis. A sensitivity analysis, to test the effect of Au filtering at different interval bins, determined that no significant change to the PCA patterns or magnitude of the corresponding scaled vectors occurred. As such, Au values were binned at 0.1-0.5 ppm Au, 0.5-1.0 ppm Au, and >1.0 ppm Au, which approximately represent background to higher grade gold values typically considered in open pit gold mine settings. The elemental correlation matrix output was filtered to show positive correlation values above 0.1 and negative correlation values below -0.1 to better assess elemental and metal associations with respect to gold and mineralization.

Re-Os molybdenite-geochronology (ID-TIMS)

Re-Os isotope dilution-thermal ionization mass spectrometry (ID-TIMS) was done at the Radiogenic Isotope Facility (RIF) at the University of Alberta, Canada. Methods used for molybdenite analysis are described in detail by Selby and Creaser (2004). Areas of each sample with visible molybdenite were removed, and preparation of a molybdenite mineral separate was made by metal-free crushing and sieving followed by magnetic and gravity concentration methods. The ^{187}Re and ^{187}Os concentrations in molybdenite were determined by isotope dilution mass spectrometry using Carius-tube, solvent extraction, anion chromatography and negative ID-TIMS techniques. For this work, a mixed double spike containing known amounts of isotopically enriched ^{185}Re, ^{190}Os, and ^{188}Os analysis was used (Markey et al., 2007). Isotopic analysis used a ThermoScientific Triton mass spectrometer by Faraday collector. Total procedural blanks for Re and Os are less than <3 picograms and 2 picograms, respectively, which are insignificant in comparison to the Re and Os concentrations in molybdenite. The Reference Material 8599 Henderson molybdenite (Markey et al., 2007) is routinely analyzed as a standard at the RIF, and during the past 8 years returned an average Re-Os date of 27.78 ± 0.07 Ma (n=35), indistinguishable from the Reference Age Value of 27.66 ± 0.1 Ma (Wise and Watters, 2011). The ^{187}Re decay constant used is 1.666e-11.a-1 (Smoliar et al., 1996), a value which is cross-calibrated to the U-Pb system (^{238}U and ^{235}U) to better than ~ ± 0.31% (Selby et al., 2007). The age uncertainty is quoted at the 2σ level, and includes all known analytical uncertainty, including a ~0.31% uncertainty in the decay constant of ^{187}Re.

Appendix B – Rock unit descriptions

Supracrustal rocks

Felsic-intermediate metavolcanic rocks (Wawa Cycle II): The oldest supracrustal rocks in the Magino area are Wawa Cycle II felsic-intermediate metavolcanic rocks ("felsic volcanic rocks"), which consist of massive tuffs to poorly-sorted matrix-supported lapilli-tuffs. Analyzed least-altered samples ($n = 2$) have an average composition of 65.4 wt.% SiO_2, 16.5 wt.% Al_2O_3, 7.60 wt.% Fe_2O_3t (total), 3.61 wt.% CaO, 1.00 wt.% MgO, 2.76 wt.% Na_2O, 1.98 wt.% K_2O, and 0.009 wt.% Cr_2O_3. They plot along the rhyodacite/dacite and andesite fields on the Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 immobile element rock type classification diagram and are of calc-alkaline magmatic affinity (Zr/Y>7; Galley and Lafrance, 2014). The unit is typically blue-green mottled cream in color and composed of <1 cm-wide grey to cream angular quartzo-feldspathic fragments, cream angular to rounded anhedral-subhedral feldspar phenocrysts, and subordinate rounded blue "quartz eye" phenocrysts set in a fine-grained quartzo-feldspathic groundmass. Locally, the unit contains bomb-sized fragments.

Iron formation chemical sedimentary rocks: Iron formation chemical sedimentary rocks ("chemical sedimentary rocks") in the deposit area comprise a semi-continuous and strongly deformed sequence of oxide, chert-sulfide, and carbonate-facies units. Unit facies proportions vary laterally, with carbonate-facies units predominating in the eastern portion of the deposit. Both the lower contacts with the felsic-intermediate volcanic rocks and upper contact with the intermediate-mafic volcanic rocks are strongly sheared and folded. The mafic-intermediate volcanic rocks along this upper contact show an interfingering intrusive contact, with apophyses cutting across individual oxide and chert-sulfide layers.

Mafic-intermediate metavolcanic rocks (Catfish Cycle III): Catfish Cycle III mafic-intermediate metavolcanic rocks ("mafic volcanic rocks") are typically grey-green in color, fine-grained, texturally massive to pillowed, and strongly foliated. Analyzed least-altered samples have an average ($n = 3$)

composition of 51.3 wt.% SiO_2, 13.7 wt.% Al_2O_3, 16.5 wt.% Fe_2O_3t (total), 8.26 wt.% CaO, 5.05 wt.% MgO, 2.71 wt.% Na_2O, 0.245 wt.% K_2O, and 0.008 wt.% Cr_2O_3. They plot along the andesite/basalt and sub-alkaline basalt fields on the Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 immobile element rock type classification diagram and are of tholeiitic magmatic affinity (Zr/Y<4; Galley and Lafrance, 2014). Least-altered samples are mineralogically composed of epidote, plagioclase, chlorite, quartz, carbonate, with accessory rutile and magnetite. The unit is intruded by the WLS and associated felsic dikes, with sheared or wispy, diffuse contacts. Distal to the WLS, the unit is variably magnetic, and hosts widely spaced (1-10 m) cm-scale quartz-carbonate-epidote veins. Proximal to the stock, it is non-magnetic and hosts closely-spaced (1-10 cm) thin (<1 cm) quartz-carbonate veins.

Intrusive phases of the Webb Lake Stock (WLS)

The WLS is a steeply-dipping, elongate multi-phase intrusion comprising two major intrusive tonalitic phases, “melanotonalite” and “leucotonalite”, and volumetrically minor m-scale quartz-feldspar porphyry (QFP) and aplite dikes. The distribution of the WLS tonalite phases at Magino broadly defines an 80-100 m-wide lenticular leucocratic tonalite core with a melanocratic tonalite outer envelope.

Melanotonalite: The volumetrically predominant intrusive phase of the WLS comprises melanocratic quartz diorite to tonalite. Analyzed least-altered samples have an average (n = 5) composition of 69.0 wt.% SiO_2, 15.1 wt.% Al_2O_3, 3.92 wt.% Fe_2O_3t (total), 3.92 wt.% CaO, 1.49 wt.% MgO, 4.80 wt.% Na_2O, 1.03 wt.% K_2O, and 0.004 wt.% Cr_2O_3. Least-altered melanotonalite is typically dark grey to black mottled blue and white in color, whereas moderately altered and weathered samples take on a characteristic “sea-green” spotted chalky white color across most of the deposit due to abundant chlorite and white mica-altered plagioclase. It is fine to medium-grained (0.5-3 mm in size), commonly porphyritic, and composed of subhedral to euhedral concentrically-zoned and twinned plagioclase (60-75%; ~An10-50), rounded blue quartz eyes (5-20%), with minor subhedral primary biotite, anhedral secondary biotite, and chlorite after biotite (5-15%), and accessory zircon, ilmenite, apatite, epidote, and allanite. Corroded rafts and xenoliths of the surrounding volcanic units are commonly found along the northern flank of the stock, near the chemical sedimentary rocks contact.

Leucotonalite: The volumetrically minor intrusive phase of the WLS comprises leucocratic tonalite to trondhjemite, which defines the core of the stock. Least-altered leucotonalite have an average (n = 6) composition of 72.1 wt.% SiO_2, 14.9 wt.% Al_2O_3, 2.96 wt.% Fe_2O_3t (total), 2.40 wt.% CaO, 0.720 wt.% MgO, 4.51 wt.% Na_2O, 1.90 wt.% K_2O, and 0.003 wt.% Cr_2O_3. Least-altered leucotonalite is typically grey to cream in color and characteristically lower in mafic minerals than melanotonalite, whereas moderately altered samples are pale grey to off-white and chalky in color with a "bleached" appearance due to white mica-altered plagioclase. It is typically equigranular, fine to coarse grained (2-3 mm in size) and composed of subhedral to euhedral concentrically-zoned and twinned plagioclase (50-70%; ~An10-30), rounded blue quartz eyes (10-30%), with minor anhedral to subhedral biotite and chlorite after biotite (1-10%), and accessory zircon, ilmenite, apatite, epidote, and allanite. Contacts between the major tonalite phases are interfingering and obscured by strong deformation, alteration, and the presence of felsic and gabbroic dikes. Along the tonalite phase contacts, corroded rounded xenoliths of melanotonalite are found within leucotonalite, suggesting that the latter phase is younger.

Quartz-Feldspar Porphyry (QFP) dikes: QFP dikes define a tonalitic to quartz-dioritic suite of intrusions with variable size and proportions of plagioclase and blue quartz eye phenocrysts. Analyzed least-altered samples have an average (n = 5) composition of 67.7 wt.% SiO_2, 15.9 wt.% Al_2O_3, 4.66 wt.% Fe_2O_3t (total), 3.46 wt.% CaO, 1.55 wt.% MgO, 4.62 wt.% Na_2O, 1.15 wt.% K_2O, and 0.003 wt.% Cr_2O_3. Least-altered QFP dikes are typically dark grey-black spotted cream and blue, fine to coarse-grained (1-10 mm in size) feldspar-quartz porphyritic set in a fine-grained biotite-plagioclase-quartz groundmass. They are mineralogically composed of euhedral concentrically-zoned plagioclase with Ca-rich rims (50-70%; ~An30-50) rounded blue quartz eyes (5-20%), with minor subhedral to anhedral biotite and chlorite after biotite (5-15%), euhedral epidote (1-5%), and accessory zircon, euhedral to wormy ilmenite, apatite, allanite, scheelite. Along the northern flank of the stock, the dikes intrude the surrounding mafic volcanic rocks and are strongly folded and boudinaged parallel to the regional foliation. In the central portion of the stock, these dikes straddle the contact between melanocratic and leucocratic tonalite. In relatively undeformed portions of the stock, tonalite-felsic dike contacts are highly irregular, jagged to lobate, and diffuse, suggesting contemporaneous emplacement. QFP dikes are predominant in the central and eastern portions of the stock, where they straddle the melanocratic-leucocratic tonalite intrusion contact. Within the volcanic package, the dikes are cut by cm- to dm-scale coarse, fibrous, N-trending quartz-carbonate-tourmaline ladder veins.

Aplite dikes: Aplites define a suite of siliceous saccharoidal felsic intrusions lacking mafic mineral phases. Analyzed least-altered samples have an average (n = 3) composition of 76.9 wt.% SiO_2, 13.5 wt.% Al_2O_3, 1.52 wt.% Fe_2O_3t (total), 2.14 wt.% CaO, 0.401 wt.% MgO, 3.65 wt.% Na_2O, 1.55 wt.% K_2O, and 0.002 wt.% Cr_2O_3. Least-altered samples are mineralogically composed of a very fine-grained mosaic (10-25 μm) groundmass of interlocking granoblastic polygonal plagioclase (An10-30) and quartz with minor subhedral to anhedral white mica and chlorite flakes (1-5%), and minor accessory zircon, ilmenite, allanite, epidote, and Ce-fluorocarbonates after allanite. They are anomalously colored pink, brown, red, and pale grey to dark grey, host very closely spaced (1-2 mm) dike-parallel laminations or bands and contain 1-5% very fine-grained (10-200 μm) disseminated inclusion-rich pyrite. Aplites are more common in the southwestern portions of the stock and within the surrounding volcanic rocks.

Least-altered melanotonalite and QFP dikes straddle the rhyodacite/dacite-andesite fields on the Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 immobile element rock type classification diagram, whereas leucotonalite and aplite dikes straddle the rhyodacite/dacite-trachyandesite fields and rhyolite fields, respectively. All phases plot predominantly within the tonalite and trondhjemite fields on the

Barker (1979) normative three-feldspar Albite-Anorthite-Orthoclase (Ab-An-Or) diagram, and within the tonalite to quartz-diorite fields on the modal Quartz-Alkali Feldspar-Plagioclase (QAP) ternary diagram; Streckeisen, 1974), with melanotonalite and QFP plotting more closely to the quartz-diorite field than leucotonalite and aplite. Melanotonalite and QFP dikes plot closer to the FeO (F) and MgO (M) nodes than the leucotonalites and aplite dikes on a Total Alkali-FeO-MgO (AFM) diagram. In terms of magmatic affinity, melanotonalite, leucotonalite, and QFP, are calc-alkaline (Zr/Y>7; Galley and Lafrance, 2014), whereas aplites are calc-alkaline to transitional (Zr/Y~7). When plotted on a bivariate Zr versus Th immobile element plot, the intrusions define three groupings: 1) Melanotonalite + QFP, 2) Leucotonalite; and, 3): Aplite. All phases are enriched in LREE with steep negative slopes and weak to absent europium anomalies on chondrite-normalized diagrams, with leucotonalite and aplites showing more highly enriched and displaying the steepest slopes. All phases display large negative Tl, Nb, and Ta anomalies, slight positive Zr and Hf anomalies, and large positive W, and Li anomalies when plotted on primitive mantle-normalized extended trace element plots. Melanotonalite and QFP also show positive Mo anomalies, whereas aplites show pronounced negative P and Ti anomalies which is unique from the other phases.

Mafic-ultramafic dikes

Gabbroic dikes: Gabbroic dikes are typically green in color, fine-grained, texturally massive, and typically strongly deformed with abundant chlorite flakes aligned parallel to the regional foliation. Analyzed least-altered samples have an average (n = 2) composition of 49.9 wt.% SiO_2, 14.4 wt.% Al_2O_3, 13.2 wt.% Fe_2O_3t (total), 10.7 wt.% CaO, 7.64 wt.% MgO, 2.68 wt.% Na_2O, 0.099 wt.% K_2O, and 0.042 wt.% Cr_2O_3. Least-altered samples straddle the andesite/basalt and subalkaline basalt fields on the Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 immobile element rock type classification diagram and are of tholeiitic magmatic affinity (Zr/Y<4; Galley and Lafrance, 2014). Least-altered samples are mineralogically composed of twinned plagioclase (50-60%), subhedral to anhedral chlorite flakes and calcite (20-30%), and coarse subhedral poikilitic ankerite (10-30%), with minor accessory rutile and ilmenite. Tonalite-gabbroic dike contacts in least-deformed areas are irregular and diffuse. The dikes commonly host closely-spaced mm-scale carbonate veins and contain 1-5% disseminated euhedral to subhedral magnetite and pyrite. The cross-cutting gabbroic and felsic dikes together define an en-echelon-esque NW-striking and E-striking pattern.

Ultramafic dikes: Ultramafic dikes are found as 1-8 m wide NW-striking and steeply north-dipping intrusions which cut the WLS within the central portion of the stock. Analyzed least-altered samples have an average (n = 2) composition of 50.0 wt.% SiO_2, 11.0 wt.% Al_2O_3, 9.11 wt.% Fe_2O_3t (total), 11.5 wt.% CaO, 15.4 wt.% MgO, 1.30 wt.% Na_2O, 0.012 wt.% K_2O, and 0.186 wt.% Cr_2O_3. Least-altered samples straddle the rhyodacite and andesite fields on the Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 immobile element rock type classification diagram and are of calc-alkaline magmatic affinity (Zr/Y>7; Galley and Lafrance, 2014). Least-altered samples are green to apple-green in color and composed of coarse-grained poikilitic FeMg-Carbonate (30-40%) in a fine-grained chlorite groundmass (40-60%), with minor fuchsite, quartz, and accessory rutile and apatite overgrown by monazite along chlorite seams. They typically display well-developed cm-scale chilled contact margins with the WLS, are strongly deformed, and are typically crenulated.

Lamprophyres: Rare, deformed cm to m-scale K-rich lamprophyre intrusions cut the WLS at depth. One analyzed least-altered sample had a composition of 51.5 wt.% SiO_2, 13.9 wt.% Al_2O_3, 9.32 wt.% Fe_2O_3t (total), 9.82 wt.% CaO, 8.06 wt.% MgO, 2.48 wt.% Na_2O, 3.49 wt.% K_2O, and 0.058 wt.% Cr_2O_3. It plots within the andesite field on the Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 immobile element rock type classification diagram and is of transitional magmatic affinity (4<Zr/Y<7; Galley and Lafrance, 2014). Lamprophyres are black to dark green in color and mineralogically composed of coarse porphyritic euhedral Ca-amphibole (30-40%) in a plagioclase and biotite (60-70%) groundmass. Contacts are sharp to diffuse.

Late diabase dikes: A series of subvertical and subhorizontal 5-20 m wide NNW-SSE-trending diabase dikes and sills cut the WLS at a lateral spacing of 300-600 m, showing consistent apparent left-lateral offsets in plan view. One least-altered samples had a composition of 50.3 wt.% SiO_2, 13.3 wt.% Al_2O_3, 18.15 wt.% Fe_2O_3t (total), 8.30 wt.% CaO, 4.36 wt.% MgO, 2.34 wt.% Na_2O, 0.785 wt.% K_2O, and 0.008 wt.% Cr_2O_3. They plot within the andesite/basalt field on the Winchester and Floyd (1977) Nb/Y versus Zr/TiO_2 immobile element rock type classification diagram and are of transitional magmatic affinity ($4<Zr/Y<7$; Galley and Lafrance, 2014). The dikes are dark grey-black, fine to medium-grained equigranular, and mineralogically composed of amphibole (10-20%), clinopyroxene (10-20%), minor euhedral to subhedral magnetite set in a twinned plagioclase (50-60%) and quartz (5%) groundmass. They show well-developed cm-scale chilled contact margins and cooling fractures.

Appendix C – Phengite and paragonite mineral chemistry index derivation

To better visualize the compositional variations of the white mica (i.e., dioctahedral micas; Rieder et al., 1999) populations observed at Magino, such as phengite, muscovite, and paragonite, we have devised two mineral indices: a phengite index (PhI), and, a paragonite index (PaI). The indices are calculated relative to end-member muscovite $K(Al_2^{vi})Al^{iv}Si_3^{iv}O_{10}(OH_2)$ and allow for evaluation of paragenetically complex white mica speciation when plotted against each other. Phengite is distinguished from muscovite based on Si cations, where muscovite contains between 3.0 and 3.1 Si cations and phengite-series white micas contain between 3.1 and 3.5 Si cations (Rieder et al., 1999; Tappert et al., 2013). The compositional change between these two species is controlled by the heterovalent Tschermak substitution of tetrahedral and octahedral sites $(Fe, Mg)Si^{iv} \leftrightarrow Al^{vi}Al^{iv}$ between muscovite and celadonite-series (e.g., aluminoceladonite) white mica compositions (Rieder et al., 1999; Tappert et al., 2013). The devised phengite index compares the composition of muscovite relative to ferro-alumino/aluminoceladonite $KAl^{vi}(Mg, Fe)Si_4O_{10}(OH)_2$ (i.e., the limit of the phengite-series field described by Tappert et al., 2013) in apfu. The index calculates a relative compositional transition by comparing the total added number of 2+ valence cations (Mg^{2+}, Fe^{2+}) and 4+ valence cations (Si^{4+}), and the subtraction of 3+ valence cations (Al^{iv}, Al^{vi}), which is controlled by the aforementioned substitution. The idealized sum of these valence sites in endmember muscovite is $[(0*Fe, Mg)^{2+}+(3*Si^{iv})^{4+}-(2*Alvi+1*Al^{iv})^{3+}] = 0$, and, in ferro-alumino/aluminoceladonite is $[(1*Mg, Fe)^{2+}+(4*Si^{iv})-(1*Al^{vi})^{3+}]= 4$. As such, the valence site sum equation is divided by 4 in order to normalize the index to ferro-alumino/aluminoceladonite, such that an index value of 1 = ferro/aluminoceladonite and a value of 0 = endmember muscovite. The devised phengite index (PhI) expands on the heterovalent Tschermak substitution by including Mn^{2+} and Ti^{4+} to encompass the range of compositions commonly observed in phengite-series white micas. Note that iron is assumed to be in the Fe^{2+} state during calculations, which may result in mineral chemistry errors due to Fe^{3+} substituting for Al^{iv} and Si^{iv} in micas and clays (Cardile, 1989; Besson and Drits, 1997). Paragonite is distinguished from muscovite based on the relative abundance of K and Na content in the I site, where paragonite is more strictly defined as containing Na/(Na+K) > 0.85, or, K/(K+Na) < 0.15 (Rieder et al., 1999) in apfu. The paragonite index (PaI) compares the composition of muscovite relative to paragonite $NaAl_2^{vi}Al^{iv}Si_3O_{10}(OH)_2$ (Rieder et al., 1999) and accounts for the direct substitution of the interlayer octahedral cation site K ↔ Na, where an index of value of 1 = endmember paragonite and a value of 0 = endmember muscovite. The indices are defined as follows:

Phengite index (PhI):

$$PhI = \frac{\sum 2^{+} + \sum 4^{+} - \sum 3^{+}}{4} \text{ or,} \tag{1}$$

$$PhI = \frac{(Fe+Mn+Mg)+\left(Si^{iv}+Ti^{iv}\right)-\left(Al^{iv}+Al^{vi}\right)}{4}$$

Paragonite index (PaI):

$$PaI = \frac{Na}{(Na+K)} \tag{2}$$

Appendix D – Analytical laboratory and structural field data

Lithogeochemistry and assay data

(enclosed)

Lithogeochemistry and assay QA/QC

(enclosed)

Mineral chemistry SEM-EDS results

(enclosed)

Mineral chemistry SEM-EDS QA/QC

(enclosed)

Structural field measurement data

(enclosed)

Biography

Ian Campos is a professional geoscientist who is passionate about understanding how deformational processes contribute to mineral systems. He received his BSc. degree in Earth and Planetary Sciences from McGill University in 2013 and subsequently worked in geotechnical engineering as a site geologist and project manager until opting to return to economic geology in 2020. Since then, he obtained a Certificate in Economic Geology at Colorado School of Mines and completed his MSc. degree in geology from Laurentian University in 2023, with a focus on structural geology applied to Precambrian ore deposits.

Analyte Method LDL							
Sample ID	Easting	Northing	Depth	Batch	Rock type	Source	Grouping
LU-MA21-071A-1			877	1	Melanotonalite	Drill core	Int Type 1A
LU-MA21-071A-2			878	1	Melanotonalite	Drill core	Int Type 1B
LU-MA21-071B			879	1	Aplite	Drill core	LA
LU-MA21-071D			885	1	Melanotonalite	Drill core	Int Type 1A
MA-Au-01				1	Au standard (CDN-GS-P6)	Standard	Standard
MA-CP-S01A	689005	5351248		1	Ultramafic dike	Surface	Type 2B
MA-CP-S01B	689005	5351248		1	Ultramafic dike	Surface	Type 2B
MA-CP-S01D	689006	5351245		1	Leucotonalite	Surface	Type 2B
MA-CP-S03	689000	5351246		1	Leucotonalite	Surface	Type 2B
MA-Rhyo-01				1	Rhyolite (ORCA1)	Standard	Standard
MA-CP-S07	688890	5351197		1	Leucotonalite	Surface	Wk Type 1B
MA-CP-S08	688891	5351177		1	Leucotonalite	Surface	Wk Type 1B
MA-CP-S09	689099	5351315		1	Diabase	Surface	LA
MA-CP-S10	689094	5351310		1	Leucotonalite	Surface	Int Type 1B
MA-CP-S10 DUPE	689094	5351310		1	Leucotonalite duplicate	Surface	Dupe
MA-CP-S12	688967	5351219		1	Leucotonalite	Surface	Type 2B
MA-CP-S13	689043	5351252		1	Leucotonalite	Surface	Wk Type 1B
MA-CP-S14	688999	5351264		1	Leucotonalite	Surface	Wk Type 1B
MA-CP-S15	688992	5351254		1	Ultramafic dike	Surface	LA
MA-Au-02				1	Au standard (CDN-GS-P6)	Standard	Standard
MA-CP-S16	688895	5351188		1	QFP	Surface	Shear zone
MA-CP-S18	688849	5351123		1	Leucotonalite	Surface	Wk Type 1B
MA-EP-S02	689522	5351556		1	Melanotonalite	Surface	Wk Type 1B
MA-EP-S03	689326	5351470		1	Gabbroic dike	Surface	LA
MA-Gab-01				1	Gabbro (LK-NIP-1)	Standard	Standard
MA-EP-S06	689304	5351457		1	Leucotonalite	Surface	Type 2B
MA-EP-S07A	689308	5351429		1	Gabbroic dike	Surface	Shear zone
MA-EP-S07B	689308	5351429		1	Gabbroic dike	Surface	Shear zone
MA-CP-S09 BLANK				1	Diabase	Surface	Blank
MA-EP-S08	689273	5351431		1	Leucotonalite	Surface	Shear zone
MA-NEP-S05	689356	5351664		1	Felsic volcanics	Surface	LA
MA-NEP-S06	689393	5351660		1	QFP	Surface	Wk Type 1B
MA-NEP-S10A	689267	5351585		1	Felsic volcanics	Surface	Chloritoid
MA-NW-S01A	688742	5351491		1	Felsic volcanics	Surface	Chloritoid
MA-NW-S02	688734	5351487		1	Felsic volcanics	Surface	Type 2B
MA-NW-S03	688845	5351474		1	Aplite	Surface	LA
MA-NW-S04A	688748	5351515		1	Felsic volcanics	Surface	Wk Type 1B
MA-SM-S01	689068	5351061		1	Mafic volcanics	Surface	LA
MA-X-S02D	689094	5351151		1	Melanotonalite	Surface	Wk Type 1B
MA-X-S02A	689094	5351152		1	Gabbroic dike	Surface	Shear zone
MA-EP-S08 DUPE	689273	5351431		1	Leucotonalite duplicate	Surface	Dupe

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	Na_2O	K_2O
Method	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
LDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sample ID	%	%	%	%	%	%	%
LU-MA21-071A-1	64.9	14.7	3.77	5.08	1.83	3.35	1.61
LU-MA21-071A-2	70.3	14.0	3.86	2.23	0.63	2.45	2.34
LU-MA21-071B	74.0	13.1	2.15	2.40	0.76	3.48	1.21
LU-MA21-071D	71.7	13.1	3.96	3.54	1.23	3.19	1.26
MA-Au-01							
MA-CP-S01A	18.9	9.08	7.57	19.1	9.76	1.58	1.90
MA-CP-S01B	39.4	9.38	7.48	11.2	9.40	1.99	0.56
MA-CP-S01D	70.6	14.7	2.86	1.75	0.45	4.73	1.88
MA-CP-S03	58.4	18.9	3.05	2.71	1.32	9.31	0.16
MA-Rhyo-01	76.4	12.8	2.91	1.17	0.48	4.71	2.18
MA-CP-S07	71.6	14.3	2.76	2.09	0.54	4.75	1.53
MA-CP-S08	69.8	14.7	2.86	1.11	0.30	4.99	1.84
MA-CP-S09	48.1	12.8	17.4	7.94	4.17	2.24	0.75
MA-CP-S10	73.1	13.9	3.16	1.35	0.59	0.55	3.70
MA-CP-S10 DUPE	70.9	14.4	3.63	1.70	0.72	0.60	3.76
MA-CP-S12	66.9	16.6	2.33	2.03	0.63	7.81	0.09
MA-CP-S13	68.3	14.4	3.12	2.59	0.76	4.15	1.70
MA-CP-S14	68.3	14.6	2.80	2.85	0.87	3.37	2.16
MA-CP-S15	42.2	9.67	6.61	9.53	11.2	2.09	0.01
MA-Au-02							
MA-CP-S16	70.6	15.2	2.92	2.16	0.83	2.29	2.78
MA-CP-S18	70.0	14.6	2.98	2.55	0.87	4.60	1.38
MA-EP-S02	69.5	13.5	3.65	3.64	1.09	4.64	0.59
MA-EP-S03	43.7	12.7	12.1	8.91	6.67	1.95	0.02
MA-Gab-01	48.4	15.4	13.6	10.3	7.27	2.41	0.46
MA-EP-S06	65.4	16.5	3.22	2.96	0.97	4.42	1.04
MA-EP-S07A	39.4	10.8	9.93	10.7	5.23	0.64	2.72
MA-EP-S07B	43.4	12.8	11.3	8.63	5.93	0.67	1.86
MA-CP-S09 BLANK							
MA-EP-S08A	67.3	13.7	3.13	3.09	1.51	2.95	2.03
MA-NEP-S05	61.8	15.8	7.77	3.85	1.47	3.18	1.28
MA-NEP-S06	66.5	16.3	4.17	2.55	1.54	5.03	0.84
MA-NEP-S10A	54.8	16.3	19.3	2.02	1.37	0.22	0.04
MA-NW-S01A	65.8	21.1	2.96	0.96	0.17	2.72	1.44
MA-NW-S02	60.9	27.2	0.83	0.33	0.04	4.14	1.78
MA-NW-S03	77.4	13.0	0.95	0.77	0.19	4.74	1.27
MA-NW-S04A	63.9	16.0	6.84	3.10	0.46	2.13	2.53
MA-SM-S01	48.9	12.9	12.7	7.44	4.86	3.12	0.05
MA-X-S02D	66.5	15.3	3.99	3.18	1.68	5.87	0.77
MA-X-S02A	49.3	14.7	14.3	4.48	6.08	2.67	0.19
MA-EP-S08 DUPE	68.8	13.7	3.24	2.85	1.40	2.85	2.01

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Cr_2O_3	TiO_2	MnO	P_2O_5	SrO	BaO
Method	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
LDL	0.002	0.01	0.01	0.01	0.01	0.01
Sample ID	%	%	%	%	%	%
LU-MA21-071A-1	0.005	0.43	0.09	0.11	0.03	0.03
LU-MA21-071A-2	0.005	0.37	0.03	0.09	0.02	0.05
LU-MA21-071B	0.003	0.07	0.03	0.03	0.04	0.02
LU-MA21-071D	0.005	0.37	0.05	0.08	0.03	0.02
MA-Au-01						
MA-CP-S01A	0.161	0.54	0.17	0.03	0.10	0.06
MA-CP-S01B	0.142	0.63	0.10	0.37	0.07	0.03
MA-CP-S01D	0.002	0.28	0.04	0.07	0.04	0.04
MA-CP-S03	0.002	0.31	0.04	0.12	0.06	<0.01
MA-Rhyo-01	0.012	0.29	0.06	0.06	<0.01	0.04
MA-CP-S07	0.002	0.28	0.03	0.09	0.03	0.05
MA-CP-S08	0.002	0.30	0.05	0.10	0.02	0.06
MA-CP-S09	0.008	1.77	0.24	0.24	0.01	0.02
MA-CP-S10	0.003	0.31	0.02	0.10	0.02	0.06
MA-CP-S10 DUPE	0.003	0.32	0.03	0.09	0.02	0.06
MA-CP-S12	0.002	0.30	0.03	0.13	0.05	<0.01
MA-CP-S13	0.003	0.31	0.03	0.10	0.02	0.03
MA-CP-S14	0.003	0.30	0.03	0.09	0.02	0.04
MA-CP-S15	0.111	0.60	0.13	0.30	0.07	<0.01
MA-Au-02						
MA-CP-S16	0.003	0.30	0.06	0.10	0.02	0.06
MA-CP-S18	0.003	0.29	0.04	0.08	0.03	0.04
MA-EP-S02	0.004	0.35	0.03	0.10	0.03	0.02
MA-EP-S03	0.034	0.76	0.18	0.05	0.01	<0.01
MA-Gab-01	0.023	1.12	0.19	0.11	0.02	0.02
MA-EP-S06	0.003	0.33	0.03	0.08	0.04	0.03
MA-EP-S07A	0.033	0.68	0.19	0.04	0.02	0.04
MA-EP-S07B	0.039	0.82	0.16	0.05	0.01	0.03
MA-CP-S09 BLANK						
MA-EP-S08A	0.003	0.30	0.05	0.09	0.01	0.03
MA-NEP-S05	0.012	0.65	0.12	0.26	0.03	0.04
MA-NEP-S06	0.003	0.44	0.04	0.10	0.04	0.02
MA-NEP-S10A	0.013	0.67	0.35	0.21	<0.01	<0.01
MA-NW-S01A	0.007	0.72	0.05	0.04	0.06	0.03
MA-NW-S02	0.009	0.88	0.01	0.07	0.07	0.03
MA-NW-S03	0.002	0.06	0.02	0.02	0.02	0.07
MA-NW-S04A	0.005	0.50	0.14	0.15	0.03	0.05
MA-SM-S01	0.008	1.48	0.20	0.07	0.01	<0.01
MA-X-S02D	0.004	0.44	0.05	0.09	0.02	0.02
MA-X-S02A	0.020	1.19	0.16	0.10	0.01	<0.01
MA-EP-S08 DUPE	0.003	0.29	0.04	0.08	0.01	0.03

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	LOI	Total	Ba	Ce	Cr	Cs	Dy
Method	OA-GRA05	TOT-ICP06	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	0.01	0.01	0.5	0.1	10	0.01	0.05
Sample ID	%	%	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	3.81	99.75	270	26.7	40	2.46	1.41
LU-MA21-071A-2	2.62	98.95	410	44.8	30	1.76	1.44
LU-MA21-071B	1.87	99.16	183	50.7	20	0.96	1.79
LU-MA21-071D	2.44	100.98	201	23.5	30	1.98	1.11
MA-Au-01							
MA-CP-S01A	29.6	98.5	576	76.4	1200	2.23	2.47
MA-CP-S01B	18.4	99.15	272	95.6	990	0.64	2.55
MA-CP-S01D	3.06	100.45	395	51.0	20	1.66	1.59
MA-CP-S03	3.84	98.22	36.4	49.5	10	0.16	1.93
MA-Rhyo-01	0.81	101.92	384	63.9	80	0.53	11.9
MA-CP-S07	2.66	100.66	413	96.4	20	1.13	2.74
MA-CP-S08	2.02	98.1	563	89.4	10	1.67	2.64
MA-CP-S09	4.27	99.86	183	43.1	60	1.74	7.53
MA-CP-S10	3.15	99.96	551	45.5	20	2.87	1.58
MA-CP-S10 DUPE	3.44	99.62	550	50.0	20	2.66	1.88
MA-CP-S12	2.01	98.91	29.6	113.5	20	0.09	3.25
MA-CP-S13	3.27	98.73	289	55.9	20	1.32	1.91
MA-CP-S14	3.65	99.08	357	45.1	20	1.79	1.43
MA-CP-S15	16.7	99.17	4.8	104.5	830	0.08	2.32
MA-Au-02							
MA-CP-S16	3.55	100.87	538	26.2	10	1.87	1.15
MA-CP-S18	3.02	100.43	358	50.3	20	1.14	1.67
MA-EP-S02	3.41	100.55	226	29.0	20	0.65	1.22
MA-EP-S03	11.6	98.58	3.3	6.0	220	0.05	2.30
MA-Gab-01	0.22	99.44	138	19.7	160	0.61	3.89
MA-EP-S06	3.43	98.4	240	38.3	20	0.75	1.31
MA-EP-S07A	11.7	92.02	299	5.8	210	2.20	2.24
MA-EP-S07B	11.3	96.95	223	7.2	260	1.54	2.88
MA-CP-S09 BLANK							
MA-EP-S08A	4.47	98.66	292	46.4	20	1.56	1.87
MA-NEP-S05	3.38	99.59	344	50.4	80	0.92	2.48
MA-NEP-S06	3.36	100.93	208	17.3	20	0.69	1.14
MA-NEP-S10A	3.82	99.11	5.8	52.9	80	0.10	2.86
MA-NW-S01A	3.05	99.11	263	60.9	50	1.19	2.82
MA-NW-S02	3.45	99.74	246	80.7	60	1.43	3.44
MA-NW-S03	1.25	99.71	651	35.4	10	0.88	1.11
MA-NW-S04A	3.95	99.79	420	44.4	30	1.26	1.68
MA-SM-S01	7.86	99.6	21.5	8.8	60	0.49	4.52
MA-X-S02D	3.65	101.51	170	28.3	30	0.59	1.69
MA-X-S02A	6.98	100.18	29.9	9.8	160	0.23	3.42
MA-EP-S08 DUPE	5.47	100.77	285	45.8	20	1.56	1.68

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Er	Eu	Ga	Gd	Ge	Hf	Ho
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	0.03	0.02	0.1	0.05	5	0.1	0.01
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	0.78	0.56	20.7	1.59	<5	3.4	0.20
LU-MA21-071A-2	0.67	0.79	22.1	2.03	<5	3.1	0.20
LU-MA21-071B	1.02	0.64	16.9	2.15	<5	2.4	0.28
LU-MA21-071D	0.57	0.47	18.9	1.43	<5	3.0	0.16
MA-Au-01							
MA-CP-S01A	1.13	1.52	15.0	3.77	<5	2.6	0.40
MA-CP-S01B	1.26	1.71	13.4	4.23	<5	3.2	0.42
MA-CP-S01D	0.83	0.83	20.6	2.18	<5	3.7	0.26
MA-CP-S03	1.09	0.96	17.4	2.65	<5	3.8	0.40
MA-Rhyo-01	7.76	1.22	17.3	9.78	<5	7.8	2.46
MA-CP-S07	1.31	1.27	21.3	3.93	<5	4.8	0.42
MA-CP-S08	1.31	1.22	21.7	3.65	<5	4.7	0.43
MA-CP-S09	4.70	1.65	21.6	6.82	<5	4.9	1.52
MA-CP-S10	0.81	0.78	20.5	1.98	<5	3.6	0.24
MA-CP-S10 DUPE	0.96	0.89	21.4	2.53	<5	4.0	0.32
MA-CP-S12	1.50	1.69	17.3	4.36	<5	5.2	0.60
MA-CP-S13	1.07	0.89	20.7	2.52	<5	4.1	0.33
MA-CP-S14	0.75	0.69	20.6	1.84	<5	3.8	0.23
MA-CP-S15	1.09	1.49	12.9	4.11	<5	3.4	0.40
MA-Au-02							
MA-CP-S16	0.63	0.57	20.1	1.41	<5	3.7	0.17
MA-CP-S18	0.96	0.79	20.9	2.19	<5	4.0	0.27
MA-EP-S02	0.68	0.55	19.8	1.48	<5	3.4	0.19
MA-EP-S03	1.49	0.52	14.2	2.10	<5	1.1	0.50
MA-Gab-01	2.28	1.02	20.9	3.53	<5	2.3	0.78
MA-EP-S06	0.70	0.63	22.4	1.53	<5	3.7	0.19
MA-EP-S07A	1.43	0.51	13.3	1.73	<5	1.1	0.45
MA-EP-S07B	1.80	0.67	15.4	2.26	<5	1.4	0.61
MA-CP-S09 BLANK							
MA-EP-S08A	0.96	0.80	20.0	2.35	<5	3.7	0.28
MA-NEP-S05	1.30	1.06	21.6	3.33	<5	3.7	0.43
MA-NEP-S06	0.69	0.43	21.5	1.29	<5	3.0	0.19
MA-NEP-S10A	1.54	1.14	20.7	3.62	<5	3.8	0.56
MA-NW-S01A	1.45	1.31	28.0	3.72	<5	4.8	0.49
MA-NW-S02	1.89	1.12	37.0	4.20	<5	6.0	0.59
MA-NW-S03	0.63	0.58	16.9	1.61	<5	2.7	0.17
MA-NW-S04A	0.82	0.86	21.2	2.38	<5	3.7	0.30
MA-SM-S01	3.05	0.73	18.4	3.72	<5	2.2	0.92
MA-X-S02D	0.80	0.73	19.7	2.19	<5	3.4	0.30
MA-X-S02A	2.26	0.63	19.1	2.73	<5	2.0	0.72
MA-EP-S08 DUPE	0.93	0.78	18.3	2.39	<5	3.5	0.30

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	La	Lu	Nb	Nd	Pr	Rb	Sm
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	0.1	0.01	0.1	0.1	0.02	0.2	0.03
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	12.7	0.10	3.3	11.2	2.98	33.4	2.08
LU-MA21-071A-2	21.4	0.09	4.0	17.0	4.88	37.1	2.92
LU-MA21-071B	23.6	0.13	3.6	20.8	5.63	19.4	3.11
LU-MA21-071D	11.5	0.07	3.0	9.5	2.62	25.3	1.88
MA-Au-01							
MA-CP-S01A	35.7	0.13	4.9	31.7	8.70	46.4	5.33
MA-CP-S01B	45.0	0.14	5.2	39.3	10.7	13.4	6.31
MA-CP-S01D	24.0	0.11	8.1	19.1	5.55	45.7	3.21
MA-CP-S03	23.5	0.15	5.4	19.8	5.65	3.7	3.46
MA-Rhyo-01	26.7	1.20	11.4	33.8	8.03	50.8	8.95
MA-CP-S07	42.1	0.18	11.7	37.5	10.85	35.0	5.62
MA-CP-S08	38.8	0.17	11.9	35.4	10.15	49.0	5.25
MA-CP-S09	19.3	0.69	8.9	23.3	5.32	20.3	6.18
MA-CP-S10	21.3	0.10	6.4	18.2	5.17	70.5	2.98
MA-CP-S10 DUPE	23.3	0.13	6.7	20.3	5.50	70.5	3.25
MA-CP-S12	49.0	0.20	4.6	44.5	12.85	1.6	6.74
MA-CP-S13	30.1	0.15	6.2	21.6	6.20	38.3	3.68
MA-CP-S14	21.8	0.09	5.7	17.1	4.89	49.4	2.64
MA-CP-S15	50.2	0.15	5.5	40.8	11.25	0.4	5.80
MA-Au-02							
MA-CP-S16	15.5	0.07	3.4	10.9	3.01	57.8	1.87
MA-CP-S18	23.8	0.13	6.0	19.5	5.44	35.0	3.24
MA-EP-S02	14.3	0.10	3.0	11.2	3.12	12.1	2.01
MA-EP-S03	2.60	0.23	1.3	4.7	0.90	0.2	1.49
MA-Gab-01	8.50	0.31	4.4	11.1	2.47	11.9	3.22
MA-EP-S06	20.2	0.08	4.3	13.7	3.87	21.5	2.32
MA-EP-S07A	2.20	0.21	1.6	4.2	0.86	53.0	1.34
MA-EP-S07B	2.70	0.28	2.0	5.3	1.07	35.7	1.65
MA-CP-S09 BLANK							
MA-EP-S08A	21.3	0.12	6.7	18.4	5.20	36.5	3.10
MA-NEP-S05	22.0	0.15	6.2	22.6	5.85	23.7	3.90
MA-NEP-S06	8.30	0.09	2.7	7.8	1.98	21.6	1.49
MA-NEP-S10A	24.3	0.25	5.7	24.9	6.17	0.7	4.35
MA-NW-S01A	31.3	0.21	5.5	27.0	7.37	24.7	4.52
MA-NW-S02	34.9	0.24	6.7	31.9	8.61	26.3	5.42
MA-NW-S03	18.0	0.10	5.6	13.2	3.92	25.2	2.22
MA-NW-S04A	21.8	0.12	3.8	17.5	4.91	42.3	3.02
MA-SM-S01	3.10	0.46	3.0	7.4	1.35	1.9	2.64
MA-X-S02D	13.9	0.11	3.2	11.6	3.18	14.9	2.40
MA-X-S02A	3.70	0.33	3.1	6.9	1.39	3.5	2.22
MA-EP-S08 DUPE	21.4	0.13	6.2	18.4	5.16	36.6	3.21

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Sn	Sr	Ta	Tb	Th	Tm	U
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	1	0.1	0.1	0.01	0.05	0.01	0.05
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	1	283	0.3	0.19	1.86	0.09	0.48
LU-MA21-071A-2	1	202	0.3	0.22	2.30	0.09	0.56
LU-MA21-071B	1	333	0.3	0.27	4.23	0.12	0.98
LU-MA21-071D	1	332	0.3	0.14	1.78	0.09	0.38
MA-Au-01							
MA-CP-S01A	1	889	0.2	0.44	5.38	0.14	0.89
MA-CP-S01B	1	658	0.3	0.46	6.08	0.14	1.02
MA-CP-S01D	1	404	0.5	0.24	4.28	0.12	0.85
MA-CP-S03	<1	578	0.4	0.39	3.86	0.15	0.68
MA-Rhyo-01	4	72.9	1.0	1.74	5.04	1.14	1.25
MA-CP-S07	<1	267	0.8	0.45	5.74	0.17	1.26
MA-CP-S08	1	214	0.8	0.43	5.46	0.16	1.07
MA-CP-S09	2	136	0.6	1.12	3.76	0.69	0.86
MA-CP-S10	1	179	0.5	0.25	3.60	0.10	1.20
MA-CP-S10 DUPE	1	177	0.5	0.32	3.91	0.12	0.89
MA-CP-S12	<1	454	0.4	0.63	6.71	0.21	1.60
MA-CP-S13	1	221	0.5	0.30	4.48	0.13	1.01
MA-CP-S14	<1	223	0.5	0.22	4.52	0.09	0.86
MA-CP-S15	1	619	0.3	0.47	7.20	0.16	1.04
MA-Au-02							
MA-CP-S16	1	268	0.3	0.18	1.97	0.08	0.45
MA-CP-S18	1	325	0.4	0.28	4.03	0.11	0.74
MA-EP-S02	<1	324	0.3	0.16	2.61	0.09	0.43
MA-EP-S03	<1	95.4	0.1	0.34	0.26	0.21	0.08
MA-Gab-01	1	165	0.3	0.58	1.65	0.31	0.44
MA-EP-S06	<1	407	0.4	0.19	5.33	0.08	1.31
MA-EP-S07A	<1	161	0.1	0.29	0.23	0.19	0.05
MA-EP-S07B	1	134	0.1	0.39	0.27	0.27	0.07
MA-CP-S09 BLANK							
MA-EP-S08A	<1	144	0.6	0.29	3.77	0.12	1.05
MA-NEP-S05	1	328	0.5	0.39	2.70	0.17	0.57
MA-NEP-S06	1	388	0.2	0.15	1.67	0.09	0.41
MA-NEP-S10A	1	40.7	0.4	0.48	2.49	0.23	0.57
MA-NW-S01A	1	567	0.5	0.45	4.72	0.19	0.79
MA-NW-S02	2	613	0.6	0.56	5.71	0.24	1.10
MA-NW-S03	1	154	0.6	0.15	3.83	0.09	1.03
MA-NW-S04A	1	287	0.4	0.27	3.49	0.11	0.57
MA-SM-S01	1	78.9	0.2	0.67	0.38	0.45	0.09
MA-X-S02D	1	190	0.3	0.30	1.86	0.12	0.36
MA-X-S02A	1	105	0.2	0.49	0.35	0.31	0.11
MA-EP-S08 DUPE	<1	150	0.5	0.30	3.52	0.13	0.92

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	V	W	Y	Yb	Zr	Ag
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-4ACD81
LDL	5	1	0.1	0.03	2	0.5
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	61	7	7.4	0.73	128	<0.5
LU-MA21-071A-2	47	15	6.6	0.71	112	<0.5
LU-MA21-071B	8	3	9.7	1.00	63	<0.5
LU-MA21-071D	64	95	5.8	0.59	115	<0.5
MA-Au-01						
MA-CP-S01A	84	16	11.6	0.99	98	1.3
MA-CP-S01B	141	10	12.0	1.04	114	<0.5
MA-CP-S01D	32	7	8.1	0.81	134	<0.5
MA-CP-S03	27	17	10.6	0.99	146	<0.5
MA-Rhyo-01	11	1	69.3	7.61	260	<0.5
MA-CP-S07	26	3	13.5	1.26	184	<0.5
MA-CP-S08	27	1	13.0	1.22	188	<0.5
MA-CP-S09	378	1	42.3	4.74	189	<0.5
MA-CP-S10	36	10	8.1	0.79	132	0.5
MA-CP-S10 DUPE	38	10	9.8	0.90	145	<0.5
MA-CP-S12	23	30	16.4	1.36	218	<0.5
MA-CP-S13	221	5	10.8	0.91	153	<0.5
MA-CP-S14	38	6	7.2	0.69	141	<0.5
MA-CP-S15	132	4	11.3	0.96	124	<0.5
MA-Au-02						
MA-CP-S16	16	7	6.3	0.63	148	<0.5
MA-CP-S18	35	2	8.8	0.81	148	<0.5
MA-EP-S02	54	1	6.6	0.67	122	<0.5
MA-EP-S03	296	2	13.4	1.53	36	<0.5
MA-Gab-01	288	<1	20.8	2.09	86	<0.5
MA-EP-S06	46	6	6.6	0.63	139	<0.5
MA-EP-S07A	211	26	12.6	1.41	37	<0.5
MA-EP-S07B	255	21	16.4	1.96	48	<0.5
MA-CP-S09 BLANK						
MA-EP-S08A	34	12	9.3	0.93	137	1.2
MA-NEP-S05	98	2	12.7	1.13	149	<0.5
MA-NEP-S06	67	19	6.5	0.72	116	<0.5
MA-NEP-S10A	104	<1	14.3	1.55	143	<0.5
MA-NW-S01A	113	1	14.4	1.44	179	<0.5
MA-NW-S02	147	7	17.8	1.62	222	<0.5
MA-NW-S03	<5	<1	7.2	0.73	64	<0.5
MA-NW-S04A	84	1	7.9	0.81	136	<0.5
MA-SM-S01	353	<1	25.5	3.01	79	<0.5
MA-X-S02D	64	1	8.3	0.70	136	<0.5
MA-X-S02A	336	1	18.6	2.13	75	<0.5
MA-EP-S08 DUPE	32	12	8.8	0.85	137	1.5

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Cd	Co	Cu	Li	Mo
Method	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81
LDL	0.5	1	1	10	1
Sample ID	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	<0.5	8	8	40	1
LU-MA21-071A-2	<0.5	13	5	20	2
LU-MA21-071B	<0.5	2	6	30	1
LU-MA21-071D	<0.5	11	2	30	1
MA-Au-01					
MA-CP-S01A	<0.5	27	7	10	<1
MA-CP-S01B	<0.5	40	46	70	<1
MA-CP-S01D	<0.5	7	5	<10	1
MA-CP-S03	<0.5	7	5	<10	<1
MA-Rhyo-01	<0.5	3	11	10	4
MA-CP-S07	<0.5	5	2	20	<1
MA-CP-S08	<0.5	6	1	20	1
MA-CP-S09	0.5	48	179	20	1
MA-CP-S10	<0.5	7	48	20	3
MA-CP-S10 DUPE	<0.5	7	58	20	1
MA-CP-S12	<0.5	4	3	10	1
MA-CP-S13	<0.5	6	17	20	<1
MA-CP-S14	<0.5	5	39	20	1
MA-CP-S15	<0.5	40	7	80	<1
MA-Au-02					
MA-CP-S16	<0.5	4	5	30	1
MA-CP-S18	<0.5	7	7	30	1
MA-EP-S02	<0.5	8	235	30	4
MA-EP-S03	<0.5	48	138	80	<1
MA-Gab-01	<0.5	58	169	10	1
MA-EP-S06	<0.5	11	228	40	142
MA-EP-S07A	<0.5	37	54	10	<1
MA-EP-S07B	<0.5	42	96	60	<1
MA-CP-S09 BLANK					
MA-EP-S08A	<0.5	6	290	20	6
MA-NEP-S05	<0.5	19	85	20	<1
MA-NEP-S06	<0.5	12	4	30	<1
MA-NEP-S10A	<0.5	32	60	10	<1
MA-NW-S01A	<0.5	4	15	40	1
MA-NW-S02	<0.5	<1	1	40	1
MA-NW-S03	<0.5	<1	13	<10	<1
MA-NW-S04A	<0.5	14	11	10	<1
MA-SM-S01	0.5	30	61	20	<1
MA-X-S02D	<0.5	10	93	20	1
MA-X-S02A	<0.5	47	140	70	1
MA-EP-S08 DUPE	<0.5	7	280	20	14

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Ni	Pb	Sc	Zn	As	Bi
Method	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-MS42	ME-MS42
LDL	1	2	1	2	0.1	0.01
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	22	6	7	65	11.7	0.04
LU-MA21-071A-2	21	3	6	30	67.0	0.16
LU-MA21-071B	7	5	1	36	18.5	0.06
LU-MA21-071D	25	3	7	35	35.1	0.20
MA-Au-01						
MA-CP-S01A	158	9	26	90	0.7	5.27
MA-CP-S01B	193	4	23	213	0.9	0.03
MA-CP-S01D	8	3	5	20	9.7	0.33
MA-CP-S03	9	5	3	22	1.8	0.14
MA-Rhyo-01	6	5	7	55	0.7	0.05
MA-CP-S07	6	3	4	33	0.4	0.04
MA-CP-S08	7	6	5	33	0.7	0.02
MA-CP-S09	37	6	40	98	0.7	0.03
MA-CP-S10	9	3	5	14	41.1	0.27
MA-CP-S10 DUPE	10	3	5	18	33.3	0.30
MA-CP-S12	6	4	3	17	1.4	4.50
MA-CP-S13	9	3	5	34	1.7	0.02
MA-CP-S14	10	2	5	35	2.6	0.03
MA-CP-S15	413	5	15	112	0.8	0.03
MA-Au-02						
MA-CP-S16	1	4	3	58	1.7	0.02
MA-CP-S18	10	4	5	44	1.9	0.03
MA-EP-S02	9	2	5	47	1.2	0.03
MA-EP-S03	83	3	38	86	2.2	0.06
MA-Gab-01	156	5	31	106	0.8	0.03
MA-EP-S06	12	4	6	29	2.1	0.17
MA-EP-S07A	70	4	31	25	234	0.24
MA-EP-S07B	91	2	37	86	52.3	0.08
MA-CP-S09 BLANK						
MA-EP-S08A	8	3	5	41	19.1	0.09
MA-NEP-S05	60	<2	12	78	1.9	0.14
MA-NEP-S06	15	2	7	39	0.7	0.03
MA-NEP-S10A	67	<2	14	69	0.4	0.12
MA-NW-S01A	17	3	13	33	0.3	0.03
MA-NW-S02	4	4	15	2	0.1	0.03
MA-NW-S03	1	<2	2	19	0.4	0.07
MA-NW-S04A	24	<2	9	42	0.1	0.03
MA-SM-S01	33	3	39	87	0.6	0.02
MA-X-S02D	26	<2	7	35	4.3	0.06
MA-X-S02A	88	3	34	122	14.9	0.07
MA-EP-S08 DUPE	8	5	4	41	23.0	0.10

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Hg	In	Re	Sb	Se	Te	Tl
Method	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42
LDL	0.005	0.005	0.001	0.05	0.2	0.01	0.02
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-MA21-071A-1	0.011	0.007	<0.001	0.10	0.2	0.06	0.10
LU-MA21-071A-2	0.007	0.005	<0.001	0.06	0.5	0.29	0.03
LU-MA21-071B	<0.005	<0.005	<0.001	0.07	<0.2	0.06	<0.02
LU-MA21-071D	0.019	0.005	0.001	<0.05	0.9	0.20	0.10
MA-Au-01							
MA-CP-S01A	0.005	0.011	<0.001	<0.05	0.3	65.2	0.02
MA-CP-S01B	<0.005	0.016	<0.001	<0.05	<0.2	1.99	<0.02
MA-CP-S01D	<0.005	<0.005	<0.001	<0.05	0.2	0.66	0.02
MA-CP-S03	<0.005	<0.005	<0.001	<0.05	0.2	0.10	<0.02
MA-Rhyo-01	<0.005	0.026	0.001	0.11	<0.2	0.01	0.02
MA-CP-S07	<0.005	<0.005	<0.001	<0.05	<0.2	0.03	0.02
MA-CP-S08	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.03
MA-CP-S09	0.010	0.068	0.002	<0.05	0.5	0.01	0.14
MA-CP-S10	<0.005	<0.005	0.001	0.07	0.4	0.13	0.04
MA-CP-S10 DUPE	<0.005	<0.005	0.001	0.06	0.6	0.11	0.03
MA-CP-S12	<0.005	<0.005	<0.001	<0.05	0.2	2.83	<0.02
MA-CP-S13	<0.005	<0.005	<0.001	<0.05	<0.2	0.03	0.02
MA-CP-S14	<0.005	<0.005	<0.001	<0.05	0.2	0.02	<0.02
MA-CP-S15	<0.005	0.029	<0.001	<0.05	<0.2	0.02	<0.02
MA-Au-02							
MA-CP-S16	<0.005	<0.005	<0.001	<0.05	<0.2	0.01	0.02
MA-CP-S18	<0.005	<0.005	<0.001	<0.05	<0.2	0.02	0.02
MA-EP-S02	<0.005	0.013	0.002	<0.05	0.4	0.02	<0.02
MA-EP-S03	<0.005	0.050	0.001	<0.05	0.7	0.03	<0.02
MA-Gab-01	<0.005	0.016	0.001	0.05	0.3	0.01	0.08
MA-EP-S06	<0.005	0.009	0.081	<0.05	0.5	0.08	<0.02
MA-EP-S07A	<0.005	0.010	0.001	0.06	1.7	0.52	<0.02
MA-EP-S07B	<0.005	0.020	0.001	0.05	1.0	0.16	<0.02
MA-CP-S09 BLANK							
MA-EP-S08A	<0.005	0.012	0.003	0.08	0.7	0.24	<0.02
MA-NEP-S05	<0.005	0.012	<0.001	0.06	0.6	0.01	<0.02
MA-NEP-S06	<0.005	0.008	<0.001	<0.05	<0.2	0.01	<0.02
MA-NEP-S10A	<0.005	0.013	<0.001	0.19	0.3	0.01	<0.02
MA-NW-S01A	<0.005	<0.005	<0.001	0.10	<0.2	<0.01	<0.02
MA-NW-S02	<0.005	0.017	<0.001	<0.05	<0.2	0.01	<0.02
MA-NW-S03	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	<0.02
MA-NW-S04A	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	<0.02
MA-SM-S01	<0.005	0.032	0.001	0.08	0.8	0.02	0.04
MA-X-S02D	<0.005	0.009	<0.001	0.05	0.2	0.02	<0.02
MA-X-S02A	<0.005	0.051	0.001	0.10	0.7	0.02	<0.02
MA-EP-S08 DUPE	0.006	0.011	0.008	0.08	0.8	0.27	<0.02

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	C	S	H2O+	Cl	F	Au	Ag
Method	C-IR07	S-IR08	OA-IR06	Cl-IC881	F-IC881	Au-ICP21	Ag-AA45
LDL	0.01	0.01	0.01	50	20	0.001	0.2
Sample ID	%	%	%	ppm	ppm	ppm	ppm
LU-MA21-071A-1	0.74	0.26	1.42	140	420	0.024	<0.2
LU-MA21-071A-2	0.23	1.32	1.38	110	300	1.365	0.3
LU-MA21-071B	0.24	0.39	1.12	110	290	0.539	<0.2
LU-MA21-071D	0.32	1.51	0.95	130	330	6.56	0.7
MA-Au-01						0.641	<0.2
MA-CP-S01A	8.15	0.01	1.13	110	290	5.51	1.0
MA-CP-S01B	4.63	<0.01	2.48	<50	620	0.022	<0.2
MA-CP-S01D	0.46	0.52	1.11	100	320	0.338	<0.2
MA-CP-S03	0.84	0.68	0.61	110	400	0.534	<0.2
MA-Rhyo-01	0.02	<0.01	1.00	130	330	0.002	<0.2
MA-CP-S07	0.42	0.03	1.09	100	330	0.005	<0.2
MA-CP-S08	0.23	<0.01	1.50	100	410	0.001	<0.2
MA-CP-S09	0.70	0.15	2.47	190	440	<0.001	<0.2
MA-CP-S10	0.24	1.51	1.80	140	650	1.145	0.3
MA-CP-S10 DUPE	0.34	1.39	1.88	130	680	0.800	0.4
MA-CP-S12	0.38	0.27	0.45	100	390	0.598	<0.2
MA-CP-S13	0.54	0.06	1.45	110	370	0.008	<0.2
MA-CP-S14	0.63	0.10	1.84	100	360	0.011	<0.2
MA-CP-S15	3.94	<0.01	3.33	<50	820	0.004	<0.2
MA-Au-02						0.630	<0.2
MA-CP-S16	0.45	0.01	2.19	100	410	0.040	<0.2
MA-CP-S18	0.52	0.12	1.49	100	380	0.008	<0.2
MA-EP-S02	0.68	0.09	1.47	110	310	0.004	0.4
MA-EP-S03	2.31	0.09	5.10	160	340	0.018	<0.2
MA-Gab-01	0.03	0.01	0.80	480	210	0.005	0.2
MA-EP-S06	0.57	0.41	1.85	100	320	0.038	0.5
MA-EP-S07A	4.43	3.91	1.62	100	260	4.18	0.4
MA-EP-S07B	3.01	1.42	3.74	120	340	0.819	0.3
MA-CP-S09 BLANK						0.004	0.2
MA-EP-S08A	1.05	0.90	1.32	100	470	1.205	1.5
MA-NEP-S05	0.51	0.37	2.17	100	380	0.020	<0.2
MA-NEP-S06	0.47	0.03	1.77	110	330	<0.001	<0.2
MA-NEP-S10A	0.32	0.10	4.05	110	350	0.001	<0.2
MA-NW-S01A	0.15	<0.01	2.48	120	300	0.001	<0.2
MA-NW-S02	0.01	<0.01	3.15	120	390	<0.001	0.2
MA-NW-S03	0.14	<0.01	0.83	130	140	<0.001	<0.2
MA-NW-S04A	0.57	0.03	2.31	120	200	0.001	<0.2
MA-SM-S01	1.45	0.26	4.20	130	160	<0.001	<0.2
MA-X-S02D	0.62	<0.01	1.68	120	200	0.016	0.5
MA-X-S02A	0.94	0.12	5.06	130	300	0.016	0.4
MA-EP-S08 DUPE	0.96	1.18	1.27	130	440	8.18	1.8

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Sample ID	Easting	Northing	Depth	Batch	Rock type	Source	Alteration/ Grouping
Analyte							
Method							
LDL							
LU-PD-MA12-004A			45	2	QFP	Drill core	Int Type 1B
LU-PD-MA12-004B			46	2	Mafic volcanics	Drill core	Int Type 1B
LU-PD-MA12-004C			47	2	Mafic volcanics	Drill core	Wk Type 1B
MA-WP-S02	688661	5351193		2	Mafic volcanics	Surface	Shear zone
MA-WP-S03A	688663	5351195		2	QFP	Surface	Wk Type 1B
MA-WP-S03B	688663	5351195		2	Mafic volcanics	Surface	Wk Type 1B
MA-WP-S04	688674	5351208		2	QFP	Surface	Type 2B
MA-WP-S05	688686	5351225		2	Mafic volcanics	Surface	Wk Type 1B
MA-EPN-S01A	689429	5351517		2	Melanotonalite	Surface	Wk Type 1B
MA-EPN-S01B	689429	5351517		2	QFP	Surface	Wk Type 1B
MA-Au-03				2	Au standard (CDN-GS-P6)	Standard	Standard
MA-EPN-S03A	689511	5351559		2	Melanotonalite	Surface	Wk Type 1B
MA-EPN-S03B	689511	5351559		2	QFP	Surface	Wk Type 1B
LU-MA20-041A-B			385	2	QFP	Drill core	Int Type 1B
MA-NEP-S01	689354	5351644		2	Gabbroic dike	Surface	Shear zone
MA-Rhyo-02				2	Rhyolite (ORCA1)	Standard	Standard
LU-MA21-076B			620	2	Gabbroic dike	Drill core	LA
LU-MA21-076C			661	2	Ultramafic dike	Drill core	LA
LU-MA21-080W1A			1250	2	Leucotonalite	Drill core	Wk Type 1A
MA-WP-S01A	688662	5351192		2	QFP	Surface	Shear zone
MA-WP-S01B	688663	5351192		2	Mafic volcanics	Surface	Shear zone
MA-EPN-S02A	689440	5351517		2	Mo-bearing SQ vein	Surface	Vein
MA-EPN-S02B	689440	5351517		2	Mo-bearing SQ vein	Surface	Vein
MA-EPN-S02C	689440	5351517		2	Mo-bearing SQ vein	Surface	Vein
MA-PS-S01	688852	5352866		2	QFP	Surface	Shear zone
LU-MA20-050A			815	2	Melanotonalite	Drill core	Type 2A
LU-MA21-080W1B-1			1175	2	QFP	Drill core	Wk Type 1A
LU-MA12-385A			483	2	Aplite	Drill core	LA
MA-EPN-S04	689528	5351576		2	Melanotonalite	Surface	Shear zone
MA-EPN-S05	689496	5351581		2	Melanotonalite	Surface	Shear zone
MA-WP-S06	688761	5351320		2	Felsic volcanics	Surface	Chloritoid
LU-MA11-068			91	2	Melanotonalite	Drill core	Int Type 1B
LU-MA21-085			1259	2	Lamprophyre	Drill core	LA

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered.
Int = Intense. Wk = Weak.

Analyte	SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	Na_2O	K_2O
Method	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
LDL	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Sample ID	%	%	%	%	%	%	%
LU-PD-MA12-004A	64.0	14.8	4.85	3.39	1.77	4.79	1.44
LU-PD-MA12-004B	47.7	12.7	16.2	6.27	4.55	2.75	1.56
LU-PD-MA12-004C	46.3	11.9	17.0	6.98	4.11	2.81	0.04
MA-WP-S02	41.3	12.8	12.4	8.28	6.57	0.51	2.17
MA-WP-S03A	66.4	14.6	4.25	3.01	1.42	3.96	1.92
MA-WP-S03B	44.1	12.2	15.3	8.48	4.43	1.15	0.75
MA-WP-S04	65.7	15.0	4.74	2.28	1.49	6.92	0.12
MA-WP-S05	46.6	12.9	15.1	7.00	4.91	2.81	0.03
MA-EPN-S01A	67.1	15.4	3.83	3.30	1.20	4.83	1.04
MA-EPN-S01B	64.8	15.4	4.25	3.48	1.30	4.59	0.98
MA-Au-03							
MA-EPN-S03A	66.9	14.8	3.66	3.77	1.16	4.53	1.18
MA-EPN-S03B	63.3	15.4	5.40	3.46	1.74	4.59	0.79
LU-MA20-041A-B	65.7	15.3	4.04	3.54	1.36	4.85	0.92
MA-NEP-S01	43.6	18.8	11.8	5.84	5.19	1.70	1.45
MA-Rhyo-02	73.9	12.6	2.84	1.14	0.48	4.54	2.12
LU-MA21-076B	42.4	12.3	10.9	9.57	6.51	2.68	0.15
LU-MA21-076C	40.3	8.46	8.39	9.51	14.3	0.07	0.01
LU-MA21-080W1A	71.5	14.6	2.72	2.81	0.85	4.44	1.85
MA-WP-S01A							
MA-WP-S01B							
MA-EPN-S02A							
MA-EPN-S02B							
MA-EPN-S02C							
MA-PS-S01							
LU-MA20-050A	65.2	15.5	3.45	3.68	1.02	3.42	2.41
LU-MA21-080W1B-1	66.0	15.6	4.41	4.23	1.50	4.14	1.04
LU-MA12-385A	72.9	13.4	1.34	3.05	0.22	2.45	2.04
MA-EPN-S04							
MA-EPN-S05	60.9	14.5	6.21	4.60	2.14	3.04	1.52
MA-WP-S06	62.5	17.5	8.21	3.46	0.90	2.04	1.00
LU-MA11-068	62.7	16.4	4.63	3.25	1.48	4.76	1.32
LU-MA21-085	47.7	12.9	8.62	9.09	7.46	2.30	3.23

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Cr_2O_3	TiO_2	MnO	P_2O_5	SrO	BaO
Method	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
LDL	0.002	0.01	0.01	0.01	0.01	0.01
Sample ID	%	%	%	%	%	%
LU-PD-MA12-004A	0.004	0.44	0.06	0.11	0.02	0.03
LU-PD-MA12-004B	0.004	1.60	0.17	0.13	0.01	0.01
LU-PD-MA12-004C	0.003	1.62	0.22	0.12	0.02	<0.01
MA-WP-S02	0.041	0.92	0.17	0.08	0.01	0.03
MA-WP-S03A	0.002	0.48	0.06	0.14	0.01	0.06
MA-WP-S03B	0.007	1.43	0.20	0.11	0.02	0.03
MA-WP-S04	0.004	0.51	0.05	0.16	0.02	<0.01
MA-WP-S05	0.010	1.44	0.19	0.10	0.01	<0.01
MA-EPN-S01A	0.003	0.45	0.04	0.13	0.03	0.03
MA-EPN-S01B	0.002	0.49	0.05	0.13	0.03	0.03
MA-Au-03						
MA-EPN-S03A	0.003	0.41	0.05	0.12	0.02	0.03
MA-EPN-S03B	0.003	0.56	0.05	0.17	0.03	0.02
LU-MA20-041A-B	0.003	0.47	0.05	0.11	0.03	0.02
MA-NEP-S01	0.064	0.98	0.13	0.07	0.04	0.05
MA-Rhyo-02	0.011	0.29	0.06	0.05	0.01	0.04
LU-MA21-076B	0.039	0.66	0.19	0.06	0.03	<0.01
LU-MA21-076C	0.195	0.53	0.13	0.22	0.06	<0.01
LU-MA21-080W1A	0.004	0.27	0.04	0.08	0.02	0.04
MA-WP-S01A						
MA-WP-S01B						
MA-EPN-S02A						
MA-EPN-S02B						
MA-EPN-S02C						
MA-PS-S01						
LU-MA20-050A	0.006	0.38	0.04	0.09	0.03	0.05
LU-MA21-080W1B-1	0.005	0.47	0.05	0.16	0.05	0.02
LU-MA12-385A	0.002	0.08	0.11	0.05	0.02	0.04
MA-EPN-S04						
MA-EPN-S05	0.014	0.57	0.13	0.20	0.02	0.02
MA-WP-S06	0.009	0.63	0.20	0.16	0.03	0.02
LU-MA11-068	0.003	0.48	0.04	0.14	0.02	0.03
LU-MA21-085	0.054	0.60	0.14	0.25	0.07	0.07

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	LOI	Total	Ba	Ce	Cr	Cs	Dy
Method	OA-GRA05	TOT-ICP06	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	0.02	0.01	0.5	0.1	5	0.01	0.05
Sample ID	%	%	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	3.94	99.64	327	26.6	31	0.71	1.62
LU-PD-MA12-004B	4.81	98.36	129	13.6	31	9.45	5.11
LU-PD-MA12-004C	6.95	98.02	4.6	12.7	25	0.32	5.32
MA-WP-S02	13.5	98.63	285	7.6	295	1.61	3.50
MA-WP-S03A	3.76	100.02	559	28.1	19	1.19	1.86
MA-WP-S03B	9.8	98.01	264	12.7	47	0.67	4.57
MA-WP-S04	2.08	99.02	40.4	34.2	32	0.11	2.19
MA-WP-S05	7.65	98.7	5.8	9.1	74	0.18	4.31
MA-EPN-S01A	3.56	100.89	294	27.7	20	1.15	1.46
MA-EPN-S01B	3.68	99.21	286	30.0	12	1.15	1.89
MA-Au-03							
MA-EPN-S03A	4.02	100.6	236	31.6	22	1.28	1.48
MA-EPN-S03B	3.7	99.21	154	37.5	25	0.82	1.82
LU-MA20-041A-B	2.91	99.3	224	26.9	17	1.28	1.46
MA-NEP-S01	8.8	98.41	496	5.1	462	1.06	2.90
MA-Rhyo-02	0.78	98.81	391	64.0	81	0.55	11.55
LU-MA21-076B	12.9	98.34	15	6.6	276	0.36	2.89
LU-MA21-076C	18	100.18	3	99.2	1330	0.35	2.55
LU-MA21-080W1A	1.62	100.84	339	54.4	28	1.34	1.94
MA-WP-S01A							
MA-WP-S01B							
MA-EPN-S02A							
MA-EPN-S02B							
MA-EPN-S02C							
MA-PS-S01							
LU-MA20-050A	4.56	99.84	396	28.3	38	3.28	1.68
LU-MA21-080W1B-1	0.84	98.47	201	37.2	34	1.62	1.74
LU-MA12-385A	2.97	98.62	361	58.4	14	2.88	1.40
MA-EPN-S04							
MA-EPN-S05	4.05	97.91	185	40.3	64	1.85	2.38
MA-WP-S06	2.91	99.57	220	41.4	65	0.90	2.71
LU-MA11-068	3.84	99.04	259	39.8	19	1.46	2.11
LU-MA21-085	6.15	98.63	634	37.2	410	16.5	3.06

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Er	Eu	Ga	Gd	Ge	Hf	Ho
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	0.03	0.02	0.1	0.05	0.5	0.05	0.01
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	0.88	0.99	21.4	2.00	1.4	3.55	0.31
LU-PD-MA12-004B	3.37	1.20	22.0	4.61	1.7	2.48	1.17
LU-PD-MA12-004C	3.26	1.11	20.2	4.05	1.6	2.24	1.12
MA-WP-S02	2.38	0.77	15.3	2.46	1.4	1.58	0.76
MA-WP-S03A	0.98	1.16	19.9	2.40	1.4	3.40	0.35
MA-WP-S03B	2.83	0.96	20.1	3.90	1.7	2.00	1.01
MA-WP-S04	1.26	0.89	20.4	2.74	1.2	3.71	0.44
MA-WP-S05	2.84	0.86	21.0	2.98	1.7	1.80	0.87
MA-EPN-S01A	0.73	0.50	21.4	1.98	1.1	3.1	0.30
MA-EPN-S01B	1.13	0.81	21.8	2.41	1.3	3.42	0.34
MA-Au-03							
MA-EPN-S03A	0.81	0.68	21.3	1.79	1.2	3.38	0.26
MA-EPN-S03B	1.05	0.83	20.8	2.39	1.5	3.45	0.36
LU-MA20-041A-B	0.82	0.68	20.4	1.81	1.1	3.20	0.29
MA-NEP-S01	2.15	0.26	21.0	1.54	1.5	1.57	0.79
MA-Rhyo-02	8.18	1.31	16.8	10.6	1.4	7.59	2.67
LU-MA21-076B	2.29	0.67	13.6	2.21	1.6	1.13	0.68
LU-MA21-076C	1.28	1.21	13.0	4.15	1.1	3.50	0.43
LU-MA21-080W1A	0.99	0.89	19.4	2.61	1.2	3.94	0.38
MA-WP-S01A							
MA-WP-S01B							
MA-EPN-S02A							
MA-EPN-S02B							
MA-EPN-S02C							
MA-PS-S01							
LU-MA20-050A	0.69	0.68	22.2	2.03	1.4	3.01	0.27
LU-MA21-080W1B-1	0.90	0.80	18.7	2.22	1.2	3.58	0.37
LU-MA12-385A	0.77	0.79	16.2	1.98	1.1	2.75	0.39
MA-EPN-S04							
MA-EPN-S05	1.26	0.98	17.6	2.84	1.3	3.65	0.44
MA-WP-S06	1.36	1.18	20.0	3.10	1.1	4.23	0.55
LU-MA11-068	1.15	1.12	20.3	2.85	1.3	3.96	0.50
LU-MA21-085	1.85	1.29	15.4	4.41	1.5	2.07	0.63

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	La	Lu	Nb	Nd	Pr	Rb	Sm
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	0.1	0.01	0.05	0.1	0.02	0.2	0.03
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	13.6	0.11	3.37	12.2	3.00	19.2	2.35
LU-PD-MA12-004B	5.4	0.42	3.71	10.9	2.19	45.6	3.52
LU-PD-MA12-004C	5.2	0.42	3.34	9.6	1.92	1.0	3.20
MA-WP-S02	3.1	0.28	2.36	6.4	1.04	46.7	1.74
MA-WP-S03A	13.7	0.15	2.96	13.9	3.35	38.9	2.75
MA-WP-S03B	5.1	0.43	3.15	9.5	1.90	15.2	3.07
MA-WP-S04	16.0	0.11	4.83	15.9	4.25	1.8	3.01
MA-WP-S05	3.4	0.33	2.89	8.1	1.41	0.8	2.35
MA-EPN-S01A	15.0	0.06	2.82	13.3	3.22	23.7	2.11
MA-EPN-S01B	15.3	0.11	3.47	14.2	3.52	23.0	2.24
MA-Au-03							
MA-EPN-S03A	16.1	0.10	3.09	13.8	3.66	26.3	2.33
MA-EPN-S03B	16.8	0.14	5.11	16.8	4.45	18.4	3.08
LU-MA20-041A-B	12.9	0.13	2.68	12.2	3.16	22.0	2.53
MA-NEP-S01	2.2	0.35	2.47	2.9	0.62	38.7	0.95
MA-Rhyo-02	27.1	1.21	11.3	35.6	8.05	54.2	9.13
LU-MA21-076B	2.5	0.30	1.68	5.0	0.98	3.9	1.71
LU-MA21-076C	45.3	0.15	6.23	40.2	11.2	0.6	6.54
LU-MA21-080W1A	25.9	0.16	7.58	22.9	6.07	47.9	3.56
MA-WP-S01A							
MA-WP-S01B							
MA-EPN-S02A							
MA-EPN-S02B							
MA-EPN-S02C							
MA-PS-S01							
LU-MA20-050A	14.5	0.09	3.6	13.3	3.11	55.4	2.36
LU-MA21-080W1B-1	17.0	0.16	4.03	17.1	4.35	29.2	2.85
LU-MA12-385A	27.3	0.18	3.85	23.6	6.63	53.7	3.63
MA-EPN-S04							
MA-EPN-S05	17.8	0.19	5.22	19.3	4.94	39.4	3.73
MA-WP-S06	18.8	0.23	5.47	19.4	5.00	20.9	3.80
LU-MA11-068	18.6	0.21	3.92	18.5	4.72	31.7	3.38
LU-MA21-085	16.8	0.25	2.51	20.2	4.77	98.3	4.67

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Sn	Sr	Ta	Tb	Th	Tm	U
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
LDL	0.5	0.1	0.1	0.01	0.05	0.01	0.05
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	0.7	130	0.3	0.31	1.96	0.12	0.44
LU-PD-MA12-004B	0.6	121	0.2	0.82	0.49	0.46	0.13
LU-PD-MA12-004C	0.9	130	0.2	0.68	0.38	0.50	0.11
MA-WP-S02	0.5	129	0.2	0.47	0.29	0.29	0.07
MA-WP-S03A	1.0	114	0.2	0.33	1.74	0.16	0.38
MA-WP-S03B	0.8	142	0.2	0.72	0.42	0.41	0.12
MA-WP-S04	0.8	153	0.3	0.39	2.20	0.18	0.52
MA-WP-S05	0.5	125	0.2	0.61	0.38	0.44	0.09
MA-EPN-S01A	0.6	242	0.2	0.23	2.01	0.11	0.39
MA-EPN-S01B	0.7	283	0.3	0.33	1.82	0.16	0.41
MA-Au-03							
MA-EPN-S03A	1.0	201	0.2	0.27	2.20	0.12	0.43
MA-EPN-S03B	0.8	228	0.3	0.31	2.03	0.14	0.86
LU-MA20-041A-B	0.6	267	0.2	0.25	1.71	0.12	0.47
MA-NEP-S01	1.0	314	0.1	0.35	0.28	0.30	0.12
MA-Rhyo-02	3.9	72.3	0.9	1.74	4.90	1.22	1.25
LU-MA21-076B	0.5	213	0.1	0.41	0.22	0.27	0.06
LU-MA21-076C	0.7	470	0.3	0.53	5.46	0.16	0.97
LU-MA21-080W1A	<0.5	226	0.6	0.34	4.78	0.13	1.31
MA-WP-S01A							
MA-WP-S01B							
MA-EPN-S02A							
MA-EPN-S02B							
MA-EPN-S02C							
MA-PS-S01							
LU-MA20-050A	0.8	327	0.2	0.23	2.54	0.08	0.42
LU-MA21-080W1B-1	0.6	415	0.3	0.32	2.11	0.17	0.61
LU-MA12-385A	1.3	186	0.3	0.3	4.44	0.17	1.10
MA-EPN-S04							
MA-EPN-S05	1.0	225	0.4	0.45	2.31	0.20	0.54
MA-WP-S06	1.0	333	0.4	0.48	2.49	0.22	0.55
LU-MA11-068	0.7	231	0.2	0.45	2.28	0.20	0.52
LU-MA21-085	0.6	604	0.1	0.61	4.02	0.24	1.25

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	V	W	Y	Yb	Zr	Ag
Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-4ACD81
LDL	5	0.5	0.1	0.03	1	0.5
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	84	15.3	7.9	0.79	133	<0.5
LU-PD-MA12-004B	381	18.5	28.2	2.98	86	0.9
LU-PD-MA12-004C	394	5.6	27.6	3.14	79	<0.5
MA-WP-S02	289	2.1	17.8	1.96	56	<0.5
MA-WP-S03A	96	3.8	9.0	0.95	128	<0.5
MA-WP-S03B	350	2.8	24.9	2.95	73	<0.5
MA-WP-S04	74	2.5	11.2	1.00	152	<0.5
MA-WP-S05	383	1.5	21.8	2.59	66	<0.5
MA-EPN-S01A	61	4.1	7.4	0.67	111	<0.5
MA-EPN-S01B	76	4.7	9.2	0.85	135	<0.5
MA-Au-03						
MA-EPN-S03A	63	8.6	7.2	0.72	128	<0.5
MA-EPN-S03B	85	2.5	9.4	0.90	142	<0.5
LU-MA20-041A-B	69	5.8	7.7	0.84	130	<0.5
MA-NEP-S01	322	4.6	19.0	1.97	58	<0.5
MA-Rhyo-02	14	0.9	72.9	8.27	264	<0.5
LU-MA21-076B	219	0.8	16.8	1.93	45	<0.5
LU-MA21-076C	124	3.5	12.2	1.16	137	<0.5
LU-MA21-080W1A	34	2.8	9.9	1.06	140	<0.5
MA-WP-S01A						
MA-WP-S01B						
MA-EPN-S02A						
MA-EPN-S02B						
MA-EPN-S02C						
MA-PS-S01						
LU-MA20-050A	65	18.7	7.4	0.64	125	<0.5
LU-MA21-080W1B-1	66	2.7	8.8	0.88	140	<0.5
LU-MA12-385A	<5	9.2	8.3	0.80	72	<0.5
MA-EPN-S04						
MA-EPN-S05	102	8.8	11.7	1.16	148	<0.5
MA-WP-S06	116	0.7	13.4	1.16	165	<0.5
LU-MA11-068	83	5.7	11.8	1.02	133	<0.5
LU-MA21-085	222	3.9	16.1	1.49	72	<0.5

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Cd	Co	Cu	Li	Mo
Method	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81
LDL	0.5	1	1	10	1
Sample ID	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	<0.5	14	40	30	1
LU-PD-MA12-004B	<0.5	39	151	60	1
LU-PD-MA12-004C	<0.5	45	237	30	1
MA-WP-S02	<0.5	49	105	50	1
MA-WP-S03A	<0.5	13	15	20	1
MA-WP-S03B	<0.5	44	97	50	1
MA-WP-S04	0.5	12	86	10	1
MA-WP-S05	<0.5	41	72	40	1
MA-EPN-S01A	<0.5	10	36	30	8
MA-EPN-S01B	<0.5	11	21	30	3
MA-Au-03					
MA-EPN-S03A	<0.5	8	100	20	11
MA-EPN-S03B	<0.5	16	26	30	1
LU-MA20-041A-B	<0.5	11	52	20	2
MA-NEP-S01	<0.5	59	102	60	1
MA-Rhyo-02	<0.5	3	12	10	5
LU-MA21-076B	<0.5	41	83	80	1
LU-MA21-076C	<0.5	49	7	110	1
LU-MA21-080W1A	<0.5	5	3	20	1
MA-WP-S01A					
MA-WP-S01B					
MA-EPN-S02A					
MA-EPN-S02B					
MA-EPN-S02C					
MA-PS-S01					
LU-MA20-050A	<0.5	8	7	20	2
LU-MA21-080W1B-1	<0.5	11	28	40	3
LU-MA12-385A	<0.5	<1	6	20	1
MA-EPN-S04					
MA-EPN-S05	<0.5	15	44	30	1
MA-WP-S06	<0.5	16	40	30	1
LU-MA11-068	<0.5	12	19	30	<1
LU-MA21-085	<0.5	33	20	80	<1

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Ni	Pb	Sc	Zn	As	Bi
Method	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-MS42	ME-MS42
LDL	1	2	1	2	0.1	0.01
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	19	<2	7	34	1.0	0.09
LU-PD-MA12-004B	23	3	37	83	0.7	0.26
LU-PD-MA12-004C	22	2	39	95	1.2	0.12
MA-WP-S02	100	<2	37	93	2.4	0.08
MA-WP-S03A	12	<2	7	32	0.3	0.01
MA-WP-S03B	32	2	38	135	0.4	0.05
MA-WP-S04	17	5	8	76	1.3	0.12
MA-WP-S05	34	2	41	104	6.0	0.04
MA-EPN-S01A	11	<2	7	34	2.0	0.02
MA-EPN-S01B	12	<2	8	36	3.1	0.03
MA-Au-03						
MA-EPN-S03A	10	<2	5	38	4.0	0.03
MA-EPN-S03B	16	2	9	66	13.0	0.02
LU-MA20-041A-B	11	3	7	41	2.9	0.02
MA-NEP-S01	165	<2	30	105	2.0	0.14
MA-Rhyo-02	8	6	7	56	0.5	0.05
LU-MA21-076B	96	3	35	78	0.9	0.01
LU-MA21-076C	470	2	22	117	1.1	0.02
LU-MA21-080W1A	10	5	4	29	0.3	0.01
MA-WP-S01A						
MA-WP-S01B						
MA-EPN-S02A						
MA-EPN-S02B						
MA-EPN-S02C						
MA-PS-S01						
LU-MA20-050A	10	3	6	22	7.9	0.34
LU-MA21-080W1B-1	14	3	7	57	0.4	0.02
LU-MA12-385A	2	7	1	21	4.3	0.06
MA-EPN-S04						
MA-EPN-S05	41	3	11	52	5.2	0.17
MA-WP-S06	39	<2	13	48	0.5	0.01
LU-MA11-068	12	<2	9	47	2.2	<0.01
LU-MA21-085	78	9	26	76	1.0	0.01

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Hg	In	Re	Sb	Se	Te	Tl
Method	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42
LDL	0.005	0.005	0.001	0.05	0.2	0.01	0.02
Sample ID	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LU-PD-MA12-004A	<0.005	0.007	<0.001	0.05	<0.2	0.05	0.02
LU-PD-MA12-004B	<0.005	0.074	0.002	<0.05	1.0	0.18	0.46
LU-PD-MA12-004C	<0.005	0.080	0.003	0.16	0.6	0.05	<0.02
MA-WP-S02	<0.005	0.019	0.001	0.05	0.5	0.02	0.04
MA-WP-S03A	<0.005	0.007	<0.001	<0.05	<0.2	<0.01	0.02
MA-WP-S03B	<0.005	0.035	0.002	0.06	0.5	0.02	<0.02
MA-WP-S04	<0.005	0.020	<0.001	0.11	0.3	0.06	<0.02
MA-WP-S05	<0.005	0.048	0.001	0.07	0.3	0.01	<0.02
MA-EPN-S01A	<0.005	0.009	0.002	<0.05	<0.2	<0.01	<0.02
MA-EPN-S01B	<0.005	0.010	0.001	0.06	<0.2	<0.01	<0.02
MA-Au-03							
MA-EPN-S03A	<0.005	0.011	0.008	<0.05	0.3	0.01	<0.02
MA-EPN-S03B	<0.005	0.012	<0.001	0.06	0.2	0.01	<0.02
LU-MA20-041A-B	<0.005	0.007	<0.001	0.13	0.3	0.02	<0.02
MA-NEP-S01	<0.005	0.035	<0.001	<0.05	0.2	0.06	<0.02
MA-Rhyo-02	<0.005	0.027	0.001	0.11	0.2	<0.01	0.02
LU-MA21-076B	<0.005	0.039	<0.001	<0.05	0.3	0.02	<0.02
LU-MA21-076C	0.005	0.024	<0.001	<0.05	0.2	0.01	<0.02
LU-MA21-080W1A	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.11
MA-WP-S01A							
MA-WP-S01B							
MA-EPN-S02A							
MA-EPN-S02B							
MA-EPN-S02C							
MA-PS-S01							
LU-MA20-050A	<0.005	<0.005	<0.001	<0.05	0.4	0.24	0.02
LU-MA21-080W1B-1	<0.005	<0.005	0.001	<0.05	0.3	0.01	0.11
LU-MA12-385A	<0.005	<0.005	<0.001	<0.05	0.2	0.01	0.13
MA-EPN-S04							
MA-EPN-S05	<0.005	0.006	<0.001	0.11	0.4	0.08	0.07
MA-WP-S06	<0.005	<0.005	<0.001	0.18	<0.2	0.01	0.03
LU-MA11-068	<0.005	<0.005	<0.001	<0.05	0.2	0.01	<0.02
LU-MA21-085	<0.005	0.009	<0.001	<0.05	0.2	0.02	0.57

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	C	S	H2O+	Cl	F	Au	Ag	Specifc gravity
Method	C-IR07	S-IR08	OA-IR06	Cl-IC881	F-IC881	Au-ICP21	Ag-AA45	OA-GRA08b
LDL	0.01	0.01	0.01	50	20	0.001	0.2	0.01
Sample ID	%	%	%	ppm	ppm	ppm	ppm	Unit
LU-PD-MA12-004A	0.69	0.06	1.71	180	270	0.006	<0.2	2.79
LU-PD-MA12-004B	1.35	1.48	3.03	180	440	1.395	0.4	2.91
LU-PD-MA12-004C	1.54	0.70	3.61	160	220	0.001	0.3	2.90
MA-WP-S02	3.11	0.20	3.58	170	230	0.004	0.3	2.84
MA-WP-S03A	0.61	0.01	1.72	150	230	<0.001	<0.2	2.74
MA-WP-S03B	1.97	0.19	4.38	160	220	0.002	0.2	2.86
MA-WP-S04	0.34	0.25	1.16	160	190	<0.001	<0.2	2.75
MA-WP-S05	1.35	0.14	3.95	160	200	0.033	<0.2	2.88
MA-EPN-S01A	0.66	0.02	1.18	150	390	0.007	<0.2	2.7
MA-EPN-S01B	0.69	0.03	1.31	140	410	0.001	0.2	2.75
MA-Au-03						0.680	0.2	
MA-EPN-S03A	0.80	0.12	1.39	160	370	0.008	0.2	2.66
MA-EPN-S03B	0.61	0.08	1.92	170	410	<0.001	<0.2	2.70
LU-MA20-041A-B	0.51	0.12	1.40	150	360	0.074	0.3	2.71
MA-NEP-S01	1.28	0.07	5.04	170	740	0.056	<0.2	2.83
MA-Rhyo-02	0.04	0.01	0.84	160	320	<0.001	<0.2	2.58
LU-MA21-076B	2.88	0.05	3.58	160	260	0.019	<0.2	2.83
LU-MA21-076C	3.81	0.02	4.54	160	1000	<0.001	<0.2	2.83
LU-MA21-080W1A	0.31	0.06	0.61	170	280	0.015	0.2	2.68
MA-WP-S01A						<0.001	<0.2	
MA-WP-S01B						0.003	<0.2	
MA-EPN-S02A						0.320	0.2	
MA-EPN-S02B						0.175	<0.2	
MA-EPN-S02C						0.05	<0.2	
MA-PS-S01						0.057	0.2	
LU-MA20-050A	0.85	1.08	1.27	150	380	0.265	0.3	2.85
LU-MA21-080W1B-1	0.11	0.11	0.65	130	400	0.002	<0.2	2.75
LU-MA12-385A	0.52	0.12	1.04	140	330	0.015	<0.2	2.76
MA-EPN-S04						0.056	<0.2	
MA-EPN-S05	0.71	0.31	1.77	130	390	0.032	<0.2	2.72
MA-WP-S06	0.32	0.14	2.34	140	260	0.002	<0.2	2.90
LU-MA11-068	0.63	0.13	1.81	140	340	0.009	<0.2	2.75
LU-MA21-085	1.34	0.04	1.32	180	790	0.003	<0.2	2.82

Abbreviations: LDL = Lower detection limit. QFP = Quartz-feldspar porphyry dike. LA = Least altered. Int = Intense. Wk = Weak.

Analyte	Method	Unit	MA-Au -01	MA-Au -02	MA-Au -03	CDN-GS-P6 reference	Mean	Stdev	**%RSD**	**%RD**
Au	Au-ICP21	ppm	0.641	0.63	0.68	0.626	0.65	0.02	**3.3**	**6564.8**

Analyte	Method	Type Grouping Unit	Leucotonalite Type 1B MA-CP-S10	Leucotonalite Type 1B MA-CP-S10 DUPE	Mean	Stdev	**%RSD**
SiO_2	ME-ICP06	%	73.1	70.9	72.00	1.10	**1.5**
$Al2O_3$	ME-ICP06	%	13.85	14.35	14.10	0.25	**1.8**
Fe_2O_3	ME-ICP06	%	3.16	3.63	3.40	0.24	**6.9**
CaO	ME-ICP06	%	1.35	1.7	1.53	0.18	**11.5**
MgO	ME-ICP06	%	0.59	0.72	0.66	0.07	**9.9**
Na_2O	ME-ICP06	%	0.55	0.6	0.58	0.03	**4.3**
K_2O	ME-ICP06	%	3.7	3.76	3.73	0.03	**0.8**
Cr_2O_3	ME-ICP06	%	0.003	0.003	0.00	0.00	**0.0**
TiO_2	ME-ICP06	%	0.31	0.32	0.32	0.01	**1.6**
MnO	ME-ICP06	%	0.02	0.03	0.03	0.01	**20.0**
P_2O_5	ME-ICP06	%	0.1	0.09	0.10	0.01	**5.3**
SrO	ME-ICP06	%	0.02	0.02	0.02	0.00	**0.0**
BaO	ME-ICP06	%	0.06	0.06	0.06	0.00	**0.0**
LOI	OA-GRA05	%	3.15	3.44	3.30	0.15	**4.4**
Total	TOT-ICP06	%	99.96	99.62	99.79	0.17	**0.2**
Ba	ME-MS81	ppm	551	550	550.50	0.50	**0.1**
Ce	ME-MS81	ppm	45.5	50	47.75	2.25	**4.7**
Cr	ME-MS81	ppm	20	20	20.00	0.00	**0.0**
Cs	ME-MS81	ppm	2.87	2.66	2.77	0.11	**3.8**
Dy	ME-MS81	ppm	1.58	1.88	1.73	0.15	**8.7**
Er	ME-MS81	ppm	0.81	0.96	0.89	0.08	**8.5**
Eu	ME-MS81	ppm	0.78	0.89	0.84	0.06	**6.6**
Ga	ME-MS81	ppm	20.5	21.4	20.95	0.45	**2.1**
Gd	ME-MS81	ppm	1.98	2.53	2.26	0.27	**12.2**
Ge	ME-MS81	ppm	<5	<5			
Hf	ME-MS81	ppm	3.6	4	3.80	0.20	**5.3**
Ho	ME-MS81	ppm	0.24	0.32	0.28	0.04	**14.3**
La	ME-MS81	ppm	21.3	23.3	22.30	1.00	**4.5**
Lu	ME-MS81	ppm	0.1	0.13	0.12	0.02	**13.0**
Nb	ME-MS81	ppm	6.4	6.7	6.55	0.15	**2.3**
Nd	ME-MS81	ppm	18.2	20.3	19.25	1.05	**5.5**
Pr	ME-MS81	ppm	5.17	5.5	5.34	0.17	**3.1**
Rb	ME-MS81	ppm	70.5	70.5	70.50	0.00	**0.0**
Sm	ME-MS81	ppm	2.98	3.25	3.12	0.14	**4.3**
Sn	ME-MS81	ppm	1	1	1.00	0.00	**0.0**
Sr	ME-MS81	ppm	179	177.5	178.25	0.75	**0.4**
Ta	ME-MS81	ppm	0.5	0.5	0.50	0.00	**0.0**
Tb	ME-MS81	ppm	0.25	0.32	0.29	0.03	**12.3**
Th	ME-MS81	ppm	3.6	3.91	3.76	0.16	**4.1**
Tm	ME-MS81	ppm	0.1	0.12	0.11	0.01	**9.1**
U	ME-MS81	ppm	1.2	0.89	1.05	0.16	**14.8**
V	ME-MS81	ppm	36	38	37.00	1.00	**2.7**

Analyte	Method	Type Grouping Unit	Leucotonalite Type 1B MA-CP-S10	Leucotonalite Type 1B MA-CP-S10 DUPE	Mean	Stdev	**%RSD**
W	ME-MS81	ppm	10	10	10.00	0.00	**0.0**
Y	ME-MS81	ppm	8.1	9.8	8.95	0.85	**9.5**
Yb	ME-MS81	ppm	0.79	0.9	0.85	0.06	**6.5**
Zr	ME-MS81	ppm	132	145	138.50	6.50	**4.7**
Ag	ME-4ACD81	ppm	0.5	<0.5			
Cd	ME-4ACD81	ppm	<0.5	<0.5			
Co	ME-4ACD81	ppm	7	7	7.00	0.00	**0.0**
Cu	ME-4ACD81	ppm	48	58	53.00	5.00	**9.4**
Li	ME-4ACD81	ppm	20	20	20.00	0.00	**0.0**
Mo	ME-4ACD81	ppm	3	1	2.00	1.00	**50.0**
Ni	ME-4ACD81	ppm	9	10	9.50	0.50	**5.3**
Pb	ME-4ACD81	ppm	3	3	3.00	0.00	**0.0**
Sc	ME-4ACD81	ppm	5	5	5.00	0.00	**0.0**
Zn	ME-4ACD81	ppm	14	18	16.00	2.00	**12.5**
As	ME-MS42	ppm	41.1	33.3	37.20	3.90	**10.5**
Bi	ME-MS42	ppm	0.27	0.3	0.29	0.02	**5.3**
Hg	ME-MS42	ppm	<0.005	<0.005			
In	ME-MS42	ppm	<0.005	<0.005			
Re	ME-MS42	ppm	0.001	0.001	0.001	0.000	**0.0**
Sb	ME-MS42	ppm	0.07	0.06	0.07	0.01	**7.7**
Se	ME-MS42	ppm	0.4	0.6	0.50	0.10	**20.0**
Te	ME-MS42	ppm	0.13	0.11	0.12	0.01	**8.3**
Tl	ME-MS42	ppm	0.04	0.03	0.04	0.01	**14.3**
C	C-IR07	%	0.24	0.34	0.29	0.05	**17.2**
S	S-IR08	%	1.51	1.39	1.45	0.06	**4.1**
H_2O+	OA-IR06	%	1.8	1.88	1.84	0.04	**2.2**
Cl	Cl-IC881	ppm	140	130	135.00	5.00	**3.7**
F	F-IC881	ppm	650	680	665.00	15.00	**2.3**
Ag	Ag-AA45	ppm	0.3	0.4	0.35	0.05	**14.3**
Au	Au-ICP21	ppm	1.145	0.8	0.973	0.173	**17.7**

Analyte	Method	Type Grouping Unit	Leucotonalite Shear zone MA-EP-S08	Leucotonalite Shear zone MA-EP-S08 DUPE	Mean	Stdev	**%RSD**
SiO_2	ME-ICP06	%	67.3	68.8	68.05	0.75	**1.1**
$Al2O_3$	ME-ICP06	%	13.7	13.7	13.70	0.00	**0.0**
Fe_2O_3	ME-ICP06	%	3.13	3.24	3.19	0.06	**1.7**
CaO	ME-ICP06	%	3.09	2.85	2.97	0.12	**4.0**
MgO	ME-ICP06	%	1.51	1.4	1.46	0.06	**3.8**
Na_2O	ME-ICP06	%	2.95	2.85	2.90	0.05	**1.7**
K_2O	ME-ICP06	%	2.03	2.01	2.02	0.01	**0.5**
Cr_2O_3	ME-ICP06	%	0.003	0.003	0.00	0.00	**0.0**
TiO_2	ME-ICP06	%	0.3	0.29	0.30	0.01	**1.7**
MnO	ME-ICP06	%	0.05	0.04	0.05	0.01	**11.1**
P_2O_5	ME-ICP06	%	0.09	0.08	0.09	0.01	**5.9**
SrO	ME-ICP06	%	0.01	0.01	0.01	0.00	**0.0**
BaO	ME-ICP06	%	0.03	0.03	0.03	0.00	**0.0**
LOI	OA-GRA05	%	4.47	5.47	4.97	0.50	**10.1**
Total	TOT-ICP06	%	98.66	100.77	99.72	1.06	**1.1**
Ba	ME-MS81	ppm	292	285	288.50	3.50	**1.2**
Ce	ME-MS81	ppm	46.4	45.8	46.10	0.30	**0.7**
Cr	ME-MS81	ppm	20	20	20.00	0.00	**0.0**
Cs	ME-MS81	ppm	1.56	1.56	1.56	0.00	**0.0**
Dy	ME-MS81	ppm	1.87	1.68	1.78	0.10	**5.4**
Er	ME-MS81	ppm	0.96	0.93	0.95	0.02	**1.6**
Eu	ME-MS81	ppm	0.8	0.78	0.79	0.01	**1.3**
Ga	ME-MS81	ppm	20	18.3	19.15	0.85	**4.4**
Gd	ME-MS81	ppm	2.35	2.39	2.37	0.02	**0.8**
Ge	ME-MS81	ppm	<5	<5			
Hf	ME-MS81	ppm	3.7	3.5	3.60	0.10	**2.8**
Ho	ME-MS81	ppm	0.28	0.3	0.29	0.01	**3.4**
La	ME-MS81	ppm	21.3	21.4	21.35	0.05	**0.2**
Lu	ME-MS81	ppm	0.12	0.13	0.13	0.01	**4.0**
Nb	ME-MS81	ppm	6.7	6.2	6.45	0.25	**3.9**
Nd	ME-MS81	ppm	18.4	18.4	18.40	0.00	**0.0**
Pr	ME-MS81	ppm	5.2	5.16	5.18	0.02	**0.4**
Rb	ME-MS81	ppm	36.5	36.6	36.55	0.05	**0.1**
Sm	ME-MS81	ppm	3.1	3.21	3.16	0.05	**1.7**
Sn	ME-MS81	ppm	<1	<1			
Sr	ME-MS81	ppm	144.5	150	147.25	2.75	**1.9**
Ta	ME-MS81	ppm	0.6	0.5	0.55	0.05	**9.1**
Tb	ME-MS81	ppm	0.29	0.3	0.30	0.01	**1.7**
Th	ME-MS81	ppm	3.77	3.52	3.65	0.13	**3.4**
Tm	ME-MS81	ppm	0.12	0.13	0.13	0.01	**4.0**
U	ME-MS81	ppm	1.05	0.92	0.99	0.07	**6.6**
V	ME-MS81	ppm	34	32	33.00	1.00	**3.0**

Analyte	Method	Type Grouping Unit	Leucotonalite Shear zone MA-EP-S08	Leucotonalite Shear zone MA-EP-S08 DUPE	Mean	Stdev	**%RSD**
W	ME-MS81	ppm	12	12	12.00	0.00	**0.0**
Y	ME-MS81	ppm	9.3	8.8	9.05	0.25	**2.8**
Yb	ME-MS81	ppm	0.93	0.85	0.89	0.04	**4.5**
Zr	ME-MS81	ppm	137	137	137.00	0.00	**0.0**
Ag	ME-4ACD81	ppm	1.2	1.5	1.35	0.15	**11.1**
Cd	ME-4ACD81	ppm	<0.5	<0.5			
Co	ME-4ACD81	ppm	6	7	6.50	0.50	**7.7**
Cu	ME-4ACD81	ppm	290	280	285.00	5.00	**1.8**
Li	ME-4ACD81	ppm	20	20	20.00	0.00	**0.0**
Mo	ME-4ACD81	ppm	6	14	10.00	4.00	**40.0**
Ni	ME-4ACD81	ppm	8	8	8.00	0.00	**0.0**
Pb	ME-4ACD81	ppm	3	5	4.00	1.00	**25.0**
Sc	ME-4ACD81	ppm	5	4	4.50	0.50	**11.1**
Zn	ME-4ACD81	ppm	41	41	41.00	0.00	**0.0**
As	ME-MS42	ppm	19.1	23	21.05	1.95	**9.3**
Bi	ME-MS42	ppm	0.09	0.1	0.10	0.01	**5.3**
Hg	ME-MS42	ppm	<0.005	0.006	0.01	0.00	**0.0**
In	ME-MS42	ppm	0.012	0.011	0.01	0.00	**4.3**
Re	ME-MS42	ppm	0.003	0.008	0.01	0.00	**45.5**
Sb	ME-MS42	ppm	0.08	0.08	0.08	0.00	**0.0**
Se	ME-MS42	ppm	0.7	0.8	0.75	0.05	**6.7**
Te	ME-MS42	ppm	0.24	0.27	0.26	0.02	**5.9**
Tl	ME-MS42	ppm	<0.02	<0.02			
C	C-IR07	%	1.05	0.96	1.01	0.05	**4.5**
S	S-IR08	%	0.9	1.18	1.04	0.14	**13.5**
H_2O+	OA-IR06	%	1.32	1.27	1.30	0.03	**1.9**
Cl	Cl-IC881	ppm	100	130	115.00	15.00	**13.0**
F	F-IC881	ppm	470	440	455.00	15.00	**3.3**
Ag	Au-ICP21	ppm	1.5	1.8	1.65	0.15	**9.1**
Au	Ag-AA45	ppm	1.205	8.18	4.69	3.49	**74.3**

Analyte	Method	Type Grouping Unit	Mid range Lab standard MRGeo08	Mid range Lab standard MRGeo08	Mean	Stdev	**%RSD**
Ag	ME-4ACD81	ppm	4.5	4.5	4.5	0.0	**0.0**
Cd	ME-4ACD81	ppm	2.3	2.2	2.3	0.0	**2.2**
Co	ME-4ACD81	ppm	20	20	20.0	0.0	**0.0**
Cu	ME-4ACD81	ppm	633	618	625.5	7.5	**1.2**
Li	ME-4ACD81	ppm	40	40	40.0	0.0	**0.0**
Mo	ME-4ACD81	ppm	14	14	14.0	0.0	**0.0**
Ni	ME-4ACD81	ppm	714	709	711.5	2.5	**0.4**
Pb	ME-4ACD81	ppm	1090	1070	1080.0	10.0	**0.9**
Sc	ME-4ACD81	ppm	12	10	11.0	1.0	**9.1**
Zn	ME-4ACD81	ppm	824	816	820.0	4.0	**0.5**

Analyte	Method	Unit	MA-Rhyo -01	MA-Rhyo -02	MA-Rhyo -01 lab dupe	ORCA-1 reference	Mean	Stdev	%RSD	%RD
SiO_2	ME-ICP06	%	76.4	73.9	73.7	74.84	74.67	1.23	**1.65**	**-0.23**
$Al2O_3$	ME-ICP06	%	12.8	12.55	12.45	12.55	12.60	0.15	**1.17**	**0.40**
Fe_2O_3	ME-ICP06	%	2.91	2.84	2.84	2.91	2.86	0.03	**1.15**	**-1.60**
CaO	ME-ICP06	%	1.17	1.14	1.15	1.14	1.15	0.01	**1.08**	**1.17**
MgO	ME-ICP06	%	0.48	0.48	0.47	0.47	0.48	0.00	**0.99**	**1.42**
Na_2O	ME-ICP06	%	4.71	4.54	4.6	4.59	4.62	0.07	**1.52**	**0.58**
K_2O	ME-ICP06	%	2.18	2.12	2.14	2.14	2.15	0.02	**1.16**	**0.31**
Cr_2O_3	ME-ICP06	%	0.012	0.011	0.011		0.01	0.00	**4.16**	
TiO_2	ME-ICP06	%	0.29	0.29	0.29	0.298	0.29	0.00	**0.00**	**-2.68**
MnO	ME-ICP06	%	0.06	0.06	0.06	0.06	0.06	0.00	**0.00**	**0.00**
P_2O_5	ME-ICP06	%	0.06	0.05	0.05	0.057	0.05	0.00	**8.84**	**-6.43**
SrO	ME-ICP06	%	<0.01	0.01	0.01		0.01	0.00	**0.00**	
BaO	ME-ICP06	%	0.04	0.04	0.04		0.04	0.00	**0.00**	
LOI	OA-GRA05	%	0.81	0.78			0.80	0.02	**1.89**	
Total	TOT-ICP06	%	101.92	98.81			100.37	1.56	**1.55**	
Ba	ME-MS81	ppm	384	391	378	374	384.33	5.31	**1.38**	**2.76**
Ce	ME-MS81	ppm	63.9	64	65	62.1	64.30	0.50	**0.77**	**3.54**
Cr	ME-MS81	ppm	80	81	70	65	77.00	4.97	**6.45**	**18.46**
Cs	ME-MS81	ppm	0.53	0.55	0.55	0.6	0.54	0.01	**1.74**	**-9.44**
Dy	ME-MS81	ppm	11.85	11.55	11.65	11.7	11.68	0.12	**1.07**	**-0.14**
Er	ME-MS81	ppm	7.76	8.18	7.72	7.6	7.89	0.21	**2.64**	**3.77**
Eu	ME-MS81	ppm	1.22	1.31	1.26	1.32	1.26	0.04	**2.91**	**-4.29**
Ga	ME-MS81	ppm	17.3	16.8	17.1	16	17.07	0.21	**1.20**	**6.67**
Gd	ME-MS81	ppm	9.78	10.6	9.78	9.87	10.05	0.39	**3.85**	**1.86**
Ge	ME-MS81	ppm	<5	1.4	<5	1.5				
Hf	ME-MS81	ppm	7.8	7.59	7.7	7.5	7.70	0.09	**1.11**	**2.62**
Ho	ME-MS81	ppm	2.46	2.67	2.42	2.53	2.52	0.11	**4.36**	**-0.53**
La	ME-MS81	ppm	26.7	27.1	29	27	27.60	1.00	**3.64**	**2.22**
Lu	ME-MS81	ppm	1.2	1.21	1.19	1.21	1.20	0.01	**0.68**	**-0.83**
Nb	ME-MS81	ppm	11.4	11.25	11.3	11.6	11.32	0.06	**0.55**	**-2.44**
Nd	ME-MS81	ppm	33.8	35.6	34.3	34.8	34.57	0.76	**2.19**	**-0.67**
Pr	ME-MS81	ppm	8.03	8.05	8.22	8.2	8.10	0.09	**1.05**	**-1.22**
Rb	ME-MS81	ppm	50.8	54.2	50	52.1	51.67	1.82	**3.52**	**-0.83**
Sm	ME-MS81	ppm	8.95	9.13	8.53	8.95	8.87	0.25	**2.83**	**-0.89**
Sn	ME-MS81	ppm	4	3.9	3	3.5	3.63	0.45	**12.38**	**3.81**
Sr	ME-MS81	ppm	72.9	72.3	72.6	71.6	72.60	0.24	**0.34**	**1.40**
Ta	ME-MS81	ppm	1	0.9	1	0.99	0.97	0.05	**4.88**	**-2.36**
Tb	ME-MS81	ppm	1.74	1.74	1.69	1.8	1.72	0.02	**1.37**	**-4.26**
Th	ME-MS81	ppm	5.04	4.9	5	4.91	4.98	0.06	**1.18**	**1.43**
Tm	ME-MS81	ppm	1.14	1.22	1.13	1.19	1.16	0.04	**3.46**	**-2.24**
U	ME-MS81	ppm	1.25	1.25	1.31	1.29	1.27	0.03	**2.23**	**-1.55**
V	ME-MS81	ppm	11	14	52	10.2	25.67	18.66	**72.70**	**151.63**
W	ME-MS81	ppm	1	0.9	2	0.88	1.30	0.50	**38.20**	**47.73**
Y	ME-MS81	ppm	69.3	72.9	68.9	70.8	70.37	1.80	**2.56**	**-0.61**

Analyte	Method	Unit	MA-Rhyo -01	MA-Rhyo -02	MA-Rhyo -01 lab dupe	ORCA-1 reference	Mean	Stdev	**%RSD**	**%RD**
Yb	ME-MS81	ppm	7.61	8.27	7.79	7.85	7.89	0.28	**3.53**	**0.51**
Zr	ME-MS81	ppm	260	264	256	246	260.00	3.27	**1.26**	**5.69**
Ag	ME-4ACD81	ppm	<0.5	<0.5						
Cd	ME-4ACD81	ppm	<0.5	<0.5						
Co	ME-4ACD81	ppm	3	3		3	3.00	0.00	**0.00**	**0.00**
Cu	ME-4ACD81	ppm	11	12		12	11.50	0.50	**4.35**	**-4.17**
Li	ME-4ACD81	ppm	10	10		6.1	10.00	0.00	**0.00**	**63.93**
Mo	ME-4ACD81	ppm	4	5		4.4	4.50	0.50	**11.11**	**2.27**
Ni	ME-4ACD81	ppm	6	8		6	7.00	1.00	**14.29**	**16.67**
Pb	ME-4ACD81	ppm	5	6		5	5.50	0.50	**9.09**	**10.00**
Sc	ME-4ACD81	ppm	7	7		7.3	7.00	0.00	**0.00**	**-4.11**
Zn	ME-4ACD81	ppm	55	56		51.2	55.50	0.50	**0.90**	**8.40**
As	ME-MS42	ppm	0.7	0.5			0.60	0.10	**16.67**	
Bi	ME-MS42	ppm	0.05	0.05			0.05	0.00	**0.00**	
Hg	ME-MS42	ppm	<0.005	<0.005						
In	ME-MS42	ppm	0.026	0.027			0.027	0.001	**1.89**	
Re	ME-MS42	ppm	0.001	0.001			0.001	0.000	**0.00**	
Sb	ME-MS42	ppm	0.11	0.11			0.11	0.00	**0.00**	
Se	ME-MS42	ppm	<0.2	0.2						
Te	ME-MS42	ppm	0.01	<0.01						
Tl	ME-MS42	ppm	0.02	0.02		0.199	0.02	0.00	**0.00**	**-89.95**
C	C-IR07	%	0.02	0.04		0.048	0.03	0.01	**33.33**	**-37.50**
S	S-IR08	%	<0.01	0.01		0.01				**0.00**
H_2O+	OA-IR06	%	1	0.84		0.71	0.92	0.08	**8.70**	**29.58**
Cl	Cl-IC881	ppm	130	160			145.0	15.0	**10.34**	
F	F-IC881	ppm	330	320			325.0	5.0	**1.54**	
Ag	Ag-AA45	ppm	<0.2	<0.2						
Au	Au-ICP21	ppm	0.002	<0.001						

Appendix D – SEM mineral chemistry and QA/QC

			Analyte	SiO2	TiO2	Al2O3	FeO	MnO	MgO	CaO	Na2O	K2O
Sample	Alteration	ID	Mineral	%	%	%	%	%	%	%	%	%
MA-CP-S18	Wk Type 1B	19	Fspar	63.33	0.01	23.58	0.21	0.00	0.13	5.05	8.05	0.14
MA-CP-S18	Wk Type 1B	20	Fspar	65.50	0.00	22.33	0.42	0.00	0.04	3.81	9.06	0.07
MA-CP-S18	Wk Type 1B	21	Fspar	67.08	0.20	21.29	0.48	0.01	0.00	2.55	9.61	0.12
MA-CP-S18	Wk Type 1B	22	Fspar	67.18	0.11	21.21	0.35	0.03	0.13	2.31	9.76	0.14
MA-CP-S18	Wk Type 1B	24	Fspar	68.46	0.13	20.29	0.47	0.11	0.16	0.99	10.39	0.14
MA-CP-S18	Wk Type 1B	25	Fspar	67.04	0.09	21.24	0.28	0.07	0.00	2.26	9.65	0.11
MA-CP-S18	Wk Type 1B	26	Fspar	66.80	0.18	22.01	0.30	0.10	0.06	3.55	8.61	0.09
MA-CP-S18	Wk Type 1B	27	Fspar	63.96	0.00	23.47	0.39	0.00	0.17	5.07	7.99	0.18
MA-CP-S18	Wk Type 1B	28	Fspar	63.00	0.17	24.00	0.28	0.02	0.04	5.12	8.10	0.17
MA-CP-S18	Wk Type 1B	29	Fspar	63.01	0.12	24.12	0.25	0.00	0.02	4.88	8.21	0.16
MA-CP-S18	Wk Type 1B	30	Fspar	66.11	0.05	21.77	0.52	0.01	0.13	2.43	9.67	0.20
MA-CP-S18	Wk Type 1B	31	Fspar	62.62	0.00	24.09	0.29	0.00	0.11	5.00	8.17	0.14
MA-CP-S18	Wk Type 1B	32	Fspar	61.89	0.00	24.11	0.57	0.00	0.10	5.04	8.26	0.09
MA-CP-S18	Wk Type 1B	33	Fspar	61.58	0.02	24.24	0.57	0.00	0.01	5.32	8.11	0.03
MA-CP-S18	Wk Type 1B	34	Fspar	61.90	0.18	24.35	0.36	0.00	0.11	5.30	7.95	0.10
MA-CP-S18	Wk Type 1B	35	Fspar	64.85	0.04	22.73	0.39	0.04	0.12	3.02	9.52	0.07
MA-CP-S18	Wk Type 1B	36	Fspar	62.68	0.00	23.52	0.45	0.16	0.09	4.60	8.40	0.11
MA-CP-S18	Wk Type 1B	37	Fspar	61.68	0.05	24.33	0.26	0.00	0.16	5.23	7.96	0.19
MA-CP-S18	Wk Type 1B	38	Fspar	62.32	0.10	23.04	0.59	0.00	0.08	4.89	8.49	0.16
MA-CP-S18	Wk Type 1B	39	Fspar	66.25	0.14	20.86	0.47	0.00	0.03	1.76	10.04	0.06
MA-CP-S18	Wk Type 1B	40	Fspar	62.80	0.07	23.57	0.59	0.10	0.00	5.02	8.41	0.13
MA-CP-S18	Wk Type 1B	41	Fspar	62.83	0.01	23.20	0.60	0.00	0.06	5.18	7.97	0.15
MA-CP-S18	Wk Type 1B	42	Fspar	64.10	0.16	22.02	0.64	0.00	0.02	3.90	8.17	0.15
MA-CP-S18	Wk Type 1B	65	Chl	27.95	0.15	22.75	25.81	0.14	10.78	0.19	0.55	0.06
MA-CP-S18	Wk Type 1B	66	Chl	27.33	0.14	22.73	26.32	0.15	10.43	0.21	0.63	0.12
MA-CP-S18	Wk Type 1B	68	Chl	27.65	0.17	22.99	26.21	0.09	10.64	0.20	0.57	0.10
MA-CP-S18	Wk Type 1B	70	Chl	27.04	0.22	22.18	26.24	0.00	10.50	0.20	0.52	0.06
MA-CP-S18	Wk Type 1B	71	Chl	26.65	0.26	22.46	26.33	0.11	10.33	0.13	0.62	0.09
MA-CP-S18	Wk Type 1B	72	Chl	26.90	0.23	22.30	26.26	0.00	10.33	0.22	0.47	0.13
MA-CP-S18	Wk Type 1B	73	Chl	26.28	0.21	21.92	26.16	0.20	10.07	0.21	0.42	0.11
MA-CP-S18	Wk Type 1B	74	Chl	26.49	0.08	21.58	26.53	0.00	9.64	0.21	0.52	0.06
MA-CP-S18	Wk Type 1B	75	Chl	26.58	0.20	21.44	25.87	0.06	9.69	0.29	0.47	0.14
MA-CP-S18	Wk Type 1B	76	Chl	26.10	0.27	20.74	25.73	0.04	9.35	0.18	0.50	0.07
MA-CP-S18	Wk Type 1B	77	Chl	26.82	0.22	20.53	25.73	0.06	9.53	0.28	0.38	0.12

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-CP-S18	Wk Type 1B	78	Chl	26.36	0.19	19.57	25.46	0.03	8.82	0.25	0.47	0.12
MA-CP-S18	Wk Type 1B	79	Chl	26.00	0.19	18.96	26.06	0.03	8.41	0.19	0.54	0.02
MA-CP-S18	Wk Type 1B	80	Wmica	49.04	0.47	33.71	1.67	0.13	0.39	0.10	1.86	8.20
MA-CP-S18	Wk Type 1B	81	Wmica	48.24	0.37	33.82	1.69	0.05	0.26	0.17	1.78	8.43
MA-CP-S18	Wk Type 1B	82	Wmica	48.26	0.40	34.18	1.77	0.00	0.41	0.20	1.94	8.55
MA-CP-S18	Wk Type 1B	83	Wmica	47.54	0.42	34.08	1.70	0.00	0.44	0.10	1.82	8.64
MA-CP-S18	Wk Type 1B	84	Wmica	47.56	0.33	34.21	1.77	0.00	0.44	0.12	1.76	8.85
MA-CP-S18	Wk Type 1B	85	Wmica	47.84	0.23	35.23	1.22	0.04	0.44	0.17	2.41	7.74
MA-CP-S18	Wk Type 1B	86	Wmica	47.13	0.24	34.67	1.80	0.00	0.43	0.07	1.97	8.35
MA-CP-S18	Wk Type 1B	87	Wmica	46.98	0.35	34.47	1.32	0.00	0.47	0.00	2.03	8.51
MA-CP-S18	Wk Type 1B	88	Wmica	47.57	0.27	34.90	1.81	0.02	0.53	0.13	1.99	8.62
MA-CP-S18	Wk Type 1B	89	Wmica	47.27	0.28	34.69	1.55	0.00	0.40	0.06	2.07	8.53
MA-CP-S18	Wk Type 1B	90	Wmica	47.83	0.27	33.98	1.89	0.00	0.38	0.17	2.01	8.30
MA-CP-S18	Wk Type 1B	91	Wmica	48.13	0.23	34.03	1.82	0.00	0.48	0.23	2.01	8.38
MA-CP-S18	Wk Type 1B	92	Wmica	48.25	0.37	33.75	2.02	0.03	0.58	0.10	2.00	8.07
MA-CP-S18	Wk Type 1B	93	Wmica	47.11	0.33	33.87	1.95	0.08	0.48	0.00	1.64	8.61
MA-CP-S18	Wk Type 1B	94	Wmica	47.92	0.17	33.33	2.17	0.00	0.58	0.09	1.50	8.96
MA-CP-S18	Wk Type 1B	95	Wmica	46.47	0.19	34.43	1.87	0.00	0.47	0.10	1.55	8.99
MA-CP-S18	Wk Type 1B	96	Wmica	46.38	0.27	34.98	1.82	0.00	0.34	0.02	1.80	8.86
MA-CP-S18	Wk Type 1B	97	Wmica	46.13	0.36	35.15	1.84	0.03	0.48	0.08	1.94	8.56
MA-CP-S18	Wk Type 1B	98	Wmica	46.14	0.29	35.12	1.64	0.00	0.41	0.12	1.83	8.57
MA-CP-S18	Wk Type 1B	99	Wmica	47.47	0.35	34.44	1.82	0.00	0.44	0.07	1.69	8.44
MA-CP-S18	Wk Type 1B	100	Wmica	47.56	0.32	33.77	2.11	0.07	0.54	0.03	1.59	8.85
MA-CP-S18	Wk Type 1B	101	Wmica	47.52	0.25	33.13	2.22	0.00	0.84	0.00	1.37	9.08
MA-CP-S18	Wk Type 1B	102	Wmica	46.61	0.38	33.28	1.97	0.00	0.79	0.04	1.35	9.32
MA-CP-S18	Wk Type 1B	103	Wmica	45.75	0.18	33.42	2.06	0.00	0.66	0.09	1.46	8.94
MA-CP-S18	Wk Type 1B	104	Wmica	46.54	0.20	34.24	1.71	0.00	0.55	0.04	1.61	9.13
MA-CP-S18	Wk Type 1B	105	Wmica	46.17	0.31	34.95	1.67	0.00	0.56	0.09	1.70	8.66
MA-CP-S18	Wk Type 1B	106	Wmica	46.81	0.18	34.02	2.36	0.00	0.64	0.13	1.44	8.81
MA-CP-S18	Wk Type 1B	107	Wmica	47.16	0.02	34.34	2.36	0.00	0.82	0.16	1.51	8.94
MA-CP-S18	Wk Type 1B	108	Chl	30.22	0.15	22.56	24.10	0.11	9.01	0.15	1.21	0.31
MA-CP-S18	Wk Type 1B	109	Chl	34.05	0.30	24.14	20.55	0.01	8.23	0.22	1.80	0.47
MA-CP-S18	Wk Type 1B	110	Chl	28.76	0.25	23.33	24.91	0.10	10.17	0.13	1.03	0.20
MA-CP-S18	Wk Type 1B	111	Chl	29.67	0.19	23.52	24.77	0.07	10.20	0.20	1.00	0.25

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-CP-S18	Wk Type 1B	112	Chl	29.59	0.32	23.16	24.18	0.04	10.16	0.14	1.08	0.33
MA-CP-S18	Wk Type 1B	113	Chl	29.73	0.24	22.99	24.81	0.19	9.88	0.14	1.21	0.21
MA-CP-S18	Wk Type 1B	114	Chl	29.79	0.16	23.14	24.43	0.05	9.60	0.16	1.03	0.39
MA-CP-S18	Wk Type 1B	115	Chl	30.89	0.23	23.24	23.35	0.06	9.64	0.20	1.13	0.28
MA-CP-S18	Wk Type 1B	116	Chl	31.15	0.25	23.25	23.73	0.15	9.89	0.16	1.10	0.23
MA-CP-S18	Wk Type 1B	117	Chl	28.00	0.19	22.77	25.61	0.10	9.75	0.13	0.65	0.22
MA-CP-S18	Wk Type 1B	118	Chl	28.11	0.08	22.69	26.60	0.22	10.07	0.06	0.58	0.25
MA-CP-S18	Wk Type 1B	119	Chl	27.90	0.17	22.85	25.45	0.14	10.43	0.10	0.58	0.29
MA-CP-S18	Wk Type 1B	120	Chl	27.67	0.16	23.00	25.41	0.00	10.26	0.00	0.48	0.29
MA-CP-S18	Wk Type 1B	121	Chl	27.76	0.20	22.97	25.83	0.20	10.53	0.06	0.55	0.29
MA-CP-S18	Wk Type 1B	122	Chl	27.45	0.08	23.46	25.44	0.23	10.60	0.04	0.44	0.32
MA-CP-S18	Wk Type 1B	123	Chl	27.40	0.19	23.21	25.42	0.00	10.49	0.00	0.57	0.27
MA-CP-S18	Wk Type 1B	124	Chl	26.85	0.08	23.11	25.91	0.05	10.42	0.05	0.65	0.24
MA-CP-S18	Wk Type 1B	125	Chl	26.97	0.03	23.15	26.29	0.06	10.54	0.16	0.49	0.29
MA-CP-S18	Wk Type 1B	126	Chl	26.47	0.30	23.35	26.19	0.13	10.58	0.18	0.47	0.29
MA-CP-S18	Wk Type 1B	127	Chl	26.28	0.15	23.28	26.64	0.12	10.63	0.00	0.44	0.20
MA-CP-S18	Wk Type 1B	128	Chl	26.36	0.11	23.38	26.90	0.17	10.78	0.05	0.45	0.19
MA-CP-S18	Wk Type 1B	129	Chl	26.09	0.21	23.41	26.86	0.25	10.44	0.10	0.44	0.24
MA-CP-S18	Wk Type 1B	130	Wmica	48.99	0.29	33.12	1.83	0.03	0.59	0.17	1.75	8.25
MA-CP-S18	Wk Type 1B	131	Wmica	49.49	0.20	33.48	1.62	0.00	0.41	0.07	1.91	8.16
MA-CP-S18	Wk Type 1B	133	Wmica	50.18	0.22	32.21	1.91	0.00	0.64	0.14	1.79	8.25
MA-CP-S18	Wk Type 1B	134	Wmica	50.30	0.22	32.51	1.45	0.00	0.70	0.12	1.54	8.44
MA-CP-S18	Wk Type 1B	139	Wmica	49.29	0.06	31.50	1.88	0.04	0.71	0.16	1.43	8.49
MA-CP-S18	Wk Type 1B	142	Wmica	49.86	0.33	32.69	1.62	0.01	0.35	0.10	1.74	8.11
MA-CP-S18	Wk Type 1B	143	Wmica	50.55	0.16	33.00	1.45	0.05	0.27	0.19	2.10	7.09
MA-CP-S18	Wk Type 1B	144	Wmica	50.40	0.19	32.89	1.60	0.15	0.36	0.05	2.15	7.25
MA-CP-S18	Wk Type 1B	145	Wmica	48.99	0.42	33.19	1.55	0.00	0.30	0.02	2.13	7.84
MA-CP-S18	Wk Type 1B	146	Wmica	48.62	0.31	32.98	1.54	0.00	0.31	0.05	1.86	7.89
MA-CP-S18	Wk Type 1B	147	Wmica	48.12	0.19	33.33	1.62	0.00	0.38	0.11	1.63	8.24
MA-CP-S18	Wk Type 1B	148	Wmica	48.04	0.27	33.85	1.66	0.00	0.31	0.13	1.89	8.13
MA-CP-S18	Wk Type 1B	149	Wmica	48.13	0.28	33.53	1.57	0.01	0.43	0.16	1.90	8.19
MA-CP-S18	Wk Type 1B	150	Wmica	48.95	0.27	33.28	1.90	0.02	0.54	0.06	1.60	8.20
MA-CP-S18	Wk Type 1B	151	Wmica	48.61	0.28	32.60	1.99	0.01	0.57	0.16	1.62	8.38
MA-CP-S18	Wk Type 1B	152	Wmica	48.41	0.32	32.90	1.73	0.00	0.41	0.27	1.70	8.19

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-CP-S18	Wk Type 1B	153	Wmica	48.42	0.47	32.80	1.74	0.00	0.40	0.19	1.64	8.06
MA-CP-S18	Wk Type 1B	154	Wmica	49.18	0.39	32.46	1.65	0.09	0.29	0.00	1.42	8.16
MA-CP-S18	Wk Type 1B	155	Wmica	50.45	0.35	31.55	1.64	0.00	0.57	0.11	1.36	8.18
MA-CP-S18	Wk Type 1B	156	Wmica	49.96	0.40	32.33	1.68	0.06	0.48	0.02	1.33	7.98
MA-CP-S18	Wk Type 1B	157	Wmica	48.81	0.31	32.66	1.80	0.03	0.53	0.04	1.38	8.37
MA-CP-S18	Wk Type 1B	158	Wmica	48.78	0.10	32.73	1.59	0.00	0.39	0.09	1.47	8.22
MA-CP-S18	Wk Type 1B	160	Wmica	47.98	0.37	33.31	1.42	0.01	0.41	0.07	1.70	8.00
MA-CP-S18	Wk Type 1B	161	Wmica	48.52	0.32	32.37	1.70	0.00	0.51	0.00	1.30	8.64
MA-CP-S18	Wk Type 1B	163	Wmica	48.79	0.23	32.55	1.72	0.00	0.54	0.06	1.26	8.48
MA-CP-S18	Wk Type 1B	164	Wmica	48.50	0.36	32.77	1.93	0.00	0.51	0.01	1.38	8.48
MA-CP-S18	Wk Type 1B	165	Wmica	48.32	0.50	32.15	1.91	0.00	0.50	0.09	1.47	8.19
MA-CP-S18	Wk Type 1B	166	Wmica	49.71	0.47	32.46	1.86	0.01	0.56	0.00	1.47	8.12
MA-CP-S18	Wk Type 1B	167	Wmica	48.76	0.41	31.85	2.01	0.00	0.51	0.10	1.43	8.19
MA-EPN-S03A	Wk Type 1B	168	Chl	26.78	0.02	22.54	24.24	0.12	10.87	0.09	0.59	0.09
MA-EPN-S03A	Wk Type 1B	169	Chl	26.51	0.00	22.37	24.23	0.22	10.65	0.10	0.55	0.05
MA-EPN-S03A	Wk Type 1B	170	Chl	26.40	0.12	22.43	24.04	0.09	10.68	0.04	0.61	0.14
MA-EPN-S03A	Wk Type 1B	171	Chl	26.17	0.13	22.41	23.96	0.08	10.60	0.07	0.57	0.10
MA-EPN-S03A	Wk Type 1B	173	Chl	25.92	0.13	22.24	24.08	0.17	10.69	0.07	0.65	0.15
MA-EPN-S03A	Wk Type 1B	174	Chl	26.24	0.02	22.81	24.72	0.00	10.73	0.01	0.55	0.04
MA-EPN-S03A	Wk Type 1B	176	Chl	26.89	0.02	23.11	24.58	0.08	11.00	0.09	0.68	0.10
MA-EPN-S03A	Wk Type 1B	177	Chl	26.60	0.06	22.82	24.82	0.00	10.60	0.14	0.66	0.11
MA-EPN-S03A	Wk Type 1B	178	Chl	26.92	0.12	23.07	24.32	0.00	10.83	0.06	0.70	0.09
MA-EPN-S03A	Wk Type 1B	179	Chl	27.00	0.00	22.78	24.22	0.11	10.87	0.01	0.63	0.12
MA-EPN-S03A	Wk Type 1B	180	Chl	27.29	0.00	23.22	23.78	0.06	10.65	0.12	0.86	0.01
MA-EPN-S03A	Wk Type 1B	181	Chl	27.41	0.18	22.89	23.84	0.00	10.58	0.17	0.83	0.14
MA-EPN-S03A	Wk Type 1B	182	Chl	27.98	0.00	23.02	23.18	0.07	10.21	0.08	1.20	0.08
MA-EPN-S03A	Wk Type 1B	183	Chl	28.02	0.08	23.24	23.24	0.09	10.31	0.08	1.04	0.11
MA-EPN-S03A	Wk Type 1B	184	Wmica	49.24	0.21	31.56	1.54	0.03	0.97	0.15	2.26	8.09
MA-EPN-S03A	Wk Type 1B	185	Wmica	48.78	0.11	31.54	1.38	0.01	0.93	0.10	2.30	8.04
MA-EPN-S03A	Wk Type 1B	186	Wmica	49.21	0.23	32.47	1.05	0.04	0.35	0.47	3.40	6.70
MA-EPN-S03A	Wk Type 1B	187	Fspar	61.68	0.15	23.51	0.23	0.03	0.05	3.57	8.79	0.24
MA-EPN-S03A	Wk Type 1B	188	Fspar	62.13	0.00	23.32	0.30	0.01	0.15	3.43	8.86	0.21
MA-EPN-S03A	Wk Type 1B	189	Fspar	66.18	0.07	20.28	0.21	0.01	0.04	0.27	10.87	0.16
MA-EPN-S03A	Wk Type 1B	190	Fspar	65.44	0.00	19.86	0.25	0.12	0.00	0.30	10.98	0.13

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	191	Fspar	65.19	0.04	20.63	0.44	0.01	0.00	1.10	10.44	0.18
MA-EPN-S03A	Wk Type 1B	192	Fspar	63.95	0.04	21.60	0.24	0.00	0.00	1.92	10.20	0.11
MA-EPN-S03A	Wk Type 1B	193	Fspar	64.21	0.00	21.07	0.25	0.00	0.00	1.43	10.09	0.16
MA-EPN-S03A	Wk Type 1B	194	Fspar	66.38	0.00	20.22	0.28	0.03	0.00	0.28	10.90	0.20
MA-EPN-S03A	Wk Type 1B	195	Fspar	66.13	0.07	20.08	0.21	0.05	0.00	0.31	10.81	0.21
MA-EPN-S03A	Wk Type 1B	196	Fspar	65.88	0.00	20.45	0.26	0.00	0.04	0.42	10.92	0.18
MA-EPN-S03A	Wk Type 1B	197	Fspar	66.12	0.00	20.22	0.21	0.05	0.00	0.50	10.88	0.25
MA-EPN-S03A	Wk Type 1B	198	Fspar	64.18	0.00	22.20	0.37	0.06	0.10	2.39	9.95	0.19
MA-EPN-S03A	Wk Type 1B	199	Fspar	63.62	0.10	21.97	0.16	0.00	0.14	2.00	9.87	0.24
MA-EPN-S03A	Wk Type 1B	200	Fspar	63.57	0.11	21.95	0.46	0.00	0.00	2.19	9.76	0.30
MA-EPN-S03A	Wk Type 1B	201	Fspar	63.09	0.00	22.59	0.38	0.00	0.00	2.69	9.52	0.14
MA-EPN-S03A	Wk Type 1B	202	Fspar	63.71	0.04	22.06	0.29	0.00	0.00	2.34	9.70	0.18
MA-EPN-S03A	Wk Type 1B	203	Fspar	64.23	0.00	22.27	0.24	0.04	0.12	2.09	9.83	0.23
MA-EPN-S03A	Wk Type 1B	204	Fspar	64.91	0.01	21.98	0.18	0.18	0.01	1.66	10.09	0.34
MA-EPN-S03A	Wk Type 1B	205	Fspar	65.26	0.01	22.57	0.19	0.08	0.03	2.16	9.96	0.49
MA-EPN-S03A	Wk Type 1B	206	Fspar	65.91	0.03	20.91	0.30	0.00	0.00	0.92	10.61	0.22
MA-EPN-S03A	Wk Type 1B	207	Fspar	66.53	0.04	20.41	0.25	0.08	0.00	0.37	11.09	0.13
MA-EPN-S03A	Wk Type 1B	208	Fspar	66.43	0.00	20.20	0.16	0.00	0.00	0.58	11.00	0.19
MA-EPN-S03A	Wk Type 1B	209	Fspar	66.75	0.00	20.30	0.53	0.00	0.00	0.27	11.02	0.21
MA-EPN-S03A	Wk Type 1B	210	Fspar	67.10	0.14	20.43	0.27	0.00	0.00	0.19	11.31	0.15
MA-EPN-S03A	Wk Type 1B	211	Fspar	60.85	0.00	23.94	0.08	0.00	0.04	4.40	8.45	0.30
MA-EPN-S03A	Wk Type 1B	212	Fspar	61.13	0.09	23.88	0.14	0.00	0.14	4.32	8.55	0.24
MA-EPN-S03A	Wk Type 1B	213	Fspar	61.54	0.00	23.76	0.12	0.00	0.00	4.26	8.27	0.23
MA-EPN-S03A	Wk Type 1B	214	Fspar	63.60	0.00	21.92	0.14	0.17	0.00	0.82	9.85	1.11
MA-EPN-S03A	Wk Type 1B	215	Fspar	64.96	0.00	21.40	0.04	0.00	0.02	1.31	10.35	0.36
MA-EPN-S03A	Wk Type 1B	216	Fspar	61.20	0.19	24.02	0.16	0.02	0.14	4.38	8.48	0.34
MA-EPN-S03A	Wk Type 1B	217	Fspar	60.84	0.00	24.20	0.25	0.05	0.00	4.38	8.22	0.40
MA-EPN-S03A	Wk Type 1B	218	Fspar	60.50	0.00	24.08	0.15	0.05	0.12	4.60	8.13	0.41
MA-EPN-S03A	Wk Type 1B	219	Fspar	61.69	0.09	23.82	0.12	0.00	0.13	4.01	8.56	0.35
MA-EPN-S03A	Wk Type 1B	220	Wmica	50.59	0.16	30.33	0.94	0.12	0.28	0.71	3.61	6.55
MA-EPN-S03A	Wk Type 1B	221	Fspar	60.39	0.13	23.91	0.03	0.10	0.09	4.55	8.37	0.32
MA-EPN-S03A	Wk Type 1B	222	Fspar	60.88	0.14	23.74	0.11	0.00	0.12	4.46	8.35	0.26
MA-EPN-S03A	Wk Type 1B	223	Fspar	61.02	0.14	23.53	0.16	0.10	0.03	4.35	8.25	0.27
MA-EPN-S03A	Wk Type 1B	224	Wmica	47.59	0.20	33.02	1.36	0.00	0.35	0.06	1.94	8.19

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	225	Wmica	46.49	0.37	33.03	1.30	0.19	0.36	0.00	1.76	8.35
MA-EPN-S03A	Wk Type 1B	226	Wmica	46.95	0.29	33.00	1.53	0.12	0.42	0.15	1.62	8.39
MA-EPN-S03A	Wk Type 1B	227	Wmica	47.59	0.40	33.10	1.52	0.00	0.40	0.09	1.74	8.11
MA-EPN-S03A	Wk Type 1B	228	Wmica	47.29	0.24	33.86	1.04	0.07	0.28	0.10	1.78	8.24
MA-EPN-S03A	Wk Type 1B	229	Wmica	47.42	0.14	33.30	1.50	0.00	0.38	0.13	1.64	8.15
MA-EPN-S03A	Wk Type 1B	230	Wmica	48.14	0.37	32.15	1.65	0.00	0.48	0.02	1.51	8.20
MA-EPN-S03A	Wk Type 1B	231	Wmica	47.52	0.15	31.86	1.72	0.00	0.42	0.11	1.26	8.55
MA-EPN-S03A	Wk Type 1B	232	Wmica	47.69	0.25	32.01	1.59	0.06	0.44	0.11	1.54	8.16
MA-EPN-S03A	Wk Type 1B	233	Wmica	47.57	0.31	32.34	1.49	0.01	0.53	0.07	1.45	8.30
MA-EPN-S03A	Wk Type 1B	234	Wmica	46.08	0.15	33.64	1.45	0.00	0.31	0.18	2.00	8.28
MA-EPN-S03A	Wk Type 1B	235	Wmica	46.31	0.16	33.40	1.43	0.03	0.35	0.08	1.81	8.00
MA-EPN-S03A	Wk Type 1B	236	Wmica	46.62	0.30	34.01	1.45	0.01	0.31	0.09	1.93	8.15
MA-EPN-S03A	Wk Type 1B	237	Wmica	46.34	0.04	33.86	1.52	0.01	0.48	0.06	1.83	8.38
MA-EPN-S03A	Wk Type 1B	238	Wmica	46.38	0.29	33.49	1.58	0.00	0.36	0.09	1.80	8.41
MA-EPN-S03A	Wk Type 1B	239	Wmica	46.58	0.19	33.52	1.39	0.00	0.28	0.14	1.71	8.42
MA-EPN-S03A	Wk Type 1B	240	Fspar	60.10	0.04	23.79	0.20	0.02	0.06	4.31	8.16	0.29
MA-EPN-S03A	Wk Type 1B	241	Fspar	63.57	0.03	21.11	0.19	0.04	0.09	1.35	9.83	0.27
MA-EPN-S03A	Wk Type 1B	242	Fspar	62.82	0.03	21.91	0.20	0.13	0.03	2.33	9.27	0.28
MA-EPN-S03A	Wk Type 1B	243	Fspar	65.47	0.06	20.06	0.04	0.00	0.00	0.36	10.68	0.23
MA-EPN-S03A	Wk Type 1B	244	Fspar	65.09	0.03	19.83	0.19	0.05	0.02	0.29	10.46	0.21
MA-EPN-S03A	Wk Type 1B	245	Fspar	65.42	0.06	20.03	0.07	0.00	0.00	0.26	10.55	0.23
MA-EPN-S03A	Wk Type 1B	246	Fspar	62.68	0.05	21.99	0.19	0.00	0.03	1.58	9.18	0.74
MA-EPN-S03A	Wk Type 1B	247	Fspar	64.88	0.00	20.75	0.03	0.00	0.05	0.85	10.24	0.30
MA-EPN-S03A	Wk Type 1B	248	Fspar	65.40	0.00	20.57	0.10	0.02	0.05	0.52	10.30	0.33
MA-EPN-S03A	Wk Type 1B	249	Fspar	60.52	0.13	24.66	0.10	0.00	0.13	0.84	8.34	2.37
MA-EPN-S03A	Wk Type 1B	250	Wmica	46.62	0.31	32.42	1.29	0.00	0.43	0.19	2.10	7.84
MA-EPN-S03A	Wk Type 1B	251	Wmica	48.46	0.14	31.00	1.74	0.00	0.97	0.16	2.03	8.07
MA-EPN-S03A	Wk Type 1B	252	Wmica	46.88	0.30	32.89	1.37	0.13	0.39	0.21	2.25	7.85
MA-EPN-S03A	Wk Type 1B	253	Fspar	60.27	0.05	23.76	0.09	0.03	0.11	4.11	8.16	0.43
MA-EPN-S03A	Wk Type 1B	254	Fspar	62.71	0.15	22.02	0.17	0.03	0.00	2.26	9.17	0.39
MA-EPN-S03A	Wk Type 1B	255	Fspar	61.65	0.06	22.84	0.18	0.03	0.11	3.39	8.84	0.25
MA-EPN-S03A	Wk Type 1B	256	Fspar	63.00	0.02	21.69	0.00	0.01	0.00	2.19	9.22	0.34
MA-EPN-S03A	Wk Type 1B	257	Chl	26.63	0.54	21.99	24.91	0.19	10.54	0.36	0.20	0.01
MA-EPN-S03A	Wk Type 1B	258	Chl	26.62	0.54	22.36	25.38	0.00	10.81	0.17	0.17	0.09

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	259	Chl	26.53	0.46	22.17	24.97	0.00	10.62	0.19	0.23	0.12
MA-EPN-S03A	Wk Type 1B	260	Chl	26.36	0.73	21.94	24.91	0.05	10.61	0.21	0.12	0.07
MA-EPN-S03A	Wk Type 1B	261	Chl	26.18	0.60	22.01	25.09	0.13	10.62	0.12	0.19	0.04
MA-EPN-S03A	Wk Type 1B	262	Chl	26.20	0.48	22.30	24.79	0.08	10.61	0.17	0.17	0.02
MA-EPN-S03A	Wk Type 1B	263	Chl	25.96	0.56	22.24	25.45	0.03	10.69	0.25	0.11	0.12
MA-EPN-S03A	Wk Type 1B	264	Chl	26.09	0.53	22.03	25.20	0.08	10.52	0.18	0.24	0.06
MA-EPN-S03A	Wk Type 1B	265	Chl	26.32	0.55	21.61	25.46	0.06	10.64	0.26	0.09	0.13
MA-EPN-S03A	Wk Type 1B	266	Chl	26.50	0.57	21.98	25.38	0.03	10.32	0.27	0.17	0.06
MA-EPN-S03A	Wk Type 1B	267	Chl	27.28	0.50	21.49	24.58	0.04	10.74	0.37	0.30	0.12
MA-EPN-S03A	Wk Type 1B	268	Chl	27.31	0.63	21.23	24.72	0.09	10.65	0.35	0.16	0.10
MA-EPN-S03A	Wk Type 1B	269	Chl	27.60	0.62	21.47	24.60	0.00	10.46	0.39	0.18	0.18
MA-EPN-S03A	Wk Type 1B	270	Chl	27.66	0.76	21.86	24.13	0.04	10.20	0.40	0.11	0.19
MA-EPN-S03A	Wk Type 1B	271	Chl	27.91	0.87	21.39	23.61	0.00	10.07	0.65	0.18	0.22
MA-EPN-S03A	Wk Type 1B	272	Chl	28.61	0.79	20.71	23.46	0.04	10.23	1.01	0.23	0.27
MA-EPN-S03A	Wk Type 1B	273	Chl	31.46	0.83	20.28	23.57	0.15	9.65	0.34	0.13	0.09
MA-EPN-S03A	Wk Type 1B	274	Chl	31.44	0.70	19.99	22.73	0.00	9.69	0.16	0.19	0.13
MA-EPN-S03A	Wk Type 1B	275	Chl	31.97	0.76	20.30	22.92	0.03	9.90	0.23	0.19	0.21
MA-EPN-S03A	Wk Type 1B	276	Chl	32.81	1.37	19.90	22.20	0.16	9.09	0.28	0.14	0.23
MA-EPN-S03A	Wk Type 1B	277	Chl	31.94	0.92	21.01	22.19	0.01	9.25	0.15	0.36	0.40
MA-EPN-S03A	Wk Type 1B	278	Wmica	46.65	0.73	31.75	2.24	0.00	0.49	0.40	1.29	8.11
MA-EPN-S03A	Wk Type 1B	279	Wmica	46.20	0.80	32.41	2.03	0.00	0.54	0.33	1.35	8.33
MA-EPN-S03A	Wk Type 1B	280	Wmica	46.16	0.80	32.31	1.91	0.02	0.53	0.28	1.36	8.33
MA-EPN-S03A	Wk Type 1B	281	Wmica	46.36	0.75	32.44	1.82	0.01	0.49	0.13	1.36	8.02
MA-EPN-S03A	Wk Type 1B	282	Wmica	46.49	0.73	32.89	2.01	0.00	0.53	0.05	1.25	8.33
MA-EPN-S03A	Wk Type 1B	283	Wmica	46.58	0.44	32.80	1.89	0.00	0.41	0.14	1.34	8.32
MA-EPN-S03A	Wk Type 1B	284	Wmica	46.31	0.77	32.47	2.20	0.06	0.57	0.10	1.33	8.39
MA-EPN-S03A	Wk Type 1B	285	Wmica	46.73	0.69	32.71	2.10	0.09	0.60	0.22	1.21	8.64
MA-EPN-S03A	Wk Type 1B	286	Wmica	46.77	0.90	31.83	2.47	0.00	0.49	0.47	1.47	7.98
MA-EPN-S03A	Wk Type 1B	287	Wmica	47.00	0.95	31.69	2.13	0.00	0.46	0.39	1.34	7.98
MA-EPN-S03A	Wk Type 1B	288	Wmica	47.16	0.90	31.67	2.33	0.00	0.55	0.29	1.39	8.04
MA-EPN-S03A	Wk Type 1B	289	Wmica	48.06	0.83	31.99	2.09	0.02	0.41	0.28	1.40	7.86
MA-EPN-S03A	Wk Type 1B	290	Wmica	48.50	0.76	31.37	1.94	0.18	0.45	0.19	1.33	7.89
MA-EPN-S03A	Wk Type 1B	291	Wmica	44.64	2.50	32.18	2.33	0.07	0.61	0.19	1.32	8.15
MA-EPN-S03A	Wk Type 1B	292	Wmica	45.04	2.41	32.06	2.30	0.14	0.39	0.24	1.25	8.16

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	293	Wmica	45.37	1.88	31.98	2.30	0.07	0.58	0.23	1.30	8.34
MA-EPN-S03A	Wk Type 1B	294	Wmica	45.53	0.81	32.14	2.06	0.01	0.38	0.18	1.25	8.69
MA-EPN-S03A	Wk Type 1B	295	Wmica	45.29	1.10	33.01	2.39	0.00	0.50	0.12	1.32	8.27
MA-EPN-S03A	Wk Type 1B	296	Wmica	45.54	0.79	32.40	2.01	0.00	0.54	0.05	1.30	8.26
MA-EPN-S03A	Wk Type 1B	297	Wmica	45.26	0.95	32.30	2.11	0.00	0.37	0.08	1.31	8.39
MA-EPN-S03A	Wk Type 1B	299	Wmica	45.50	0.81	32.37	2.17	0.15	0.46	0.07	1.36	8.38
MA-EPN-S03A	Wk Type 1B	300	Chl	26.88	0.02	21.43	20.18	0.07	9.27	0.40	0.68	0.31
MA-EPN-S03A	Wk Type 1B	301	Chl	25.72	0.07	20.56	20.73	0.07	9.00	0.42	0.67	0.32
MA-EPN-S03A	Wk Type 1B	302	Chl	26.83	0.07	22.16	19.52	0.08	9.40	0.40	0.53	0.63
MA-EPN-S03A	Wk Type 1B	303	Chl	27.62	0.09	20.08	20.51	0.04	9.25	0.38	0.52	0.19
MA-EPN-S03A	Wk Type 1B	323	Chl	27.95	0.05	19.97	20.72	0.02	9.19	0.39	0.32	0.20
MA-EPN-S03A	Wk Type 1B	324	Chl	27.79	0.01	20.15	20.89	0.13	9.23	0.25	0.38	0.14
MA-EPN-S03A	Wk Type 1B	325	Chl	25.36	0.02	20.37	22.10	0.07	9.49	0.34	0.30	0.13
MA-EPN-S03A	Wk Type 1B	328	Chl	24.78	0.03	20.18	22.17	0.10	9.89	0.33	0.30	0.09
MA-EPN-S03A	Wk Type 1B	329	Chl	24.51	0.02	20.40	22.20	0.13	9.98	0.31	0.26	0.09
MA-EPN-S03A	Wk Type 1B	330	Chl	24.68	0.08	20.04	22.02	0.08	10.29	0.37	0.25	0.11
MA-EPN-S03A	Wk Type 1B	331	Chl	24.79	0.04	20.74	22.18	0.09	9.83	0.41	0.26	0.08
MA-EPN-S03A	Wk Type 1B	332	Chl	24.58	0.01	20.77	22.22	0.00	9.84	0.37	0.31	0.11
MA-EPN-S03A	Wk Type 1B	333	Chl	25.18	0.00	21.06	22.22	0.00	10.18	0.46	0.28	0.00
MA-EPN-S03A	Wk Type 1B	334	Chl	24.83	0.10	20.62	21.90	0.18	10.07	0.92	0.18	0.07
MA-EPN-S03A	Wk Type 1B	335	Chl	24.54	0.02	19.82	22.16	0.01	10.07	1.01	0.26	0.06
MA-EPN-S03A	Wk Type 1B	393	Wmica	44.90	0.23	29.44	1.27	0.08	0.64	0.46	2.14	7.30
MA-EPN-S03A	Wk Type 1B	394	Wmica	45.96	0.07	28.58	1.31	0.00	0.59	0.50	2.98	6.58
MA-EPN-S03A	Wk Type 1B	395	Wmica	42.90	0.09	29.68	1.73	0.01	0.85	0.42	1.39	7.59
MA-EPN-S03A	Wk Type 1B	396	Wmica	43.27	0.34	30.08	1.73	0.00	0.70	0.41	1.48	7.77
MA-EPN-S03A	Wk Type 1B	397	Wmica	42.19	0.35	30.43	1.91	0.04	0.59	0.46	1.54	7.38
MA-EPN-S03A	Wk Type 1B	398	Wmica	42.03	0.13	30.30	1.72	0.01	0.65	0.47	1.39	7.45
MA-EPN-S03A	Wk Type 1B	399	Wmica	43.16	0.15	30.96	1.54	0.00	0.46	0.64	1.67	7.43
MA-EPN-S03A	Wk Type 1B	400	Wmica	42.97	0.16	30.85	1.60	0.02	0.46	0.62	1.73	7.46
MA-EPN-S03A	Wk Type 1B	401	Wmica	43.11	0.13	31.03	1.42	0.00	0.53	0.71	1.79	7.40
MA-EPN-S03A	Wk Type 1B	402	Wmica	43.19	0.16	30.98	1.59	0.14	0.47	0.74	1.84	7.20
MA-EPN-S03A	Wk Type 1B	404	Wmica	43.30	0.20	30.87	1.68	0.01	0.53	0.69	1.76	7.25
MA-EPN-S03A	Wk Type 1B	405	Wmica	41.83	0.26	30.69	1.32	0.00	0.56	0.33	1.40	7.63
MA-EPN-S03A	Wk Type 1B	406	Wmica	42.49	0.14	29.87	1.88	0.00	0.77	0.47	1.26	7.81

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	407	Wmica	42.34	0.16	29.48	1.87	0.00	0.82	0.49	1.45	7.75
MA-EPN-S03A	Wk Type 1B	408	Wmica	42.05	0.16	30.70	1.69	0.00	0.49	0.45	1.57	7.64
MA-EPN-S03A	Wk Type 1B	409	Wmica	41.65	0.13	30.98	1.69	0.04	0.58	0.65	1.77	7.08
MA-EPN-S03A	Wk Type 1B	410	Wmica	41.92	0.09	31.46	1.32	0.12	0.49	0.77	2.59	6.22
MA-EPN-S03A	Wk Type 1B	411	Wmica	42.00	0.23	30.14	2.02	0.03	0.60	0.63	1.57	7.41
MA-EPN-S03A	Wk Type 1B	417	Wmica	42.33	0.11	30.51	1.53	0.01	0.60	0.51	1.61	7.42
MA-EPN-S03A	Wk Type 1B	418	Wmica	42.20	0.13	30.08	1.66	0.00	0.55	0.56	1.65	7.20
MA-EPN-S03A	Wk Type 1B	419	Biotite	35.19	2.13	16.88	21.41	0.00	7.81	0.15	0.51	8.79
MA-EPN-S03A	Wk Type 1B	420	Biotite	35.34	2.00	16.78	21.76	0.05	7.84	0.24	0.39	8.88
MA-EPN-S03A	Wk Type 1B	421	Biotite	35.46	1.84	17.13	21.53	0.00	8.06	0.27	0.37	8.93
MA-EPN-S03A	Wk Type 1B	422	Biotite	36.06	2.02	17.23	21.43	0.11	8.06	0.17	0.51	9.22
MA-EPN-S03A	Wk Type 1B	423	Biotite	36.16	2.12	17.62	21.54	0.45	8.23	0.21	0.41	9.28
MA-EPN-S03A	Wk Type 1B	424	Biotite	36.63	1.96	17.64	21.55	0.20	8.30	0.02	0.40	9.28
MA-EPN-S03A	Wk Type 1B	425	Biotite	36.31	1.93	17.45	21.48	0.18	8.15	0.03	0.35	9.33
MA-EPN-S03A	Wk Type 1B	426	Biotite	36.63	2.12	17.88	22.00	0.07	8.25	0.08	0.39	9.18
MA-EPN-S03A	Wk Type 1B	427	Biotite	36.34	1.95	17.73	21.86	0.29	8.19	0.21	0.55	9.11
MA-EPN-S03A	Wk Type 1B	428	Biotite	36.50	1.79	18.00	21.99	0.06	8.50	0.17	0.47	9.44
MA-EPN-S03A	Wk Type 1B	429	Biotite	36.03	2.12	17.58	22.02	0.12	8.23	0.15	0.37	9.27
MA-EPN-S03A	Wk Type 1B	430	Biotite	36.09	1.90	17.72	21.80	0.20	8.31	0.10	0.48	8.95
MA-EPN-S03A	Wk Type 1B	431	Biotite	36.01	2.03	17.66	21.97	0.00	8.31	0.10	0.43	9.05
MA-EPN-S03A	Wk Type 1B	432	Biotite	33.84	1.93	16.34	20.78	0.15	7.70	1.19	0.41	6.91
MA-EPN-S03A	Wk Type 1B	433	Biotite	33.96	1.85	16.63	21.40	0.23	7.81	0.48	0.44	8.24
MA-EPN-S03A	Wk Type 1B	434	Biotite	35.69	1.91	17.45	21.31	0.12	8.08	0.23	0.45	8.78
MA-EPN-S03A	Wk Type 1B	435	Biotite	36.15	2.13	17.48	21.17	0.23	8.18	0.28	0.47	8.69
MA-EPN-S03A	Wk Type 1B	436	Biotite	36.68	2.14	17.43	21.39	0.17	8.26	0.21	0.39	8.69
MA-EPN-S03A	Wk Type 1B	437	Biotite	37.19	1.99	17.72	21.34	0.00	8.10	0.23	0.38	8.68
MA-EPN-S03A	Wk Type 1B	438	Biotite	36.89	1.77	17.71	21.09	0.24	8.29	0.28	0.47	8.59
MA-EPN-S03A	Wk Type 1B	439	Biotite	35.66	1.91	17.39	20.76	0.19	8.47	1.49	0.46	4.33
MA-EPN-S03A	Wk Type 1B	440	Biotite	35.24	2.04	17.44	20.61	0.14	8.39	1.34	0.48	4.70
MA-EPN-S03A	Wk Type 1B	442	Biotite	35.96	1.97	17.94	21.40	0.15	8.69	0.93	0.38	6.01
MA-EPN-S03A	Wk Type 1B	443	Biotite	35.91	1.99	17.70	21.19	0.03	8.55	1.24	0.43	5.89
MA-EPN-S03A	Wk Type 1B	444	Biotite	35.34	1.97	17.26	20.88	0.15	8.66	1.36	0.48	5.37
MA-EPN-S03A	Wk Type 1B	445	Biotite	34.99	1.92	17.46	21.09	0.09	8.88	1.40	0.46	4.67
MA-EPN-S03A	Wk Type 1B	446	Biotite	35.14	1.93	17.14	20.96	0.14	8.79	2.10	0.48	4.13

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	447	Biotite	34.94	1.98	17.02	20.80	0.04	8.69	2.28	0.43	3.20
MA-EPN-S03A	Wk Type 1B	448	Biotite	38.47	2.16	17.54	20.79	0.06	7.98	0.24	0.62	9.09
MA-EPN-S03A	Wk Type 1B	449	Biotite	38.71	2.32	17.30	21.38	0.06	7.86	0.07	0.52	9.10
MA-EPN-S03A	Wk Type 1B	450	Biotite	38.12	2.30	17.00	20.60	0.18	8.05	0.14	0.56	9.04
MA-EPN-S03A	Wk Type 1B	451	Biotite	38.62	2.30	17.21	20.54	0.00	8.00	0.13	0.53	8.98
MA-EPN-S03A	Wk Type 1B	452	Biotite	38.26	2.33	17.00	20.33	0.00	7.79	0.32	0.60	9.20
MA-EPN-S03A	Wk Type 1B	453	Biotite	38.78	2.40	16.79	20.24	0.13	7.92	0.15	0.61	8.77
MA-EPN-S03A	Wk Type 1B	454	Biotite	38.33	2.16	17.16	20.63	0.18	7.89	0.26	0.67	8.89
MA-EPN-S03A	Wk Type 1B	455	Biotite	38.68	2.11	17.14	20.66	0.00	7.96	0.31	0.73	8.89
MA-EPN-S03A	Wk Type 1B	456	Biotite	38.88	2.05	17.29	20.33	0.06	7.88	0.38	0.85	8.81
MA-EPN-S03A	Wk Type 1B	457	Biotite	37.67	2.22	17.19	21.07	0.11	7.84	0.18	0.61	9.26
MA-EPN-S03A	Wk Type 1B	458	Biotite	38.11	2.33	17.35	20.89	0.04	7.98	0.15	0.67	9.26
MA-EPN-S03A	Wk Type 1B	459	Biotite	38.08	2.40	17.54	20.76	0.12	7.94	0.21	0.76	9.23
MA-EPN-S03A	Wk Type 1B	460	Biotite	38.13	2.29	17.75	19.96	0.07	7.94	0.23	0.73	8.94
MA-EPN-S03A	Wk Type 1B	461	Biotite	38.98	2.16	17.77	20.11	0.15	7.83	0.20	0.89	8.96
MA-EPN-S03A	Wk Type 1B	462	Biotite	38.38	2.14	17.73	20.47	0.13	7.99	0.19	0.60	9.10
MA-EPN-S03A	Wk Type 1B	463	Fspar	62.95	0.06	23.39	0.74	0.00	0.11	4.33	8.28	0.33
MA-EPN-S03A	Wk Type 1B	464	Fspar	63.00	0.03	23.03	0.72	0.02	0.05	4.26	8.33	0.23
MA-EPN-S03A	Wk Type 1B	465	Fspar	64.43	0.00	22.91	0.73	0.00	0.01	3.57	8.93	0.29
MA-EPN-S03A	Wk Type 1B	466	Fspar	63.57	0.10	22.55	0.98	0.00	0.16	3.76	8.81	0.31
MA-EPN-S03A	Wk Type 1B	467	Fspar	63.96	0.11	22.40	0.77	0.00	0.16	3.63	8.90	0.34
MA-EPN-S03A	Wk Type 1B	468	Fspar	64.26	0.15	22.14	0.35	0.00	0.00	3.49	8.87	0.31
MA-EPN-S03A	Wk Type 1B	469	Fspar	64.01	0.04	22.34	0.37	0.06	0.00	3.64	8.87	0.12
MA-EPN-S03A	Wk Type 1B	470	Fspar	64.37	0.12	22.86	0.53	0.06	0.10	3.75	8.62	0.05
MA-EPN-S03A	Wk Type 1B	471	Fspar	64.99	0.08	22.25	0.50	0.15	0.11	3.76	8.80	0.16
MA-EPN-S03A	Wk Type 1B	472	Fspar	64.64	0.11	22.06	0.43	0.00	0.01	3.89	8.57	0.19
MA-EPN-S03A	Wk Type 1B	473	Fspar	64.28	0.12	22.44	0.54	0.00	0.08	3.90	8.66	0.12
MA-EPN-S03A	Wk Type 1B	474	Fspar	64.41	0.05	22.40	0.29	0.00	0.16	3.82	8.73	0.08
MA-EPN-S03A	Wk Type 1B	475	Fspar	65.38	0.09	21.38	0.55	0.06	0.07	2.34	9.64	0.15
MA-EPN-S03A	Wk Type 1B	476	Fspar	65.04	0.06	21.76	0.34	0.03	0.00	2.70	9.46	0.25
MA-EPN-S03A	Wk Type 1B	477	Fspar	63.55	0.03	22.24	0.47	0.00	0.00	3.61	8.89	0.28
MA-EPN-S03A	Wk Type 1B	478	Fspar	63.73	0.03	22.64	0.21	0.00	0.10	3.75	8.90	0.23
MA-EPN-S03A	Wk Type 1B	479	Fspar	63.26	0.02	22.67	0.37	0.10	0.01	3.64	8.90	0.17
MA-EPN-S03A	Wk Type 1B	480	Fspar	64.42	0.13	22.33	0.45	0.00	0.02	3.23	9.29	0.23

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	481	Fspar	63.74	0.19	22.79	0.61	0.04	0.00	3.37	9.07	0.18
MA-EPN-S03A	Wk Type 1B	482	Fspar	63.47	0.00	22.99	0.41	0.09	0.19	3.84	8.92	0.18
MA-EPN-S03A	Wk Type 1B	483	Wmica	49.00	0.92	29.56	3.74	0.00	1.30	0.17	0.98	9.64
MA-EPN-S03A	Wk Type 1B	484	Wmica	48.88	0.70	29.07	3.80	0.09	1.16	0.14	0.85	9.72
MA-EPN-S03A	Wk Type 1B	485	Wmica	48.92	0.68	29.17	3.86	0.00	1.32	0.21	0.94	9.48
MA-EPN-S03A	Wk Type 1B	486	Wmica	48.37	0.61	29.51	3.91	0.01	1.26	0.27	1.14	9.48
MA-EPN-S03A	Wk Type 1B	487	Wmica	47.71	0.56	29.06	4.09	0.08	1.25	0.28	1.07	9.65
MA-EPN-S03A	Wk Type 1B	488	Wmica	47.69	0.59	29.42	4.04	0.19	1.26	0.31	1.19	9.75
MA-EPN-S03A	Wk Type 1B	489	Wmica	47.37	0.63	29.69	4.22	0.00	1.29	0.32	1.14	9.70
MA-EPN-S03A	Wk Type 1B	490	Wmica	47.59	0.60	29.29	4.19	0.16	1.24	0.32	1.06	9.65
MA-EPN-S03A	Wk Type 1B	491	Wmica	47.14	0.65	29.55	4.16	0.00	1.17	0.25	1.06	9.62
MA-EPN-S03A	Wk Type 1B	492	Wmica	47.50	0.76	28.81	4.02	0.00	1.28	0.30	1.14	9.44
MA-EPN-S03A	Wk Type 1B	493	Wmica	48.13	0.74	29.45	4.27	0.10	1.41	0.21	0.87	9.72
MA-EPN-S03A	Wk Type 1B	494	Wmica	47.48	0.67	29.47	4.86	0.00	1.21	0.19	0.79	9.90
MA-EPN-S03A	Wk Type 1B	495	Wmica	47.37	0.55	29.44	4.68	0.00	1.27	0.21	0.85	9.56
MA-EPN-S03A	Wk Type 1B	496	Wmica	47.22	0.92	29.59	4.73	0.00	1.29	0.20	0.72	9.78
MA-EPN-S03A	Wk Type 1B	497	Wmica	47.22	0.85	28.97	4.54	0.13	1.29	0.20	0.94	9.75
MA-EPN-S03A	Wk Type 1B	498	Wmica	47.65	0.99	28.96	4.18	0.07	1.22	0.19	0.94	9.45
MA-EPN-S03A	Wk Type 1B	499	Wmica	47.70	0.85	29.15	4.16	0.05	1.10	0.16	0.77	9.51
MA-EPN-S03A	Wk Type 1B	500	Chl	35.52	0.29	16.64	32.58	0.16	1.91	0.40	0.62	1.76
MA-EPN-S03A	Wk Type 1B	501	Chl	34.99	0.14	16.64	33.87	0.25	1.99	0.33	0.58	1.68
MA-EPN-S03A	Wk Type 1B	502	Chl	34.61	0.13	16.26	34.62	0.15	2.11	0.35	0.67	1.52
MA-EPN-S03A	Wk Type 1B	503	Chl	35.06	0.18	16.46	33.59	0.15	2.01	0.37	0.57	1.66
MA-EPN-S03A	Wk Type 1B	504	Chl	35.13	0.17	16.28	34.07	0.11	2.11	0.31	0.63	1.57
MA-EPN-S03A	Wk Type 1B	505	Chl	35.18	0.26	16.17	33.67	0.18	1.88	0.28	0.68	1.62
MA-EPN-S03A	Wk Type 1B	506	Chl	35.40	0.16	15.94	33.29	0.16	1.99	0.34	0.62	1.43
MA-EPN-S03A	Wk Type 1B	507	Chl	35.01	0.16	15.26	34.53	0.18	1.74	0.46	0.66	1.26
MA-EPN-S03A	Wk Type 1B	508	Fspar	62.58	0.07	22.54	0.52	0.03	0.00	3.50	8.72	0.37
MA-EPN-S03A	Wk Type 1B	509	Fspar	62.66	0.00	22.35	0.35	0.00	0.02	3.43	8.83	0.27
MA-EPN-S03A	Wk Type 1B	510	Fspar	62.16	0.07	23.09	0.40	0.00	0.00	3.99	8.35	0.31
MA-EPN-S03A	Wk Type 1B	511	Fspar	61.03	0.15	23.36	0.31	0.00	0.05	4.49	8.18	0.21
MA-EPN-S03A	Wk Type 1B	512	Fspar	61.24	0.12	23.67	0.48	0.11	0.00	4.56	8.24	0.29
MA-EPN-S03A	Wk Type 1B	513	Fspar	61.01	0.12	23.42	0.53	0.00	0.00	4.64	8.43	0.33
MA-EPN-S03A	Wk Type 1B	514	Fspar	62.92	0.04	22.29	0.55	0.00	0.16	3.08	9.01	0.31

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	515	Fspar	64.80	0.09	21.19	0.44	0.18	0.08	1.53	10.15	0.26
MA-EPN-S03A	Wk Type 1B	516	Fspar	62.77	0.07	22.17	0.62	0.00	0.11	3.00	9.08	0.35
MA-EPN-S03A	Wk Type 1B	517	Fspar	60.88	0.00	23.26	0.65	0.00	0.09	4.56	8.18	0.23
MA-EPN-S03A	Wk Type 1B	518	Fspar	60.75	0.02	23.30	0.65	0.06	0.20	4.38	8.37	0.45
MA-EPN-S03A	Wk Type 1B	519	Fspar	60.49	0.09	23.09	0.90	0.00	0.22	4.45	8.23	0.48
MA-EPN-S03A	Wk Type 1B	520	Biotite	36.28	1.74	16.35	19.23	0.14	9.19	3.63	0.48	0.33
MA-EPN-S03A	Wk Type 1B	521	Biotite	38.23	1.81	17.80	20.07	0.07	9.71	2.63	0.67	0.80
MA-EPN-S03A	Wk Type 1B	522	Biotite	38.42	1.72	18.24	20.96	0.06	9.85	2.03	0.65	2.66
MA-EPN-S03A	Wk Type 1B	523	Biotite	37.98	1.81	17.63	20.12	0.21	9.71	2.32	0.60	1.83
MA-EPN-S03A	Wk Type 1B	524	Biotite	38.50	1.75	17.98	19.75	0.02	9.91	2.19	0.57	0.99
MA-EPN-S03A	Wk Type 1B	525	Biotite	38.63	1.85	18.09	20.28	0.00	9.55	2.13	0.59	1.77
MA-EPN-S03A	Wk Type 1B	526	Biotite	36.83	1.63	16.39	19.23	0.17	8.91	3.47	0.61	0.66
MA-EPN-S03A	Wk Type 1B	527	Biotite	36.44	1.69	16.21	18.73	0.01	8.85	3.80	0.68	0.77
MA-EPN-S03A	Wk Type 1B	528	Chl	28.41	0.92	20.53	25.74	0.23	11.82	0.11	0.16	0.09
MA-EPN-S03A	Wk Type 1B	529	Chl	28.61	0.60	20.36	26.25	0.30	11.90	0.07	0.15	0.14
MA-EPN-S03A	Wk Type 1B	530	Chl	30.29	0.37	20.67	25.38	0.31	12.52	0.16	0.27	0.19
MA-EPN-S03A	Wk Type 1B	531	Chl	31.15	0.34	21.06	25.13	0.26	12.70	0.12	0.03	0.18
MA-EPN-S03A	Wk Type 1B	532	Chl	31.68	0.32	21.81	24.81	0.27	12.62	0.14	0.21	0.19
MA-EPN-S03A	Wk Type 1B	533	Chl	27.79	1.27	19.45	25.74	0.43	10.96	0.10	0.09	0.04
MA-EPN-S03A	Wk Type 1B	534	Chl	28.22	0.69	20.14	25.27	0.26	11.84	0.13	0.13	0.11
MA-EPN-S03A	Wk Type 1B	535	Chl	28.79	0.52	20.30	25.23	0.04	12.08	0.00	0.18	0.07
MA-EPN-S03A	Wk Type 1B	536	Chl	28.49	0.36	20.38	25.19	0.37	12.20	0.13	0.15	0.15
MA-EPN-S03A	Wk Type 1B	537	Chl	28.37	0.39	20.23	25.34	0.16	12.00	0.13	0.26	0.12
MA-EPN-S03A	Wk Type 1B	538	Chl	29.41	0.36	20.28	25.16	0.22	12.35	0.12	0.19	0.14
MA-EPN-S03A	Wk Type 1B	539	Chl	29.10	0.55	19.13	25.70	0.25	11.09	0.06	0.20	0.25
MA-EPN-S03A	Wk Type 1B	540	Chl	29.04	0.50	19.36	25.01	0.30	10.95	0.17	0.16	0.25
MA-EPN-S03A	Wk Type 1B	541	Chl	28.87	0.38	19.50	24.72	0.13	11.02	0.10	0.25	0.32
MA-EPN-S03A	Wk Type 1B	542	Chl	27.81	1.34	19.68	26.22	0.21	10.82	0.08	0.23	0.19
MA-EPN-S03A	Wk Type 1B	543	Chl	27.16	0.90	19.59	26.07	0.26	11.39	0.06	0.09	0.17
MA-EPN-S03A	Wk Type 1B	544	Chl	27.37	0.56	20.14	25.44	0.35	11.55	0.17	0.27	0.15
MA-EPN-S03A	Wk Type 1B	545	Chl	27.84	0.59	20.18	26.10	0.24	11.70	0.09	0.22	0.13
MA-EPN-S03A	Wk Type 1B	546	Wmica	48.94	0.58	31.76	5.24	0.03	1.63	0.20	0.49	9.44
MA-EPN-S03A	Wk Type 1B	547	Wmica	48.13	0.75	31.92	4.95	0.00	1.33	0.11	0.69	9.46
MA-EPN-S03A	Wk Type 1B	548	Wmica	48.46	0.94	31.43	4.97	0.00	1.38	0.09	0.51	9.44

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	549	Wmica	48.57	1.10	31.89	5.02	0.13	1.29	0.09	0.57	9.36
MA-EPN-S03A	Wk Type 1B	550	Wmica	47.93	1.80	30.15	5.05	0.12	1.61	0.21	0.50	9.53
MA-EPN-S03A	Wk Type 1B	551	Wmica	47.97	2.16	29.89	5.62	0.06	1.59	0.20	0.50	9.18
MA-EPN-S03A	Wk Type 1B	552	Wmica	47.95	2.29	29.86	5.76	0.14	1.56	0.20	0.57	9.22
MA-EPN-S03A	Wk Type 1B	553	Wmica	45.95	0.69	29.96	4.62	0.00	1.36	0.09	0.43	9.98
MA-EPN-S03A	Wk Type 1B	554	Wmica	46.51	0.74	29.69	4.64	0.00	1.46	0.10	0.43	9.68
MA-EPN-S03A	Wk Type 1B	555	Wmica	45.81	0.71	29.76	4.63	0.04	1.23	0.16	0.50	9.85
MA-EPN-S03A	Wk Type 1B	556	Wmica	46.89	0.72	30.13	4.40	0.00	1.37	0.07	0.45	9.97
MA-EPN-S03A	Wk Type 1B	557	Wmica	47.98	0.99	30.28	4.35	0.16	1.44	0.14	0.47	9.62
MA-EPN-S03A	Wk Type 1B	558	Wmica	47.67	0.51	30.96	4.15	0.04	1.32	0.08	0.57	9.80
MA-EPN-S03A	Wk Type 1B	559	Wmica	47.89	0.57	31.45	4.42	0.00	1.36	0.04	0.50	9.76
MA-EPN-S03A	Wk Type 1B	560	Wmica	47.44	0.74	31.10	4.49	0.13	1.37	0.09	0.47	9.80
MA-EPN-S03A	Wk Type 1B	561	Wmica	47.89	0.56	30.89	4.40	0.02	1.35	0.14	0.52	9.83
MA-EPN-S03A	Wk Type 1B	562	Wmica	48.56	0.92	30.13	3.94	0.00	1.15	0.13	0.53	9.75
MA-EPN-S03A	Wk Type 1B	563	Wmica	48.31	0.96	30.03	3.77	0.21	1.24	0.03	0.48	9.73
MA-EPN-S03A	Wk Type 1B	564	Wmica	48.38	0.96	29.99	3.89	0.00	1.26	0.16	0.53	9.93
MA-EPN-S03A	Wk Type 1B	565	Wmica	48.72	1.03	29.62	3.72	0.05	1.28	0.07	0.47	9.88
MA-EPN-S03A	Wk Type 1B	566	Wmica	48.93	0.97	28.71	4.02	0.02	1.37	0.08	0.45	9.92
MA-EPN-S03A	Wk Type 1B	567	Wmica	48.71	1.16	28.74	4.23	0.00	1.41	0.00	0.43	9.90
MA-EPN-S03A	Wk Type 1B	568	Wmica	48.39	1.12	28.70	4.17	0.00	1.26	0.08	0.42	9.92
MA-EPN-S03A	Wk Type 1B	569	Wmica	48.88	1.23	28.85	4.03	0.01	1.38	0.03	0.50	9.92
MA-EPN-S03A	Wk Type 1B	570	Fspar	65.55	0.23	20.12	0.26	0.01	0.00	1.64	9.69	0.12
MA-EPN-S03A	Wk Type 1B	571	Fspar	65.70	0.22	20.12	0.26	0.00	0.19	1.34	9.92	0.10
MA-EPN-S03A	Wk Type 1B	572	Fspar	62.01	0.26	22.79	0.46	0.00	0.05	4.21	8.29	0.07
MA-EPN-S03A	Wk Type 1B	573	Fspar	62.06	0.01	22.61	0.17	0.00	0.08	4.04	8.34	0.17
MA-EPN-S03A	Wk Type 1B	574	Fspar	62.12	0.09	22.61	0.24	0.00	0.09	3.95	8.75	0.15
MA-EPN-S03A	Wk Type 1B	575	Fspar	63.11	0.00	21.90	0.18	0.06	0.00	3.32	8.96	0.00
MA-EPN-S03A	Wk Type 1B	576	Fspar	61.51	0.03	23.05	0.21	0.11	0.01	4.84	8.18	0.16
MA-EPN-S03A	Wk Type 1B	577	Fspar	65.83	0.10	20.14	0.25	0.00	0.00	1.18	10.11	0.16
MA-EPN-S03A	Wk Type 1B	578	Fspar	61.86	0.00	23.10	0.27	0.00	0.15	4.90	8.05	0.08
MA-EPN-S03A	Wk Type 1B	579	Fspar	63.18	0.00	21.91	0.29	0.00	0.02	3.42	8.79	0.06
MA-EPN-S03A	Wk Type 1B	580	Fspar	61.16	0.08	23.43	0.46	0.08	0.02	4.72	8.22	0.21
MA-EPN-S03A	Wk Type 1B	581	Fspar	61.86	0.01	22.70	0.33	0.00	0.02	4.06	8.64	0.20
MA-EPN-S03A	Wk Type 1B	582	Biotite	37.13	2.17	17.43	21.03	0.02	7.73	0.16	0.68	8.83

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S03A	Wk Type 1B	583	Biotite	36.20	1.85	16.73	20.23	0.01	7.45	0.19	0.67	8.69
MA-EPN-S03A	Wk Type 1B	584	Biotite	36.54	2.11	16.93	20.53	0.18	7.75	0.20	0.71	8.41
MA-EPN-S03A	Wk Type 1B	585	Biotite	36.75	2.12	17.00	20.73	0.11	7.70	0.27	0.62	8.69
MA-EPN-S03A	Wk Type 1B	586	Biotite	37.10	2.18	17.23	20.59	0.16	7.87	0.31	0.73	8.76
MA-EPN-S03A	Wk Type 1B	587	Biotite	37.73	2.07	17.24	20.01	0.11	7.60	0.28	0.96	8.83
MA-EPN-S03A	Wk Type 1B	588	Biotite	37.12	2.09	17.22	20.78	0.23	7.96	0.19	0.63	8.84
MA-EPN-S03A	Wk Type 1B	589	Biotite	36.86	2.05	17.13	20.78	0.14	7.88	0.17	0.59	8.91
MA-EPN-S03A	Wk Type 1B	590	Fspar	63.20	0.08	22.27	0.15	0.00	0.10	3.28	9.22	0.23
MA-EPN-S03A	Wk Type 1B	591	Fspar	60.64	0.06	23.96	0.37	0.10	0.15	4.98	8.00	0.26
MA-EPN-S03A	Wk Type 1B	592	Fspar	59.92	0.04	24.29	0.63	0.00	0.00	5.18	8.02	0.32
MA-EPN-S04	HS/SZ	593	Wmica	48.09	0.23	34.39	3.82	0.08	0.36	0.06	1.25	8.85
MA-EPN-S04	HS/SZ	594	Wmica	49.84	0.28	33.92	3.78	0.01	0.21	0.00	1.33	8.25
MA-EPN-S04	HS/SZ	595	Wmica	46.49	0.24	35.45	3.78	0.01	0.47	0.02	1.50	8.80
MA-EPN-S04	HS/SZ	596	Wmica	46.29	0.24	34.68	5.34	0.10	0.33	0.04	1.39	8.91
MA-EPN-S04	HS/SZ	597	Wmica	45.92	0.32	35.60	4.62	0.13	0.39	0.00	1.53	8.71
MA-EPN-S04	HS/SZ	598	Wmica	46.10	0.31	34.66	5.16	0.00	0.43	0.00	1.38	8.58
MA-EPN-S04	HS/SZ	599	Wmica	45.83	0.22	35.00	4.80	0.02	0.34	0.02	1.51	8.90
MA-EPN-S04	HS/SZ	600	Wmica	45.47	0.40	35.82	4.84	0.00	0.44	0.00	1.49	9.11
MA-EPN-S04	HS/SZ	601	Wmica	45.97	0.40	35.99	3.86	0.04	0.47	0.02	1.53	9.08
MA-EPN-S04	HS/SZ	602	Wmica	46.05	0.39	35.98	3.65	0.06	0.49	0.13	1.49	9.17
MA-EPN-S04	HS/SZ	603	Wmica	45.56	0.18	37.19	4.20	0.02	0.25	0.04	1.64	9.05
MA-EPN-S04	HS/SZ	604	Wmica	46.87	0.28	36.53	4.02	0.03	0.51	0.04	1.42	9.09
MA-EPN-S04	HS/SZ	605	Wmica	46.08	0.12	35.88	4.52	0.00	0.62	0.00	1.30	9.12
MA-EPN-S04	HS/SZ	606	Wmica	46.10	0.10	36.24	3.99	0.07	0.58	0.00	1.44	9.05
MA-EPN-S04	HS/SZ	607	Wmica	44.57	0.15	37.21	4.62	0.18	0.29	0.05	1.65	8.99
MA-EPN-S04	HS/SZ	608	Wmica	46.02	0.19	37.01	3.36	0.07	0.34	0.05	1.63	9.03
MA-EPN-S04	HS/SZ	609	Wmica	46.01	0.40	36.91	3.27	0.05	0.39	0.03	1.66	8.76
MA-EPN-S04	HS/SZ	610	Wmica	46.02	0.37	36.56	3.57	0.03	0.44	0.03	1.65	9.01
MA-EPN-S04	HS/SZ	611	Wmica	45.67	0.27	36.17	3.60	0.02	0.40	0.02	1.42	9.25
MA-EPN-S04	HS/SZ	612	Wmica	45.94	0.31	36.18	3.32	0.00	0.47	0.00	1.51	9.08
MA-EPN-S04	HS/SZ	613	Wmica	45.31	0.42	35.89	3.58	0.00	0.43	0.01	1.45	9.38
MA-EPN-S04	HS/SZ	614	Wmica	45.52	0.32	35.66	4.50	0.00	0.47	0.01	1.61	8.89
MA-EPN-S04	HS/SZ	615	Wmica	45.86	0.38	36.18	3.77	0.00	0.56	0.03	1.42	9.16
MA-EPN-S04	HS/SZ	630	Wmica	46.13	0.30	35.57	3.90	0.13	0.48	0.01	1.43	9.07

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S04	HS/SZ	631	Wmica	46.61	0.17	34.30	1.55	0.03	0.47	0.47	1.32	8.78
MA-EPN-S04	HS/SZ	632	Wmica	45.78	0.15	34.80	1.53	0.06	0.39	0.36	1.42	8.58
MA-EPN-S04	HS/SZ	633	Wmica	45.67	0.25	35.36	1.50	0.01	0.41	0.28	1.56	8.38
MA-EPN-S04	HS/SZ	635	Wmica	45.47	0.19	34.80	1.39	0.00	0.40	0.37	1.63	8.48
MA-EPN-S04	HS/SZ	636	Wmica	47.46	0.32	33.63	1.59	0.05	0.51	0.28	1.34	8.69
MA-EPN-S04	HS/SZ	637	Wmica	47.07	0.30	33.58	1.57	0.05	0.49	0.28	1.36	8.61
MA-EPN-S04	HS/SZ	638	Wmica	47.69	0.30	34.28	1.54	0.02	0.42	0.37	1.38	8.67
MA-EPN-S04	HS/SZ	639	Wmica	47.39	0.19	33.87	1.34	0.00	0.35	0.38	1.26	8.76
MA-EPN-S04	HS/SZ	640	Wmica	48.59	0.33	34.49	1.31	0.02	0.34	0.29	1.43	8.44
MA-EPN-S04	HS/SZ	641	Wmica	48.05	0.26	34.05	1.36	0.07	0.44	0.36	1.47	8.56
MA-EPN-S04	HS/SZ	642	Wmica	46.38	0.14	34.74	1.55	0.06	0.38	0.32	1.46	8.72
MA-EPN-S04	HS/SZ	643	Wmica	45.99	0.22	34.74	1.65	0.06	0.49	0.40	1.53	8.62
MA-EPN-S04	HS/SZ	644	Wmica	47.47	0.25	34.74	1.75	0.00	0.55	0.28	1.41	8.59
MA-EPN-S04	HS/SZ	645	Wmica	47.46	0.26	34.09	1.50	0.00	0.47	0.30	1.29	8.48
MA-EPN-S04	HS/SZ	646	Wmica	47.80	0.28	34.82	1.68	0.06	0.41	0.39	1.78	7.72
MA-EPN-S04	HS/SZ	647	Wmica	46.79	0.26	34.35	1.63	0.01	0.39	0.41	1.54	8.87
MA-EPN-S04	HS/SZ	648	Wmica	46.04	0.32	34.92	1.70	0.08	0.39	0.39	1.56	8.59
MA-EPN-S04	HS/SZ	649	Wmica	46.25	0.29	35.59	1.48	0.07	0.51	0.46	2.15	7.99
MA-EPN-S04	HS/SZ	650	Wmica	45.92	0.13	35.35	1.67	0.00	0.48	0.37	1.48	8.53
MA-EPN-S04	HS/SZ	651	Wmica	45.48	0.23	34.86	1.86	0.16	0.62	0.34	1.37	8.19
MA-EPN-S04	HS/SZ	652	Wmica	45.98	0.35	34.83	1.89	0.00	0.70	0.36	1.54	8.34
MA-EPN-S04	HS/SZ	653	Wmica	48.38	0.25	34.52	1.54	0.00	0.38	0.38	1.59	8.35
MA-EPN-S04	HS/SZ	654	Wmica	47.09	0.03	36.03	1.41	0.08	0.44	0.29	1.69	8.53
MA-EPN-S04	HS/SZ	655	Wmica	46.42	0.25	35.58	1.63	0.10	0.43	0.22	1.51	8.68
MA-EPN-S04	HS/SZ	656	Wmica	46.49	0.17	36.35	1.22	0.13	0.44	0.39	2.85	6.46
MA-EPN-S04	HS/SZ	657	Wmica	46.20	0.35	35.45	1.54	0.01	0.51	0.27	1.57	8.55
MA-EPN-S04	HS/SZ	658	Wmica	45.99	0.28	35.14	1.51	0.00	0.53	0.28	1.42	8.90
MA-EPN-S04	HS/SZ	659	Wmica	45.47	0.36	35.09	1.56	0.01	0.43	0.33	1.38	8.83
MA-EPN-S04	HS/SZ	660	Wmica	45.93	0.14	35.56	1.71	0.05	0.25	0.38	1.64	8.58
MA-EPN-S04	HS/SZ	680	Wmica	45.05	0.29	34.83	1.63	0.04	0.57	0.37	1.40	9.02
MA-EPN-S04	HS/SZ	681	Wmica	45.17	0.26	35.08	1.55	0.15	0.52	0.48	1.39	8.81
MA-EPN-S04	HS/SZ	682	Wmica	45.62	0.35	35.02	1.93	0.08	0.56	0.44	1.34	8.90
MA-EPN-S04	HS/SZ	683	Wmica	45.33	0.21	34.76	1.91	0.02	0.46	0.52	1.29	8.91
MA-EPN-S04	HS/SZ	684	Wmica	44.76	0.29	34.66	2.04	0.02	0.53	0.56	1.41	8.85

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S04	HS/SZ	685	Wmica	44.95	0.16	35.00	1.90	0.00	0.62	0.64	1.49	8.87
MA-EPN-S04	HS/SZ	686	Wmica	44.44	0.27	34.75	1.89	0.16	0.46	0.61	1.43	8.69
MA-EPN-S04	HS/SZ	687	Wmica	44.82	0.19	35.00	1.98	0.06	0.55	0.72	1.40	8.84
MA-EPN-S04	HS/SZ	688	Wmica	44.23	0.21	34.78	2.01	0.03	0.59	0.89	1.45	8.77
MA-EPN-S04	HS/SZ	689	Wmica	44.06	0.29	34.58	1.85	0.13	0.66	0.89	1.41	8.39
MA-EPN-S04	HS/SZ	690	Chl	4.29	0.10	1.63	12.14	0.86	11.30	26.85	0.05	0.27
MA-EPN-S04	HS/SZ	691	Chl	4.15	0.05	1.62	12.56	0.69	11.30	26.44	0.07	0.19
MA-EPN-S04	HS/SZ	692	Chl	4.14	0.00	1.54	12.60	1.03	11.24	26.74	0.14	0.12
MA-EPN-S04	HS/SZ	693	Chl	4.00	0.11	1.50	13.34	0.78	10.67	26.52	0.14	0.18
MA-EPN-S04	HS/SZ	694	Chl	4.08	0.02	1.43	12.63	0.81	10.95	26.84	0.01	0.17
MA-EPN-S04	HS/SZ	695	Chl	4.02	0.12	1.41	13.21	0.60	10.70	26.70	0.09	0.15
MA-EPN-S04	HS/SZ	696	Chl	4.21	0.00	1.52	14.70	0.53	9.57	26.38	0.11	0.17
MA-EPN-S04	HS/SZ	697	Chl	4.03	0.12	1.43	14.40	0.51	9.63	26.31	0.05	0.19
MA-EPN-S04	HS/SZ	698	Chl	4.16	0.02	1.39	14.38	0.59	9.75	26.47	0.12	0.15
MA-EPN-S04	HS/SZ	699	Chl	4.19	0.11	1.32	14.39	0.73	10.25	26.92	0.11	0.17
MA-EPN-S04	HS/SZ	700	Chl	4.05	0.06	1.23	12.44	0.79	11.12	26.97	0.03	0.23
MA-EPN-S04	HS/SZ	701	Chl	3.98	0.11	1.53	12.50	0.68	11.78	27.00	0.08	0.16
MA-EPN-S04	HS/SZ	702	Chl	4.19	0.05	1.35	14.56	0.66	10.16	26.68	0.07	0.18
MA-EPN-S04	HS/SZ	703	Chl	4.05	0.00	1.33	14.36	0.69	10.18	27.02	0.03	0.15
MA-EPN-S04	HS/SZ	704	Chl	4.55	0.00	1.32	14.92	0.55	10.03	26.65	0.06	0.15
MA-EPN-S04	HS/SZ	705	Chl	4.97	0.10	1.35	14.63	0.36	10.11	26.35	0.00	0.09
MA-EPN-S04	HS/SZ	706	Chl	5.37	0.00	1.41	15.06	0.53	10.20	26.33	0.08	0.20
MA-EPN-S04	HS/SZ	707	Chl	5.03	0.08	1.46	14.74	0.61	10.10	26.25	0.08	0.13
MA-EPN-S04	HS/SZ	708	Chl	4.53	0.00	1.71	15.07	0.42	9.96	26.26	0.16	0.19
MA-EPN-S04	HS/SZ	709	Chl	4.72	0.00	1.91	14.71	0.52	9.87	26.16	0.12	0.17
MA-EPN-S04	HS/SZ	710	Chl	4.89	0.00	2.16	14.88	0.51	9.51	25.86	0.12	0.22
MA-EPN-S04	HS/SZ	711	Chl	5.23	0.03	2.58	14.82	0.59	9.51	25.85	0.15	0.28
MA-EPN-S04	HS/SZ	712	Chl	5.78	0.02	2.93	13.79	0.58	9.71	25.44	0.22	0.32
MA-EPN-S04	HS/SZ	713	Chl	5.94	0.04	2.90	13.54	0.59	10.12	25.59	0.15	0.45
MA-EPN-S04	HS/SZ	714	Chl	6.55	0.00	3.57	13.56	0.64	9.67	25.18	0.10	0.54
MA-EPN-S04	HS/SZ	720	Wmica	48.05	0.28	38.36	0.90	0.02	0.10	0.26	5.31	3.50
MA-EPN-S04	HS/SZ	721	Wmica	47.75	0.16	38.25	0.79	0.12	0.04	0.38	5.93	2.23
MA-EPN-S04	HS/SZ	722	Wmica	47.67	0.06	39.07	0.81	0.00	0.00	0.42	5.77	2.51
MA-EPN-S04	HS/SZ	723	Wmica	47.68	0.10	39.01	0.59	0.00	0.05	0.41	6.09	2.20

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S04	HS/SZ	724	Wmica	47.58	0.05	39.89	0.69	0.00	0.11	0.41	6.24	2.07
MA-EPN-S04	HS/SZ	725	Wmica	47.92	0.06	39.61	0.93	0.00	0.05	0.28	5.74	2.63
MA-EPN-S04	HS/SZ	726	Wmica	47.93	0.10	38.75	0.68	0.00	0.07	0.35	5.69	2.73
MA-EPN-S04	HS/SZ	727	Wmica	48.27	0.17	38.92	0.89	0.00	0.00	0.23	5.48	3.49
MA-EPN-S04	HS/SZ	728	Wmica	48.45	0.16	39.42	0.57	0.00	0.01	0.32	5.82	2.79
MA-EPN-S04	HS/SZ	729	Wmica	47.90	0.08	39.86	0.45	0.00	0.00	0.42	6.48	1.55
MA-EPN-S04	HS/SZ	730	Wmica	47.63	0.00	39.51	0.92	0.00	0.06	0.33	6.11	2.05
MA-EPN-S04	HS/SZ	731	Wmica	47.59	0.17	39.57	0.40	0.04	0.04	0.37	5.88	2.38
MA-EPN-S04	HS/SZ	732	Wmica	47.18	0.13	39.58	0.77	0.01	0.00	0.30	6.03	2.04
MA-EPN-S04	HS/SZ	733	Wmica	47.73	0.09	39.99	0.76	0.17	0.14	0.33	6.30	1.83
MA-EPN-S04	HS/SZ	734	Wmica	47.61	0.19	39.71	0.62	0.02	0.04	0.29	6.45	1.84
MA-EPN-S04	HS/SZ	735	Wmica	47.81	0.12	39.32	0.65	0.05	0.07	0.44	6.07	2.11
MA-EPN-S04	HS/SZ	736	Wmica	47.96	0.17	39.43	0.70	0.01	0.08	0.29	6.46	1.56
MA-EPN-S04	HS/SZ	737	Wmica	47.55	0.14	39.20	0.75	0.00	0.00	0.32	6.34	1.63
MA-EPN-S04	HS/SZ	738	Wmica	48.41	0.29	39.57	0.53	0.00	0.06	0.41	6.12	1.95
MA-EPN-S04	HS/SZ	739	Wmica	47.86	0.19	38.64	0.81	0.00	0.09	0.36	5.60	2.92
MA-EPN-S04	HS/SZ	765	Wmica	47.89	0.09	38.84	0.56	0.00	0.00	0.37	5.71	2.55
MA-EPN-S04	HS/SZ	766	Wmica	47.70	0.16	39.12	0.72	0.00	0.01	0.23	5.73	2.80
MA-EPN-S04	HS/SZ	767	Wmica	47.11	0.27	35.83	1.62	0.10	0.29	0.12	1.58	8.87
MA-EPN-S04	HS/SZ	768	Wmica	46.70	0.43	35.35	1.60	0.00	0.44	0.09	1.50	8.84
MA-EPN-S04	HS/SZ	769	Wmica	47.32	0.53	35.33	1.56	0.00	0.48	0.03	1.57	8.94
MA-EPN-S04	HS/SZ	770	Wmica	46.96	0.31	35.41	1.65	0.00	0.49	0.05	1.46	8.97
MA-EPN-S04	HS/SZ	771	Wmica	46.69	0.34	35.75	1.79	0.02	0.35	0.07	1.51	9.23
MA-EPN-S04	HS/SZ	772	Wmica	46.99	0.40	35.72	1.67	0.00	0.38	0.14	1.38	9.23
MA-EPN-S04	HS/SZ	773	Wmica	47.60	0.48	36.00	1.50	0.05	0.43	0.12	1.50	9.21
MA-EPN-S04	HS/SZ	774	Wmica	47.46	0.26	35.87	1.56	0.11	0.43	0.12	1.45	9.17
MA-EPN-S04	HS/SZ	775	Wmica	47.47	0.31	35.95	1.30	0.00	0.31	0.14	1.34	9.12
MA-EPN-S04	HS/SZ	776	Wmica	47.21	0.33	36.64	1.54	0.00	0.29	0.05	1.73	8.79
MA-EPN-S04	HS/SZ	777	Wmica	47.18	0.28	36.00	1.63	0.01	0.42	0.05	1.64	8.85
MA-EPN-S04	HS/SZ	778	Wmica	47.62	0.36	35.98	1.53	0.00	0.34	0.00	1.57	9.04
MA-EPN-S04	HS/SZ	779	Wmica	47.40	0.34	36.12	1.67	0.04	0.42	0.04	1.64	9.00
MA-EPN-S04	HS/SZ	780	Wmica	48.36	0.08	36.52	1.33	0.05	0.41	0.14	1.53	9.20
MA-EPN-S04	HS/SZ	781	Wmica	48.23	0.19	36.28	1.33	0.00	0.46	0.13	1.52	9.13
MA-EPN-S04	HS/SZ	782	Wmica	48.18	0.22	36.34	1.43	0.05	0.43	0.18	1.54	9.06

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S04	HS/SZ	783	Wmica	48.04	0.21	36.28	1.39	0.06	0.41	0.18	1.66	8.73
MA-EPN-S04	HS/SZ	784	Wmica	48.21	0.15	36.30	1.35	0.05	0.40	0.12	1.61	8.91
MA-EPN-S04	HS/SZ	785	Wmica	48.13	0.31	35.70	1.68	0.02	0.39	0.01	1.45	9.22
MA-EPN-S04	HS/SZ	786	Wmica	47.63	0.38	35.08	1.55	0.01	0.41	0.04	1.52	9.15
MA-EPN-S04	HS/SZ	787	Wmica	47.81	0.23	35.04	1.79	0.00	0.52	0.10	1.59	9.10
MA-EPN-S04	HS/SZ	788	Wmica	47.39	0.29	36.24	1.26	0.09	0.19	0.14	1.97	8.04
MA-EPN-S04	HS/SZ	789	Wmica	48.45	0.21	34.92	1.24	0.04	0.47	0.14	1.38	9.16
MA-EPN-S04	HS/SZ	790	Wmica	48.27	0.51	34.99	1.43	0.00	0.35	0.14	1.37	8.91
MA-EPN-S04	HS/SZ	791	Wmica	48.42	0.27	34.83	1.60	0.04	0.55	0.08	1.48	8.93
MA-EPN-S04	HS/SZ	792	Wmica	48.12	0.32	35.73	1.63	0.12	0.33	0.09	1.40	9.00
MA-EPN-S04	HS/SZ	793	Wmica	48.07	0.38	35.95	1.44	0.00	0.29	0.13	1.47	9.01
MA-EPN-S04	HS/SZ	794	Wmica	48.99	0.20	35.95	1.60	0.06	0.35	0.04	1.63	8.87
MA-EPN-S04	HS/SZ	795	Wmica	48.93	0.19	35.93	1.23	0.01	0.40	0.08	1.61	8.91
MA-EPN-S04	HS/SZ	796	Wmica	48.23	0.28	36.17	1.33	0.09	0.38	0.10	1.77	8.73
MA-EPN-S04	HS/SZ	797	Wmica	47.61	0.26	36.42	1.44	0.00	0.31	0.08	1.62	9.08
MA-EPN-S04	HS/SZ	798	Wmica	47.48	0.39	36.05	1.82	0.03	0.34	0.10	1.50	9.18
MA-EPN-S04	HS/SZ	799	Wmica	47.50	0.33	36.43	1.73	0.03	0.38	0.15	1.57	9.04
MA-EPN-S04	HS/SZ	800	Wmica	47.75	0.31	36.38	1.51	0.00	0.39	0.12	1.64	9.06
MA-EPN-S04	HS/SZ	801	Wmica	49.21	0.39	36.39	1.39	0.00	0.33	0.04	1.66	8.77
MA-EPN-S04	HS/SZ	802	Wmica	48.85	0.30	36.40	1.65	0.00	0.34	0.13	1.62	8.83
MA-EPN-S04	HS/SZ	803	Wmica	48.79	0.36	36.30	1.64	0.00	0.41	0.08	1.59	9.27
MA-EPN-S04	HS/SZ	804	Wmica	47.91	0.22	35.99	1.41	0.00	0.40	0.17	1.38	9.01
MA-EPN-S04	HS/SZ	805	Wmica	48.21	0.30	36.31	1.37	0.05	0.36	0.10	1.47	9.29
MA-EPN-S04	HS/SZ	806	Wmica	47.90	0.45	36.09	1.64	0.00	0.35	0.07	1.31	9.39
MA-EPN-S04	HS/SZ	807	Wmica	47.54	0.45	35.89	1.61	0.00	0.40	0.05	1.54	9.06
MA-EPN-S04	HS/SZ	808	Wmica	47.43	0.38	36.26	1.70	0.01	0.47	0.10	1.46	9.27
MA-EPN-S04	HS/SZ	809	Wmica	47.37	0.38	36.10	1.32	0.00	0.44	0.03	1.51	9.26
MA-EPN-S04	HS/SZ	810	Wmica	48.12	0.26	36.59	1.65	0.14	0.40	0.10	1.53	9.07
MA-EPN-S04	HS/SZ	811	Wmica	47.60	0.29	36.55	1.52	0.00	0.45	0.13	1.65	9.03
MA-EPN-S04	HS/SZ	812	Wmica	47.15	0.12	39.40	0.63	0.00	0.10	0.22	6.67	1.69
MA-EPN-S04	HS/SZ	813	Wmica	48.20	0.13	39.93	0.72	0.00	0.05	0.33	6.35	1.95
MA-EPN-S04	HS/SZ	853	Wmica	46.65	0.16	35.59	1.66	0.00	0.44	0.29	2.71	6.84
MA-EPN-S04	HS/SZ	854	Wmica	46.48	0.41	35.02	1.72	0.00	0.52	0.17	1.43	8.68
MA-EPN-S04	HS/SZ	855	Wmica	46.87	0.26	34.81	1.68	0.00	0.42	0.25	1.37	8.88

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S04	HS/SZ	856	Wmica	47.46	0.29	35.51	1.46	0.00	0.29	0.20	1.46	8.81
MA-EPN-S04	HS/SZ	857	Wmica	47.08	0.33	35.07	1.79	0.04	0.63	0.26	1.36	9.31
MA-EPN-S04	HS/SZ	858	Wmica	47.05	0.47	34.92	1.86	0.03	0.52	0.27	1.39	8.90
MA-EPN-S04	HS/SZ	859	Wmica	46.81	0.25	35.77	1.53	0.07	0.33	0.32	1.51	8.88
MA-EPN-S04	HS/SZ	860	Wmica	46.35	0.02	35.89	1.62	0.05	0.28	0.25	1.49	8.91
MA-EPN-S04	HS/SZ	861	Wmica	47.11	0.19	36.06	1.61	0.21	0.41	0.28	1.47	8.88
MA-EPN-S04	HS/SZ	862	Wmica	47.10	0.21	35.86	1.66	0.00	0.47	0.22	1.57	8.94
MA-EPN-S04	HS/SZ	863	Wmica	46.97	0.22	35.75	1.67	0.00	0.44	0.30	1.51	8.96
MA-EPN-S04	HS/SZ	864	Wmica	46.62	0.17	35.53	1.67	0.00	0.50	0.97	1.49	8.86
MA-EPN-S04	HS/SZ	865	Wmica	46.43	0.27	35.55	1.97	0.26	0.59	0.78	1.52	8.68
MA-EPN-S04	HS/SZ	866	Wmica	46.83	0.39	35.34	2.01	0.05	0.55	0.82	1.43	8.59
MA-EPN-S04	HS/SZ	867	Wmica	47.28	0.28	35.47	1.81	0.00	0.52	0.75	1.40	8.71
MA-EPN-S04	HS/SZ	868	Wmica	46.57	0.22	35.12	1.86	0.02	0.54	0.73	1.61	8.45
MA-EPN-S04	HS/SZ	869	Wmica	46.81	0.18	35.15	1.68	0.07	0.41	0.61	1.64	8.53
MA-EPN-S04	HS/SZ	870	Wmica	46.94	0.11	35.28	1.88	0.11	0.46	0.57	1.51	8.54
MA-EPN-S04	HS/SZ	871	Wmica	48.26	0.10	38.16	0.62	0.04	0.12	0.46	6.34	1.72
MA-EPN-S04	HS/SZ	872	Wmica	47.77	0.12	38.33	0.87	0.01	0.11	0.45	6.01	1.97
MA-EPN-S04	HS/SZ	873	Wmica	47.92	0.00	38.84	0.90	0.00	0.19	0.49	6.14	2.12
MA-EPN-S04	HS/SZ	874	Wmica	47.55	0.07	38.55	0.58	0.00	0.07	0.41	6.07	2.05
MA-EPN-S04	HS/SZ	875	Wmica	47.42	0.06	38.98	0.88	0.03	0.13	0.59	5.96	2.15
MA-EPN-S04	HS/SZ	876	Wmica	47.11	0.00	38.74	0.79	0.10	0.08	0.57	5.83	2.22
MA-EPN-S04	HS/SZ	877	Wmica	47.09	0.32	36.20	1.49	0.03	0.33	0.33	1.64	8.76
MA-EPN-S04	HS/SZ	878	Wmica	47.09	0.30	36.17	1.31	0.00	0.33	0.28	1.57	8.75
MA-EPN-S04	HS/SZ	879	Wmica	47.27	0.19	36.21	1.35	0.00	0.46	0.20	1.71	8.61
MA-EPN-S04	HS/SZ	880	Wmica	47.18	0.23	36.09	1.20	0.00	0.35	0.31	1.91	8.23
MA-EPN-S04	HS/SZ	881	Wmica	46.61	0.36	35.21	1.61	0.00	0.50	0.29	1.40	9.17
MA-EPN-S04	HS/SZ	882	Wmica	46.60	0.37	35.44	1.89	0.16	0.43	0.17	1.32	9.00
MA-EPN-S04	HS/SZ	883	Wmica	46.78	0.39	35.67	1.64	0.00	0.52	0.20	1.42	9.26
MA-EPN-S04	HS/SZ	884	Wmica	46.78	0.24	35.61	1.71	0.11	0.58	0.26	1.35	9.08
MA-EPN-S04	HS/SZ	885	Wmica	46.74	0.26	35.75	1.71	0.00	0.51	0.13	1.43	8.62
MA-EPN-S04	HS/SZ	886	Wmica	46.69	0.42	35.62	1.72	0.23	0.51	0.13	1.53	8.71
MA-EPN-S04	HS/SZ	887	Wmica	44.86	0.28	34.80	1.58	0.00	0.50	0.29	2.01	7.19
MA-EPN-S04	HS/SZ	888	Wmica	45.03	0.32	34.62	1.71	0.00	0.61	0.29	1.76	7.98
MA-EPN-S04	HS/SZ	889	Wmica	45.56	0.34	34.51	1.90	0.01	0.64	0.25	1.40	8.67

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EPN-S04	HS/SZ	890	Wmica	46.20	0.28	34.81	1.63	0.00	0.59	0.21	1.37	8.96
MA-EPN-S04	HS/SZ	891	Wmica	46.32	0.37	34.88	1.78	0.01	0.67	0.25	1.37	9.00
MA-EPN-S04	HS/SZ	892	Wmica	46.61	0.42	34.92	1.59	0.13	0.56	0.29	1.44	8.91
MA-EPN-S04	HS/SZ	893	Wmica	47.99	0.15	35.26	1.58	0.00	0.48	0.29	1.43	8.72
MA-EPN-S04	HS/SZ	894	Wmica	47.92	0.08	35.36	1.65	0.00	0.39	0.30	1.52	8.69
MA-EPN-S04	HS/SZ	895	Wmica	48.39	0.14	34.99	1.63	0.00	0.40	0.32	1.34	8.92
MA-EPN-S04	HS/SZ	896	Wmica	48.52	0.13	34.99	1.68	0.00	0.41	0.38	1.43	8.78
MA-EPN-S04	HS/SZ	897	Wmica	48.58	0.12	34.96	1.52	0.02	0.39	0.35	1.33	8.85
MA-EPN-S04	HS/SZ	898	Wmica	47.97	0.08	36.92	1.14	0.00	0.35	0.44	4.09	5.05
MA-EPN-S04	HS/SZ	899	Wmica	47.94	0.34	36.77	1.17	0.01	0.30	0.39	4.13	4.71
MA-EPN-S04	HS/SZ	900	Wmica	47.87	0.00	36.67	1.02	0.00	0.32	0.62	4.13	5.09
MA-EPN-S04	HS/SZ	901	Wmica	47.71	0.13	36.87	1.17	0.00	0.36	0.78	3.17	6.03
MA-EPN-S04	HS/SZ	902	Wmica	49.77	0.30	33.92	1.51	0.00	0.42	0.39	1.47	8.45
MA-EPN-S04	HS/SZ	903	Wmica	49.22	0.29	33.54	1.67	0.00	0.54	0.59	1.31	8.44
MA-EPN-S04	HS/SZ	904	Wmica	48.83	0.10	33.96	1.75	0.00	0.60	0.78	1.53	8.40
MA-EPN-S04	HS/SZ	905	Wmica	47.64	0.08	33.50	1.87	0.14	0.82	1.08	1.25	8.48
MA-EPN-S04	HS/SZ	906	Wmica	46.68	0.08	32.81	2.18	0.01	0.77	1.28	1.21	8.43
MA11-068	HS/SZ	921	Chl	24.55	0.03	23.48	29.75	0.15	11.26	0.05	0.43	0.23
MA11-068	HS/SZ	922	Chl	25.23	0.01	23.73	29.24	0.06	11.57	0.01	0.41	0.26
MA11-068	HS/SZ	923	Chl	24.77	0.09	23.44	29.81	0.28	11.17	0.05	0.45	0.18
MA11-068	HS/SZ	924	Chl	25.12	0.03	23.51	29.56	0.16	11.54	0.03	0.47	0.15
MA11-068	HS/SZ	925	Chl	25.39	0.06	23.91	29.57	0.11	11.74	0.09	0.56	0.22
MA11-068	HS/SZ	926	Wmica	45.05	0.21	36.23	2.12	0.00	0.56	0.00	1.43	10.49
MA11-068	HS/SZ	927	Wmica	45.16	0.15	36.35	2.11	0.00	0.58	0.00	1.82	9.89
MA11-068	HS/SZ	928	Wmica	45.06	0.11	36.09	2.32	0.00	0.63	0.00	1.47	10.15
MA11-068	HS/SZ	929	Wmica	45.08	0.21	36.39	2.35	0.05	0.61	0.00	1.48	10.39
MA11-068	HS/SZ	930	Wmica	45.44	0.13	36.74	1.92	0.00	0.55	0.00	1.64	10.15
MA11-068	HS/SZ	931	Wmica	45.61	0.26	36.49	1.87	0.00	0.65	0.00	1.71	10.11
MA11-068	HS/SZ	932	Wmica	45.64	0.25	36.94	1.83	0.09	0.56	0.00	1.69	9.79
MA11-068	HS/SZ	933	Wmica	45.81	0.19	36.40	1.99	0.03	0.57	0.00	1.57	10.20
MA11-068	HS/SZ	934	Wmica	46.06	0.26	36.48	1.76	0.05	0.64	0.00	1.45	10.06
MA11-068	HS/SZ	935	Wmica	45.56	0.25	36.14	2.09	0.01	0.70	0.00	1.57	10.28
MA11-068	HS/SZ	936	Wmica	46.18	0.07	36.68	1.71	0.00	0.65	0.00	1.58	10.13
MA11-068	HS/SZ	938	Wmica	46.27	0.11	36.56	1.62	0.00	0.64	0.00	1.92	9.81

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-068	HS/SZ	939	Wmica	46.02	0.24	36.68	1.92	0.04	0.78	0.00	1.66	10.10
MA11-068	HS/SZ	940	Wmica	46.01	0.20	37.17	1.73	0.04	0.70	0.00	2.13	9.67
MA11-068	HS/SZ	941	Wmica	45.74	0.13	36.25	2.34	0.00	0.76	0.00	1.46	10.52
MA11-068	HS/SZ	942	Wmica	45.85	0.10	37.05	1.91	0.27	0.65	0.00	1.71	10.17
MA11-068	HS/SZ	943	Chl	23.79	0.00	22.59	28.29	0.05	11.09	0.05	0.38	0.17
MA11-068	HS/SZ	944	Chl	23.84	0.00	22.68	28.60	0.33	11.02	0.01	0.43	0.16
MA11-068	HS/SZ	945	Chl	23.93	0.01	22.83	28.86	0.10	11.22	0.02	0.40	0.12
MA11-068	HS/SZ	946	Chl	24.12	0.04	22.50	28.68	0.00	11.19	0.05	0.42	0.14
MA11-068	HS/SZ	947	Chl	23.80	0.13	22.65	28.77	0.22	11.11	0.09	0.37	0.11
MA11-068	HS/SZ	948	Chl	24.07	0.12	22.93	28.62	0.29	11.32	0.03	0.51	0.10
MA11-068	HS/SZ	949	Chl	24.04	0.12	22.98	28.37	0.22	11.22	0.10	0.52	0.12
MA11-068	HS/SZ	950	Chl	23.99	0.03	22.80	28.57	0.23	11.24	0.13	0.56	0.17
MA11-068	HS/SZ	951	Chl	23.94	0.03	23.04	28.53	0.30	11.29	0.00	0.48	0.12
MA11-068	HS/SZ	952	Chl	24.21	0.04	23.18	28.64	0.19	11.55	0.01	0.42	0.07
MA11-068	HS/SZ	953	Chl	23.86	0.02	22.82	29.16	0.14	11.39	0.07	0.46	0.04
MA11-068	HS/SZ	954	Chl	24.26	0.07	23.13	28.72	0.33	11.51	0.00	0.27	0.08
MA11-068	HS/SZ	955	Chl	24.37	0.04	23.06	28.83	0.33	11.67	0.06	0.38	0.04
MA11-068	HS/SZ	956	Chl	24.35	0.18	23.09	28.75	0.17	11.38	0.09	0.33	0.07
MA11-068	HS/SZ	957	Chl	24.01	0.04	22.98	28.74	0.31	11.26	0.06	0.57	0.12
MA11-068	HS/SZ	958	Chl	24.20	0.05	23.14	28.74	0.21	11.55	0.00	0.53	0.11
MA11-068	HS/SZ	959	Chl	24.77	0.10	23.11	28.57	0.17	11.46	0.00	0.43	0.11
MA11-068	HS/SZ	960	Chl	24.63	0.02	23.25	28.95	0.11	11.69	0.02	0.44	0.11
MA11-068	HS/SZ	961	Chl	24.30	0.09	23.46	29.44	0.19	11.58	0.00	0.34	0.09
MA11-068	HS/SZ	962	Chl	24.62	0.00	23.41	28.86	0.21	11.75	0.03	0.38	0.13
MA11-068	HS/SZ	963	Chl	24.61	0.06	23.40	29.00	0.26	11.56	0.05	0.43	0.09
MA11-068	HS/SZ	964	Wmica	43.09	0.13	34.50	2.30	0.00	0.57	0.00	1.70	9.53
MA11-068	HS/SZ	965	Wmica	44.91	0.04	38.75	0.82	0.00	0.00	0.24	6.33	1.66
MA11-068	HS/SZ	966	Wmica	43.10	0.26	34.70	2.26	0.19	0.67	0.00	1.40	10.04
MA11-068	HS/SZ	967	Wmica	43.26	0.29	34.58	2.42	0.04	0.66	0.00	1.44	9.78
MA11-068	HS/SZ	968	Wmica	43.70	0.04	35.13	2.05	0.15	0.51	0.00	1.37	10.15
MA11-068	HS/SZ	969	Wmica	45.58	0.14	37.97	0.92	0.11	0.05	0.13	5.76	2.61
MA11-068	HS/SZ	970	Wmica	45.58	0.07	38.67	0.76	0.00	0.02	0.19	6.16	1.89
MA11-068	HS/SZ	971	Wmica	43.76	0.11	35.19	2.23	0.10	0.65	0.00	1.47	9.99
MA11-068	HS/SZ	972	Wmica	44.13	0.16	35.06	2.21	0.00	0.61	0.00	1.38	10.24

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-068	HS/SZ	973	Wmica	44.17	0.11	35.32	1.93	0.00	0.67	0.00	1.53	10.18
MA11-068	HS/SZ	974	Wmica	45.42	0.11	38.76	0.97	0.00	0.04	0.20	6.22	2.01
MA11-068	HS/SZ	975	Wmica	44.45	0.33	34.69	2.38	0.00	0.77	0.00	1.33	10.31
MA11-068	HS/SZ	976	Wmica	44.19	0.28	35.20	2.03	0.00	0.74	0.00	1.50	10.27
MA11-068	HS/SZ	977	Wmica	44.72	0.15	35.40	2.17	0.00	0.62	0.00	1.46	10.07
MA11-068	HS/SZ	978	Fspar	64.67	0.00	20.28	0.27	0.00	0.01	0.85	10.27	0.13
MA11-068	HS/SZ	979	Fspar	64.29	0.01	20.62	0.27	0.00	0.00	1.34	10.21	0.22
MA11-068	HS/SZ	982	Fspar	65.69	0.04	19.69	0.28	0.01	0.02	0.35	10.72	0.14
MA11-068	HS/SZ	983	Fspar	65.19	0.03	20.06	0.13	0.14	0.00	0.43	10.75	0.09
MA11-068	HS/SZ	984	Fspar	63.34	0.02	22.12	0.23	0.07	0.01	0.50	10.19	0.24
MA11-068	HS/SZ	988	Fspar	62.40	0.00	21.99	0.20	0.00	0.04	3.10	9.33	0.14
MA11-068	HS/SZ	989	Fspar	63.26	0.01	21.22	0.30	0.17	0.00	2.18	9.90	0.21
MA11-068	HS/SZ	991	Fspar	68.22	0.07	18.62	0.29	0.00	0.01	0.84	9.43	0.13
MA11-068	HS/SZ	993	Fspar	65.72	0.01	20.16	0.23	0.05	0.00	0.53	10.65	0.14
MA11-068	HS/SZ	994	Fspar	64.36	0.00	21.15	0.32	0.01	0.00	1.66	10.06	0.18
MA11-068	HS/SZ	995	Fspar	64.95	0.00	20.84	0.25	0.00	0.00	1.29	10.35	0.15
MA11-068	HS/SZ	996	Chl	23.18	0.05	21.33	28.42	0.15	10.73	0.07	0.41	0.08
MA11-068	HS/SZ	997	Chl	23.23	0.02	21.56	28.77	0.16	10.77	0.18	0.39	0.03
MA11-068	HS/SZ	998	Chl	23.81	0.00	22.53	28.79	0.23	11.07	0.08	0.24	0.15
MA11-068	HS/SZ	999	Chl	23.90	0.00	22.46	29.16	0.22	10.98	0.04	0.33	0.03
MA11-068	HS/SZ	1000	Chl	23.49	0.02	22.62	29.07	0.22	11.01	0.02	0.45	0.08
MA11-068	HS/SZ	1001	Chl	23.79	0.01	22.81	28.76	0.26	11.12	0.09	0.27	0.06
MA11-068	HS/SZ	1002	Chl	24.01	0.00	22.64	29.19	0.18	11.26	0.01	0.38	0.06
MA11-068	HS/SZ	1003	Chl	23.74	0.03	23.32	29.38	0.31	11.35	0.04	0.37	0.07
MA11-068	HS/SZ	1004	Chl	24.27	0.05	23.22	29.49	0.15	11.59	0.07	0.37	0.03
MA11-068	HS/SZ	1005	Wmica	44.84	0.17	34.82	2.12	0.03	0.63	0.00	1.42	9.80
MA11-068	HS/SZ	1006	Wmica	44.99	0.13	34.70	2.15	0.00	0.61	0.00	1.41	9.96
MA11-068	HS/SZ	1007	Wmica	44.27	0.25	35.76	2.26	0.09	0.56	0.00	1.29	10.27
MA11-068	HS/SZ	1008	Wmica	44.82	0.17	35.61	2.46	0.09	0.70	0.00	1.32	10.29
MA11-068	HS/SZ	1009	Wmica	44.74	0.18	35.57	2.41	0.21	0.73	0.00	1.48	10.12
MA11-068	HS/SZ	1010	Wmica	44.83	0.21	35.46	2.48	0.04	0.68	0.00	1.46	10.02
MA11-068	HS/SZ	1011	Wmica	45.24	0.21	35.72	2.31	0.07	0.69	0.00	1.32	10.13
MA11-068	HS/SZ	1012	Wmica	45.37	0.30	35.50	2.40	0.00	0.60	0.00	1.24	10.37
MA11-068	HS/SZ	1013	Wmica	45.48	0.33	35.72	2.67	0.00	0.65	0.00	1.31	10.15

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-068	HS/SZ	1014	Wmica	45.92	0.14	36.21	2.08	0.00	0.61	0.00	1.39	10.16
MA11-068	HS/SZ	1015	Wmica	45.94	0.12	36.52	2.28	0.20	0.44	0.00	1.37	10.04
MA11-068	HS/SZ	1016	Wmica	45.68	0.22	36.39	2.18	0.09	0.72	0.00	1.53	10.10
MA11-068	HS/SZ	1017	Chl	23.60	0.12	22.98	28.74	0.34	11.54	0.01	0.45	0.14
MA11-068	HS/SZ	1018	Chl	23.96	0.00	22.99	28.65	0.21	11.34	0.03	0.37	0.11
MA11-068	HS/SZ	1019	Chl	23.83	0.00	22.93	29.18	0.16	11.20	0.03	0.46	0.08
MA11-068	HS/SZ	1020	Chl	23.57	0.03	23.11	28.84	0.34	11.28	0.00	0.38	0.11
MA11-068	HS/SZ	1021	Chl	23.78	0.03	23.08	28.83	0.21	11.16	0.03	0.40	0.13
MA11-068	HS/SZ	1022	Chl	23.37	0.04	23.13	29.68	0.24	10.98	0.00	0.39	0.12
MA11-068	HS/SZ	1023	Chl	23.81	0.04	23.21	29.10	0.14	11.48	0.01	0.40	0.11
MA11-068	HS/SZ	1024	Chl	23.61	0.00	23.28	29.30	0.20	11.18	0.00	0.52	0.08
MA11-068	HS/SZ	1025	Chl	23.68	0.05	23.37	29.57	0.26	10.93	0.01	0.29	0.12
MA11-068	HS/SZ	1026	Chl	23.73	0.07	23.24	28.61	0.21	11.60	0.03	0.49	0.11
MA11-068	HS/SZ	1027	Chl	23.71	0.00	23.24	29.46	0.10	11.16	0.08	0.49	0.14
MA11-068	HS/SZ	1028	Chl	23.69	0.08	23.21	29.18	0.15	11.24	0.07	0.39	0.10
MA11-068	HS/SZ	1029	Chl	24.13	0.05	23.43	28.70	0.24	11.51	0.04	0.48	0.16
MA11-068	HS/SZ	1030	Chl	24.05	0.09	23.62	28.53	0.25	11.55	0.01	0.39	0.11
MA11-068	HS/SZ	1031	Chl	23.92	0.04	23.43	29.48	0.21	11.46	0.05	0.47	0.08
MA11-068	HS/SZ	1032	Wmica	43.24	0.09	34.27	2.42	0.00	0.82	0.00	1.08	9.97
MA11-068	HS/SZ	1033	Wmica	43.95	0.18	34.75	2.22	0.08	0.78	0.00	1.27	10.29
MA11-068	HS/SZ	1034	Wmica	43.93	0.20	35.23	2.30	0.00	0.72	0.00	1.29	10.00
MA11-068	HS/SZ	1035	Wmica	43.77	0.26	34.92	2.80	0.00	0.82	0.00	1.25	10.40
MA11-068	HS/SZ	1036	Wmica	44.50	0.35	34.48	2.49	0.00	0.93	0.00	1.16	10.33
MA11-068	HS/SZ	1037	Wmica	43.99	0.32	35.22	2.53	0.00	0.73	0.00	1.31	10.36
MA11-068	HS/SZ	1038	Wmica	43.86	0.38	34.92	2.77	0.00	0.72	0.00	1.24	10.53
MA11-068	HS/SZ	1039	Wmica	44.43	0.25	35.18	2.40	0.02	0.94	0.00	1.30	10.36
MA11-068	HS/SZ	1040	Wmica	44.29	0.34	35.62	2.52	0.03	0.76	0.00	1.35	10.45
MA11-068	HS/SZ	1041	Chl	22.81	0.06	21.55	27.76	0.27	10.01	0.07	0.48	0.05
MA11-068	HS/SZ	1042	Chl	22.69	0.05	21.35	27.85	0.20	10.36	0.01	0.44	0.05
MA11-068	HS/SZ	1043	Chl	22.71	0.00	21.49	27.76	0.08	10.59	0.07	0.36	0.07
MA11-068	HS/SZ	1044	Chl	22.41	0.13	21.81	28.26	0.11	10.42	0.07	0.45	0.05
MA11-068	HS/SZ	1045	Chl	22.89	0.11	21.87	27.62	0.26	10.58	0.00	0.46	0.07
MA11-068	HS/SZ	1046	Chl	22.99	0.00	22.01	27.64	0.26	10.81	0.04	0.30	0.03
MA11-068	HS/SZ	1047	Chl	23.00	0.00	22.30	28.34	0.14	11.03	0.00	0.43	0.04

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-068	HS/SZ	1048	Chl	23.26	0.00	22.42	28.47	0.13	10.96	0.00	0.40	0.08
MA11-068	HS/SZ	1049	Chl	23.50	0.04	22.53	27.81	0.17	11.21	0.05	0.31	0.02
MA11-068	HS/SZ	1050	Chl	23.39	0.06	22.55	28.76	0.06	10.83	0.02	0.41	0.04
MA11-068	HS/SZ	1051	Chl	23.64	0.17	22.93	28.49	0.20	11.33	0.07	0.47	0.00
MA11-068	HS/SZ	1052	Wmica	42.51	0.12	33.64	1.83	0.06	0.66	0.00	1.46	9.58
MA11-068	HS/SZ	1053	Wmica	42.76	0.24	33.00	2.24	0.00	0.73	0.00	1.36	9.80
MA11-068	HS/SZ	1054	Wmica	42.90	0.16	34.13	1.83	0.00	0.68	0.00	1.49	9.34
MA11-068	HS/SZ	1055	Wmica	42.90	0.29	33.51	2.25	0.04	0.80	0.00	1.26	10.05
MA11-068	HS/SZ	1056	Wmica	42.80	0.21	34.15	1.96	0.00	0.61	0.00	1.33	9.68
MA11-068	HS/SZ	1057	Wmica	42.71	0.07	34.72	1.80	0.06	0.58	0.01	1.57	9.56
MA11-068	HS/SZ	1058	Wmica	42.97	0.14	34.10	2.23	0.00	0.59	0.00	1.44	9.68
MA11-068	HS/SZ	1059	Wmica	43.49	0.13	34.15	2.04	0.01	0.65	0.00	1.55	9.54
MA11-068	HS/SZ	1060	Wmica	43.20	0.41	33.67	2.13	0.00	0.76	0.00	1.42	9.72
MA11-068	HS/SZ	1061	Wmica	43.39	0.07	33.79	2.02	0.00	0.81	0.00	1.32	10.22
MA11-068	HS/SZ	1062	Wmica	43.32	0.23	34.71	2.12	0.00	0.64	0.00	1.59	9.50
MA11-068	HS/SZ	1063	Wmica	43.37	0.23	34.28	1.96	0.08	0.80	0.00	1.56	9.63
MA11-068	HS/SZ	1079	Wmica	43.61	0.27	33.64	2.29	0.04	1.00	0.00	1.41	10.22
MA11-068	HS/SZ	1080	Wmica	43.39	0.27	34.47	2.27	0.25	0.76	0.00	1.22	9.99
MA11-068	HS/SZ	1081	Wmica	44.21	0.32	34.05	1.97	0.00	0.69	0.00	1.36	9.84
MA11-068	HS/SZ	1085	Wmica	44.17	0.10	35.02	1.76	0.03	0.69	0.00	1.73	9.29
MA11-068	HS/SZ	1086	Wmica	45.51	0.28	33.32	2.13	0.00	0.59	0.00	1.33	9.55
MA11-068	HS/SZ	1087	Wmica	44.21	0.09	35.14	1.65	0.00	0.62	0.00	1.70	9.64
MA11-068	HS/SZ	1088	Wmica	44.23	0.15	34.76	1.85	0.00	0.62	0.00	1.58	9.73
MA11-068	HS/SZ	1089	Wmica	43.17	0.03	37.08	0.73	0.00	0.03	0.24	5.95	1.68
MA11-068	HS/SZ	1090	Wmica	43.48	0.07	36.85	0.70	0.18	0.05	0.15	5.99	1.77
MA11-068	HS/SZ	1091	Wmica	43.53	0.05	37.14	0.71	0.00	0.01	0.21	6.15	1.70
MA11-068	HS/SZ	1092	Wmica	44.18	0.03	37.34	0.62	0.00	0.31	0.16	6.32	1.41
MA11-068	HS/SZ	1093	Fspar	62.76	0.01	19.46	0.13	0.00	0.02	0.50	10.30	0.13
MA11-068	HS/SZ	1094	Fspar	62.76	0.01	19.37	0.76	0.07	0.00	0.72	10.10	0.09
MA11-068	HS/SZ	1095	Fspar	63.16	0.04	19.67	0.27	0.01	0.00	0.67	10.45	0.09
MA11-068	HS/SZ	1096	Fspar	67.91	0.00	17.32	0.28	0.03	0.01	0.40	9.63	0.12
MA11-068	HS/SZ	1097	Fspar	64.52	0.01	19.55	0.26	0.03	0.00	0.48	10.61	0.14
MA11-068	HS/SZ	1098	Fspar	65.24	0.14	19.58	0.18	0.00	0.00	0.67	10.48	0.10
MA11-068	HS/SZ	1099	Chl	22.81	0.00	21.61	28.84	0.06	10.28	0.03	0.04	0.11

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-068	HS/SZ	1100	Chl	23.22	0.02	22.27	28.92	0.24	10.93	0.00	0.25	0.07
MA11-068	HS/SZ	1101	Chl	23.66	0.01	22.07	28.47	0.18	10.93	0.08	0.38	0.12
MA11-068	HS/SZ	1102	Chl	23.80	0.03	22.01	28.70	0.11	11.19	0.08	0.28	0.09
MA11-068	HS/SZ	1103	Chl	23.95	0.00	22.50	28.56	0.01	11.33	0.05	0.31	0.01
MA11-068	HS/SZ	1104	Chl	24.12	0.08	22.56	28.32	0.20	11.29	0.03	0.21	0.02
MA11-068	HS/SZ	1105	Chl	23.86	0.00	22.01	29.41	0.11	11.26	0.01	0.25	0.03
MA11-068	HS/SZ	1106	Chl	23.43	0.05	22.42	29.51	0.10	11.06	0.04	0.28	0.09
MA11-068	HS/SZ	1107	Chl	24.19	0.07	23.01	28.90	0.06	11.20	0.04	0.02	0.00
MA11-068	HS/SZ	1108	Chl	23.99	0.00	23.18	28.61	0.29	11.23	0.02	0.30	0.10
MA11-068	HS/SZ	1109	Chl	23.79	0.00	22.70	29.48	0.17	11.26	0.03	0.39	0.10
MA11-068	HS/SZ	1110	Chl	23.69	0.03	23.03	29.48	0.19	11.34	0.04	0.43	0.06
MA11-068	HS/SZ	1111	Chl	24.25	0.02	22.94	28.79	0.12	11.51	0.02	0.34	0.01
MA11-068	HS/SZ	1112	Chl	23.71	0.10	23.01	29.09	0.16	11.51	0.03	0.40	0.07
MA11-068	HS/SZ	1113	Wmica	43.11	0.13	33.40	2.51	0.02	0.79	0.00	1.23	9.95
MA11-068	HS/SZ	1114	Wmica	43.20	0.27	33.62	2.72	0.00	0.73	0.00	1.26	9.77
MA11-068	HS/SZ	1115	Wmica	43.55	0.24	33.46	2.66	0.18	0.86	0.00	1.19	10.24
MA11-068	HS/SZ	1116	Wmica	43.31	0.17	34.06	2.59	0.06	0.72	0.00	1.24	10.01
MA11-068	HS/SZ	1117	Wmica	43.86	0.12	34.34	2.72	0.00	0.81	0.00	1.46	9.73
MA11-068	HS/SZ	1118	Wmica	44.13	0.25	33.57	2.86	0.00	0.84	0.00	1.11	10.14
MA11-068	HS/SZ	1119	Wmica	43.35	0.16	34.61	2.57	0.08	0.68	0.00	1.28	9.92
MA11-068	HS/SZ	1120	Wmica	43.24	0.26	34.57	2.75	0.00	0.80	0.00	1.32	9.95
MA11-068	HS/SZ	1121	Wmica	44.17	0.25	35.21	2.20	0.02	0.71	0.00	1.70	9.60
MA11-068	HS/SZ	1122	Wmica	44.08	0.28	33.95	2.95	0.00	0.94	0.00	1.14	10.42
MA11-068	HS/SZ	1123	Wmica	42.86	0.17	34.55	2.06	0.05	0.48	0.00	1.29	9.99
MA11-068	HS/SZ	1124	Wmica	42.79	0.23	34.48	1.93	0.02	0.67	0.00	1.44	10.00
MA11-068	HS/SZ	1125	Wmica	43.58	0.10	33.77	2.24	0.05	0.72	0.00	1.14	10.12
MA11-068	HS/SZ	1126	Wmica	43.36	0.15	33.71	2.01	0.10	0.94	0.00	1.27	10.05
MA11-068	HS/SZ	1127	Wmica	43.60	0.15	33.96	2.19	0.03	0.96	0.00	1.17	10.01
MA11-068	HS/SZ	1128	Wmica	43.60	0.31	34.48	2.20	0.00	0.70	0.00	1.21	10.05
MA11-068	HS/SZ	1129	Wmica	43.63	0.29	33.37	2.51	0.04	0.86	0.00	1.03	10.34
MA11-068	HS/SZ	1130	Wmica	43.86	0.29	34.05	2.07	0.00	0.86	0.00	1.11	10.20
MA11-068	HS/SZ	1131	Wmica	43.55	0.22	34.57	2.23	0.00	0.62	0.00	1.23	9.96
MA11-068	HS/SZ	1132	Wmica	43.79	0.28	33.96	2.05	0.00	0.86	0.00	1.18	10.36
MA11-068	HS/SZ	1133	Wmica	44.04	0.23	34.40	2.11	0.00	0.72	0.00	1.33	10.06

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1134	Wmica	45.84	0.10	35.66	1.31	0.18	0.74	0.05	1.56	10.08
MA11-072	HS/SZ	1135	Wmica	45.74	0.26	35.50	1.69	0.03	0.79	0.01	1.57	10.13
MA11-072	HS/SZ	1136	Wmica	45.95	0.14	35.94	1.45	0.09	0.59	0.00	1.65	9.97
MA11-072	HS/SZ	1137	Wmica	46.00	0.12	35.18	1.56	0.22	0.74	0.00	1.74	10.15
MA11-072	HS/SZ	1138	Wmica	46.01	0.12	35.96	1.64	0.00	0.79	0.00	1.70	9.94
MA11-072	HS/SZ	1139	Wmica	45.93	0.14	35.82	1.56	0.01	0.85	0.03	1.76	9.99
MA11-072	HS/SZ	1140	Wmica	46.45	0.14	35.98	1.52	0.00	0.62	0.01	1.75	9.76
MA11-072	HS/SZ	1141	Wmica	45.93	0.15	35.81	1.71	0.14	0.66	0.00	1.59	10.16
MA11-072	HS/SZ	1142	Wmica	46.20	0.43	34.96	1.94	0.05	0.96	0.00	1.43	10.55
MA11-072	HS/SZ	1143	Wmica	45.69	0.21	35.92	1.53	0.18	0.87	0.00	1.76	10.05
MA11-072	HS/SZ	1144	Wmica	46.39	0.14	35.65	1.65	0.01	0.77	0.00	1.78	9.99
MA11-072	HS/SZ	1145	Wmica	46.33	0.15	36.16	1.18	0.00	0.79	0.01	1.64	9.99
MA11-072	HS/SZ	1146	Wmica	46.10	0.24	36.08	1.72	0.00	0.59	0.00	1.53	10.14
MA11-072	HS/SZ	1147	Wmica	46.29	0.22	35.29	1.64	0.26	1.00	0.00	1.39	10.42
MA11-072	HS/SZ	1148	Wmica	45.99	0.35	36.32	1.43	0.00	0.82	0.00	1.61	10.21
MA11-072	HS/SZ	1149	Fspar	59.22	0.03	24.37	0.22	0.02	0.02	6.48	7.53	0.19
MA11-072	HS/SZ	1150	Fspar	59.37	0.00	24.61	0.30	0.00	0.02	5.79	7.82	0.26
MA11-072	HS/SZ	1151	Fspar	59.56	0.00	24.54	0.22	0.04	0.00	5.84	7.89	0.24
MA11-072	HS/SZ	1152	Fspar	59.75	0.00	24.32	0.34	0.02	0.04	5.76	7.91	0.21
MA11-072	HS/SZ	1153	Fspar	59.69	0.01	24.74	0.21	0.00	0.02	6.26	7.54	0.12
MA11-072	HS/SZ	1154	Fspar	59.47	0.00	24.70	0.16	0.00	0.00	6.36	7.59	0.24
MA11-072	HS/SZ	1155	Fspar	61.67	0.00	23.67	0.09	0.04	0.00	4.59	8.52	0.17
MA11-072	HS/SZ	1156	Fspar	60.08	0.00	24.48	0.36	0.00	0.00	5.63	7.99	0.23
MA11-072	HS/SZ	1157	Fspar	60.06	0.02	24.52	0.24	0.00	0.06	5.63	8.01	0.22
MA11-072	HS/SZ	1158	Fspar	59.29	0.00	25.05	0.10	0.00	0.01	6.78	7.56	0.27
MA11-072	HS/SZ	1159	Fspar	59.62	0.01	25.08	0.13	0.00	0.01	6.45	7.46	0.24
MA11-072	HS/SZ	1160	Fspar	59.26	0.06	24.78	0.17	0.15	0.01	6.42	7.62	0.34
MA11-072	HS/SZ	1161	Fspar	59.46	0.13	25.09	0.17	0.02	0.00	6.48	7.51	0.18
MA11-072	HS/SZ	1162	Fspar	59.72	0.00	25.00	0.16	0.00	0.00	6.57	7.45	0.20
MA11-072	HS/SZ	1163	Fspar	59.54	0.03	25.04	0.30	0.04	0.01	6.39	7.71	0.18
MA11-072	HS/SZ	1164	Fspar	60.14	0.00	24.85	0.14	0.02	0.02	5.97	7.89	0.20
MA11-072	HS/SZ	1165	Fspar	59.97	0.00	24.68	0.12	0.06	0.02	5.90	7.92	0.17
MA11-072	HS/SZ	1166	Fspar	59.59	0.00	25.00	0.28	0.18	0.00	6.41	7.68	0.22
MA11-072	HS/SZ	1167	Fspar	61.61	0.00	23.80	0.21	0.04	0.04	4.78	8.49	0.23

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1168	Fspar	60.07	0.00	24.55	0.35	0.00	0.03	5.98	7.88	0.26
MA11-072	HS/SZ	1169	Fspar	60.99	0.03	24.44	0.23	0.06	0.03	5.65	8.31	0.18
MA11-072	HS/SZ	1185	Wmica	40.30	0.27	31.49	1.47	0.00	0.76	0.06	1.20	9.69
MA11-072	HS/SZ	1186	Wmica	42.66	0.32	29.93	1.62	0.04	0.91	0.08	1.10	9.37
MA11-072	HS/SZ	1187	Wmica	40.89	0.22	32.21	1.14	0.00	0.74	0.00	1.33	9.64
MA11-072	HS/SZ	1188	Wmica	42.63	0.14	32.65	1.27	0.06	0.80	0.00	1.37	9.60
MA11-072	HS/SZ	1189	Wmica	43.25	0.15	32.77	1.33	0.00	0.81	0.00	1.25	9.79
MA11-072	HS/SZ	1190	Wmica	47.18	0.16	36.75	1.76	0.00	0.98	0.27	1.56	10.44
MA11-072	HS/SZ	1191	Fspar	60.01	0.00	24.73	0.10	0.00	0.04	6.68	7.72	0.11
MA11-072	HS/SZ	1192	Fspar	59.91	0.00	24.76	0.30	0.00	0.01	6.53	7.91	0.15
MA11-072	HS/SZ	1193	Fspar	60.09	0.01	25.02	0.16	0.02	0.00	6.49	7.77	0.05
MA11-072	HS/SZ	1194	Fspar	60.38	0.03	24.62	0.06	0.00	0.03	6.37	8.00	0.12
MA11-072	HS/SZ	1195	Wmica	47.34	0.06	36.98	2.01	0.04	1.13	0.23	1.55	10.27
MA11-072	HS/SZ	1196	Wmica	47.48	0.15	37.50	1.38	0.14	0.76	0.03	1.56	10.46
MA11-072	HS/SZ	1197	Wmica	47.76	0.13	37.54	1.46	0.02	0.97	0.19	1.65	10.23
MA11-072	HS/SZ	1198	Fspar	60.15	0.03	24.85	0.19	0.00	0.03	6.43	7.98	0.14
MA11-072	HS/SZ	1199	Fspar	60.95	0.00	24.57	0.26	0.00	0.02	6.07	8.21	0.06
MA11-072	HS/SZ	1200	Fspar	60.16	0.04	25.14	0.20	0.01	0.04	6.56	7.76	0.18
MA11-072	HS/SZ	1201	Fspar	61.76	0.00	24.24	0.14	0.00	0.01	5.88	8.18	0.16
MA11-072	HS/SZ	1202	Fspar	60.63	0.00	24.88	0.24	0.00	0.05	6.73	7.77	0.12
MA11-072	HS/SZ	1203	Fspar	60.22	0.01	25.25	0.31	0.09	0.01	6.52	7.95	0.12
MA11-072	HS/SZ	1204	Fspar	60.89	0.00	24.80	0.33	0.00	0.02	6.47	7.98	0.11
MA11-072	HS/SZ	1205	Wmica	47.85	0.16	38.14	1.22	0.11	0.97	0.07	1.73	10.14
MA11-072	HS/SZ	1206	Fspar	62.82	0.00	23.61	0.32	0.00	0.03	4.83	8.82	0.23
MA11-072	HS/SZ	1207	Fspar	61.44	0.00	24.89	0.24	0.00	0.04	5.50	8.52	0.20
MA11-072	HS/SZ	1208	Wmica	44.99	0.06	35.76	1.18	0.00	0.49	0.05	1.44	9.91
MA11-072	HS/SZ	1209	Wmica	45.81	0.07	35.32	1.31	0.11	0.77	0.03	1.43	9.95
MA11-072	HS/SZ	1210	Wmica	45.09	0.25	35.39	1.49	0.08	0.73	0.10	1.45	10.17
MA11-072	HS/SZ	1212	Wmica	46.30	0.15	35.29	1.01	0.00	0.64	0.00	1.88	9.54
MA11-072	HS/SZ	1213	Wmica	45.73	0.21	35.78	1.07	0.10	0.78	0.00	1.68	9.84
MA11-072	HS/SZ	1214	Wmica	45.49	0.27	35.34	1.67	0.00	0.59	0.04	1.39	10.31
MA11-072	HS/SZ	1215	Wmica	45.97	0.14	35.52	1.32	0.15	0.72	0.00	1.61	10.02
MA11-072	HS/SZ	1216	Wmica	45.94	0.15	35.63	1.19	0.00	0.80	0.05	1.62	10.15
MA11-072	HS/SZ	1217	Wmica	46.08	0.10	35.89	1.38	0.00	0.74	0.04	1.70	10.04

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1218	Fspar	58.75	0.00	23.80	0.15	0.01	0.03	5.68	8.03	0.23
MA11-072	HS/SZ	1219	Fspar	58.91	0.02	24.47	0.08	0.00	0.01	6.14	7.84	0.13
MA11-072	HS/SZ	1220	Fspar	58.78	0.00	24.61	0.12	0.00	0.01	6.33	7.68	0.17
MA11-072	HS/SZ	1221	Fspar	59.64	0.02	24.06	0.00	0.05	0.02	5.52	8.13	0.18
MA11-072	HS/SZ	1222	Fspar	59.08	0.05	24.38	0.04	0.17	0.02	6.10	7.72	0.25
MA11-072	HS/SZ	1223	Fspar	59.37	0.02	24.37	0.12	0.02	0.02	5.89	7.95	0.13
MA11-072	HS/SZ	1224	Fspar	59.38	0.09	24.18	0.12	0.00	0.03	5.91	7.91	0.13
MA11-072	HS/SZ	1225	Fspar	59.11	0.00	24.91	0.13	0.06	0.03	6.17	7.72	0.18
MA11-072	HS/SZ	1226	Fspar	60.26	0.00	24.01	0.03	0.00	0.00	5.39	8.26	0.21
MA11-072	HS/SZ	1227	Fspar	59.00	0.00	24.90	0.17	0.04	0.03	6.61	7.64	0.26
MA11-072	HS/SZ	1228	Fspar	59.77	0.00	24.27	0.11	0.00	0.00	6.11	7.91	0.30
MA11-072	HS/SZ	1229	Fspar	60.13	0.00	24.29	0.19	0.02	0.01	5.93	7.95	0.18
MA11-072	HS/SZ	1230	Fspar	60.11	0.00	24.34	0.15	0.01	0.00	5.80	7.96	0.12
MA11-072	HS/SZ	1231	Wmica	44.65	0.09	34.42	1.22	0.00	0.56	0.03	1.67	9.77
MA11-072	HS/SZ	1232	Wmica	44.44	0.17	34.22	1.62	0.08	0.85	0.00	1.49	9.84
MA11-072	HS/SZ	1233	Wmica	45.53	0.01	33.05	1.48	0.00	1.26	0.09	1.34	9.98
MA11-072	HS/SZ	1234	Wmica	44.58	0.14	34.93	0.87	0.00	0.79	0.09	1.53	9.88
MA11-072	HS/SZ	1235	Wmica	44.79	0.26	34.53	1.35	0.22	0.84	0.00	1.54	9.76
MA11-072	HS/SZ	1236	Wmica	44.60	0.31	34.68	1.46	0.00	0.83	0.00	1.63	9.84
MA11-072	HS/SZ	1237	Wmica	45.38	0.12	36.52	0.68	0.00	0.61	0.03	3.37	6.74
MA11-072	HS/SZ	1238	Wmica	44.63	0.00	34.67	1.42	0.13	0.82	0.00	1.64	9.87
MA11-072	HS/SZ	1239	Wmica	45.07	0.25	34.43	1.42	0.00	0.62	0.06	1.53	10.02
MA11-072	HS/SZ	1240	Wmica	45.80	0.16	33.40	1.49	0.00	1.32	0.03	1.36	10.10
MA11-072	HS/SZ	1241	Wmica	45.09	0.13	34.67	1.31	0.02	0.67	0.04	1.67	9.81
MA11-072	HS/SZ	1242	Wmica	46.66	0.13	33.48	1.08	0.10	0.63	0.71	2.35	8.55
MA11-072	HS/SZ	1243	Fspar	61.56	0.00	21.55	0.11	0.05	0.03	2.88	9.04	0.11
MA11-072	HS/SZ	1244	Fspar	64.72	0.06	19.61	0.00	0.04	0.00	0.60	10.60	0.11
MA11-072	HS/SZ	1245	Fspar	62.94	0.01	20.89	0.20	0.02	0.00	1.68	9.87	0.18
MA11-072	HS/SZ	1246	Fspar	61.83	0.02	21.38	0.13	0.09	0.00	3.02	9.31	0.10
MA11-072	HS/SZ	1247	Fspar	62.61	0.01	21.02	0.20	0.03	0.01	2.03	9.81	0.12
MA11-072	HS/SZ	1248	Fspar	58.20	0.00	23.83	0.19	0.00	0.00	5.73	7.86	0.23
MA11-072	HS/SZ	1249	Fspar	62.34	0.05	21.46	0.00	0.14	0.03	2.32	9.42	0.23
MA11-072	HS/SZ	1250	Fspar	60.45	0.00	22.53	0.20	0.00	0.01	4.29	8.54	0.12
MA11-072	HS/SZ	1251	Fspar	60.68	0.00	22.45	0.00	0.03	0.00	3.70	9.06	0.12

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1252	Fspar	62.17	0.01	21.57	0.07	0.07	0.00	2.73	9.27	0.13
MA11-072	HS/SZ	1253	Fspar	64.26	0.00	20.02	0.02	0.00	0.01	0.95	10.40	0.16
MA11-072	HS/SZ	1254	Fspar	62.77	0.00	21.08	0.00	0.10	0.01	2.52	9.50	0.14
MA11-072	HS/SZ	1255	Fspar	62.73	0.00	21.54	0.00	0.05	0.00	1.82	9.58	0.44
MA11-072	HS/SZ	1256	Fspar	60.09	0.00	22.83	0.07	0.15	0.00	4.53	8.59	0.13
MA11-072	HS/SZ	1257	Fspar	58.36	0.00	23.91	0.11	0.02	0.00	5.84	7.82	0.16
MA11-072	HS/SZ	1258	Fspar	58.10	0.08	24.49	0.08	0.00	0.00	5.70	7.60	0.47
MA11-072	HS/SZ	1259	Fspar	58.28	0.00	24.20	0.03	0.00	0.00	6.08	7.67	0.23
MA11-072	HS/SZ	1287	Fspar	63.90	0.00	20.57	0.09	0.03	0.00	1.63	9.99	0.10
MA11-072	HS/SZ	1288	Fspar	63.38	0.07	20.80	0.13	0.00	0.00	1.73	10.22	0.12
MA11-072	HS/SZ	1289	Fspar	64.92	0.06	20.11	0.05	0.02	0.04	0.55	10.67	0.15
MA11-072	HS/SZ	1290	Fspar	59.32	0.00	23.65	0.13	0.00	0.01	5.35	8.07	0.19
MA11-072	HS/SZ	1291	Fspar	59.89	0.01	23.41	0.00	0.00	0.00	4.82	8.32	0.12
MA11-072	HS/SZ	1292	Fspar	59.28	0.03	24.00	0.19	0.00	0.02	5.91	7.86	0.08
MA11-072	HS/SZ	1293	Fspar	59.10	0.01	23.85	0.10	0.00	0.00	5.57	7.95	0.29
MA11-072	HS/SZ	1294	Fspar	63.11	0.00	21.45	0.13	0.00	0.03	2.59	9.69	0.17
MA11-072	HS/SZ	1295	Fspar	58.93	0.14	24.68	0.12	0.07	0.04	6.03	7.87	0.13
MA11-072	HS/SZ	1296	Chl	24.60	0.13	22.71	24.35	0.13	13.27	0.12	0.44	0.14
MA11-072	HS/SZ	1297	Chl	24.30	0.00	21.57	24.94	0.21	13.10	0.11	0.49	0.14
MA11-072	HS/SZ	1298	Chl	24.59	0.04	22.68	24.82	0.37	12.94	0.08	0.48	0.16
MA11-072	HS/SZ	1299	Chl	24.41	0.00	22.39	24.98	0.00	13.28	0.16	0.46	0.04
MA11-072	HS/SZ	1300	Chl	24.60	0.01	22.56	24.81	0.20	13.45	0.13	0.34	0.07
MA11-072	HS/SZ	1302	Chl	24.68	0.00	22.28	24.58	0.17	13.43	0.09	0.46	0.07
MA11-072	HS/SZ	1303	Chl	24.44	0.06	22.17	24.78	0.23	13.56	0.14	0.51	0.13
MA11-072	HS/SZ	1304	Chl	24.96	0.00	22.84	24.91	0.00	13.16	0.03	0.48	0.20
MA11-072	HS/SZ	1305	Chl	25.12	0.00	22.37	25.21	0.06	13.73	0.10	0.50	0.20
MA11-072	HS/SZ	1306	Chl	24.80	0.05	22.87	25.11	0.05	13.57	0.05	0.48	0.04
MA11-072	HS/SZ	1307	Chl	25.72	0.03	22.76	24.89	0.18	13.77	0.14	0.39	0.18
MA11-072	HS/SZ	1308	Chl	25.29	0.04	23.07	25.60	0.28	13.78	0.05	0.41	0.16
MA11-072	HS/SZ	1309	Wmica	43.09	0.15	34.11	1.41	0.00	0.82	0.03	1.53	9.94
MA11-072	HS/SZ	1310	Wmica	43.68	0.13	34.19	1.53	0.00	0.82	0.01	1.43	9.74
MA11-072	HS/SZ	1311	Wmica	43.67	0.21	34.31	1.49	0.00	0.75	0.01	1.43	9.65
MA11-072	HS/SZ	1312	Wmica	43.97	0.31	34.42	1.41	0.03	0.64	0.04	1.25	10.02
MA11-072	HS/SZ	1313	Wmica	44.26	0.27	34.50	1.58	0.00	0.80	0.07	1.23	10.01

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1314	Wmica	44.43	0.09	34.66	1.74	0.00	0.77	0.03	1.34	9.92
MA11-072	HS/SZ	1315	Wmica	44.32	0.31	34.79	1.43	0.13	0.74	0.00	1.61	10.01
MA11-072	HS/SZ	1317	Wmica	44.49	0.16	35.61	1.17	0.00	0.64	0.00	1.69	9.84
MA11-072	HS/SZ	1318	Wmica	45.01	0.15	35.54	1.34	0.00	0.67	0.04	1.60	10.03
MA11-072	HS/SZ	1319	Wmica	45.38	0.23	34.99	1.38	0.01	0.85	0.00	1.48	10.21
MA11-072	HS/SZ	1320	Fspar	57.84	0.03	23.80	0.10	0.00	0.05	5.64	7.62	0.16
MA11-072	HS/SZ	1321	Fspar	57.70	0.12	23.94	0.19	0.00	0.00	6.03	7.72	0.21
MA11-072	HS/SZ	1322	Fspar	57.51	0.00	24.05	0.21	0.01	0.03	6.07	7.72	0.19
MA11-072	HS/SZ	1323	Fspar	59.60	0.00	23.14	0.18	0.01	0.05	4.75	8.29	0.14
MA11-072	HS/SZ	1324	Fspar	59.14	0.00	23.74	0.07	0.06	0.01	5.34	7.84	0.15
MA11-072	HS/SZ	1325	Fspar	58.05	0.00	24.09	0.17	0.03	0.02	6.08	7.69	0.25
MA11-072	HS/SZ	1326	Fspar	58.36	0.00	23.98	0.11	0.00	0.00	5.98	7.71	0.22
MA11-072	HS/SZ	1327	Fspar	58.02	0.01	24.34	0.21	0.00	0.02	6.45	7.42	0.15
MA11-072	HS/SZ	1328	Fspar	61.68	0.03	22.09	0.17	0.01	0.00	3.43	9.11	0.20
MA11-072	HS/SZ	1329	Fspar	58.45	0.06	23.78	0.10	0.06	0.03	5.56	8.10	0.29
MA11-072	HS/SZ	1330	Fspar	59.10	0.00	24.00	0.14	0.00	0.02	5.66	7.81	0.21
MA11-072	HS/SZ	1331	Wmica	44.72	0.35	33.68	1.63	0.00	0.66	0.00	1.00	10.39
MA11-072	HS/SZ	1332	Wmica	45.23	0.32	34.64	1.23	0.00	0.75	0.00	1.42	10.27
MA11-072	HS/SZ	1333	Wmica	44.37	0.09	35.93	1.24	0.00	0.61	0.00	1.58	10.08
MA11-072	HS/SZ	1334	Wmica	44.93	0.22	34.70	1.73	0.00	0.88	0.04	1.49	10.01
MA11-072	HS/SZ	1335	Wmica	45.18	0.24	34.64	1.68	0.00	0.78	0.00	1.44	10.10
MA11-072	HS/SZ	1336	Wmica	45.42	0.06	35.37	1.14	0.00	0.73	0.00	1.55	9.83
MA11-072	HS/SZ	1337	Wmica	45.37	0.12	35.44	1.28	0.02	0.69	0.00	1.55	9.85
MA11-072	HS/SZ	1338	Wmica	45.09	0.13	35.78	1.34	0.00	0.50	0.00	1.46	10.12
MA11-072	HS/SZ	1339	Wmica	45.65	0.26	35.06	1.36	0.00	0.76	0.00	1.46	9.90
MA11-072	HS/SZ	1340	Wmica	45.10	0.28	35.45	1.35	0.07	0.77	0.00	1.41	10.15
MA11-072	HS/SZ	1341	Wmica	45.40	0.40	34.57	1.77	0.02	0.82	0.00	1.35	10.29
MA11-072	HS/SZ	1342	Wmica	45.87	0.21	35.07	1.17	0.00	0.79	0.01	1.59	9.86
MA11-072	HS/SZ	1343	Fspar	64.37	0.03	19.58	0.00	0.00	0.01	0.75	10.20	0.02
MA11-072	HS/SZ	1344	Wmica	48.58	0.10	34.20	1.14	0.00	0.73	0.02	2.09	8.23
MA11-072	HS/SZ	1345	Wmica	44.90	0.25	35.58	1.49	0.06	0.86	0.00	1.42	10.41
MA11-072	HS/SZ	1346	Wmica	45.63	0.26	34.99	1.47	0.00	0.89	0.00	1.35	10.48
MA11-072	HS/SZ	1364	Wmica	45.85	0.23	35.16	1.71	0.00	0.80	0.00	1.46	9.96
MA11-072	HS/SZ	1365	Wmica	45.46	0.36	34.48	1.80	0.07	0.99	0.01	1.52	10.31

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1366	Wmica	45.77	0.25	35.12	1.69	0.21	0.76	0.00	1.54	9.88
MA11-072	HS/SZ	1367	Wmica	46.22	0.15	35.72	1.17	0.02	0.49	0.00	1.44	10.24
MA11-072	HS/SZ	1368	Fspar	61.77	0.15	21.70	0.12	0.00	0.01	3.00	9.15	0.19
MA11-072	HS/SZ	1369	Fspar	58.74	0.00	23.97	0.02	0.00	0.00	5.50	7.74	0.18
MA11-072	HS/SZ	1370	Fspar	58.19	0.00	24.36	0.00	0.00	0.00	6.54	7.32	0.13
MA11-072	HS/SZ	1371	Fspar	57.86	0.00	24.58	0.13	0.00	0.00	6.37	7.40	0.21
MA11-072	HS/SZ	1372	Fspar	62.22	0.00	22.00	0.04	0.00	0.03	2.77	9.11	0.22
MA11-072	HS/SZ	1373	Fspar	58.82	0.03	24.03	0.08	0.00	0.00	5.59	7.64	0.26
MA11-072	HS/SZ	1374	Fspar	61.09	0.02	22.70	0.00	0.00	0.00	3.97	8.58	0.24
MA11-072	HS/SZ	1375	Fspar	58.88	0.10	23.75	0.16	0.10	0.01	5.82	7.54	0.22
MA11-072	HS/SZ	1376	Fspar	58.19	0.00	24.42	0.07	0.06	0.00	6.36	7.41	0.22
MA11-072	HS/SZ	1377	Fspar	58.91	0.04	23.75	0.03	0.03	0.00	5.97	7.72	0.26
MA11-072	HS/SZ	1378	Fspar	62.73	0.00	21.52	0.00	0.20	0.01	2.65	9.25	0.29
MA11-072	HS/SZ	1379	Fspar	58.43	0.02	24.21	0.11	0.00	0.00	6.41	7.48	0.12
MA11-072	HS/SZ	1380	Fspar	63.93	0.00	20.76	0.06	0.11	0.02	1.70	9.95	0.13
MA11-072	HS/SZ	1381	Fspar	58.86	0.00	24.09	0.15	0.08	0.03	5.85	7.71	0.13
MA11-072	HS/SZ	1382	Fspar	58.51	0.00	24.55	0.02	0.21	0.03	6.35	7.25	0.12
MA11-072	HS/SZ	1383	Fspar	58.89	0.00	24.04	0.10	0.00	0.00	5.96	7.58	0.29
MA11-072	HS/SZ	1384	Fspar	64.83	0.13	20.82	0.05	0.00	0.02	1.63	9.89	0.12
MA11-072	HS/SZ	1385	Fspar	58.77	0.00	24.32	0.14	0.00	0.00	6.06	7.67	0.29
MA11-072	HS/SZ	1386	Fspar	59.70	0.08	23.90	0.12	0.09	0.00	5.55	7.82	0.21
MA11-072	HS/SZ	1387	Chl	25.02	0.11	21.64	24.74	0.29	13.43	0.26	0.34	0.02
MA11-072	HS/SZ	1388	Chl	25.64	0.02	22.03	25.05	0.18	13.86	0.26	0.33	0.00
MA11-072	HS/SZ	1389	Chl	25.28	0.02	22.50	25.43	0.17	13.56	0.09	0.35	0.04
MA11-072	HS/SZ	1390	Chl	25.11	0.03	22.97	24.90	0.19	13.71	0.16	0.36	0.10
MA11-072	HS/SZ	1391	Chl	25.49	0.00	22.73	25.45	0.09	13.58	0.12	0.03	0.05
MA11-072	HS/SZ	1392	Chl	25.68	0.04	22.77	25.18	0.35	13.64	0.18	0.29	0.00
MA11-072	HS/SZ	1393	Chl	25.82	0.02	22.77	24.78	0.24	14.17	0.09	0.21	0.03
MA11-072	HS/SZ	1394	Chl	25.42	0.04	23.17	25.12	0.35	13.91	0.10	0.38	0.06
MA11-072	HS/SZ	1395	Chl	25.66	0.12	23.12	25.23	0.01	14.12	0.12	0.31	0.06
MA11-072	HS/SZ	1396	Chl	25.74	0.05	23.01	24.96	0.01	13.88	0.15	0.44	0.00
MA11-072	HS/SZ	1397	Chl	26.08	0.06	22.90	25.24	0.00	13.79	0.16	0.32	0.08
MA11-072	HS/SZ	1398	Chl	25.61	0.07	23.01	24.97	0.12	14.10	0.12	0.43	0.02
MA11-072	HS/SZ	1399	Chl	25.63	0.04	23.26	25.30	0.09	13.77	0.07	0.33	0.01

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1400	Chl	25.84	0.00	23.11	25.40	0.25	14.21	0.16	0.33	0.04
MA11-072	HS/SZ	1401	Chl	25.80	0.02	23.01	25.65	0.00	14.09	0.16	0.34	0.01
MA11-072	HS/SZ	1402	Wmica	45.75	0.23	33.85	1.44	0.00	0.97	0.12	1.28	9.69
MA11-072	HS/SZ	1403	Wmica	45.09	0.17	34.85	1.44	0.05	0.77	0.08	1.39	9.68
MA11-072	HS/SZ	1404	Wmica	45.69	0.28	34.32	1.72	0.01	0.83	0.00	1.40	9.32
MA11-072	HS/SZ	1405	Wmica	46.31	0.28	34.02	1.87	0.04	0.94	0.03	1.36	10.14
MA11-072	HS/SZ	1406	Wmica	46.75	0.30	34.45	1.80	0.00	0.81	0.04	1.05	10.35
MA11-072	HS/SZ	1407	Wmica	46.10	0.40	35.13	1.73	0.08	0.85	0.02	1.44	10.16
MA11-072	HS/SZ	1408	Wmica	46.45	0.18	35.78	1.62	0.00	0.79	0.01	1.50	10.19
MA11-072	HS/SZ	1436	Chl	24.64	0.12	22.06	24.40	0.18	13.72	0.08	0.55	0.21
MA11-072	HS/SZ	1437	Chl	24.68	0.02	22.23	24.57	0.25	13.63	0.05	0.40	0.18
MA11-072	HS/SZ	1438	Chl	24.78	0.06	22.65	24.80	0.00	13.84	0.06	0.37	0.14
MA11-072	HS/SZ	1439	Chl	24.75	0.03	22.86	24.88	0.07	13.80	0.04	0.41	0.15
MA11-072	HS/SZ	1440	Chl	25.31	0.20	22.89	24.31	0.27	14.09	0.00	0.30	0.08
MA11-072	HS/SZ	1441	Chl	25.33	0.03	22.91	24.83	0.00	13.95	0.06	0.40	0.00
MA11-072	HS/SZ	1442	Chl	25.34	0.13	22.85	25.19	0.20	13.99	0.07	0.35	0.08
MA11-072	HS/SZ	1443	Chl	25.26	0.11	22.91	24.70	0.18	14.36	0.02	0.28	0.12
MA11-072	HS/SZ	1444	Chl	25.41	0.15	23.15	24.60	0.24	14.23	0.09	0.34	0.02
MA11-072	HS/SZ	1445	Chl	26.01	0.04	22.83	24.33	0.27	14.74	0.01	0.44	0.05
MA11-072	HS/SZ	1446	Chl	25.13	0.13	23.11	24.76	0.13	14.27	0.02	0.48	0.09
MA11-072	HS/SZ	1447	Chl	25.46	0.14	23.20	24.61	0.15	14.56	0.01	0.43	0.11
MA11-072	HS/SZ	1448	Chl	25.65	0.02	23.32	24.96	0.05	14.24	0.06	0.30	0.24
MA11-072	HS/SZ	1449	Wmica	43.87	0.28	34.44	1.73	0.00	0.74	0.00	1.30	10.02
MA11-072	HS/SZ	1450	Wmica	43.79	0.20	34.46	1.86	0.02	0.71	0.00	1.32	9.91
MA11-072	HS/SZ	1451	Wmica	43.67	0.43	33.66	2.09	0.16	0.98	0.00	1.40	9.82
MA11-072	HS/SZ	1452	Wmica	43.76	0.35	34.30	1.84	0.00	0.81	0.00	1.30	10.22
MA11-072	HS/SZ	1453	Wmica	43.37	0.10	34.80	2.09	0.03	0.74	0.07	1.41	9.85
MA11-072	HS/SZ	1454	Wmica	43.99	0.34	33.71	1.68	0.01	0.83	0.00	1.33	10.15
MA11-072	HS/SZ	1455	Wmica	43.68	0.24	34.50	2.17	0.01	1.03	0.00	1.42	9.84
MA11-072	HS/SZ	1456	Wmica	43.86	0.31	34.57	1.83	0.03	0.85	0.00	1.40	9.79
MA11-072	HS/SZ	1457	Wmica	44.35	0.15	35.06	1.57	0.03	0.73	0.00	1.41	9.92
MA11-072	HS/SZ	1458	Wmica	44.47	0.43	35.14	1.45	0.01	0.70	0.00	1.26	10.05
MA11-072	HS/SZ	1459	Wmica	44.49	0.28	34.40	1.74	0.02	0.83	0.00	1.33	10.15
MA11-072	HS/SZ	1460	Wmica	44.42	0.15	35.00	1.84	0.04	0.77	0.00	1.30	9.90

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1461	Wmica	44.46	0.15	35.41	1.56	0.07	0.83	0.00	1.54	9.63
MA11-072	HS/SZ	1462	Wmica	44.24	0.33	35.04	1.53	0.00	0.80	0.00	1.39	10.06
MA11-072	HS/SZ	1463	Wmica	44.64	0.26	35.16	1.50	0.12	0.56	0.00	1.28	10.06
MA11-072	HS/SZ	1464	Wmica	44.45	0.34	34.45	2.15	0.09	0.89	0.00	1.45	10.11
MA11-072	HS/SZ	1465	Wmica	43.91	0.16	35.26	2.09	0.22	0.79	0.00	1.40	10.08
MA11-072	HS/SZ	1466	Wmica	44.10	0.25	34.81	2.21	0.04	1.01	0.00	1.30	10.08
MA11-072	HS/SZ	1467	Fspar	57.09	0.00	23.49	0.16	0.00	0.00	6.08	7.55	0.16
MA11-072	HS/SZ	1468	Wmica	44.50	0.29	35.65	1.71	0.00	0.71	0.00	1.44	9.68
MA11-072	HS/SZ	1469	Fspar	58.48	0.02	23.30	0.26	0.00	0.01	4.77	7.48	0.40
MA11-072	HS/SZ	1470	Fspar	58.45	0.08	23.35	0.03	0.00	0.00	5.28	7.68	0.11
MA11-072	HS/SZ	1471	Fspar	64.42	0.00	19.43	0.11	0.06	0.00	0.40	10.40	0.10
MA11-072	HS/SZ	1472	Fspar	64.51	0.12	19.38	0.07	0.00	0.01	0.41	10.51	0.24
MA11-072	HS/SZ	1473	Fspar	64.61	0.04	19.43	0.11	0.05	0.00	0.34	10.53	0.14
MA11-072	HS/SZ	1474	Fspar	57.57	0.02	23.92	0.10	0.11	0.03	5.95	7.61	0.19
MA11-072	HS/SZ	1475	Fspar	58.30	0.02	23.67	0.19	0.00	0.01	5.11	7.83	0.23
MA11-072	HS/SZ	1476	Fspar	62.91	0.02	20.23	0.61	0.07	0.04	1.81	9.74	0.09
MA11-072	HS/SZ	1477	Fspar	57.58	0.00	23.92	0.21	0.02	0.03	5.92	7.67	0.15
MA11-072	HS/SZ	1478	Fspar	57.59	0.06	23.92	0.14	0.00	0.00	6.02	7.64	0.20
MA11-072	HS/SZ	1479	Fspar	63.07	0.02	20.20	0.80	0.16	0.25	1.15	10.15	0.09
MA11-072	HS/SZ	1480	Fspar	64.46	0.00	19.64	0.15	0.00	0.00	0.50	10.63	0.19
MA11-072	HS/SZ	1481	Fspar	58.24	0.00	23.84	0.18	0.13	0.02	5.96	7.45	0.19
MA11-072	HS/SZ	1482	Fspar	58.07	0.05	23.67	0.21	0.17	0.00	5.63	7.89	0.26
MA11-072	HS/SZ	1483	Fspar	58.63	0.00	23.59	0.25	0.00	0.01	5.62	7.74	0.20
MA11-072	HS/SZ	1484	Fspar	64.07	0.01	19.46	0.89	0.03	0.05	0.25	10.69	0.13
MA11-072	HS/SZ	1485	Fspar	58.91	0.00	23.42	0.26	0.00	0.01	5.40	8.10	0.12
MA11-072	HS/SZ	1486	Fspar	57.71	0.00	24.11	0.26	0.08	0.00	6.12	7.44	0.23
MA11-072	HS/SZ	1487	Fspar	59.20	0.03	23.35	0.27	0.00	0.00	5.32	7.81	0.18
MA11-072	HS/SZ	1488	Fspar	58.48	0.01	23.41	0.26	0.18	0.00	5.77	7.81	0.20
MA11-072	HS/SZ	1489	Fspar	58.54	0.00	23.73	0.25	0.00	0.00	5.47	7.80	0.20
MA11-072	HS/SZ	1490	Fspar	63.07	0.04	20.61	0.80	0.00	0.04	1.91	9.76	0.12
MA11-072	HS/SZ	1491	Fspar	64.97	0.03	19.76	0.31	0.13	0.03	0.39	10.63	0.23
MA11-072	HS/SZ	1492	Fspar	64.90	0.03	19.73	0.72	0.00	0.06	0.53	10.55	0.11
MA11-072	HS/SZ	1493	Fspar	58.45	0.00	23.96	0.13	0.00	0.02	5.75	7.82	0.19
MA11-072	HS/SZ	1510	Chl	24.49	0.05	22.05	24.96	0.00	13.53	0.25	0.28	0.05

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA11-072	HS/SZ	1511	Chl	24.77	0.01	22.26	24.96	0.23	14.12	0.21	0.27	0.00
MA11-072	HS/SZ	1512	Chl	24.78	0.02	22.50	25.49	0.23	13.51	0.78	0.03	0.01
MA11-072	HS/SZ	1513	Chl	24.70	0.12	22.34	25.01	0.12	14.15	0.34	0.46	0.08
MA11-072	HS/SZ	1514	Chl	24.87	0.03	22.67	25.02	0.13	13.95	0.16	0.06	0.06
MA11-072	HS/SZ	1515	Chl	24.90	0.03	22.62	24.95	0.00	14.10	0.25	0.34	0.00
MA11-072	HS/SZ	1516	Chl	25.17	0.05	22.72	25.07	0.33	14.32	0.15	0.35	0.00
MA11-072	HS/SZ	1517	Chl	24.98	0.00	22.75	25.22	0.07	14.16	0.29	0.45	0.11
MA11-072	HS/SZ	1518	Chl	24.76	0.00	22.89	25.09	0.00	13.89	0.84	0.41	0.05
MA11-072	HS/SZ	1519	Chl	25.60	0.00	23.07	24.79	0.42	14.48	0.27	0.36	0.00
MA11-072	HS/SZ	1520	Chl	25.33	0.00	22.93	25.43	0.20	13.92	0.30	0.26	0.04
MA11-072	HS/SZ	1521	Chl	25.22	0.01	22.86	25.18	0.24	14.24	0.22	0.49	0.06
MA11-072	HS/SZ	1522	Chl	26.14	0.06	22.78	24.44	0.00	14.84	0.19	0.32	0.09
MA11-072	HS/SZ	1523	Chl	24.75	0.00	22.98	25.76	0.28	14.08	0.82	0.30	0.05
MA11-072	HS/SZ	1524	Chl	25.44	0.04	23.62	24.99	0.30	14.55	0.21	0.45	0.05
MA11-072	HS/SZ	1525	Wmica	43.28	0.28	33.58	1.94	0.00	0.90	0.08	1.15	9.64
MA11-072	HS/SZ	1526	Wmica	43.88	0.35	34.44	1.89	0.00	0.87	0.00	1.37	9.69
MA11-072	HS/SZ	1527	Wmica	43.84	0.28	34.21	2.10	0.05	0.84	0.00	1.30	10.01
MA11-072	HS/SZ	1528	Wmica	43.88	0.34	34.46	1.88	0.09	0.93	0.04	1.33	9.69
MA11-072	HS/SZ	1529	Wmica	44.16	0.04	35.20	1.63	0.07	0.90	0.02	1.29	9.66
MA11-072	HS/SZ	1530	Wmica	44.31	0.13	35.00	1.77	0.00	1.03	0.02	1.34	10.12
MA11-072	HS/SZ	1531	Wmica	44.51	0.31	34.96	1.94	0.07	0.73	0.06	1.33	9.83
MA11-072	HS/SZ	1532	Wmica	45.04	0.21	35.17	2.04	0.01	0.93	0.00	1.29	10.28
MA11-072	HS/SZ	1533	Wmica	44.94	0.20	35.39	1.98	0.00	0.99	0.02	1.40	9.88
MA11-072	HS/SZ	1534	Wmica	45.31	0.11	35.64	1.76	0.00	0.94	0.01	1.55	9.99
MA11-072	HS/SZ	1535	Chl	22.30	0.01	19.86	37.93	0.14	1.08	0.09	0.00	0.05
MA11-072	HS/SZ	1536	Chl	21.28	0.04	21.05	35.25	0.00	5.01	0.05	0.29	0.00
MA11-072	HS/SZ	1537	Chl	24.21	0.01	20.23	37.51	0.00	4.83	0.08	0.45	0.13
MA11-072	HS/SZ	1538	Chl	24.19	0.01	20.73	37.12	0.38	4.63	0.15	0.42	0.10
MA11-072	HS/SZ	1541	Chl	23.62	0.03	19.93	37.79	0.17	4.87	0.12	0.46	0.17
MA11-072	HS/SZ	1543	Chl	24.18	0.00	19.56	39.87	0.07	3.34	0.08	0.31	0.06
MA11-072	HS/SZ	1544	Chl	23.15	0.00	21.73	38.47	0.18	3.32	0.11	0.40	0.09
MA11-072	HS/SZ	1545	Chl	24.19	0.00	19.66	40.11	0.12	3.25	0.08	0.44	0.13
MA11-072	HS/SZ	1546	Chl	22.36	0.00	23.94	38.31	0.08	3.33	0.11	0.38	0.06
MA11-072	HS/SZ	1547	Chl	23.86	0.00	20.10	40.66	0.10	3.42	0.01	0.30	0.14

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA12-385B	SQvein	1692	Fspar	68.32	0.14	20.74	0.32	0.00	0.62	0.00	0.22	18.58
MA12-385B	SQvein	1693	Wmica	46.27	0.19	34.90	2.56	0.00	0.73	0.00	1.11	10.16
MA12-385B	SQvein	1694	Wmica	46.79	0.09	34.81	2.56	0.00	0.71	0.00	1.31	10.07
MA12-385B	SQvein	1695	Wmica	47.09	0.24	33.77	2.48	0.06	1.08	0.02	0.92	10.34
MA12-385B	SQvein	1696	Wmica	46.70	0.14	34.89	2.74	0.00	0.66	0.00	1.14	10.38
MA12-385B	SQvein	1697	Wmica	46.65	0.21	34.58	2.43	0.02	0.85	0.00	1.07	10.57
MA12-385B	SQvein	1698	Wmica	47.58	0.24	34.39	2.43	0.00	0.96	0.00	1.21	10.05
MA12-385B	SQvein	1699	Wmica	47.50	0.31	34.37	2.50	0.00	0.83	0.04	1.14	10.29
MA12-385B	SQvein	1700	Wmica	46.68	0.16	35.43	2.46	0.18	0.60	0.00	1.07	10.34
MA12-385B	SQvein	1701	Wmica	46.90	0.16	35.34	2.52	0.02	0.71	0.00	1.21	10.21
MA12-385B	SQvein	1702	Wmica	46.81	0.40	35.12	2.63	0.00	0.83	0.00	1.23	10.28
MA12-385B	SQvein	1703	Wmica	47.27	0.17	34.62	2.68	0.01	0.72	0.00	1.11	10.52
MA12-385B	SQvein	1704	Wmica	46.58	0.33	34.87	2.62	0.10	1.10	0.00	1.14	10.66
MA12-385B	SQvein	1705	Wmica	47.09	0.26	35.51	2.23	0.00	0.84	0.00	1.28	10.39
MA12-385B	SQvein	1706	Wmica	47.60	0.24	35.21	2.19	0.00	0.86	0.00	1.29	10.30
MA12-385B	SQvein	1707	Wmica	47.02	0.24	35.12	2.91	0.00	0.94	0.00	1.07	10.37
MA12-385B	SQvein	1708	Wmica	47.23	0.12	35.56	2.43	0.00	0.94	0.00	1.06	10.51
MA12-385B	SQvein	1709	Wmica	47.19	0.25	35.35	2.29	0.00	0.86	0.00	1.16	10.65
MA12-385B	SQvein	1710	Wmica	48.05	0.25	35.07	2.38	0.07	0.95	0.05	1.19	10.05
MA12-385B	SQvein	1711	Wmica	46.95	0.47	35.77	2.58	0.00	0.82	0.00	1.05	10.67
MA12-385B	SQvein	1712	Wmica	47.54	0.27	35.50	2.50	0.00	0.86	0.00	1.27	10.53
MA12-385B	SQvein	1713	Wmica	47.54	0.41	35.27	2.37	0.00	0.82	0.00	1.02	10.86
MA12-385B	SQvein	1714	Wmica	47.62	0.18	35.49	2.40	0.00	0.92	0.08	1.27	10.41
MA12-385B	SQvein	1715	Wmica	47.99	0.24	34.71	2.68	0.00	1.08	0.00	1.29	10.73
MA12-385B	SQvein	1717	Wmica	47.54	0.35	35.60	2.52	0.07	0.81	0.00	1.18	10.56
MA12-385B	SQvein	1718	Wmica	47.27	0.05	36.53	2.49	0.06	0.71	0.00	1.25	10.57
MA12-385B	SQvein	1719	Wmica	47.59	0.27	35.38	3.10	0.00	0.91	0.01	1.03	10.66
MA12-385B	SQvein	1720	Wmica	48.08	0.23	35.06	2.59	0.27	0.90	0.00	1.30	10.76
MA12-385B	SQvein	1721	Wmica	47.71	0.09	36.84	2.29	0.21	0.55	0.00	1.53	10.39
MA12-385B	SQvein	1722	Wmica	47.92	0.38	35.31	2.95	0.13	0.88	0.00	1.05	10.66
MA12-385B	SQvein	1723	Wmica	47.58	0.22	36.31	2.53	0.00	0.73	0.00	1.13	10.52
MA12-385B	SQvein	1724	Wmica	47.83	0.26	35.56	2.80	0.00	1.05	0.00	1.07	10.70
MA12-385B	SQvein	1725	Wmica	47.43	0.17	36.66	2.59	0.07	0.79	0.00	1.30	10.19
MA12-385B	SQvein	1726	Wmica	47.95	0.22	36.71	2.20	0.04	0.77	0.00	1.35	10.42

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA12-385B	SQvein	1727	Wmica	47.41	0.24	36.44	2.55	0.31	0.81	0.00	1.18	10.36
MA12-385B	SQvein	1728	Wmica	48.10	0.27	35.94	2.87	0.03	1.03	0.00	0.97	10.72
MA12-385B	SQvein	1729	Wmica	48.00	0.07	37.13	2.38	0.01	0.71	0.00	1.53	10.11
MA12-385B	SQvein	1730	Fspar	64.15	0.00	19.14	0.49	0.10	0.00	0.00	0.56	16.16
MA12-385B	SQvein	1731	Fspar	61.72	0.00	25.38	0.28	0.00	0.02	5.30	7.51	0.58
MA12-385B	SQvein	1732	Wmica	48.20	0.23	36.43	2.55	0.00	0.90	0.00	1.17	10.87
MA12-385B	SQvein	1733	Wmica	48.02	0.06	37.23	2.53	0.37	0.79	0.05	1.51	10.28
MA12-385B	SQvein	1734	Fspar	63.91	0.00	19.45	0.26	0.00	0.00	0.00	0.36	17.13
MA12-385B	SQvein	1735	Fspar	68.96	0.00	21.22	0.21	0.02	0.03	0.49	10.31	0.39
MA12-385B	SQvein	1736	Fspar	61.53	0.00	25.78	0.16	0.00	0.00	6.29	7.40	0.41
MA12-385B	SQvein	1737	Fspar	62.81	0.03	24.87	0.07	0.00	0.04	5.37	7.99	0.47
MA12-385B	SQvein	1738	Fspar	62.51	0.05	25.07	0.14	0.00	0.04	5.48	8.00	0.52
MA12-385B	SQvein	1739	Fspar	62.29	0.00	25.57	0.36	0.00	0.00	5.65	7.64	0.35
MA12-385B	SQvein	1740	Fspar	65.96	0.02	23.21	0.40	0.03	0.02	3.16	8.90	0.37
MA12-385B	SQvein	1741	Fspar	64.51	0.04	19.26	0.45	0.00	0.01	0.00	0.00	17.86
MA12-385B	SQvein	1742	Fspar	62.98	0.01	25.14	0.20	0.00	0.00	5.32	7.92	0.48
MA12-385B	SQvein	1743	Fspar	69.18	0.00	21.10	0.28	0.00	0.02	0.29	10.69	0.42
MA12-385B	SQvein	1744	Fspar	63.00	0.00	25.09	0.15	0.10	0.00	5.14	8.16	0.52
MA12-385B	SQvein	1745	Fspar	64.09	0.00	19.80	0.12	0.04	0.02	0.00	0.13	17.90
MA12-385B	SQvein	1746	Fspar	65.57	0.05	19.33	0.36	0.01	0.00	0.00	0.53	16.69
MA12-385B	SQvein	1747	Fspar	62.24	0.02	25.78	0.28	0.00	0.01	5.86	7.74	0.57
MA12-385B	SQvein	1748	Fspar	65.43	0.00	19.57	0.30	0.00	0.01	0.00	0.52	16.85
MA12-385B	SQvein	1749	Fspar	65.14	0.00	19.55	0.29	0.00	0.01	0.00	0.29	17.55
MA12-385B	SQvein	1750	Fspar	65.34	0.00	19.61	0.15	0.00	0.00	0.00	0.00	17.78
MA12-385B	SQvein	1751	Fspar	64.94	0.00	19.17	0.35	0.07	0.01	0.00	0.13	17.95
MA12-385B	SQvein	1752	Fspar	65.39	0.09	19.44	0.53	0.00	0.02	0.00	0.29	17.52
MA12-385B	SQvein	1753	Fspar	65.16	0.05	19.46	0.58	0.00	0.00	0.00	0.26	17.71
MA12-385B	SQvein	1754	Fspar	65.33	0.00	19.66	0.14	0.00	0.02	0.00	0.09	18.17
MA12-385B	SQvein	1755	Fspar	62.69	0.00	26.15	0.19	0.00	0.00	5.87	7.85	0.62
MA12-385B	SQvein	1756	Fspar	65.64	0.05	19.31	0.36	0.08	0.01	0.00	0.14	17.99
MA12-385B	SQvein	1757	Fspar	65.20	0.00	20.03	0.31	0.04	0.47	0.00	0.22	17.42
MA12-385B	SQvein	1758	Fspar	70.22	0.00	21.78	0.38	0.09	0.00	0.13	10.89	0.48
MA12-385B	SQvein	1759	Fspar	65.92	0.06	19.67	0.39	0.00	0.01	0.00	0.03	17.88
MA12-385B	SQvein	1760	Fspar	65.53	0.00	19.86	0.42	0.07	0.45	0.00	0.37	17.55

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA12-385B	SQvein	1761	Fspar	63.44	0.11	25.91	0.17	0.00	0.00	6.09	7.65	0.62
MA12-385B	SQvein	1762	Fspar	63.37	0.19	26.13	0.19	0.09	0.03	5.57	7.94	0.66
MA12-385B	SQvein	1763	Fspar	65.66	0.00	19.80	0.42	0.00	0.02	0.00	0.05	18.10
MA12-385B	SQvein	1764	Fspar	64.17	0.01	19.32	0.32	0.00	0.02	0.11	0.58	16.05
MA12-385B	SQvein	1765	Fspar	64.42	0.00	18.76	0.13	0.04	0.02	0.00	0.21	17.17
MA12-385B	SQvein	1767	Fspar	63.82	0.05	19.19	0.24	0.00	0.03	0.00	0.23	17.38
MA12-385B	SQvein	1768	Wmica	46.80	0.24	35.79	2.42	0.03	0.79	0.07	1.47	10.21
MA12-385B	SQvein	1769	Fspar	62.89	0.00	21.02	0.28	0.00	0.52	0.01	0.30	15.73
MA12-385B	SQvein	1770	Fspar	63.76	0.00	24.77	0.03	0.00	0.02	5.29	8.07	0.26
MA12-385B	SQvein	1771	Fspar	63.29	0.02	25.39	0.10	0.00	0.01	5.56	7.93	0.44
MA12-385B	SQvein	1772	Fspar	65.64	0.04	19.75	0.27	0.00	0.02	0.13	0.54	16.70
MA12-385B	SQvein	1773	Fspar	65.70	0.05	19.49	0.15	0.00	0.00	0.00	0.28	17.76
MA12-385B	SQvein	1774	Wmica	45.95	0.23	34.52	2.77	0.01	0.61	0.02	1.13	9.69
MA12-385B	SQvein	1775	Wmica	46.16	0.15	34.73	2.58	0.00	0.71	0.00	1.33	9.83
MA12-385B	SQvein	1776	Wmica	47.05	0.25	34.16	2.49	0.00	0.62	0.08	1.28	9.93
MA12-385B	SQvein	1777	Wmica	46.71	0.17	34.40	2.62	0.00	0.69	0.04	1.46	9.78
MA12-385B	SQvein	1778	Wmica	46.17	0.04	35.13	2.67	0.00	0.69	0.00	1.33	10.12
MA12-385B	SQvein	1779	Wmica	46.29	0.27	35.00	2.38	0.04	0.78	0.00	1.42	9.83
MA12-385B	SQvein	1780	Wmica	46.69	0.23	34.82	2.73	0.00	0.75	0.00	1.33	9.70
MA12-385B	SQvein	1781	Fspar	57.78	0.00	23.54	0.87	0.00	1.02	0.00	0.38	12.96
MA12-385B	SQvein	1782	Wmica	46.82	0.17	34.64	2.73	0.15	0.64	0.00	1.32	9.71
MA12-385B	SQvein	1783	Fspar	59.16	0.05	22.70	0.66	0.00	0.85	0.00	0.43	13.67
MA12-385B	SQvein	1784	Fspar	61.49	0.00	21.25	0.94	0.00	0.98	0.60	3.03	9.91
MA12-385B	SQvein	1785	Fspar	62.06	0.00	18.73	0.36	0.00	0.05	0.00	0.28	16.48
MA12-385B	SQvein	1786	Fspar	60.63	0.00	22.17	0.33	0.00	0.84	0.00	0.26	13.94
MA12-385B	SQvein	1787	Fspar	61.47	0.01	21.43	0.94	0.20	1.04	0.49	2.79	10.21
MA12-385B	SQvein	1788	Fspar	60.20	0.04	24.75	0.00	0.00	0.00	5.94	7.55	0.25
MA12-385B	SQvein	1789	Fspar	60.43	0.01	24.79	0.02	0.00	0.04	5.81	7.54	0.30
MA12-385B	SQvein	1790	Fspar	62.96	0.00	18.73	0.10	0.25	0.00	0.00	0.47	16.68
MA12-385B	SQvein	1791	Fspar	63.34	0.06	23.09	0.11	0.00	0.00	3.65	8.84	0.16
MA12-385B	SQvein	1792	Fspar	60.94	0.19	24.67	0.13	0.00	0.01	5.82	7.39	0.24
MA12-385B	SQvein	1793	Fspar	60.27	0.00	24.94	0.13	0.16	0.03	6.22	7.48	0.18
MA12-385B	SQvein	1795	Fspar	60.17	0.02	25.30	0.02	0.00	0.00	6.30	7.52	0.23
MA12-385B	SQvein	1838	Fspar	60.47	0.07	25.00	0.27	0.00	0.05	5.85	7.53	0.27

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA12-385B	SQ vein	1841	Fspar	62.28	0.00	23.88	0.03	0.00	0.02	4.98	8.18	0.23
MA12-385B	SQ vein	1858	Fspar	62.87	0.02	19.78	0.45	0.00	0.58	0.01	0.68	15.48
MA12-385B	SQ vein	1859	Fspar	63.18	0.00	19.35	0.04	0.00	0.05	0.00	0.55	16.29
MA12-385B	SQ vein	1860	Fspar	62.35	0.02	23.98	0.04	0.10	0.00	4.87	8.22	0.24
MA12-385B	SQ vein	1861	Fspar	62.76	0.07	20.14	0.58	0.00	0.84	0.00	0.76	14.91
MA12-385B	SQ vein	1862	Fspar	62.71	0.01	19.38	0.12	0.13	0.48	0.01	0.42	16.72
MA12-385B	SQ vein	1863	Fspar	61.59	0.08	24.65	0.11	0.00	0.00	5.56	7.76	0.20
MA12-385B	SQ vein	1864	Fspar	61.46	0.00	24.91	0.06	0.00	0.01	5.47	7.68	0.09
MA12-385B	SQ vein	1865	Fspar	63.03	0.04	23.79	0.00	0.00	0.00	4.48	8.39	0.29
MA12-385B	SQ vein	1866	Fspar	63.36	0.03	19.26	0.13	0.08	0.00	0.00	0.36	16.87
MA12-385B	SQ vein	1867	Fspar	63.30	0.03	19.50	0.32	0.02	0.05	0.39	0.75	15.48
MA12-385B	SQ vein	1868	Fspar	63.32	0.03	19.40	0.00	0.00	0.02	0.00	0.23	17.04
MA12-385B	SQ vein	1869	Fspar	63.57	0.00	19.52	0.33	0.00	0.04	0.06	0.51	16.15
MA12-385B	SQ vein	1870	Fspar	60.76	0.11	25.58	0.19	0.00	0.00	5.84	7.68	0.19
MA12-385B	SQ vein	1871	Fspar	62.76	0.06	19.87	0.12	0.16	0.39	0.00	0.26	17.07
MA12-385B	SQ vein	1873	Fspar	64.00	0.04	19.31	0.21	0.00	0.04	0.02	0.47	16.49
MA12-385B	SQ vein	1874	Fspar	64.15	0.00	19.06	0.15	0.00	0.00	0.00	0.18	17.18
MA12-385B	SQ vein	1875	Fspar	64.07	0.01	19.03	0.13	0.00	0.01	0.00	0.34	17.12
MA12-385B	SQ vein	1876	Fspar	63.88	0.00	19.13	0.10	0.05	0.01	0.11	0.41	16.88
MA12-385B	SQ vein	1877	Fspar	64.17	0.02	19.32	0.26	0.02	0.01	0.11	0.31	16.71
MA12-385B	SQ vein	1878	Fspar	64.30	0.05	19.28	0.29	0.06	0.00	0.00	0.49	16.77
MA12-385B	SQ vein	1879	Fspar	64.34	0.03	19.37	0.32	0.20	0.02	0.00	0.78	16.47
MA12-385B	SQ vein	1880	Fspar	63.90	0.00	20.13	0.46	0.06	0.57	0.02	0.53	16.17
MA12-385B	SQ vein	1881	Fspar	61.98	0.02	25.59	0.06	0.00	0.01	5.86	7.88	0.26
MA12-385B	SQ vein	1882	Fspar	64.66	0.13	19.57	0.01	0.00	0.02	0.00	0.30	16.90
MA12-385B	SQ vein	1883	Fspar	64.79	0.15	19.24	0.36	0.00	0.00	0.00	0.33	16.89
MA12-385B	SQ vein	1884	Fspar	64.71	0.00	19.69	0.25	0.00	0.06	0.00	0.25	17.00
MA12-385B	SQ vein	1885	Chl	25.08	0.07	20.94	22.14	0.15	12.01	0.04	0.00	0.27
MA12-385B	SQ vein	1886	Chl	25.09	0.02	22.51	20.92	0.16	14.31	0.03	0.00	0.20
MA12-385B	SQ vein	1887	Chl	24.84	0.20	22.21	22.25	0.06	13.66	0.16	0.05	0.14
MA12-385B	SQ vein	1888	Chl	25.58	0.08	22.47	21.93	0.19	14.42	0.00	0.29	0.12
MA12-385B	SQ vein	1889	Chl	25.93	0.07	22.11	22.16	0.39	14.82	0.00	0.24	0.05
MA12-385B	SQ vein	1890	Chl	25.50	0.00	22.86	22.22	0.19	14.78	0.04	0.22	0.08
MA12-385B	SQ vein	1891	Chl	25.70	0.12	22.44	21.76	0.34	15.00	0.02	0.42	0.15

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA12-385B	SQvein	1892	Chl	26.10	0.06	22.92	21.30	0.00	15.03	0.05	0.32	0.12
MA12-385B	SQvein	1893	Chl	25.70	0.09	22.89	22.27	0.42	14.82	0.07	0.00	0.21
MA12-385B	SQvein	1894	Chl	26.17	0.06	23.13	21.93	0.02	15.27	0.06	0.18	0.11
MA12-385B	SQvein	1895	Chl	26.12	0.19	23.00	22.10	0.36	14.94	0.07	0.31	0.16
MA12-385B	SQvein	1896	Chl	25.98	0.00	23.14	21.66	0.11	15.14	0.00	0.37	0.13
MA12-385B	SQvein	1897	Chl	26.00	0.00	23.23	22.50	0.07	14.88	0.02	0.35	0.09
MA12-385B	SQvein	1898	Chl	26.21	0.18	22.85	22.34	0.09	14.97	0.02	0.44	0.19
MA12-385B	SQvein	1899	Chl	26.19	0.20	22.92	22.06	0.00	15.09	0.14	0.50	0.24
MA12-385B	SQvein	1900	Chl	26.56	0.11	23.03	22.60	0.13	15.23	0.07	0.32	0.16
MA12-385B	SQvein	1901	Chl	26.54	0.03	23.48	22.58	0.03	15.02	0.08	0.43	0.22
MA12-385B	SQvein	1902	Wmica	45.35	0.24	34.95	2.77	0.16	0.86	0.00	1.02	9.98
MA12-385B	SQvein	1903	Wmica	45.84	0.33	33.66	2.98	0.01	0.91	0.00	0.94	10.27
MA12-385B	SQvein	1904	Wmica	46.36	0.21	34.04	2.55	0.02	0.78	0.00	1.12	10.25
MA12-385B	SQvein	1905	Wmica	45.70	0.26	34.25	2.56	0.04	0.95	0.00	1.06	10.20
MA12-385B	SQvein	1906	Wmica	46.43	0.31	33.89	2.95	0.00	0.88	0.00	0.99	10.11
MA12-385B	SQvein	1907	Wmica	45.67	0.26	34.78	2.31	0.16	0.83	0.00	1.44	10.07
MA12-385B	SQvein	1908	Wmica	46.21	0.25	34.21	2.97	0.30	0.69	0.00	1.15	10.14
MA12-385B	SQvein	1909	Wmica	46.36	0.34	34.07	2.82	0.10	0.85	0.01	0.90	10.32
MA12-385B	SQvein	1910	Wmica	46.02	0.29	34.71	2.71	0.07	0.79	0.00	1.16	10.24
MA12-385B	SQvein	1911	Wmica	46.48	0.36	33.86	3.18	0.00	0.98	0.00	1.03	10.16
MA12-385B	SQvein	1912	Wmica	45.91	0.16	34.82	3.07	0.00	0.87	0.04	1.22	10.37
MA12-385B	SQvein	1913	Wmica	46.52	0.28	34.25	2.82	0.10	0.90	0.00	1.10	9.84
MA12-385B	SQvein	1914	Wmica	46.50	0.37	34.06	3.19	0.11	1.18	0.00	1.05	10.52
MA12-385B	SQvein	1915	Wmica	46.12	0.13	35.55	3.05	0.19	0.80	0.00	1.26	10.01
MA12-385B	SQvein	1916	Wmica	47.15	0.25	34.31	3.12	0.00	1.05	0.00	1.01	10.26
MA12-385B	SQvein	1917	Wmica	46.72	0.40	33.77	3.44	0.15	1.29	0.00	1.07	10.39
MA12-385B	SQvein	1918	Wmica	46.81	0.20	32.95	2.32	0.00	0.57	0.13	1.67	9.12
MA12-385B	SQvein	1919	Wmica	46.89	0.33	33.81	2.34	0.07	0.63	0.00	1.17	9.50
MA12-385B	SQvein	1920	Wmica	47.49	0.25	33.70	2.17	0.06	0.88	0.04	1.30	9.62
MA12-385B	SQvein	1921	Wmica	46.18	0.30	32.78	2.34	0.00	0.76	0.01	2.19	9.65
MA12-385B	SQvein	1922	Wmica	47.22	0.26	34.01	2.38	0.01	0.78	0.05	1.46	9.78
MA12-385B	SQvein	1923	Fspar	60.27	0.17	22.98	0.29	0.08	0.00	5.73	7.33	0.23
MA12-385B	SQvein	1924	Fspar	62.90	0.08	18.38	0.10	0.00	0.00	0.00	0.66	15.61
MA12-385B	SQvein	1925	Fspar	66.87	0.00	16.34	0.20	0.00	0.00	0.58	0.82	13.56

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA12-385B	SQ vein	1926	Fspar	67.27	0.02	16.93	0.09	0.00	0.02	0.91	1.08	12.16
MA12-385B	SQ vein	1927	Fspar	63.28	0.12	18.53	0.29	0.00	0.04	0.07	0.72	15.69
MA12-385B	SQ vein	1928	Fspar	68.93	0.55	14.94	0.27	0.00	0.03	0.25	0.52	13.23
MA12-385B	SQ vein	1929	Fspar	63.31	0.18	18.58	0.30	0.03	0.00	0.01	0.72	15.91
MA12-385B	SQ vein	1930	Fspar	66.36	0.05	17.04	0.22	0.07	0.00	0.87	0.99	13.26
MA12-385B	SQ vein	1931	Fspar	63.43	0.18	18.76	0.37	0.00	0.04	0.10	1.03	15.25
MA12-385B	SQ vein	1932	Fspar	66.75	0.03	17.10	0.58	0.22	0.01	0.81	1.27	12.76
MA12-385B	SQ vein	1933	Fspar	63.90	0.09	18.72	0.24	0.00	0.00	0.00	0.43	16.30
MA12-385B	SQ vein	1934	Fspar	63.93	0.06	18.87	0.30	0.03	0.01	0.15	0.95	15.55
MA12-385B	SQ vein	1935	Chl	28.16	0.07	21.97	20.86	0.00	13.64	0.28	0.64	0.28
MA12-385B	SQ vein	1936	Chl	29.41	0.02	22.45	19.76	0.01	13.44	0.34	0.77	0.28
MA12-385B	SQ vein	1937	Chl	29.57	0.00	22.58	19.82	0.10	13.50	0.35	0.67	0.16
MA12-385B	SQ vein	1938	Chl	29.90	0.01	22.56	20.71	0.22	13.88	0.26	0.64	0.28
MA12-385B	SQ vein	1939	Chl	30.74	0.07	24.20	19.94	0.32	14.58	0.26	0.83	0.29
MA12-385B	SQ vein	1940	Chl	31.08	0.04	24.14	20.04	0.13	14.56	0.47	0.76	0.33
MA12-385B	SQ vein	1941	Wmica	46.43	0.11	33.43	2.41	0.06	0.90	0.08	1.00	10.16
MA12-385B	SQ vein	1942	Wmica	47.63	0.58	33.29	2.17	0.00	0.77	0.17	1.63	9.16
MA12-385B	SQ vein	1943	Wmica	46.72	0.26	34.27	2.50	0.00	0.70	0.00	1.06	10.17
MA12-385B	SQ vein	1945	Wmica	47.86	0.25	33.94	2.40	0.00	0.70	0.05	1.63	9.43
MA12-385B	SQ vein	1946	Wmica	47.28	0.25	34.37	2.26	0.03	0.77	0.00	1.13	10.26
MA12-385B	SQ vein	1947	Wmica	48.33	0.22	34.05	2.06	0.00	0.45	0.12	1.59	9.44
MA12-385B	SQ vein	1948	Wmica	47.18	0.21	34.85	2.41	0.14	0.75	0.00	1.31	9.82
MA12-385B	SQ vein	1949	Wmica	48.20	0.16	34.44	2.24	0.01	0.71	0.09	1.50	9.47
MA12-385B	SQ vein	1950	Wmica	47.32	0.31	34.69	2.48	0.00	0.83	0.00	1.24	10.14
MA12-385B	SQ vein	1951	Wmica	47.25	0.22	34.63	2.53	0.05	0.79	0.00	1.40	10.08
MA12-385B	SQ vein	1952	Wmica	47.80	0.25	34.12	2.37	0.00	0.83	0.11	1.72	9.68
MA12-385B	SQ vein	1953	Wmica	47.18	0.22	34.49	2.62	0.00	0.78	0.00	1.25	10.39
MA12-385B	SQ vein	1954	Wmica	47.99	0.31	33.78	2.68	0.00	0.91	0.00	1.10	10.30
MA12-385B	SQ vein	1955	Wmica	47.54	0.19	34.82	2.22	0.31	0.98	0.00	1.39	9.87
MA12-385B	SQ vein	1956	Wmica	47.56	0.23	34.95	2.52	0.00	0.77	0.00	1.14	10.24
MA12-385B	SQ vein	1957	Wmica	48.27	0.25	34.43	2.26	0.09	0.85	0.05	1.21	10.22
MA12-385B	SQ vein	1958	Wmica	47.70	0.22	34.71	2.38	0.20	0.91	0.00	1.34	10.31
MA12-385B	SQ vein	1959	Fspar	61.83	0.03	24.02	0.24	0.00	0.00	5.49	7.58	0.21
MA12-385B	SQ vein	1960	Fspar	63.04	0.00	19.11	0.26	0.01	0.03	0.19	0.74	15.72

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA12-385B	SQvein	1961	Fspar	61.52	0.04	24.22	0.14	0.05	0.00	5.57	7.51	0.25
MA12-385B	SQvein	1962	Fspar	63.37	0.09	19.16	0.03	0.00	0.02	0.14	0.78	16.07
MA12-385B	SQvein	1963	Fspar	62.62	0.00	23.44	0.18	0.00	0.00	4.80	8.03	0.19
MA12-385B	SQvein	1964	Fspar	61.13	0.03	24.41	0.15	0.03	0.03	5.60	7.86	0.23
MA12-385B	SQvein	1965	Fspar	62.07	0.05	24.28	0.00	0.02	0.03	5.54	7.59	0.16
MA12-385B	SQvein	1966	Fspar	61.88	0.00	24.33	0.09	0.06	0.00	5.57	7.80	0.22
MA12-385B	SQvein	1967	Fspar	62.00	0.00	24.21	0.17	0.00	0.02	5.66	7.60	0.02
MA12-385B	SQvein	1968	Fspar	62.56	0.01	24.06	0.20	0.01	0.00	5.21	7.80	0.15
MA12-385B	SQvein	1969	Fspar	61.84	0.01	24.41	0.06	0.00	0.03	5.77	7.66	0.20
MA12-385B	SQvein	1970	Fspar	63.42	0.07	19.26	0.32	0.00	0.00	0.18	0.91	16.04
MA12-385B	SQvein	1971	Fspar	62.18	0.03	24.26	0.11	0.00	0.00	5.37	7.73	0.22
MA12-385B	SQvein	1972	Fspar	62.40	0.00	24.35	0.20	0.00	0.01	5.44	7.82	0.16
MA12-385B	SQvein	1973	Fspar	64.36	0.12	19.00	0.24	0.14	0.00	0.00	0.35	16.89
MA12-385B	SQvein	1974	Fspar	64.13	0.02	19.73	0.29	0.00	0.02	0.68	1.69	14.16
MA12-385B	SQvein	1975	Fspar	65.06	0.09	19.33	0.31	0.15	0.03	0.00	0.41	17.09
MA15-463	SQvein	1976	Wmica	43.10	0.18	32.99	1.85	0.02	0.55	0.03	1.08	9.32
MA15-463	SQvein	1977	Wmica	43.81	0.32	33.58	1.77	0.00	0.58	0.01	1.00	9.86
MA15-463	SQvein	1978	Wmica	44.45	0.28	32.87	1.87	0.02	0.80	0.00	1.02	9.81
MA15-463	SQvein	1979	Wmica	44.35	0.32	32.96	2.03	0.00	0.82	0.00	1.08	9.96
MA15-463	SQvein	1980	Wmica	44.10	0.25	33.79	1.86	0.16	0.63	0.00	1.00	9.81
MA15-463	SQvein	1981	Wmica	44.08	0.20	33.87	1.82	0.03	0.43	0.00	1.03	9.81
MA15-463	SQvein	1982	Wmica	43.78	0.16	34.04	1.85	0.16	0.53	0.02	1.04	9.88
MA15-463	SQvein	1983	Wmica	44.12	0.21	33.87	1.67	0.00	0.52	0.00	1.08	9.92
MA15-463	SQvein	1984	Wmica	44.20	0.12	34.72	1.58	0.00	0.60	0.00	1.44	9.16
MA15-463	SQvein	1985	Wmica	44.33	0.22	33.96	1.66	0.03	0.57	0.00	1.14	9.76
MA15-463	SQvein	1986	Wmica	44.09	0.24	34.50	1.79	0.00	0.58	0.00	1.37	9.46
MA15-463	SQvein	1987	Wmica	44.64	0.17	33.90	1.74	0.02	0.70	0.02	1.10	9.87
MA15-463	SQvein	1988	Wmica	44.47	0.32	33.78	2.03	0.00	0.80	0.00	0.91	9.97
MA15-463	SQvein	1989	Wmica	44.85	0.12	34.77	1.59	0.00	0.37	0.02	1.61	8.88
MA15-463	SQvein	1990	Wmica	44.59	0.12	34.32	2.00	0.00	0.60	0.00	1.18	9.63
MA15-463	SQvein	1991	Wmica	44.75	0.28	33.98	1.61	0.00	0.71	0.00	1.22	9.98
MA15-463	SQvein	1992	Wmica	44.67	0.15	34.14	1.92	0.00	0.61	0.01	1.05	9.90
MA15-463	SQvein	1993	Wmica	44.71	0.14	33.77	1.88	0.15	0.86	0.00	1.30	9.99
MA15-463	SQvein	1994	Wmica	44.54	0.18	34.85	1.55	0.08	0.61	0.03	1.44	9.63

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA15-463	SQvein	1995	Wmica	44.50	0.20	34.22	2.07	0.01	0.86	0.00	1.14	9.96
MA15-463	SQvein	1996	Wmica	44.85	0.17	34.09	1.98	0.08	0.66	0.00	1.03	10.10
MA15-463	SQvein	1997	Wmica	44.88	0.16	33.96	1.93	0.00	0.85	0.00	1.13	9.84
MA15-463	SQvein	1998	Wmica	44.41	0.24	34.01	2.10	0.29	0.77	0.00	1.24	9.83
MA15-463	SQvein	1999	Wmica	45.16	0.14	34.98	1.17	0.03	0.82	0.00	1.32	9.49
MA15-463	SQvein	2000	Wmica	44.54	0.13	34.93	1.57	0.06	0.71	0.00	1.46	9.77
MA15-463	SQvein	2001	Wmica	45.46	0.21	33.92	2.15	0.08	0.85	0.00	1.16	9.97
MA15-463	SQvein	2002	Wmica	45.32	0.34	33.53	2.10	0.07	1.12	0.01	1.14	10.12
MA15-463	SQvein	2003	Wmica	43.91	0.30	33.82	1.90	0.00	0.60	0.00	0.88	10.13
MA15-463	SQvein	2004	Wmica	44.13	0.22	34.04	1.78	0.03	0.41	0.00	1.10	9.94
MA15-463	SQvein	2005	Wmica	44.53	0.25	33.32	1.87	0.00	0.67	0.01	0.95	9.97
MA15-463	SQvein	2006	Wmica	44.95	0.21	32.73	2.18	0.00	0.95	0.00	1.00	9.97
MA15-463	SQvein	2007	Wmica	44.20	0.22	33.90	1.84	0.00	0.68	0.00	1.06	9.69
MA15-463	SQvein	2008	Wmica	44.06	0.15	34.95	1.61	0.00	0.58	0.00	1.32	9.63
MA15-463	SQvein	2009	Wmica	43.91	0.22	35.13	1.62	0.00	0.54	0.00	1.39	9.51
MA15-463	SQvein	2010	Wmica	44.17	0.18	34.09	1.81	0.08	0.64	0.01	1.19	10.04
MA15-463	SQvein	2011	Wmica	44.12	0.09	34.84	1.71	0.10	0.54	0.00	1.13	9.70
MA15-463	SQvein	2012	Wmica	44.63	0.08	33.50	2.03	0.02	0.76	0.00	1.07	9.86
MA15-463	SQvein	2013	Wmica	44.35	0.19	34.89	1.52	0.00	0.55	0.00	1.24	9.61
MA15-463	SQvein	2014	Wmica	44.29	0.19	34.89	1.43	0.00	0.67	0.00	1.35	9.67
MA15-463	SQvein	2015	Wmica	43.80	0.15	34.54	1.90	0.31	0.54	0.00	1.33	9.93
MA15-463	SQvein	2016	Wmica	44.88	0.42	33.47	1.80	0.00	0.85	0.00	1.15	9.92
MA15-463	SQvein	2017	Wmica	44.38	0.36	34.11	2.05	0.00	0.54	0.00	1.10	9.90
MA15-463	SQvein	2018	Wmica	44.83	0.17	33.41	1.96	0.00	0.96	0.00	1.13	10.08
MA15-463	SQvein	2019	Wmica	44.87	0.22	33.13	2.47	0.00	0.90	0.00	1.03	10.10
MA15-463	SQvein	2020	Wmica	44.33	0.16	34.60	1.73	0.06	0.79	0.00	1.20	9.90
MA15-463	SQvein	2021	Wmica	45.12	0.22	33.89	1.67	0.03	0.90	0.00	1.23	9.79
MA15-463	SQvein	2022	Wmica	44.79	0.12	34.63	1.57	0.00	0.65	0.03	1.32	9.68
MA15-463	SQvein	2025	Wmica	44.28	0.23	34.51	1.66	0.11	0.56	0.00	1.23	9.73
MA15-463	SQvein	2026	Wmica	44.87	0.29	33.64	1.69	0.23	0.73	0.00	0.98	10.10
MA15-463	SQvein	2027	Wmica	44.02	0.29	34.73	1.88	0.04	0.67	0.00	1.37	9.56
MA15-463	SQvein	2028	Wmica	44.42	0.23	34.62	1.86	0.00	0.58	0.00	1.19	9.87
MA15-463	SQvein	2029	Wmica	44.31	0.26	34.82	1.74	0.00	0.78	0.01	1.32	9.75
MA15-463	SQvein	2030	Wmica	44.47	0.15	35.12	1.45	0.22	0.56	0.00	1.35	9.73

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA15-463	SQvein	2031	Wmica	44.27	0.06	34.95	1.71	0.15	0.64	0.00	1.37	9.59
MA15-463	SQvein	2032	Wmica	44.60	0.18	33.85	2.06	0.13	0.78	0.00	1.11	9.89
MA15-463	SQvein	2033	Wmica	45.10	0.35	34.16	1.84	0.00	0.66	0.00	1.28	9.87
MA15-463	SQvein	2034	Wmica	44.48	0.12	34.90	1.57	0.30	0.57	0.00	1.22	9.84
MA15-463	SQvein	2035	Wmica	44.77	0.22	34.88	1.69	0.08	0.75	0.00	1.43	9.73
MA15-463	SQvein	2036	Wmica	44.79	0.22	34.76	1.93	0.10	0.67	0.00	1.28	9.94
MA15-463	SQvein	2037	Wmica	44.88	0.10	35.43	1.66	0.10	0.82	0.00	1.51	9.66
MA15-463	SQvein	2038	Wmica	43.70	0.05	34.96	1.54	0.04	0.84	0.00	1.45	9.57
MA15-463	SQvein	2039	Wmica	43.89	0.18	34.95	1.58	0.00	0.69	0.00	1.51	9.79
MA15-463	SQvein	2040	Wmica	44.14	0.22	35.54	1.27	0.00	0.62	0.00	1.50	9.67
MA15-463	SQvein	2041	Wmica	44.49	0.21	34.92	1.68	0.26	0.43	0.01	1.42	9.50
MA15-463	SQvein	2042	Wmica	44.29	0.31	35.02	1.95	0.00	0.66	0.00	1.47	9.76
MA15-463	SQvein	2043	Wmica	44.62	0.12	35.30	1.58	0.00	0.61	0.00	1.39	9.60
MA15-463	SQvein	2044	Wmica	44.69	0.23	35.69	1.14	0.04	0.59	0.00	1.38	9.66
MA15-463	SQvein	2045	Wmica	44.97	0.24	34.63	1.95	0.00	0.60	0.00	1.40	9.81
MA15-463	SQvein	2046	Wmica	44.71	0.14	35.52	1.31	0.15	0.80	0.00	1.47	9.47
MA15-463	SQvein	2048	Wmica	45.03	0.20	35.55	1.30	0.11	0.70	0.00	1.52	9.64
MA15-463	SQvein	2049	Wmica	45.14	0.21	34.57	1.92	0.02	0.72	0.00	1.31	9.88
MA15-463	SQvein	2050	Wmica	44.73	0.22	35.59	1.33	0.00	0.74	0.00	1.66	9.57
MA15-463	SQvein	2051	Wmica	44.77	0.20	34.93	1.98	0.00	0.87	0.01	1.52	9.64
MA15-463	SQvein	2052	Wmica	45.12	0.17	35.37	1.48	0.00	0.72	0.06	1.46	9.70
MA15-463	SQvein	2053	Wmica	45.13	0.18	35.12	2.09	0.04	0.91	0.00	1.50	9.59
MA15-463	SQvein	2054	Wmica	45.25	0.08	35.39	1.61	0.02	0.77	0.00	1.52	9.69
MA15-463	SQvein	2055	Wmica	45.00	0.15	35.14	2.07	0.02	0.66	0.00	1.40	9.88
MA15-463	SQvein	2056	Wmica	44.63	0.24	35.95	1.49	0.00	0.76	0.04	1.60	9.70
MA15-463	SQvein	2057	Wmica	45.39	0.12	35.69	1.44	0.00	0.83	0.01	1.47	9.81
MA15-463	SQvein	2065	Wmica	45.62	0.10	35.70	1.22	0.18	0.83	0.00	1.64	9.16
MA15-463	SQvein	2066	Wmica	45.23	0.25	35.91	1.65	0.00	0.71	0.00	1.50	9.50
MA15-463	SQvein	2067	Wmica	45.37	0.20	36.55	0.72	0.00	0.67	0.00	1.57	9.78
MA15-463	SQvein	2068	Wmica	45.00	0.28	35.35	1.86	0.03	0.88	0.00	1.60	9.70
MA15-463	SQvein	2069	Wmica	45.58	0.21	35.09	2.12	0.00	0.92	0.00	1.40	9.90
MA15-463	SQvein	2070	Wmica	45.43	0.11	36.15	1.30	0.10	0.63	0.00	1.33	9.95
MA15-463	SQvein	2071	Wmica	46.04	0.23	35.36	1.87	0.00	0.84	0.00	1.58	9.56
MA15-463	SQvein	2072	Wmica	44.29	0.26	34.07	1.50	0.00	0.67	0.04	1.49	9.37

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA15-463	SQ vein	2073	Wmica	44.20	0.19	34.63	1.23	0.06	0.61	0.00	1.51	9.34
MA15-463	SQ vein	2074	Wmica	43.90	0.22	34.47	1.42	0.00	0.55	0.00	1.15	9.69
MA15-463	SQ vein	2075	Wmica	44.18	0.08	34.32	1.61	0.00	0.63	0.00	1.39	9.60
MA15-463	SQ vein	2076	Wmica	43.98	0.24	34.31	1.74	0.07	0.72	0.00	1.51	9.39
MA15-463	SQ vein	2077	Wmica	43.99	0.25	34.56	1.60	0.00	0.50	0.00	1.36	9.62
MA15-463	SQ vein	2078	Wmica	44.53	0.21	34.69	1.41	0.00	0.59	0.00	1.32	9.51
MA15-463	SQ vein	2080	Wmica	44.55	0.27	34.46	1.26	0.00	0.76	0.00	1.35	9.61
MA15-463	SQ vein	2081	Wmica	43.73	0.37	34.95	1.38	0.00	0.51	0.00	1.31	9.64
MA15-463	SQ vein	2082	Wmica	44.78	0.32	33.83	1.91	0.05	0.70	0.00	1.18	9.63
MA15-463	SQ vein	2083	Wmica	45.11	0.21	34.29	1.46	0.00	0.74	0.00	1.27	9.72
MA15-463	SQ vein	2084	Wmica	45.04	0.31	33.60	1.90	0.00	0.91	0.00	1.31	9.85
MA15-463	SQ vein	2099	Wmica	44.65	0.25	34.65	1.81	0.00	0.81	0.00	1.38	9.38
MA15-463	SQ vein	2100	Wmica	44.27	0.40	34.26	2.04	0.00	0.79	0.00	1.36	9.85
MA15-463	SQ vein	2101	Wmica	44.87	0.20	34.49	1.54	0.17	0.75	0.00	1.51	9.56
MA15-463	SQ vein	2102	Wmica	44.75	0.14	35.02	1.21	0.00	0.78	0.00	1.50	9.60
MA15-463	SQ vein	2103	Wmica	44.88	0.22	34.41	1.62	0.05	0.69	0.00	1.23	9.61
MA15-463	SQ vein	2106	Wmica	44.86	0.33	33.65	2.06	0.00	0.87	0.00	1.27	9.73
MA15-463	SQ vein	2107	Wmica	45.20	0.28	34.55	1.53	0.00	0.62	0.00	1.30	9.63
MA15-463	SQ vein	2108	Wmica	44.73	0.17	34.38	2.11	0.00	0.75	0.00	1.43	9.62
MA15-463	SQ vein	2109	Wmica	45.11	0.24	33.66	1.86	0.03	0.99	0.00	1.28	9.66
MA15-463	SQ vein	2110	Wmica	45.10	0.23	35.07	1.61	0.00	0.66	0.00	1.37	9.27
MA15-463	SQ vein	2111	Wmica	44.78	0.15	34.29	1.79	0.00	0.69	0.00	1.28	9.87
MA15-463	SQ vein	2112	Wmica	44.87	0.23	34.79	1.31	0.00	0.77	0.00	1.45	9.65
MA15-463	SQ vein	2113	Wmica	45.18	0.13	34.63	1.60	0.03	0.79	0.00	1.38	9.92
MA15-463	SQ vein	2116	Wmica	44.97	0.32	34.89	1.66	0.00	0.81	0.00	1.46	9.53
MA15-463	SQ vein	2129	Wmica	45.31	0.25	34.51	1.93	0.03	0.66	0.00	1.05	9.74
MA15-463	SQ vein	2130	Wmica	44.84	0.25	34.24	2.24	0.02	0.88	0.00	1.24	9.93
MA15-463	SQ vein	2131	Wmica	46.09	0.34	34.20	1.37	0.04	0.68	0.00	1.26	9.79
MA15-463	SQ vein	2132	Wmica	44.96	0.22	34.04	2.09	0.06	0.82	0.00	1.29	9.99
MA15-463	SQ vein	2133	Wmica	44.91	0.25	35.35	1.35	0.09	0.69	0.00	1.58	9.52
MA15-463	SQ vein	2134	Wmica	44.97	0.24	34.90	1.34	0.16	0.92	0.00	1.56	9.56
MA15-463	SQ vein	2136	Wmica	45.58	0.32	33.91	2.12	0.28	0.80	0.00	1.23	9.91
MA15-463	SQ vein	2137	Wmica	45.37	0.23	35.20	1.65	0.14	0.78	0.00	1.54	9.69
MA15-463	SQ vein	2138	Chl	25.64	0.06	22.36	25.37	0.20	11.61	0.00	0.00	0.13

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA15-463	SQvein	2139	Chl	25.55	0.23	22.98	25.60	0.03	11.33	0.03	0.30	0.20
MA15-463	SQvein	2140	Chl	26.01	0.06	22.32	26.06	0.09	11.50	0.00	0.06	0.17
MA15-463	SQvein	2143	Chl	25.70	0.21	22.70	26.55	0.10	11.32	0.10	0.00	0.17
MA15-463	SQvein	2145	Chl	25.71	0.20	23.06	25.56	0.22	11.54	0.01	0.41	0.15
MA15-463	SQvein	2146	Chl	25.18	0.00	22.80	26.18	0.28	11.47	0.04	0.50	0.16
MA15-463	SQvein	2147	Chl	25.44	0.10	23.12	26.15	0.39	11.54	0.00	0.34	0.08
MA15-463	SQvein	2148	Chl	25.71	0.13	23.00	26.08	0.25	11.72	0.02	0.31	0.13
MA15-463	SQvein	2150	Chl	26.57	0.18	22.26	25.38	0.21	12.17	0.00	0.26	0.31
MA15-463	SQvein	2151	Chl	26.69	0.00	22.52	25.11	0.01	12.02	0.02	0.33	0.29
MA15-463	SQvein	2153	Chl	26.56	0.06	22.28	25.61	0.31	11.91	0.10	0.06	0.27
MA15-463	SQvein	2154	Chl	25.94	0.07	23.19	26.49	0.00	11.45	0.03	0.44	0.26
MA15-463	SQvein	2155	Chl	26.49	0.07	22.35	25.76	0.26	12.10	0.03	0.48	0.27
MA15-463	SQvein	2156	Chl	25.36	0.10	23.20	26.79	0.23	11.84	0.04	0.39	0.16
MA15-463	SQvein	2157	Chl	27.09	0.21	22.44	25.02	0.12	12.16	0.06	0.48	0.31
MA15-463	SQvein	2159	Chl	26.03	0.20	23.32	26.04	0.18	11.60	0.01	0.45	0.13
MA15-463	SQvein	2160	Chl	26.96	0.15	22.68	24.75	0.62	12.12	0.01	0.46	0.19
MA15-463	SQvein	2161	Chl	25.89	0.16	22.63	26.21	0.44	11.82	0.03	0.26	0.26
MA15-463	SQvein	2162	Chl	26.37	0.04	22.70	25.88	0.29	12.13	0.00	0.42	0.28
MA15-463	SQvein	2163	Chl	26.29	0.03	23.39	26.29	0.34	11.83	0.04	0.47	0.10
MA15-463	SQvein	2164	Chl	25.76	0.11	23.38	26.77	0.24	11.84	0.02	0.52	0.17
MA15-463	SQvein	2165	Chl	25.82	0.11	23.31	27.14	0.01	11.75	0.06	0.44	0.22
MA15-463	SQvein	2166	Chl	26.34	0.13	23.95	26.11	0.34	12.22	0.00	0.44	0.14
MA15-463	SQvein	2167	Chl	26.33	0.17	23.49	26.52	0.20	12.18	0.04	0.43	0.11
MA15-463	SQvein	2169	Wmica	44.97	0.31	34.47	2.29	0.00	0.63	0.00	1.14	9.48
MA15-463	SQvein	2170	Wmica	45.11	0.25	32.60	2.95	0.09	1.25	0.00	0.90	10.20
MA15-463	SQvein	2171	Wmica	46.11	0.19	32.54	2.53	0.14	1.20	0.00	1.10	9.74
MA15-463	SQvein	2172	Wmica	45.79	0.35	33.19	2.17	0.00	1.20	0.00	1.18	9.69
MA15-463	SQvein	2173	Wmica	44.82	0.36	34.50	2.73	0.00	0.81	0.00	1.13	9.80
MA15-463	SQvein	2174	Wmica	44.50	0.20	34.97	2.82	0.04	0.83	0.00	1.16	9.80
MA15-463	SQvein	2175	Wmica	45.75	0.44	34.01	2.73	0.05	0.80	0.00	1.05	9.70
MA15-463	SQvein	2176	Wmica	45.66	0.33	33.10	2.64	0.00	1.61	0.00	1.06	10.01
MA15-463	SQvein	2177	Wmica	44.85	0.35	34.71	2.50	0.00	1.11	0.00	1.25	9.89
MA15-463	SQvein	2178	Wmica	44.30	0.23	34.53	3.29	0.02	1.41	0.00	1.29	9.11
MA15-463	SQvein	2185	Wmica	45.43	0.34	34.86	2.32	0.00	0.94	0.00	1.28	9.66

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA15-463	SQvein	2188	Wmica	45.09	0.37	34.60	2.39	0.00	0.87	0.00	1.25	9.75
MA15-463	SQvein	2190	Wmica	45.20	0.19	34.40	2.83	0.04	0.90	0.00	1.15	9.87
MA15-463	SQvein	2191	Wmica	45.96	0.22	33.20	2.74	0.10	1.29	0.00	1.04	9.85
MA15-463	SQvein	2192	Wmica	46.08	0.27	32.84	3.21	0.04	1.28	0.00	0.88	10.27
MA15-463	SQvein	2193	Wmica	45.46	0.21	34.71	2.38	0.10	1.06	0.00	1.25	9.74
MA15-463	SQvein	2194	Wmica	46.30	0.20	34.10	2.65	0.04	0.89	0.00	0.99	9.98
MA15-463	SQvein	2195	Wmica	45.87	0.17	32.99	3.20	0.15	1.41	0.00	1.03	10.35
MA15-463	SQvein	2196	Wmica	45.22	0.09	35.09	2.79	0.07	0.74	0.00	1.08	10.10
MA15-463	SQvein	2197	Wmica	45.49	0.13	34.33	2.79	0.00	1.01	0.00	1.06	10.15
MA15-463	SQvein	2198	Wmica	45.25	0.52	34.63	2.30	0.00	0.74	0.00	1.30	9.96
MA15-463	SQvein	2199	Wmica	45.10	0.53	35.05	2.55	0.00	0.92	0.00	1.49	9.54
MA15-463	SQvein	2200	Wmica	45.64	0.46	34.93	2.45	0.15	1.03	0.00	1.56	9.58
MA15-463	SQvein	2201	Wmica	46.20	0.30	33.00	3.27	0.00	1.30	0.00	0.90	10.64
MA15-463	SQvein	2202	Wmica	45.63	0.13	35.24	2.75	0.29	0.73	0.00	0.93	10.20
MA15-463	SQvein	2203	Wmica	46.36	0.27	32.93	3.36	0.03	1.44	0.00	1.01	10.15
MA15-463	SQvein	2204	Wmica	46.61	0.48	33.24	3.19	0.09	1.52	0.00	1.02	10.43
MA15-463	SQvein	2205	Chl	25.46	0.00	22.11	28.12	0.27	10.69	0.10	0.35	0.03
MA15-463	SQvein	2206	Chl	27.45	0.00	22.04	26.20	0.18	11.76	0.12	0.46	0.04
MA15-463	SQvein	2207	Chl	26.52	0.06	22.35	28.27	0.18	10.97	0.20	0.03	0.04
MA15-463	SQvein	2208	Chl	27.29	0.13	22.53	27.60	0.18	11.05	0.06	0.00	0.07
MA15-463	SQvein	2209	Chl	27.30	0.08	22.42	27.46	0.21	11.44	0.10	0.00	0.00
MA15-463	SQvein	2219	Chl	26.67	0.05	22.76	27.38	0.40	11.58	0.08	0.00	0.09
MA15-463	SQvein	2220	Chl	26.80	0.14	22.57	27.50	0.19	11.98	0.06	0.00	0.05
MA15-463	SQvein	2221	Chl	25.96	0.00	22.85	29.20	0.27	11.00	0.11	0.10	0.09
MA15-463	SQvein	2222	Chl	26.10	0.03	23.31	28.14	0.36	11.78	0.30	0.27	0.00
MA15-463	SQvein	2224	Chl	26.36	0.06	23.38	26.90	0.36	12.21	0.26	0.39	0.10
MA15-463	SQvein	2225	Chl	26.84	0.00	23.01	27.63	0.40	11.96	0.26	0.43	0.00
MA15-463	SQvein	2226	Chl	26.09	0.07	23.33	28.92	0.31	11.03	0.23	0.37	0.00
MA15-463	SQvein	2228	Chl	26.23	0.03	23.21	28.15	0.02	11.90	0.14	0.32	0.04
MA15-463	SQvein	2229	Chl	27.72	0.00	23.39	26.88	0.13	11.85	0.15	0.42	0.00
MA15-463	SQvein	2230	Chl	27.43	0.14	23.26	27.73	0.15	11.69	0.06	0.29	0.05
MA15-463	SQvein	2231	Chl	27.63	0.05	23.03	27.82	0.28	11.62	0.11	0.33	0.04
MA15-463	SQvein	2232	Chl	26.46	0.01	23.56	28.74	0.49	11.39	0.05	0.30	0.02
MA15-463	SQvein	2233	Chl	28.26	0.05	22.65	27.40	0.08	11.77	0.16	0.38	0.02

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA15-463	SQ vein	2234	Chl	26.24	0.12	23.04	29.45	0.43	11.51	0.08	0.52	0.02
MA15-463	SQ vein	2236	Chl	26.89	0.01	23.41	28.78	0.38	11.78	0.16	0.25	0.00
MA15-463	SQ vein	2237	Chl	26.37	0.00	24.02	28.18	0.51	12.37	0.22	0.60	0.01
MA15-463	SQ vein	2240	Wmica	46.09	0.16	37.67	0.37	0.26	0.02	1.18	5.36	2.79
MA15-463	SQ vein	2241	Wmica	46.71	0.01	38.21	0.25	0.00	0.01	1.25	6.07	1.53
MA15-463	SQ vein	2242	Wmica	46.85	0.06	38.13	0.35	0.13	0.03	1.11	5.54	2.37
MA15-463	SQ vein	2243	Wmica	46.96	0.00	38.85	0.27	0.00	0.00	1.08	6.34	1.24
MA15-463	SQ vein	2244	Wmica	46.84	0.00	38.56	0.29	0.00	0.01	1.28	5.92	1.89
MA15-463	SQ vein	2245	Wmica	47.17	0.05	37.67	0.39	0.07	0.02	1.18	5.44	2.69
MA15-463	SQ vein	2246	Wmica	46.53	0.16	38.30	0.35	0.00	0.00	1.28	6.04	1.93
MA15-463	SQ vein	2247	Wmica	46.75	0.09	38.58	0.38	0.00	0.00	1.20	5.73	2.03
MA15-463	SQ vein	2248	Wmica	46.89	0.07	38.04	0.30	0.04	0.42	1.18	5.39	2.72
MA15-463	SQ vein	2249	Wmica	47.25	0.05	38.16	0.24	0.00	0.03	1.21	5.48	2.54
MA15-463	SQ vein	2250	Wmica	46.35	0.08	38.16	0.42	0.06	0.05	1.49	4.68	3.90
MA15-463	SQ vein	2251	Wmica	46.91	0.08	39.05	0.35	0.04	0.02	1.28	5.91	1.76
MA15-463	SQ vein	2252	Wmica	46.82	0.14	37.72	0.45	0.00	0.03	1.33	4.74	3.92
MA15-463	SQ vein	2253	Wmica	46.88	0.00	38.80	0.34	0.00	0.27	1.35	5.66	2.21
MA15-463	SQ vein	2254	Wmica	47.45	0.09	37.41	0.54	0.03	0.07	1.07	4.91	3.87
MA15-463	SQ vein	2255	Wmica	47.43	0.06	38.20	0.36	0.05	0.05	1.22	5.60	2.53
MA15-463	SQ vein	2256	Wmica	46.74	0.13	39.26	0.59	0.00	0.00	1.31	6.23	1.51
MA15-463	SQ vein	2257	Wmica	47.70	0.12	38.75	0.41	0.08	0.00	1.30	5.77	1.91
MA15-463	SQ vein	2258	Wmica	46.97	0.04	35.10	1.48	0.12	0.66	0.82	1.44	9.57
MA15-463	SQ vein	2259	Wmica	47.78	0.21	39.19	0.36	0.07	0.00	1.21	5.61	2.04
MA15-463	Type 2B vein	2260	Wmica	45.87	0.00	38.90	0.50	0.00	0.02	0.67	5.83	2.16
MA15-463	Type 2B vein	2261	Wmica	46.22	0.16	38.68	0.59	0.00	0.02	0.82	5.94	1.81
MA15-463	Type 2B vein	2262	Wmica	46.18	0.05	39.14	0.28	0.00	0.00	0.73	6.51	0.91
MA15-463	Type 2B vein	2263	Wmica	46.43	0.05	38.72	0.59	0.00	0.01	0.69	5.93	2.06
MA15-463	Type 2B vein	2264	Wmica	46.67	0.00	38.74	0.51	0.00	0.04	0.69	5.92	1.72
MA15-463	Type 2B vein	2265	Wmica	46.51	0.00	38.63	0.40	0.09	0.01	0.60	6.25	1.61
MA15-463	Type 2B vein	2266	Wmica	46.78	0.09	39.32	0.35	0.00	0.01	0.80	6.57	1.05
MA15-463	Type 2B vein	2267	Wmica	46.79	0.00	39.24	0.39	0.02	0.04	0.73	6.39	1.12
MA15-463	Type 2B vein	2268	Wmica	47.19	0.00	39.24	0.38	0.00	0.05	0.60	5.95	2.12
MA15-463	Type 2B vein	2269	Wmica	47.27	0.04	38.89	0.55	0.00	0.04	0.52	5.56	2.45
MA15-463	Type 2B vein	2270	Wmica	47.47	0.01	38.28	0.51	0.01	0.42	0.56	5.07	3.52

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA15-463	Type 2B vein	2271	Wmica	47.37	0.25	38.74	0.58	0.00	0.07	0.48	5.25	3.09
MA15-463	Type 2B vein	2272	Wmica	45.90	0.08	38.02	0.45	0.04	0.00	0.58	5.95	1.81
MA15-463	Type 2B vein	2273	Wmica	46.02	0.14	38.51	0.31	0.00	0.01	0.68	5.92	1.49
MA15-463	Type 2B vein	2274	Wmica	45.62	0.03	38.50	0.43	0.09	0.05	0.80	5.17	2.73
MA15-463	Type 2B vein	2275	Wmica	45.65	0.01	38.65	0.47	0.00	0.03	0.75	5.77	2.00
MA15-463	Type 2B vein	2276	Wmica	45.75	0.02	38.45	0.54	0.10	0.04	0.74	5.54	2.47
MA15-463	Type 2B vein	2277	Wmica	45.76	0.02	38.69	0.74	0.06	0.08	0.90	5.71	2.03
MA15-463	Type 2B vein	2278	Wmica	46.45	0.03	38.12	0.39	0.00	0.03	0.80	4.86	3.16
MA15-463	Type 2B vein	2279	Wmica	46.02	0.02	38.49	0.58	0.00	0.01	0.88	5.37	2.70
MA15-463	Type 2B vein	2280	Wmica	46.17	0.00	38.17	0.55	0.00	0.03	0.79	5.20	3.08
MA15-463	Type 2B vein	2281	Wmica	46.35	0.11	38.55	0.46	0.03	0.03	0.76	6.04	1.72
MA15-463	Type 2B vein	2282	Wmica	45.97	0.05	37.96	0.53	0.05	0.03	0.88	5.48	3.15
MA15-463	Type 2B vein	2285	Wmica	45.76	0.06	38.34	0.59	0.22	0.04	0.72	5.20	3.24
MA15-463	Type 2B vein	2286	Wmica	46.81	0.03	38.14	0.39	0.08	0.03	0.71	5.74	2.33
MA15-463	Type 2B vein	2287	Wmica	46.12	0.06	38.94	0.31	0.02	0.02	1.03	6.22	1.55
MA15-463	Type 2B vein	2288	Wmica	45.95	0.00	38.68	0.66	0.03	0.02	0.70	5.43	2.79
MA15-463	Type 2B vein	2289	Wmica	45.84	0.15	39.26	0.58	0.05	0.02	0.91	5.59	2.32
MA15-463	Type 2B vein	2290	Wmica	46.83	0.03	38.59	0.33	0.00	0.07	0.56	5.07	3.55
MA15-463	Type 2B vein	2291	Wmica	46.43	0.05	39.39	0.42	0.17	0.02	1.01	6.12	1.78
MA15-463	Type 2B vein	2292	Wmica	46.53	0.05	37.03	1.18	0.09	0.69	0.43	1.82	9.46
MA19-004	Type 2B vein	2305	Chl	26.91	0.01	20.92	26.94	0.11	8.48	0.45	0.02	0.06
MA19-004	Type 2B vein	2306	Chl	25.68	0.03	21.30	29.38	0.03	7.06	0.46	0.22	0.00
MA19-004	Type 2B vein	2307	Chl	27.22	0.04	21.04	26.76	0.14	8.57	0.69	0.00	0.03
MA19-004	Type 2B vein	2308	Chl	26.87	0.12	20.89	27.43	0.00	8.29	0.57	0.40	0.09
MA19-004	Type 2B vein	2310	Chl	27.27	0.05	21.43	26.77	0.26	8.41	0.50	0.00	0.08
MA19-004	Type 2B vein	2311	Chl	27.00	0.00	21.25	27.08	0.01	8.43	0.61	0.00	0.00
MA19-004	Type 2B vein	2312	Chl	26.56	0.00	20.77	29.62	0.06	7.63	0.58	0.35	0.00
MA19-004	Type 2B vein	2313	Chl	27.33	0.03	21.03	27.38	0.25	8.97	0.54	0.30	0.00
MA19-004	Type 2B vein	2314	Chl	27.19	0.04	21.48	28.05	0.00	8.15	0.78	0.33	0.09
MA19-004	Type 2B vein	2316	Chl	27.20	0.02	21.51	27.67	0.00	8.85	0.81	0.42	0.06
MA19-004	Type 2B vein	2317	Chl	27.54	0.08	21.44	26.58	0.04	8.89	0.87	0.39	0.04
MA19-004	Type 2B vein	2318	Chl	27.20	0.00	21.32	28.19	0.08	8.80	0.65	0.31	0.00
MA19-004	Type 2B vein	2319	Chl	26.91	0.04	21.09	29.68	0.00	7.84	0.68	0.43	0.05
MA19-004	Type 2B vein	2320	Chl	27.58	0.04	21.48	27.63	0.17	8.67	0.46	0.28	0.07

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA19-004	Type 2B vein	2332	Chl	25.77	0.01	20.42	29.59	0.00	6.74	0.18	0.00	0.08
MA19-004	Type 2B vein	2333	Chl	26.46	0.00	21.55	28.10	0.15	8.42	0.17	0.28	0.06
MA19-004	Type 2B vein	2343	Chl	26.45	0.00	21.84	29.18	0.18	7.19	0.23	0.30	0.03
MA19-004	Type 2B vein	2345	Chl	26.42	0.05	21.48	29.92	0.08	7.51	0.24	0.10	0.00
MA19-004	Type 2B vein	2346	Chl	26.27	0.00	21.83	29.04	0.00	8.05	0.28	0.26	0.00
MA19-004	Type 2B vein	2347	Chl	27.15	0.00	21.82	27.97	0.28	8.34	0.33	0.43	0.03
MA19-004	Type 2B vein	2348	Chl	27.02	0.02	21.78	27.29	0.29	8.95	0.24	0.42	0.00
MA19-004	Type 2B vein	2349	Chl	26.82	0.00	21.30	28.25	0.00	8.67	0.29	0.46	0.02
MA19-004	Type 2B vein	2350	Chl	26.27	0.00	21.37	29.76	0.07	7.69	0.29	0.28	0.01
MA19-004	Type 2B vein	2351	Chl	27.49	0.06	21.76	27.41	0.09	8.72	0.32	0.38	0.00
MA19-004	Type 2B vein	2352	Chl	26.58	0.04	22.06	29.94	0.59	7.56	0.23	0.23	0.01
MA19-004	Type 2B vein	2354	Chl	28.49	0.02	23.57	25.50	0.09	5.94	0.26	0.58	0.05
MA19-004	Type 2B vein	2356	Chl	27.46	0.02	21.77	28.13	0.24	6.50	0.17	0.76	0.10
MA19-004	Type 2B vein	2357	Chl	27.70	0.03	22.72	25.97	0.07	8.83	0.26	0.56	0.02
MA19-004	Type 2B vein	2358	Wmica	45.40	0.01	35.04	1.67	0.07	0.76	0.09	1.68	9.10
MA19-004	Type 2B vein	2359	Fspar	64.42	0.00	19.84	0.76	0.11	0.08	0.71	10.18	0.06
MA19-004	Type 2B vein	2360	Fspar	61.97	0.00	20.96	0.58	0.00	0.04	1.89	9.32	0.04
MA19-004	Type 2B vein	2361	Fspar	61.61	0.00	21.03	0.69	0.00	0.04	2.33	9.16	0.07
MA19-004	Type 2B vein	2362	Fspar	63.06	0.00	20.32	0.49	0.00	0.07	1.44	9.34	0.09
MA19-004	Type 2B vein	2363	Fspar	63.40	0.00	20.36	0.74	0.00	0.02	1.16	9.63	0.00
MA19-004	Type 2B vein	2364	Fspar	61.43	0.08	21.75	0.44	0.00	0.20	2.68	8.85	0.00
MA19-004	Type 2B vein	2365	Fspar	62.15	0.04	20.82	0.53	0.00	0.03	2.10	9.33	0.00
MA19-004	Type 2B vein	2366	Fspar	63.25	0.02	20.59	0.51	0.00	0.13	1.48	9.55	0.01
MA19-004	Type 2B vein	2367	Fspar	62.19	0.02	20.89	0.77	0.26	0.06	1.91	9.29	0.01
MA19-004	Type 2B vein	2368	Fspar	63.92	0.14	19.87	0.62	0.00	0.03	0.64	9.99	0.00
MA19-004	Type 2B vein	2369	Fspar	61.64	0.00	21.47	0.91	0.07	0.08	2.49	9.02	0.00
MA19-004	Type 2B vein	2370	Fspar	61.51	0.00	21.48	0.88	0.00	0.04	2.66	8.88	0.12
MA19-004	Type 2B vein	2371	Fspar	62.81	0.03	21.03	0.40	0.00	0.07	1.95	9.26	0.06
MA19-004	Type 2B vein	2372	Fspar	63.17	0.02	20.46	0.97	0.00	0.02	1.24	9.60	0.08
MA19-004	Type 2B vein	2373	Fspar	61.91	0.03	21.45	0.96	0.00	0.06	2.57	8.95	0.10
MA19-004	Type 2B vein	2374	Fspar	63.85	0.20	20.14	0.48	0.00	0.05	1.20	9.86	0.02
MA19-004	Type 2B vein	2376	Fspar	63.33	0.08	20.41	1.40	0.11	0.37	0.79	9.52	0.00
MA19-004	Type 2B vein	2377	Fspar	63.47	0.17	20.61	0.78	0.12	0.01	1.10	9.73	0.00
MA19-004	Type 2B vein	2378	Fspar	64.66	0.10	19.85	0.45	0.00	0.04	0.78	10.02	0.06

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA19-004	Type 2B vein	2379	Fspar	63.57	0.00	20.22	0.73	0.00	0.04	1.12	9.91	0.15
MA19-004	Type 2B vein	2381	Fspar	63.74	0.00	20.75	0.56	0.00	0.05	1.75	9.54	0.05
MA19-004	Type 2B vein	2382	Fspar	62.84	0.07	20.99	0.99	0.00	0.20	1.76	9.34	0.09
MA19-004	Type 2B vein	2383	Fspar	62.68	0.03	21.13	1.21	0.00	0.39	1.69	9.35	0.12
MA19-004	Type 2B vein	2384	Fspar	63.03	0.06	21.06	0.87	0.00	0.00	1.89	9.47	0.16
MA19-004	Type 2B vein	2385	Fspar	61.66	0.03	21.99	1.12	0.04	0.19	2.81	8.88	0.14
MA19-004	Type 2B vein	2386	Fspar	62.99	0.04	21.30	0.59	0.00	0.44	2.14	9.65	0.09
MA19-004	Type 2B vein	2387	Fspar	63.39	0.00	20.69	1.03	0.00	0.04	1.71	9.96	0.12
MA19-004	Type 2B vein	2426	Chl	27.01	0.04	21.52	25.11	0.02	8.18	0.17	0.65	0.00
MA19-004	Type 2B vein	2429	Chl	26.65	0.00	21.75	24.91	0.02	8.51	0.20	0.53	0.11
MA19-004	Type 2B vein	2431	Chl	27.35	0.00	21.17	25.22	0.00	8.67	0.16	0.70	0.00
MA19-004	Type 2B vein	2432	Chl	27.23	0.08	21.71	25.26	0.19	8.55	0.13	0.64	0.01
MA19-004	Type 2B vein	2433	Chl	27.13	0.05	21.90	25.61	0.04	9.09	0.29	0.57	0.00
MA19-004	Type 2B vein	2434	Chl	27.38	0.01	21.42	26.08	0.08	8.63	0.12	0.57	0.04
MA19-004	Type 2B vein	2435	Chl	27.51	0.05	22.37	25.11	0.11	8.94	0.18	0.61	0.04
MA19-004	Type 2B vein	2436	Chl	27.38	0.00	22.09	26.00	0.08	8.97	0.20	0.65	0.03
MA19-004	Type 2B vein	2437	Fspar	62.18	0.01	19.77	0.39	0.00	0.03	1.31	9.46	0.02
MA19-004	Type 2B vein	2438	Fspar	62.05	0.00	19.76	0.37	0.00	0.00	1.43	9.44	0.04
MA19-004	Type 2B vein	2439	Fspar	62.71	0.01	19.58	0.44	0.05	0.03	0.77	9.51	0.02
MA19-004	Type 2B vein	2440	Fspar	63.04	0.02	19.49	0.50	0.10	0.05	0.84	9.73	0.07
MA19-004	Type 2B vein	2441	Fspar	62.86	0.00	19.63	0.35	0.02	0.01	1.28	9.51	0.09
MA19-004	Type 2B vein	2442	Fspar	63.12	0.06	19.34	0.91	0.18	0.24	0.66	9.71	0.05
MA19-004	Type 2B vein	2444	Fspar	63.14	0.06	19.49	0.42	0.06	0.04	0.91	9.63	0.05
MA19-004	Type 2B vein	2445	Fspar	62.61	0.05	19.77	0.68	0.17	0.02	1.22	9.50	0.03
MA19-004	Type 2B vein	2446	Fspar	63.60	0.02	19.29	0.54	0.00	0.00	0.54	10.07	0.08
MA19-004	Type 2B vein	2447	Fspar	62.90	0.00	19.45	0.54	0.00	0.01	0.92	9.94	0.02
MA19-004	Type 2B vein	2448	Fspar	62.19	0.02	20.53	0.61	0.15	0.23	1.56	9.09	0.04
MA19-004	Type 2B vein	2449	Fspar	62.14	0.00	19.93	0.60	0.09	0.03	1.51	9.66	0.08
MA19-004	Type 2B vein	2450	Fspar	61.94	0.00	20.61	0.52	0.00	0.05	2.25	8.95	0.03
MA19-004	Type 2B vein	2451	Fspar	62.82	0.24	20.04	0.59	0.00	0.06	1.21	9.52	0.01
MA19-004	HS/SZ	2461	Wmica	44.77	0.01	37.56	0.66	0.00	0.00	0.26	6.41	1.00
MA19-004	HS/SZ	2462	Wmica	45.58	0.07	37.34	0.43	0.01	0.04	0.25	6.37	1.08
MA19-004	HS/SZ	2463	Wmica	44.60	0.18	33.24	2.51	0.00	0.67	0.00	1.23	9.84
MA19-004	HS/SZ	2464	Wmica	44.93	0.06	33.47	2.13	0.00	0.66	0.01	1.52	9.49

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA19-004	HS/SZ	2466	Wmica	44.81	0.23	33.47	2.06	0.00	0.79	0.04	1.84	9.43
MA19-004	HS/SZ	2467	Wmica	45.04	0.17	33.22	2.18	0.10	0.75	0.00	1.53	9.59
MA19-004	HS/SZ	2468	Wmica	45.17	0.23	33.76	2.09	0.04	0.73	0.00	1.53	9.21
MA19-004	HS/SZ	2469	Wmica	45.17	0.10	34.83	1.43	0.04	0.51	0.00	1.63	9.20
MA19-004	HS/SZ	2470	Wmica	45.14	0.00	34.89	1.31	0.00	0.60	0.00	1.71	9.37
MA19-004	HS/SZ	2471	Wmica	44.97	0.07	34.75	1.85	0.00	0.64	0.00	1.88	8.60
MA19-004	HS/SZ	2472	Wmica	45.47	0.20	33.20	2.09	0.01	0.64	0.00	1.45	9.57
MA19-004	HS/SZ	2473	Wmica	45.82	0.12	33.13	2.24	0.00	0.56	0.06	1.70	9.52
MA19-004	HS/SZ	2474	Wmica	45.13	0.10	33.82	2.22	0.07	0.56	0.06	1.29	9.87
MA19-004	HS/SZ	2475	Wmica	45.52	0.01	35.24	1.06	0.00	0.42	0.00	1.84	8.67
MA19-004	HS/SZ	2476	Wmica	45.10	0.38	33.67	2.39	0.16	0.61	0.02	1.37	9.67
MA19-004	HS/SZ	2477	Wmica	44.92	0.21	33.79	2.18	0.00	0.88	0.02	1.30	9.71
MA19-004	HS/SZ	2479	Wmica	45.46	0.35	33.64	2.27	0.00	0.83	0.00	1.34	9.56
MA19-004	HS/SZ	2480	Wmica	45.95	0.17	32.53	2.48	0.31	0.86	0.00	1.95	9.56
MA19-004	HS/SZ	2481	Wmica	44.96	0.06	35.07	1.80	0.12	0.71	0.00	2.08	8.63
MA19-004	HS/SZ	2482	Wmica	45.43	0.14	34.29	2.30	0.00	0.75	0.13	1.69	9.44
MA19-004	HS/SZ	2483	Wmica	45.06	0.22	33.76	2.47	0.10	0.96	0.04	1.56	10.10
MA19-004	HS/SZ	2484	Wmica	45.86	0.09	33.84	2.60	0.00	0.79	0.02	1.32	9.89
MA19-004	HS/SZ	2485	Fspar	64.13	0.00	20.20	0.08	0.00	0.01	1.18	9.85	0.08
MA19-004	HS/SZ	2486	Fspar	64.25	0.00	20.09	0.20	0.00	0.04	1.32	9.62	0.16
MA19-004	HS/SZ	2487	Fspar	63.65	0.03	20.59	0.18	0.03	0.00	1.83	9.46	0.06
MA19-004	HS/SZ	2489	Fspar	64.48	0.00	20.10	0.15	0.00	0.03	1.33	9.89	0.15
MA19-004	HS/SZ	2490	Fspar	63.36	0.00	20.91	0.09	0.00	0.06	2.14	9.44	0.04
MA19-004	HS/SZ	2491	Fspar	64.02	0.00	20.67	0.14	0.01	0.00	1.47	9.70	0.10
MA19-004	HS/SZ	2492	Fspar	63.34	0.04	21.30	0.06	0.00	0.05	2.22	9.14	0.16
MA19-004	HS/SZ	2493	Fspar	64.86	0.01	20.13	0.17	0.01	0.00	1.30	9.94	0.01
MA19-004	HS/SZ	2494	Fspar	65.21	0.05	20.06	0.02	0.03	0.01	0.73	10.30	0.05
MA19-004	HS/SZ	2495	Fspar	65.43	0.04	19.91	0.17	0.00	0.00	1.07	9.92	0.07
MA19-004	HS/SZ	2496	Fspar	64.44	0.06	20.45	0.00	0.17	0.01	1.16	10.06	0.13
MA19-004	HS/SZ	2497	Fspar	64.64	0.04	20.45	0.28	0.00	0.00	1.13	9.81	0.23
MA19-004	HS/SZ	2498	Fspar	65.04	0.00	20.50	0.00	0.00	0.02	1.01	10.01	0.09
MA19-004	HS/SZ	2499	Fspar	65.07	0.00	20.17	0.08	0.00	0.02	1.30	10.03	0.00
MA19-004	HS/SZ	2500	Fspar	63.67	0.00	21.21	0.12	0.09	0.01	1.91	9.59	0.09
MA19-004	HS/SZ	2501	Fspar	64.19	0.08	20.74	0.21	0.07	0.00	1.67	9.87	0.04

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA19-004	HS/SZ	2502	Fspar	64.46	0.00	20.62	0.15	0.17	0.02	1.52	9.86	0.10
MA19-004	HS/SZ	2503	Fspar	63.40	0.00	21.30	0.35	0.00	0.04	2.57	9.15	0.17
MA19-004	HS/SZ	2504	Fspar	65.19	0.16	20.29	0.29	0.00	0.02	1.01	10.16	0.07
MA19-004	HS/SZ	2505	Fspar	64.52	0.00	21.10	0.01	0.00	0.02	1.74	9.59	0.27
MA19-004	HS/SZ	2506	Fspar	65.71	0.00	20.18	0.23	0.00	0.00	1.05	10.03	0.16
MA19-004	HS/SZ	2507	Fspar	63.72	0.06	21.46	0.19	0.00	0.01	2.40	9.38	0.09
MA19-004	HS/SZ	2508	Fspar	63.35	0.00	20.39	0.02	0.02	0.00	1.36	9.67	0.08
MA19-004	HS/SZ	2509	Fspar	62.82	0.05	20.88	0.02	0.00	0.04	1.95	9.41	0.00
MA19-004	HS/SZ	2510	Fspar	61.08	0.03	21.98	0.06	0.00	0.02	3.18	8.73	0.13
MA19-004	HS/SZ	2511	Fspar	63.63	0.11	20.61	0.09	0.00	0.01	1.52	9.61	0.11
MA19-004	HS/SZ	2512	Fspar	63.09	0.04	20.97	0.06	0.01	0.00	1.55	9.74	0.10
MA19-004	HS/SZ	2513	Fspar	64.52	0.00	19.78	0.07	0.06	0.00	0.93	10.02	0.07
MA19-004	HS/SZ	2514	Fspar	61.63	0.14	21.65	0.01	0.08	0.01	3.10	8.82	0.11
MA19-004	HS/SZ	2515	Fspar	62.56	0.00	21.10	0.11	0.15	0.00	2.46	9.27	0.08
MA19-004	HS/SZ	2516	Fspar	61.95	0.01	21.46	0.00	0.10	0.01	3.00	9.08	0.10
MA19-004	HS/SZ	2517	Fspar	64.54	0.05	20.00	0.05	0.00	0.00	0.77	10.02	0.11
MA19-004	HS/SZ	2518	Fspar	63.37	0.06	21.01	0.00	0.00	0.00	2.28	9.19	0.00
MA19-004	HS/SZ	2519	Fspar	61.48	0.00	21.87	0.00	0.26	0.01	3.08	8.98	0.09
MA19-004	HS/SZ	2520	Fspar	62.09	0.02	21.86	0.00	0.04	0.02	3.00	8.86	0.02
MA19-004	HS/SZ	2521	Fspar	64.53	0.00	20.07	0.08	0.00	0.01	1.03	10.01	0.05
MA19-004	HS/SZ	2522	Fspar	61.56	0.21	21.93	0.16	0.00	0.00	3.07	8.85	0.25
MA19-004	HS/SZ	2523	Fspar	62.17	0.04	21.54	0.13	0.14	0.02	2.36	9.12	0.04
MA19-004	HS/SZ	2524	Fspar	63.92	0.00	20.63	0.21	0.03	0.02	1.64	9.54	0.05
MA19-004	HS/SZ	2525	Fspar	62.70	0.00	21.22	0.00	0.00	0.01	2.85	8.91	0.09
MA19-004	HS/SZ	2526	Fspar	64.64	0.01	20.24	0.08	0.09	0.00	0.88	10.08	0.09
MA19-004	HS/SZ	2527	Fspar	62.83	0.00	21.31	0.57	0.00	0.14	1.94	9.24	0.17
MA19-004	HS/SZ	2528	Fspar	63.92	0.00	20.67	0.03	0.10	0.00	1.61	9.84	0.02
MA19-004	HS/SZ	2529	Fspar	64.33	0.11	20.34	0.00	0.00	0.00	1.19	10.11	0.11
MA19-004	HS/SZ	2530	Fspar	64.86	0.00	20.47	0.15	0.07	0.03	0.84	10.28	0.03
MA19-004	HS/SZ	2531	Fspar	62.29	0.00	21.75	0.20	0.02	0.03	2.88	9.31	0.06
MA19-004	HS/SZ	2532	Fspar	63.35	0.01	21.52	0.14	0.00	0.00	2.21	9.30	0.13
MA19-004	Type 2B vein	2533	Wmica	44.35	0.00	37.12	0.74	0.00	0.03	0.18	5.24	2.53
MA19-004	Type 2B vein	2534	Wmica	44.77	0.05	37.06	0.39	0.00	0.03	0.29	6.14	1.29
MA19-004	Type 2B vein	2535	Wmica	44.66	0.02	37.20	0.57	0.00	0.00	0.32	6.31	1.02

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA19-004	Type 2B vein	2536	Wmica	44.51	0.02	36.81	0.92	0.00	0.03	0.26	5.51	2.33
MA19-004	Type 2B vein	2537	Wmica	44.82	0.01	37.19	0.74	0.00	0.00	0.35	6.33	1.13
MA19-004	Type 2B vein	2538	Wmica	44.79	0.10	37.04	0.75	0.04	0.03	0.23	5.75	1.72
MA19-004	Type 2B vein	2539	Wmica	45.06	0.12	37.21	0.73	0.02	0.05	0.39	6.39	0.68
MA19-004	Type 2B vein	2540	Wmica	45.04	0.08	37.63	0.53	0.00	0.03	0.36	6.20	0.84
MA19-004	Type 2B vein	2541	Wmica	44.68	0.06	37.63	0.55	0.10	0.00	0.36	6.30	1.02
MA19-004	Type 2B vein	2542	Wmica	44.48	0.17	37.19	0.88	0.00	0.01	0.21	5.53	2.20
MA19-004	Type 2B vein	2543	Wmica	44.43	0.19	37.31	1.04	0.16	0.00	0.19	5.87	2.31
MA19-004	Type 2B vein	2544	Wmica	44.70	0.02	34.89	1.40	0.10	0.05	0.00	1.60	8.84
MA19-004	Type 2B vein	2545	Wmica	44.44	0.12	34.81	1.70	0.06	0.43	0.00	1.72	8.79
MA19-004	Type 2B vein	2546	Wmica	44.47	0.12	34.83	1.71	0.00	0.45	0.00	1.70	8.79
MA19-004	Type 2B vein	2547	Wmica	45.38	0.04	37.78	0.64	0.10	0.01	0.39	6.40	1.00
MA19-004	Type 2B vein	2548	Wmica	44.82	0.05	34.79	1.37	0.00	0.41	0.00	1.76	8.97
MA19-004	Type 2B vein	2549	Wmica	44.71	0.04	35.28	1.23	0.00	0.43	0.01	1.78	8.88
MA19-004	Type 2B vein	2550	Wmica	45.17	0.01	34.75	1.31	0.00	0.41	0.00	1.66	8.94
MA19-004	Type 2B vein	2551	Wmica	45.04	0.00	35.14	1.50	0.00	0.52	0.00	1.76	8.87
MA19-004	Type 2B vein	2552	Wmica	45.12	0.12	34.78	1.49	0.19	0.56	0.00	1.70	8.98
MA19-004	Type 2B vein	2553	Wmica	45.09	0.04	35.33	1.48	0.08	0.56	0.00	2.05	8.48
MA19-004	Type 2B vein	2554	Wmica	45.08	0.11	35.03	1.37	0.05	0.60	0.00	1.80	8.85
MA19-004	Type 2B vein	2555	Wmica	45.17	0.02	35.03	1.46	0.00	0.31	0.00	1.69	9.02
MA19-004	Type 2B vein	2556	Wmica	45.15	0.08	35.16	1.50	0.06	0.64	0.01	1.83	8.97
MA19-004	Type 2B vein	2557	Wmica	45.29	0.10	34.76	1.50	0.13	0.59	0.07	1.73	9.08
MA19-004	Type 2B vein	2558	Wmica	45.54	0.12	34.98	1.47	0.00	0.58	0.00	1.80	9.15
MA19-004	Type 2B vein	2559	Wmica	44.95	0.04	35.05	1.83	0.05	0.63	0.00	1.85	9.07
MA19-004	Type 2B vein	2560	Fspar	60.71	0.00	21.57	0.27	0.00	0.05	3.28	8.55	0.10
MA19-004	Type 2B vein	2561	Fspar	64.72	0.02	19.11	0.55	0.00	0.02	0.14	10.07	0.00
MA19-004	Type 2B vein	2562	Fspar	62.65	0.00	20.16	0.88	0.00	0.18	1.56	8.98	0.07
MA19-004	Type 2B vein	2563	Fspar	62.01	0.00	20.50	1.11	0.16	0.34	1.52	8.91	0.09
MA19-004	Type 2B vein	2564	Fspar	62.24	0.00	21.15	0.12	0.00	0.02	2.68	8.88	0.01
MA19-004	Type 2B vein	2565	Fspar	65.00	0.01	19.19	0.41	0.04	0.00	0.11	10.25	0.07
MA19-004	Type 2B vein	2566	Fspar	62.11	0.00	21.46	0.20	0.00	0.00	2.94	8.76	0.03
MA19-004	Type 2B vein	2567	Fspar	65.37	0.00	19.38	0.25	0.06	0.00	0.21	10.26	0.05
MA19-004	Type 2B vein	2568	Fspar	65.37	0.00	19.48	0.37	0.00	0.03	0.20	10.19	0.08
MA19-004	Type 2B vein	2569	Fspar	65.32	0.00	19.59	0.32	0.00	0.01	0.18	10.27	0.01

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA19-004	Type 2B vein	2571	Fspar	64.56	0.06	19.78	0.42	0.15	0.04	0.61	10.17	0.09
MA19-004	Type 2B vein	2572	Fspar	66.09	0.16	19.25	0.21	0.00	0.00	0.09	10.25	0.01
MA19-004	Type 2B vein	2582	Wmica	43.22	0.02	36.42	1.57	0.15	0.05	0.20	5.48	1.60
MA19-004	Type 2B vein	2583	Wmica	43.27	0.04	36.80	1.85	0.10	0.48	0.21	5.87	0.91
MA19-004	Type 2B vein	2584	Wmica	43.38	0.06	37.14	1.76	0.14	0.48	0.27	5.89	0.89
MA19-004	Type 2B vein	2585	Wmica	43.80	0.05	36.94	1.87	0.11	0.32	0.24	5.72	1.14
MA19-004	Type 2B vein	2586	Wmica	43.70	0.00	36.82	1.77	0.02	0.39	0.36	5.73	1.73
MA19-004	Type 2B vein	2587	Wmica	43.96	0.03	36.91	1.48	0.03	0.38	0.23	5.64	1.73
MA19-004	Type 2B vein	2588	Wmica	43.89	0.06	37.26	1.56	0.00	0.36	0.29	5.64	1.73
MA19-004	Type 2B vein	2589	Wmica	43.89	0.05	37.17	1.67	0.11	0.37	0.24	5.66	1.86
MA19-004	Type 2B vein	2590	Wmica	43.91	0.00	37.57	1.54	0.02	0.44	0.27	5.82	1.52
MA19-004	Type 2B vein	2591	Wmica	44.18	0.08	37.40	1.60	0.00	0.49	0.31	5.55	1.82
MA19-004	Type 2B vein	2592	Wmica	42.68	0.06	35.53	1.42	0.00	0.49	0.22	5.15	2.27
MA19-004	Type 2B vein	2593	Wmica	43.81	0.02	36.58	1.12	0.01	0.05	0.26	5.85	1.15
MA19-004	Type 2B vein	2594	Wmica	43.55	0.04	36.73	1.17	0.11	0.06	0.32	5.77	1.28
MA19-004	Type 2B vein	2595	Wmica	43.71	0.00	37.56	0.89	0.07	0.34	0.33	6.10	1.11
MA19-004	Type 2B vein	2596	Wmica	44.86	0.05	37.17	0.84	0.00	0.02	0.27	5.81	2.04
MA19-004	Type 2B vein	2597	Wmica	45.12	0.03	37.36	0.47	0.00	0.03	0.24	5.90	1.74
MA19-004	Type 2B vein	2598	Wmica	44.83	0.04	37.31	0.72	0.01	0.02	0.29	5.87	1.88
MA19-004	Type 2B vein	2599	Wmica	44.81	0.00	37.73	1.05	0.10	0.03	0.29	6.50	0.93
MA19-004	Type 2B vein	2600	Wmica	44.03	0.00	37.98	1.19	0.00	0.35	0.31	6.30	0.92
MA19-004	Type 2B vein	2601	Wmica	44.40	0.04	38.14	0.98	0.04	0.05	0.32	6.14	1.16
MA19-004	Type 2B vein	2602	Wmica	45.54	0.02	37.31	0.78	0.03	0.03	0.33	6.08	1.49
MA19-004	Type 2B vein	2603	Wmica	45.61	0.01	37.74	0.59	0.00	0.03	0.18	5.85	2.05
MA19-004	Type 2B vein	2604	Wmica	45.99	0.03	37.61	0.74	0.01	0.01	0.24	6.01	1.85
MA19-004	Type 2B vein	2605	Wmica	44.96	0.04	33.86	2.21	0.04	0.50	0.03	1.37	9.57
MA19-004	Type 2B vein	2606	Wmica	46.12	0.06	38.03	0.79	0.00	0.00	0.35	6.56	0.95
MA19-004	Type 2B vein	2607	Wmica	44.53	0.02	35.16	1.61	0.00	0.56	0.05	1.93	9.27
MA20-041A-A	Type 2B vein	2608	Fspar	64.16	0.04	20.42	0.01	0.00	0.00	1.28	9.31	0.00
MA20-041A-A	Type 2B vein	2609	Fspar	66.10	0.00	18.84	0.00	0.00	0.01	0.18	10.19	0.11
MA20-041A-A	Type 2B vein	2610	Fspar	64.85	0.00	19.88	0.03	0.00	0.00	1.10	9.69	0.01
MA20-041A-A	Type 2B vein	2611	Fspar	62.93	0.00	21.24	0.03	0.00	0.01	2.54	9.03	0.03
MA20-041A-A	Type 2B vein	2612	Fspar	65.77	0.00	19.30	0.17	0.00	0.00	0.48	10.10	0.10
MA20-041A-A	Type 2B vein	2613	Fspar	66.08	0.00	19.14	0.07	0.05	0.00	0.35	10.09	0.00

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-A	Type 2B vein	2614	Fspar	65.53	0.01	19.58	0.00	0.04	0.02	0.72	10.15	0.00
MA20-041A-A	Type 2B vein	2615	Fspar	64.14	0.05	20.56	0.02	0.00	0.01	1.64	9.49	0.00
MA20-041A-A	Type 2B vein	2616	Fspar	62.73	0.00	21.58	0.00	0.06	0.01	2.86	8.72	0.00
MA20-041A-A	Type 2B vein	2617	Fspar	64.42	0.04	20.67	0.01	0.00	0.00	1.77	9.30	0.00
MA20-041A-A	Type 2B vein	2618	Fspar	63.41	0.00	20.92	0.04	0.24	0.01	2.37	9.21	0.03
MA20-041A-A	Type 2B vein	2633	Fspar	66.43	0.00	19.32	0.00	0.00	0.00	0.43	10.16	0.00
MA20-041A-A	Type 2B vein	2634	Fspar	66.27	0.00	19.47	0.00	0.12	0.01	0.38	10.16	0.00
MA20-041A-A	Type 2B vein	2635	Fspar	65.16	0.00	19.97	0.23	0.03	0.00	1.01	10.06	0.00
MA20-041A-A	Type 2B vein	2636	Fspar	64.96	0.03	20.42	0.00	0.09	0.00	1.15	9.88	0.00
MA20-041A-A	Type 2B vein	2637	Fspar	64.71	0.00	20.56	0.02	0.06	0.00	1.70	9.68	0.00
MA20-041A-A	Type 2B vein	2638	Fspar	64.85	0.00	20.47	0.06	0.06	0.01	1.43	9.55	0.04
MA20-041A-A	Type 2B vein	2639	Fspar	64.73	0.01	20.59	0.04	0.07	0.00	1.63	9.70	0.00
MA20-041A-A	Type 2B vein	2640	Fspar	65.76	0.02	20.24	0.15	0.00	0.00	1.01	9.89	0.03
MA20-041A-A	Type 2B vein	2641	Fspar	66.41	0.19	19.61	0.12	0.06	0.00	0.51	10.25	0.04
MA20-041A-A	Type 2B vein	2690	Fspar	64.47	0.06	22.59	0.04	0.06	0.02	1.88	9.48	0.19
MA20-041A-A	Type 2B vein	2691	Fspar	66.05	0.01	21.70	0.10	0.00	0.00	0.92	9.96	0.12
MA20-041A-A	Type 2B vein	2692	Fspar	64.53	0.12	22.58	0.16	0.02	0.02	2.05	9.25	0.13
MA20-041A-A	Type 2B vein	2693	Fspar	65.17	0.02	22.18	0.19	0.04	0.00	1.60	9.70	0.12
MA20-041A-A	Type 2B vein	2695	Fspar	65.99	0.03	21.71	0.14	0.00	0.00	1.33	9.71	0.18
MA20-041A-A	Type 2B vein	2696	Fspar	66.06	0.00	21.82	0.13	0.00	0.00	1.34	9.72	0.07
MA20-041A-A	Type 2B vein	2697	Fspar	66.15	0.07	21.72	0.19	0.01	0.02	0.80	9.83	0.25
MA20-041A-A	Type 2B vein	2698	Fspar	65.08	0.00	22.57	0.19	0.00	0.00	1.74	9.55	0.17
MA20-041A-A	Type 2B vein	2699	Fspar	65.40	0.00	22.14	0.10	0.00	0.01	1.49	9.69	0.16
MA20-041A-A	Type 2B vein	2700	Fspar	67.15	0.00	21.31	0.09	0.07	0.04	0.44	10.08	0.12
MA20-041A-A	Type 2B vein	2701	Fspar	65.67	0.00	22.05	0.16	0.00	0.05	1.50	9.74	0.10
MA20-041A-A	Type 2B vein	2702	Fspar	64.72	0.02	22.89	0.05	0.00	0.02	1.97	9.71	0.16
MA20-041A-A	Type 2B vein	2703	Fspar	65.10	0.00	22.99	0.08	0.03	0.00	2.03	9.40	0.09
MA20-041A-A	Type 2B vein	2704	Fspar	65.85	0.02	22.08	0.20	0.00	0.00	1.54	9.71	0.08
MA20-041A-A	Type 2B vein	2705	Fspar	65.06	0.00	22.82	0.04	0.00	0.04	1.98	9.65	0.16
MA20-041A-A	Type 2B vein	2706	Fspar	65.65	0.00	22.24	0.17	0.00	0.00	1.61	9.76	0.14
MA20-041A-A	Type 2B vein	2707	Fspar	65.68	0.02	22.64	0.03	0.00	0.01	1.52	9.79	0.21
MA20-041A-A	Type 2B vein	2708	Fspar	65.28	0.02	22.80	0.23	0.00	0.00	2.02	9.49	0.15
MA20-041A-A	Type 2B vein	2709	Fspar	65.33	0.01	22.70	0.26	0.00	0.04	2.03	9.57	0.12
MA20-041A-A	Type 2B vein	2710	Fspar	65.26	0.20	22.62	0.05	0.03	0.02	1.83	10.03	0.14

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-A	Type 2B vein	2711	Fspar	65.27	0.03	22.99	0.16	0.02	0.00	1.88	9.71	0.18
MA20-041A-A	Type 2B vein	2712	Fspar	67.37	0.01	21.57	0.16	0.00	0.00	0.85	10.19	0.10
MA20-041A-A	Type 2B vein	2713	Fspar	65.96	0.00	22.24	0.30	0.10	0.05	1.61	9.73	0.17
MA20-041A-A	Type 2B vein	2714	Fspar	64.53	0.01	22.67	0.38	0.25	0.00	1.92	9.90	0.17
MA20-041A-A	Type 2B vein	2715	Fspar	67.47	0.07	21.29	0.33	0.22	0.00	0.25	10.34	0.26
MA20-041A-A	Type 2B vein	2716	Fspar	65.31	0.00	22.84	0.09	0.01	0.00	1.96	9.68	0.16
MA20-041A-A	Type 2B vein	2717	Fspar	66.01	0.00	22.57	0.10	0.13	0.00	1.31	10.08	0.34
MA20-041A-A	Type 2B vein	2718	Fspar	64.84	0.00	23.27	0.14	0.15	0.02	2.66	9.30	0.19
MA20-041A-A	Type 2B vein	2719	Fspar	65.65	0.00	22.91	0.24	0.13	0.01	1.76	9.83	0.16
MA20-041A-A	Type 2B vein	2720	Fspar	65.48	0.00	22.97	0.22	0.19	0.02	1.85	9.76	0.16
MA20-041A-A	Type 2B vein	2721	Fspar	65.11	0.00	19.25	0.00	0.04	0.00	0.73	9.67	0.00
MA20-041A-A	Type 2B vein	2722	Fspar	63.98	0.00	20.12	0.04	0.10	0.02	1.40	9.58	0.03
MA20-041A-A	Type 2B vein	2723	Fspar	64.82	0.02	19.89	0.00	0.02	0.00	1.15	9.72	0.02
MA20-041A-A	Type 2B vein	2724	Fspar	65.41	0.01	19.63	0.00	0.02	0.00	0.98	9.70	0.06
MA20-041A-A	Type 2B vein	2725	Fspar	64.78	0.00	19.82	0.01	0.09	0.02	1.22	9.69	0.06
MA20-041A-A	Type 2B vein	2728	Fspar	64.06	0.00	20.02	0.16	0.00	0.02	1.69	9.58	0.05
MA20-041A-A	Type 2B vein	2729	Fspar	65.16	0.00	19.95	0.00	0.00	0.02	0.86	9.89	0.00
MA20-041A-A	Type 2B vein	2730	Fspar	66.09	0.06	19.46	0.03	0.02	0.00	0.30	10.10	0.00
MA20-041A-A	Type 2B vein	2731	Fspar	66.47	0.00	19.12	0.00	0.03	0.00	0.29	10.20	0.00
MA20-041A-A	Type 2B vein	2732	Fspar	64.70	0.02	20.02	0.06	0.17	0.02	1.28	9.73	0.00
MA20-041A-A	Type 2B vein	2733	Fspar	63.72	0.06	20.86	0.01	0.00	0.03	1.98	9.33	0.00
MA20-041A-A	Type 2B vein	2734	Fspar	65.06	0.03	20.18	0.03	0.00	0.01	1.29	9.58	0.08
MA20-041A-A	Type 2B vein	2735	Fspar	64.40	0.01	20.76	0.02	0.04	0.00	1.95	9.23	0.03
MA20-041A-A	Type 2B vein	2736	Fspar	63.43	0.00	21.23	0.02	0.00	0.00	2.37	9.25	0.07
MA20-041A-A	Type 2B vein	2737	Fspar	64.70	0.04	20.44	0.00	0.00	0.00	1.50	9.72	0.00
MA20-041A-A	Type 2B vein	2738	Fspar	64.36	0.03	20.51	0.03	0.07	0.00	1.57	9.58	0.00
MA20-041A-A	Type 2B vein	2739	Fspar	64.32	0.01	20.60	0.02	0.00	0.00	1.95	9.32	0.03
MA20-041A-A	Type 2B vein	2740	Fspar	65.16	0.00	19.90	0.07	0.00	0.00	1.34	9.85	0.02
MA20-041A-A	Type 2B vein	2741	Fspar	65.01	0.00	20.35	0.11	0.07	0.01	1.63	9.42	0.00
MA20-041A-A	Type 2B vein	2742	Fspar	64.89	0.01	20.33	0.10	0.00	0.01	1.59	9.56	0.07
MA20-041A-A	Type 2B vein	2743	Fspar	66.81	0.00	19.59	0.02	0.05	0.00	0.48	10.15	0.00
MA20-041A-C	Type 2B vein	2978	Chl	23.34	0.08	21.38	21.70	0.24	14.36	0.57	0.02	0.00
MA20-041A-C	Type 2B vein	2979	Chl	23.58	0.04	21.75	22.03	0.21	14.42	0.57	0.00	0.04
MA20-041A-C	Type 2B vein	2980	Chl	23.63	0.02	22.42	21.61	0.21	14.59	0.38	0.00	0.03

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-C	Type 2B vein	2981	Chl	23.52	0.00	21.67	23.09	0.23	14.18	0.64	0.00	0.02
MA20-041A-C	Type 2B vein	2982	Chl	25.14	0.00	20.43	21.16	0.12	15.99	0.44	0.00	0.00
MA20-041A-C	Type 2B vein	2983	Chl	24.46	0.06	21.06	22.19	0.40	15.35	0.48	0.04	0.00
MA20-041A-C	Type 2B vein	2984	Chl	23.66	0.05	22.07	23.28	0.28	14.31	0.52	0.00	0.01
MA20-041A-C	Type 2B vein	2985	Chl	25.49	0.02	20.28	21.58	0.37	15.90	0.63	0.00	0.00
MA20-041A-C	Type 2B vein	2986	Chl	23.98	0.03	22.65	21.59	0.14	14.92	0.24	0.00	0.02
MA20-041A-C	Type 2B vein	2987	Chl	24.08	0.07	21.14	22.81	0.19	14.57	0.57	0.03	0.09
MA20-041A-C	Type 2B vein	2988	Chl	23.82	0.07	22.13	22.32	0.25	14.56	0.55	0.39	0.03
MA20-041A-C	Type 2B vein	2989	Chl	24.23	0.02	22.28	21.99	0.12	15.44	0.61	0.36	0.00
MA20-041A-C	Type 2B vein	2990	Chl	24.23	0.02	22.60	22.63	0.11	15.10	0.47	0.23	0.09
MA20-041A-C	Type 2B vein	2991	Chl	24.56	0.03	22.32	22.91	0.16	14.98	0.51	0.42	0.00
MA20-041A-C	Type 2B vein	2992	Chl	24.89	0.00	21.93	21.92	0.28	16.21	0.35	0.38	0.01
MA20-041A-C	Type 2B vein	3020	Chl	23.05	0.03	21.64	21.67	0.07	13.81	0.47	0.01	0.00
MA20-041A-C	Type 2B vein	3021	Chl	22.98	0.00	21.74	22.63	0.04	14.25	0.53	0.00	0.01
MA20-041A-C	Type 2B vein	3022	Chl	23.42	0.00	22.11	22.00	0.17	13.95	0.53	0.00	0.00
MA20-041A-C	Type 2B vein	3023	Chl	23.91	0.00	21.07	22.14	0.18	14.28	0.45	0.30	0.00
MA20-041A-C	Type 2B vein	3024	Chl	23.38	0.00	21.79	22.26	0.32	14.29	0.51	0.08	0.08
MA20-041A-C	Type 2B vein	3025	Chl	23.44	0.18	21.72	23.12	0.11	14.20	0.44	0.00	0.01
MA20-041A-C	Type 2B vein	3026	Chl	23.99	0.03	21.61	22.55	0.44	14.33	0.39	0.04	0.08
MA20-041A-C	Type 2B vein	3027	Chl	23.79	0.02	21.85	23.03	0.24	14.67	0.38	0.00	0.00
MA20-041A-C	Type 2B vein	3028	Chl	23.98	0.02	22.27	22.76	0.31	14.30	0.40	0.31	0.09
MA20-041A-C	Type 2B vein	3029	Chl	23.99	0.04	22.38	22.73	0.22	14.50	0.52	0.26	0.00
MA20-041A-C	Type 2B vein	3030	Chl	23.83	0.07	22.53	22.39	0.08	14.70	0.54	0.51	0.00
MA20-041A-C	Type 2B vein	3031	Chl	23.77	0.01	22.63	22.59	0.35	14.78	0.49	0.33	0.00
MA20-041A-C	Type 2B vein	3032	Chl	23.69	0.02	22.66	22.66	0.13	14.80	0.41	0.38	0.05
MA20-041A-C	Type 2B vein	3033	Chl	24.10	0.00	22.45	23.28	0.34	14.99	0.48	0.47	0.00
MA20-041A-C	Type 2B vein	3034	Chl	22.64	0.03	21.71	23.58	0.19	11.96	0.00	0.37	0.09
MA20-041A-C	Type 2B vein	3035	Chl	22.87	0.00	21.42	23.90	0.33	11.44	0.17	0.22	0.15
MA20-041A-C	Type 2B vein	3036	Chl	23.34	0.08	21.55	23.06	0.30	12.07	0.01	0.50	0.01
MA20-041A-C	Type 2B vein	3037	Chl	22.96	0.00	21.52	23.92	0.17	11.70	0.00	0.37	0.08
MA20-041A-C	Type 2B vein	3038	Chl	23.48	0.13	21.44	23.54	0.00	12.35	0.00	0.51	0.01
MA20-041A-C	Type 2B vein	3039	Chl	23.70	0.00	21.56	23.10	0.32	12.40	0.00	0.40	0.13
MA20-041A-C	Type 2B vein	3040	Chl	23.72	0.00	21.04	24.01	0.24	12.34	0.11	0.37	0.10
MA20-041A-C	Type 2B vein	3041	Chl	23.58	0.08	21.87	23.81	0.24	12.19	0.03	0.44	0.14

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-C	Type 2B vein	3042	Chl	23.55	0.00	21.51	24.04	0.15	12.07	0.00	0.42	0.14
MA20-041A-C	Type 2B vein	3043	Chl	23.65	0.02	21.64	23.71	0.14	12.41	0.04	0.31	0.05
MA20-041A-C	Type 2B vein	3045	Chl	23.46	0.01	22.13	24.23	0.04	11.78	0.10	0.44	0.13
MA20-041A-C	Type 2B vein	3054	Wmica	43.49	0.21	29.97	3.66	0.00	1.59	0.00	1.04	9.60
MA20-041A-C	Type 2B vein	3055	Wmica	43.57	0.24	31.23	2.84	0.15	1.57	0.00	1.16	9.77
MA20-041A-C	Type 2B vein	3056	Wmica	43.53	0.43	31.54	2.93	0.01	1.30	0.00	0.87	9.98
MA20-041A-C	Type 2B vein	3057	Wmica	43.46	0.39	31.31	3.18	0.10	1.39	0.00	0.69	10.20
MA20-041A-C	Type 2B vein	3058	Wmica	43.72	0.43	31.19	3.65	0.00	1.45	0.00	0.78	10.17
MA20-041A-C	Type 2B vein	3059	Wmica	43.52	0.38	31.81	2.98	0.06	1.33	0.00	1.03	9.83
MA20-041A-C	Type 2B vein	3060	Wmica	45.76	0.22	29.26	3.22	0.00	1.99	0.00	0.80	9.71
MA20-041A-C	Type 2B vein	3061	Wmica	43.99	0.30	31.50	3.15	0.00	1.41	0.00	0.77	10.21
MA20-041A-C	Type 2B vein	3062	Fspar	62.69	0.00	18.99	0.59	0.00	0.06	0.48	9.73	0.01
MA20-041A-C	Type 2B vein	3063	Wmica	47.14	0.09	28.97	3.31	0.13	2.07	0.00	0.93	9.54
MA20-041A-C	Type 2B vein	3064	Fspar	62.64	0.01	19.26	0.41	0.00	0.06	0.75	9.69	0.08
MA20-041A-C	Type 2B vein	3065	Wmica	44.69	0.22	33.36	2.29	0.00	1.00	0.00	1.34	9.59
MA20-041A-C	Type 2B vein	3066	Wmica	44.75	0.37	31.42	3.48	0.13	1.39	0.00	0.68	10.33
MA20-041A-C	Type 2B vein	3067	Wmica	45.05	0.21	31.96	3.11	0.01	1.39	0.00	1.07	9.78
MA20-041A-C	Type 2B vein	3068	Wmica	44.56	0.24	35.32	1.72	0.00	0.62	0.00	1.60	9.06
MA20-041A-C	Type 2B vein	3069	Fspar	61.45	0.00	19.90	0.74	0.00	0.02	1.73	9.21	0.15
MA20-041A-C	Type 2B vein	3070	Fspar	61.77	0.01	20.38	0.26	0.06	0.03	1.59	9.19	0.14
MA20-041A-C	Type 2B vein	3071	Fspar	61.62	0.01	20.11	0.44	0.05	0.03	1.65	9.22	0.00
MA20-041A-C	Type 2B vein	3072	Fspar	62.11	0.02	20.10	0.24	0.02	0.00	1.70	8.95	0.01
MA20-041A-C	Type 2B vein	3073	Fspar	61.86	0.02	20.25	0.20	0.00	0.02	1.66	9.27	0.01
MA20-041A-C	Type 2B vein	3074	Fspar	63.08	0.00	18.89	0.68	0.37	0.05	0.54	9.89	0.00
MA20-041A-C	Type 2B vein	3075	Fspar	62.10	0.00	20.01	0.56	0.06	0.05	1.44	9.28	0.00
MA20-041A-C	Type 2B vein	3076	Fspar	62.39	0.02	20.01	0.40	0.08	0.04	1.63	9.18	0.00
MA20-041A-C	Type 2B vein	3077	Fspar	62.00	0.02	20.29	0.39	0.00	0.04	1.59	9.34	0.05
MA20-041A-C	Type 2B vein	3078	Fspar	61.90	0.00	20.20	0.79	0.00	0.05	1.62	9.10	0.12
MA20-041A-C	Type 2B vein	3079	Wmica	44.31	0.08	36.12	1.80	0.25	0.50	0.00	1.75	9.12
MA20-041A-C	Type 2B vein	3080	Wmica	45.04	0.21	34.66	2.21	0.00	0.95	0.01	1.51	9.72
MA20-041A-C	Type 2B vein	3081	Wmica	44.93	0.16	36.07	1.56	0.00	0.52	0.00	1.52	9.39
MA20-041A-C	Type 2B vein	3082	Fspar	63.57	0.00	19.61	0.43	0.00	0.22	0.71	9.81	0.09
MA20-041A-C	Type 2B vein	3083	Fspar	63.22	0.02	19.66	0.55	0.03	0.04	0.82	9.68	0.09
MA20-041A-C	Type 2B vein	3084	Fspar	63.75	0.04	19.56	0.58	0.00	0.06	0.69	9.79	0.08

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-C	Type 2B vein	3085	Fspar	62.51	0.00	20.31	0.66	0.07	0.03	1.74	9.37	0.11
MA20-041A-C	Type 2B vein	3086	Fspar	63.61	0.00	20.07	0.64	0.00	0.01	1.20	9.85	0.05
MA20-041A-C	Type 2B vein	3087	Fspar	62.90	0.00	20.59	0.60	0.12	0.02	1.52	9.33	0.14
MA20-041A-C	Type 2B vein	3088	Fspar	62.90	0.02	20.73	0.58	0.00	0.04	1.81	9.76	0.10
MA20-041A-C	Type 2B vein	3089	Fspar	62.92	0.01	20.80	0.71	0.09	0.02	1.71	9.54	0.17
MA20-041A-C	Type 2B vein	3090	Fspar	64.90	0.10	19.02	0.00	0.13	0.00	0.15	10.33	0.07
MA20-041A-C	Type 2B vein	3091	Fspar	64.96	0.00	19.04	0.10	0.22	0.00	0.35	10.31	0.08
MA20-041A-C	Type 2B vein	3092	Fspar	64.55	0.03	19.44	0.00	0.00	0.01	0.79	10.13	0.00
MA20-041A-C	Type 2B vein	3093	Fspar	63.21	0.06	20.49	0.07	0.00	0.01	1.64	9.40	0.09
MA20-041A-C	Type 2B vein	3094	Fspar	65.40	0.02	19.07	0.00	0.00	0.00	0.14	10.26	0.09
MA20-041A-C	Type 2B vein	3095	Fspar	64.86	0.02	19.50	0.02	0.06	0.00	0.35	10.19	0.09
MA20-041A-C	Type 2B vein	3096	Fspar	64.10	0.00	19.84	0.15	0.00	0.00	1.05	10.03	0.03
MA20-041A-C	Type 2B vein	3097	Fspar	66.05	0.07	18.45	0.23	0.00	0.00	0.30	9.96	0.00
MA20-041A-C	Type 2B vein	3098	Fspar	64.74	0.00	19.73	0.02	0.00	0.00	0.70	9.77	0.09
MA20-041A-C	Type 2B vein	3099	Fspar	65.18	0.00	19.24	0.00	0.04	0.02	0.70	10.11	0.07
MA20-041A-C	Type 2B vein	3100	Fspar	65.49	0.06	19.46	0.20	0.00	0.02	0.45	9.68	0.02
MA20-041A-C	Type 2B vein	3101	Fspar	64.99	0.16	19.60	0.08	0.00	0.00	0.28	10.23	0.00
MA20-041A-C	Type 2B vein	3102	Fspar	64.42	0.00	20.20	0.11	0.00	0.00	0.93	9.88	0.06
MA20-041A-C	Type 2B vein	3103	Fspar	65.71	0.01	19.07	0.06	0.11	0.00	0.33	10.28	0.06
MA20-041A-C	Type 2B vein	3104	Fspar	64.58	0.00	19.90	0.03	0.00	0.01	0.85	10.11	0.07
MA20-041A-C	Type 2B vein	3105	Fspar	64.65	0.01	19.89	0.01	0.01	0.01	0.93	9.87	0.12
MA20-041A-C	Type 2B vein	3106	Fspar	65.41	0.00	19.30	0.16	0.09	0.00	0.33	10.22	0.08
MA20-041A-C	Type 2B vein	3107	Fspar	65.09	0.00	19.89	0.03	0.04	0.00	0.63	10.11	0.00
MA20-041A-C	Type 2B vein	3108	Fspar	63.58	0.00	20.75	0.14	0.00	0.01	1.83	9.41	0.06
MA20-041A-C	Type 2B vein	3109	Fspar	65.27	0.00	19.55	0.24	0.00	0.00	0.29	10.33	0.17
MA20-041A-C	Type 2B vein	3110	Fspar	64.51	0.00	20.34	0.00	0.00	0.04	1.35	9.53	0.00
MA20-041A-C	Type 2B vein	3111	Fspar	64.91	0.00	20.19	0.00	0.08	0.00	1.00	9.79	0.04
MA20-041A-C	Type 2B vein	3112	Fspar	64.92	0.06	20.02	0.00	0.02	0.05	0.91	9.97	0.07
MA20-041A-C	Type 2B vein	3114	Fspar	66.07	0.00	19.39	0.02	0.17	0.00	0.15	10.36	0.00
MA20-041A-C	Type 2B vein	3115	Fspar	65.57	0.00	19.79	0.10	0.00	0.01	0.34	10.33	0.00
MA20-041A-C	Type 2B vein	3116	Fspar	65.76	0.00	19.73	0.03	0.00	0.00	0.39	10.31	0.06
MA20-041A-C	Type 2B vein	3117	Fspar	65.73	0.01	19.59	0.00	0.00	0.00	0.28	10.50	0.00
MA20-041A-C	Type 2B vein	3118	Fspar	64.77	0.19	20.16	0.16	0.04	0.03	1.10	10.14	0.00
MA20-041A-C	Type 2B vein	3119	Fspar	66.05	0.01	19.71	0.06	0.16	0.01	0.27	10.21	0.11

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-C	Type 2B vein	3120	Fspar	66.32	0.00	19.69	0.00	0.21	0.01	0.60	10.23	0.10
MA20-041A-C	Type 2B vein	3121	Wmica	44.49	0.19	33.65	1.63	0.00	0.63	0.02	1.47	9.77
MA20-041A-C	Type 2B vein	3122	Wmica	45.06	0.36	32.27	2.12	0.00	1.02	0.03	1.07	10.03
MA20-041A-C	Type 2B vein	3123	Wmica	45.04	0.36	32.93	1.71	0.07	0.93	0.00	1.26	9.91
MA20-041A-C	Type 2B vein	3124	Wmica	46.02	0.11	30.11	3.01	0.00	1.56	0.00	0.83	10.23
MA20-041A-C	Type 2B vein	3125	Wmica	44.66	0.19	33.82	1.84	0.00	0.68	0.00	1.49	9.76
MA20-041A-C	Type 2B vein	3126	Wmica	45.00	0.16	31.46	2.80	0.10	1.11	0.00	0.95	10.34
MA20-041A-C	Type 2B vein	3127	Wmica	46.54	0.18	29.64	2.77	0.00	1.72	0.00	0.79	10.16
MA20-041A-C	Type 2B vein	3128	Wmica	46.23	0.00	29.48	3.05	0.08	1.74	0.00	0.86	10.39
MA20-041A-C	Type 2B vein	3129	Wmica	45.00	0.07	34.06	1.94	0.00	0.57	0.00	1.24	9.81
MA20-041A-C	Type 2B vein	3130	Wmica	45.31	0.16	33.83	1.47	0.00	0.80	0.00	1.33	9.73
MA20-041A-C	Type 2B vein	3131	Wmica	46.11	0.24	31.09	2.87	0.00	1.22	0.00	0.99	9.99
MA20-041A-C	Type 2B vein	3132	Wmica	44.72	0.26	33.87	1.68	0.21	0.68	0.00	1.24	9.99
MA20-041A-C	Type 2B vein	3133	Wmica	45.19	0.15	34.50	1.63	0.09	0.59	0.00	1.32	9.42
MA20-041A-C	Type 2B vein	3134	Wmica	45.11	0.19	33.67	2.14	0.04	0.85	0.00	1.39	9.45
MA20-041A-C	Type 2B vein	3135	Wmica	45.49	0.34	33.75	1.34	0.11	0.83	0.00	1.21	9.86
MA20-041A-C	Type 2B vein	3136	Wmica	45.10	0.22	31.62	2.92	0.03	1.31	0.01	1.09	10.32
MA20-041A-C	Type 2B vein	3137	Wmica	45.16	0.28	33.96	1.62	0.00	0.78	0.00	1.49	9.61
MA20-041A-C	Type 2B vein	3138	Wmica	45.15	0.06	33.92	1.57	0.00	0.63	0.00	1.49	9.94
MA20-041A-C	Type 2B vein	3139	Wmica	47.56	0.08	29.62	2.71	0.08	1.66	0.00	0.85	10.30
MA20-041A-C	Type 2B vein	3140	Wmica	46.03	0.24	31.74	2.61	0.00	1.38	0.00	1.17	9.90
MA20-041A-C	Type 2B vein	3141	Wmica	45.16	0.24	31.67	2.88	0.07	1.23	0.00	1.11	10.37
MA20-041A-C	Type 2B vein	3142	Wmica	45.33	0.07	33.79	1.95	0.16	0.68	0.00	1.40	9.98
MA20-041A-C	Type 2B vein	3143	Wmica	45.35	0.35	32.57	2.60	0.00	1.16	0.00	1.24	9.91
MA20-041A-C	Type 2B vein	3144	Wmica	45.68	0.17	33.83	1.77	0.00	0.81	0.00	1.54	10.00
MA20-041A-C	Type 2B vein	3145	Wmica	45.18	0.37	34.00	1.84	0.09	0.91	0.00	1.47	10.00
MA20-041A-C	Type 2B vein	3146	Wmica	46.16	0.20	31.46	2.99	0.26	1.34	0.00	1.07	10.11
MA20-041A-C	Type 2B vein	3147	Wmica	45.31	0.32	34.25	1.57	0.09	0.71	0.00	1.25	10.05
MA20-041A-C	Type 2B vein	3148	Wmica	45.31	0.16	33.14	2.25	0.00	0.94	0.00	1.26	10.07
MA20-041A-C	Type 2B vein	3149	Wmica	45.17	0.19	34.05	1.93	0.00	0.78	0.00	1.38	10.24
MA20-041A-C	Type 2B vein	3150	Wmica	46.02	0.12	32.99	2.45	0.04	1.07	0.00	1.24	10.02
MA20-041A-C	Type 2B vein	3151	Wmica	45.54	0.11	34.22	1.82	0.23	0.87	0.00	1.46	9.51
MA20-041A-C	Type 2B vein	3152	Wmica	46.49	0.06	33.76	2.01	0.01	0.97	0.00	1.43	9.89
MA20-041A-C	Type 2B vein	3153	Wmica	44.42	0.15	30.33	2.68	0.04	1.51	0.00	0.89	9.92

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-C	Type 2B vein	3154	Wmica	43.84	0.47	31.30	2.51	0.03	0.92	0.00	0.91	9.80
MA20-041A-C	Type 2B vein	3155	Wmica	43.93	0.23	31.17	2.95	0.26	0.94	0.00	0.99	9.87
MA20-041A-C	Type 2B vein	3156	Wmica	44.75	0.17	31.34	2.58	0.00	1.09	0.00	1.08	9.75
MA20-041A-C	Type 2B vein	3157	Wmica	43.94	0.32	31.72	2.90	0.04	0.80	0.00	1.17	9.97
MA20-041A-C	Type 2B vein	3158	Wmica	44.85	0.26	30.72	3.00	0.00	1.42	0.00	0.85	9.82
MA20-041A-C	Type 2B vein	3159	Wmica	44.62	0.32	30.01	3.16	0.11	1.47	0.00	0.94	10.21
MA20-041A-C	Type 2B vein	3160	Wmica	44.06	0.45	31.29	2.86	0.00	1.10	0.00	1.10	10.13
MA20-041A-C	Type 2B vein	3161	Wmica	44.89	0.24	30.74	2.51	0.01	1.40	0.00	0.92	9.80
MA20-041A-C	Type 2B vein	3162	Wmica	44.37	0.23	31.97	2.45	0.00	0.89	0.00	0.99	9.87
MA20-041A-C	Type 2B vein	3163	Wmica	44.55	0.18	31.25	2.91	0.01	1.19	0.00	0.98	9.96
MA20-041A-C	Type 2B vein	3164	Wmica	44.15	0.21	30.91	3.04	0.02	1.28	0.00	1.00	10.40
MA20-041A-C	Type 2B vein	3165	Wmica	44.28	0.26	31.74	2.80	0.00	0.97	0.00	1.31	9.84
MA20-041A-C	Type 2B vein	3166	Wmica	44.22	0.26	31.47	2.71	0.00	0.99	0.00	1.06	10.12
MA20-041A-C	Type 2B vein	3167	Wmica	44.38	0.49	31.55	3.10	0.00	1.10	0.00	1.03	9.84
MA20-041A-C	Type 2B vein	3168	Wmica	44.18	0.24	30.94	2.91	0.51	1.19	0.00	0.98	9.90
MA20-041A-C	Type 2B vein	3169	Wmica	43.74	0.36	31.84	2.96	0.16	1.07	0.00	1.13	9.71
MA20-041A-C	Type 2B vein	3170	Wmica	44.12	0.45	31.54	2.79	0.16	1.04	0.00	1.16	10.07
MA20-041A-C	Type 2B vein	3171	Wmica	43.72	0.43	31.87	2.87	0.03	1.11	0.00	1.17	9.82
MA20-041A-C	Type 2B vein	3172	Wmica	44.63	0.18	31.38	3.07	0.05	1.24	0.00	1.28	9.86
MA20-041A-C	Type 2B vein	3173	Wmica	44.38	0.52	31.41	2.83	0.00	1.19	0.00	1.22	10.05
MA20-041A-C	Type 2B vein	3174	Wmica	44.34	0.57	31.55	3.04	0.00	1.01	0.00	1.11	10.05
MA20-041A-C	Type 2B vein	3175	Wmica	45.24	0.23	30.40	3.08	0.03	1.73	0.00	1.00	9.96
MA20-041A-C	Type 2B vein	3176	Wmica	44.15	0.43	31.62	2.67	0.00	1.03	0.00	1.18	9.72
MA20-041A-C	Type 2B vein	3177	Wmica	45.74	0.24	30.35	2.91	0.00	1.78	0.00	0.94	9.98
MA20-041A-C	Type 2B vein	3178	Wmica	44.47	0.48	31.65	3.03	0.27	1.23	0.00	1.18	10.22
MA20-041A-C	Type 2B vein	3179	Wmica	44.73	0.15	31.35	3.16	0.02	1.23	0.00	1.20	10.06
MA20-041A-C	Type 2B vein	3180	Wmica	44.96	0.51	31.00	2.97	0.00	1.48	0.00	1.00	10.10
MA20-041A-C	Type 2B vein	3181	Wmica	44.83	0.24	33.16	2.01	0.16	0.79	0.00	1.36	9.84
MA20-041A-C	Type 2B vein	3182	Wmica	43.66	0.20	29.58	1.99	0.00	1.20	0.00	0.90	9.68
MA20-041A-C	Type 2B vein	3183	Wmica	43.72	0.15	29.56	2.37	0.00	1.35	0.00	1.19	9.98
MA20-041A-C	Type 2B vein	3184	Wmica	44.68	0.21	31.86	1.99	0.00	1.02	0.00	1.18	9.90
MA20-041A-C	Type 2B vein	3185	Wmica	44.19	0.20	31.94	2.50	0.01	0.98	0.00	1.29	9.71
MA20-041A-C	Type 2B vein	3186	Wmica	44.72	0.34	31.29	2.69	0.14	0.92	0.00	1.05	9.82
MA20-041A-C	Type 2B vein	3187	Wmica	44.20	0.19	32.59	2.03	0.17	0.87	0.00	1.24	9.94

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-041A-C	Type 2B vein	3188	Wmica	44.36	0.35	31.53	2.89	0.00	1.21	0.00	1.32	9.81
MA20-041A-C	Type 2B vein	3189	Wmica	44.66	0.16	31.76	2.92	0.01	1.05	0.00	1.18	9.83
MA20-041A-C	Type 2B vein	3190	Wmica	44.42	0.24	32.32	2.60	0.00	0.95	0.00	1.46	9.64
MA20-041A-C	Type 2B vein	3191	Wmica	45.34	0.25	32.06	1.94	0.23	1.19	0.00	1.04	9.76
MA20-041A-C	Type 2B vein	3192	Wmica	44.56	0.23	32.12	2.91	0.07	1.07	0.00	1.34	9.69
MA20-041A-C	Type 2B vein	3193	Wmica	44.78	0.34	32.21	2.72	0.02	0.85	0.00	1.15	9.85
MA20-041A-C	Type 2B vein	3194	Wmica	45.63	0.19	31.38	1.94	0.06	1.02	0.00	0.95	9.95
MA20-041A-C	Type 2B vein	3195	Wmica	44.94	0.38	32.02	3.06	0.00	0.87	0.00	1.02	9.72
MA20-041A-C	Type 2B vein	3196	Wmica	44.97	0.24	32.50	2.09	0.01	0.98	0.00	1.20	10.14
MA20-041A-C	Type 2B vein	3197	Wmica	44.89	0.23	32.71	2.33	0.03	1.02	0.00	1.18	9.79
MA20-041A-C	Type 2B vein	3198	Wmica	45.09	0.19	32.53	2.39	0.00	1.09	0.00	1.31	9.89
MA20-041A-C	Type 2B vein	3199	Wmica	44.54	0.21	32.53	2.59	0.00	1.16	0.00	1.38	9.77
MA20-041A-C	Type 2B vein	3200	Wmica	44.92	0.34	32.79	2.37	0.07	0.91	0.00	1.37	9.73
MA20-041A-C	Type 2B vein	3201	Wmica	44.79	0.45	32.73	2.55	0.00	0.98	0.00	1.25	9.75
MA20-041A-C	Type 2B vein	3202	Wmica	44.84	0.21	34.34	1.93	0.01	0.73	0.00	1.54	9.41
MA20-041A-C	Type 2B vein	3203	Wmica	45.18	0.38	31.90	2.79	0.04	1.17	0.00	1.28	9.91
MA20-041A-C	Type 2B vein	3204	Wmica	45.08	0.20	32.19	2.78	0.12	1.16	0.00	1.41	9.73
MA20-041A-C	Type 2B vein	3205	Wmica	45.54	0.23	31.76	2.82	0.10	0.89	0.00	1.09	10.11
MA20-041A-C	Type 2B vein	3206	Wmica	45.16	0.36	32.45	2.58	0.00	1.03	0.00	1.32	9.58
MA20-041A-C	Type 2B vein	3207	Wmica	45.57	0.45	32.27	2.32	0.06	1.26	0.00	1.31	9.98
MA20-041A-C	Type 2B vein	3208	Wmica	46.76	0.22	31.83	2.49	0.00	1.37	0.00	1.27	9.78
MA20-041A-C	Type 2B vein	3209	Wmica	44.89	0.17	34.40	1.84	0.21	0.82	0.00	1.51	9.75
MA20-041A-C	Type 2B vein	3210	Wmica	45.49	0.31	32.33	2.64	0.00	1.32	0.00	1.35	9.85
MA20-041A-C	Type 2B vein	3211	Wmica	45.16	0.38	33.17	2.63	0.10	0.93	0.00	1.40	9.89
MA20-050A	Type 2A	3250	Chl	23.49	0.00	21.27	21.59	0.15	15.24	0.72	0.41	0.00
MA20-050A	Type 2A	3251	Chl	23.56	0.06	21.37	21.55	0.15	15.46	0.79	0.00	0.01
MA20-050A	Type 2A	3252	Chl	23.97	0.02	22.08	21.08	0.14	15.87	0.97	0.00	0.05
MA20-050A	Type 2A	3253	Chl	23.86	0.13	21.70	22.09	0.24	15.66	0.79	0.37	0.02
MA20-050A	Type 2A	3254	Chl	25.12	0.01	21.16	21.34	0.14	16.80	0.61	0.28	0.00
MA20-050A	Type 2A	3255	Chl	24.15	0.01	22.68	20.90	0.16	16.55	1.12	0.07	0.00
MA20-050A	Type 2A	3256	Chl	24.34	0.00	22.46	21.55	0.15	16.36	0.84	0.43	0.06
MA20-050A	Type 2A	3257	Chl	24.56	0.01	22.46	22.34	0.28	16.11	0.71	0.33	0.02
MA20-050A	Type 2A	3258	Chl	24.57	0.01	22.34	21.81	0.13	16.85	0.99	0.36	0.00
MA20-050A	Type 2A	3259	Chl	25.57	0.00	22.50	23.51	0.19	15.07	0.49	0.26	0.00

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050A	Type 2A	3260	Chl	25.85	0.00	22.50	22.40	0.38	16.03	0.33	0.51	0.00
MA20-050A	Type 2A	3261	Chl	25.72	0.10	22.19	22.19	0.19	16.33	0.38	0.30	0.04
MA20-050A	Type 2A	3262	Chl	24.65	0.06	23.04	20.84	0.20	17.12	1.21	0.35	0.02
MA20-050A	Type 2A	3263	Chl	25.47	0.00	22.27	22.04	0.18	16.81	0.54	0.38	0.07
MA20-050A	Type 2A	3264	Chl	25.83	0.01	22.50	22.09	0.00	16.83	0.43	0.43	0.10
MA20-050A	Type 2A	3265	Chl	24.86	0.00	22.81	21.90	0.17	17.10	1.00	0.31	0.00
MA20-050A	Type 2A	3266	Chl	26.01	0.00	23.31	22.18	0.14	16.63	0.50	0.36	0.00
MA20-050A	Type 2A	3267	Chl	25.62	0.00	23.66	21.61	0.12	17.20	0.62	0.32	0.05
MA20-050A	Type 2A	3288	Chl	27.79	0.00	20.77	25.14	0.00	11.21	0.87	0.47	0.26
MA20-050A	Type 2A	3289	Chl	27.96	0.07	20.93	24.81	0.00	11.77	0.87	0.36	0.15
MA20-050A	Type 2A	3290	Chl	27.91	0.00	21.10	24.93	0.11	11.01	0.88	0.42	0.34
MA20-050A	Type 2A	3291	Chl	28.17	0.01	21.19	24.66	0.06	11.47	0.89	0.47	0.22
MA20-050A	Type 2A	3292	Chl	28.48	0.02	21.22	24.18	0.00	12.11	0.83	0.47	0.20
MA20-050A	Type 2A	3293	Chl	28.19	0.01	21.42	24.63	0.17	12.01	0.85	0.48	0.20
MA20-050A	Type 2A	3294	Wmica	42.63	0.20	32.86	3.24	0.00	1.08	0.61	1.17	9.58
MA20-050A	Type 2A	3295	Wmica	43.27	0.14	33.04	2.95	0.00	0.96	0.52	1.14	9.72
MA20-050A	Type 2A	3296	Wmica	42.96	0.20	33.85	2.82	0.00	0.96	0.45	1.62	9.50
MA20-050A	Type 2A	3297	Wmica	43.32	0.00	33.07	3.23	0.07	1.11	0.50	1.37	9.58
MA20-050A	Type 2A	3298	Wmica	43.20	0.37	33.32	2.91	0.00	1.14	0.70	1.36	9.35
MA20-050A	Type 2A	3299	Wmica	43.25	0.36	33.51	2.94	0.00	1.14	0.38	1.46	9.54
MA20-050A	Type 2A	3300	Wmica	43.48	0.21	34.02	2.91	0.09	0.92	0.29	1.50	9.41
MA20-050A	Type 2A	3301	Wmica	43.71	0.11	33.42	2.92	0.00	1.10	0.57	1.35	9.82
MA20-050A	Type 2A	3302	Wmica	43.50	0.20	33.64	2.95	0.00	1.10	0.42	1.37	9.83
MA20-050A	Type 2A	3303	Wmica	43.51	0.22	33.39	3.05	0.11	1.07	0.57	1.32	9.74
MA20-050A	Type 2A	3304	Wmica	43.68	0.14	33.47	2.83	0.04	1.03	0.52	1.35	9.83
MA20-050A	Type 2A	3305	Wmica	44.17	0.15	33.28	2.79	0.01	1.19	0.49	1.35	9.64
MA20-050A	Type 2A	3306	Wmica	43.94	0.08	33.14	3.34	0.00	1.06	0.53	1.36	9.81
MA20-050A	Type 2A	3307	Wmica	43.89	0.15	33.37	3.17	0.00	1.13	0.49	1.32	9.84
MA20-050A	Type 2A	3308	Wmica	43.88	0.16	33.51	3.04	0.00	1.09	0.43	1.22	9.88
MA20-050A	Type 2A	3309	Wmica	43.89	0.32	33.68	3.17	0.00	1.28	0.52	1.44	9.68
MA20-050A	Type 2A	3333	Wmica	43.86	0.36	32.42	2.69	0.00	0.80	0.00	1.22	10.04
MA20-050A	Type 2A	3334	Wmica	43.91	0.19	31.92	3.07	0.12	0.92	0.00	1.19	10.07
MA20-050A	Type 2A	3335	Wmica	44.55	0.15	31.33	2.96	0.03	1.12	0.00	1.14	10.12
MA20-050A	Type 2A	3337	Wmica	44.61	0.15	33.11	2.81	0.02	0.81	0.05	1.32	10.11

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050A	Type 2A	3338	Wmica	45.09	0.13	31.91	3.00	0.00	1.16	0.00	1.08	10.13
MA20-050A	Type 2A	3339	Wmica	45.07	0.26	32.71	2.78	0.00	0.88	0.00	1.23	10.14
MA20-050A	Type 2A	3340	Wmica	44.47	0.27	32.95	3.12	0.00	0.80	0.00	1.09	10.10
MA20-050A	Type 2A	3341	Wmica	45.32	0.29	33.35	2.47	0.00	0.76	0.00	1.22	10.19
MA20-050A	Type 2A	3342	Wmica	44.44	0.14	33.25	3.26	0.00	0.89	0.00	1.18	10.18
MA20-050A	Type 2A	3343	Wmica	45.12	0.22	33.39	2.53	0.02	0.75	0.08	1.23	10.32
MA20-050A	Type 2A	3344	Wmica	45.28	0.30	33.27	2.91	0.00	0.80	0.02	1.24	10.21
MA20-050A	Type 2A	3345	Wmica	45.24	0.19	33.40	3.10	0.07	0.90	0.00	1.25	10.20
MA20-050A	Type 2A	3346	Wmica	44.94	0.26	33.85	2.91	0.00	0.77	0.00	1.26	10.15
MA20-050A	Type 2A	3347	Wmica	45.72	0.07	33.85	2.80	0.10	0.90	0.00	1.35	10.26
MA20-050A	Type 2A	3348	Chl	24.52	0.00	21.91	23.09	0.18	14.78	0.84	0.06	0.11
MA20-050A	Type 2A	3349	Chl	23.96	0.00	22.94	28.36	0.11	10.13	0.84	0.24	0.05
MA20-050A	Type 2A	3350	Chl	23.33	0.03	22.83	30.05	0.06	9.46	0.60	0.31	0.08
MA20-050A	Type 2A	3351	Chl	24.96	0.00	22.72	23.08	0.01	15.48	0.93	0.31	0.04
MA20-050A	Type 2A	3352	Chl	25.03	0.02	22.58	23.19	0.08	15.52	0.95	0.33	0.08
MA20-050A	Type 2A	3353	Chl	24.96	0.00	22.80	28.80	0.00	9.93	0.44	0.33	0.15
MA20-050A	Type 2A	3354	Chl	24.64	0.00	23.66	32.83	0.00	6.72	0.37	0.36	0.21
MA20-050A	Type 2A	3355	Chl	25.68	0.04	23.04	22.48	0.17	16.29	0.82	0.35	0.00
MA20-050A	Type 2A	3356	Chl	26.10	0.00	22.66	25.66	0.01	13.97	0.63	0.37	0.11
MA20-050A	Type 2A	3357	Chl	26.29	0.03	23.06	22.09	0.16	16.98	0.59	0.26	0.09
MA20-050A	Type 2A	3358	Chl	24.44	0.00	23.61	31.41	0.00	8.94	0.81	0.33	0.02
MA20-050A	Type 2A	3359	Chl	25.71	0.00	23.19	29.97	0.02	9.83	0.40	0.38	0.09
MA20-050A	Type 2A	3360	Chl	27.24	0.05	24.02	28.26	0.11	8.61	0.77	1.15	0.11
MA20-050A	Type 2A	3361	Chl	25.57	0.03	23.10	26.78	0.03	13.11	0.86	0.56	0.09
MA20-050A	Type 2A	3362	Chl	25.11	0.00	23.93	31.29	0.17	9.15	0.77	0.30	0.04
MA20-050A	Type 2A	3363	Chl	23.60	0.00	25.24	32.21	0.20	8.20	0.65	0.31	0.06
MA20-050A	Type 2A	3364	Chl	23.64	0.02	24.77	34.87	0.31	5.97	0.55	0.29	0.09
MA20-050A	Type 2A	3365	Chl	23.89	0.01	24.39	35.47	0.18	5.94	0.48	0.33	0.08
MA20-050A	Type 2A	3366	Chl	27.32	0.04	23.15	23.11	0.06	16.10	0.44	0.31	0.19
MA20-050A	Type 2A	3367	Chl	25.28	0.03	24.22	30.06	0.07	10.06	0.71	0.28	0.08
MA20-050A	Type 2A	3377	Chl	25.03	0.01	23.82	30.53	0.15	10.07	0.84	0.42	0.10
MA20-050A	Type 2A	3378	Chl	24.04	0.00	24.92	35.51	0.31	6.33	0.49	0.33	0.08
MA20-050A	Type 2A	3379	Chl	28.03	0.00	23.34	23.00	0.04	16.49	0.39	0.43	0.21
MA20-050A	Type 2A	3380	Chl	24.35	0.01	24.88	36.54	0.15	6.01	0.47	0.48	0.03

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050A	Type 2A	3417	Chl	25.63	0.19	22.18	20.46	0.02	16.90	0.43	0.00	0.00
MA20-050A	Type 2A	3418	Chl	26.25	0.05	22.80	20.04	0.13	17.41	0.47	0.37	0.02
MA20-050A	Type 2A	3419	Chl	25.59	0.14	22.83	21.22	0.37	16.78	0.50	0.40	0.01
MA20-050A	Type 2A	3420	Chl	25.86	0.30	22.62	20.94	0.12	16.74	0.52	0.29	0.00
MA20-050A	Type 2A	3421	Wmica	41.23	0.73	31.83	2.60	0.00	0.92	0.14	1.25	9.60
MA20-050A	Type 2A	3422	Chl	25.94	0.17	22.96	21.68	0.18	16.57	0.35	0.45	0.06
MA20-050A	Type 2A	3423	Chl	24.12	0.58	23.31	30.93	0.18	8.69	0.50	0.42	0.02
MA20-050A	Type 2A	3424	Chl	24.05	0.57	22.74	33.60	0.00	6.46	0.63	0.25	0.08
MA20-050A	Type 2A	3425	Chl	26.08	0.09	22.93	20.62	0.07	17.59	0.62	0.34	0.05
MA20-050A	Type 2A	3426	Chl	27.65	0.04	21.83	21.63	0.00	16.85	0.26	0.48	0.00
MA20-050A	Type 2A	3427	Chl	27.34	0.00	22.19	20.63	0.11	17.31	0.36	0.28	0.00
MA20-050A	Type 2A	3428	Wmica	41.79	0.58	32.26	2.38	0.00	0.81	0.10	1.19	9.74
MA20-050A	Type 2A	3429	Chl	23.50	0.44	23.48	34.03	0.27	6.55	0.64	0.43	0.00
MA20-050A	Type 2A	3430	Chl	24.68	0.45	23.78	29.73	0.10	9.63	0.60	0.34	0.00
MA20-050A	Type 2A	3431	Chl	26.70	0.04	23.44	21.67	0.00	16.75	0.39	0.45	0.00
MA20-050A	Type 2A	3432	Wmica	42.84	0.48	32.62	2.47	0.06	0.87	0.06	1.31	9.54
MA20-050A	Type 2A	3433	Chl	23.44	0.55	23.41	33.69	0.21	7.21	0.98	0.42	0.00
MA20-050A	Type 2A	3434	Wmica	42.67	0.64	33.54	2.91	0.01	0.84	0.11	1.45	9.35
MA20-050A	Type 2A	3435	Wmica	43.02	0.69	32.98	2.56	0.00	0.71	0.08	1.21	9.84
MA20-050A	Type 2A	3436	Wmica	43.31	0.64	33.33	2.50	0.00	0.79	0.17	1.39	9.67
MA20-050A	Type 2A	3437	Wmica	43.17	0.30	33.88	2.61	0.00	0.82	0.05	1.37	9.82
MA20-050A	Type 2A	3438	Wmica	43.52	0.40	33.73	2.70	0.00	0.84	0.04	1.31	9.71
MA20-050A	Type 2A	3439	Wmica	43.53	0.40	33.93	2.79	0.00	0.81	0.10	1.50	9.76
MA20-050A	Type 2A	3440	Wmica	43.36	0.41	33.75	2.86	0.00	0.85	0.00	1.39	9.83
MA20-050A	Type 2A	3441	Wmica	43.85	0.38	34.21	2.91	0.01	0.82	0.10	1.55	9.86
MA20-054B	Type 2B vein	3450	Chl	19.47	0.00	23.39	38.15	0.59	0.46	0.27	0.02	0.01
MA20-054B	Type 2B vein	3451	Chl	18.38	0.06	24.77	38.17	0.55	0.53	0.19	0.00	0.02
MA20-054B	Type 2B vein	3452	Chl	18.60	0.01	24.62	38.43	0.52	0.54	0.37	0.00	0.00
MA20-054B	Type 2B vein	3453	Chl	18.91	0.00	24.25	38.75	0.52	0.53	0.40	0.00	0.00
MA20-054B	Type 2B vein	3454	Chl	18.54	0.07	25.14	37.96	0.74	0.68	0.27	0.00	0.00
MA20-054B	Type 2B vein	3455	Chl	19.41	0.02	23.78	38.01	0.74	0.55	0.43	0.35	0.00
MA20-054B	Type 2B vein	3456	Chl	18.63	0.00	25.00	38.91	0.55	0.37	0.28	0.00	0.02
MA20-054B	Type 2B vein	3457	Chl	18.73	0.03	25.37	38.15	0.55	0.69	0.29	0.00	0.04
MA20-054B	Type 2B vein	3458	Chl	18.79	0.00	25.22	37.61	0.64	0.59	0.32	0.24	0.00

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-054B	Type 2B vein	3459	Chl	19.79	0.02	23.15	39.21	0.52	0.57	0.21	0.04	0.03
MA20-054B	Type 2B vein	3460	Chl	18.87	0.01	25.45	38.18	0.79	0.65	0.25	0.35	0.08
MA20-054B	Type 2B vein	3461	Chl	20.15	0.00	22.67	38.76	0.49	0.35	0.02	0.00	0.02
MA20-054B	Type 2B vein	3462	Chl	20.34	0.00	23.36	37.52	0.42	0.88	0.19	0.12	0.10
MA20-054B	Type 2B vein	3463	Chl	20.36	0.02	23.09	38.56	0.37	0.61	0.10	0.14	0.07
MA20-054B	Type 2B vein	3464	Chl	20.77	0.00	22.78	38.64	0.42	0.81	0.08	0.09	0.10
MA20-054B	Type 2B vein	3465	Chl	21.25	0.00	21.49	39.24	0.35	0.55	0.15	0.12	0.03
MA20-054B	Type 2B vein	3466	Chl	21.06	0.03	21.75	38.49	0.54	0.60	0.07	0.33	0.13
MA20-054B	Type 2B vein	3467	Chl	20.60	0.00	23.14	38.69	0.51	0.48	0.06	0.06	0.08
MA20-054B	Type 2B vein	3468	Chl	21.25	0.00	21.59	38.07	0.50	1.03	0.14	0.39	0.07
MA20-054B	Type 2B vein	3469	Chl	20.81	0.01	22.92	37.97	0.33	0.70	0.06	0.40	0.06
MA20-054B	Type 2B vein	3470	Chl	21.10	0.13	22.92	37.75	0.44	0.89	0.06	0.26	0.02
MA20-054B	Type 2B vein	3471	Chl	21.18	0.04	22.98	37.43	0.60	1.02	0.12	0.10	0.00
MA20-054B	Type 2B vein	3472	Chl	20.36	0.04	23.75	38.22	0.50	0.33	0.07	0.03	0.00
MA20-054B	Type 2B vein	3473	Chl	20.51	0.00	23.24	37.98	0.68	0.64	0.04	0.22	0.00
MA20-054B	Type 2B vein	3474	Chl	21.01	0.00	21.75	39.04	0.60	0.65	0.04	0.27	0.01
MA20-054B	Type 2B vein	3475	Chl	21.94	0.00	21.33	38.85	0.43	0.78	0.10	0.38	0.12
MA20-054B	Type 2B vein	3476	Chl	21.55	0.00	22.42	38.27	0.71	0.70	0.01	0.25	0.00
MA20-054B	Type 2B vein	3477	Chl	21.68	0.00	21.75	38.53	0.43	0.66	0.14	0.33	0.06
MA20-054B	Type 2B vein	3478	Chl	20.91	0.03	23.25	38.31	0.57	0.73	0.11	0.31	0.08
MA20-054B	Type 2B vein	3479	Chl	19.97	0.16	24.03	38.51	0.49	0.74	0.05	0.13	0.09
MA20-054B	Type 2B vein	3480	Chl	20.54	0.00	24.26	37.80	0.69	0.91	0.09	0.28	0.12
MA20-054B	Type 2B vein	3481	Chl	20.51	0.00	24.80	37.39	0.42	0.55	0.06	0.30	0.08
MA20-054B	Type 2B vein	3482	Chl	20.99	0.00	23.69	38.26	0.53	0.75	0.12	0.14	0.00
MA20-054B	Type 2B vein	3483	Chl	20.05	0.00	24.26	38.44	0.48	0.53	0.00	0.45	0.04
MA20-054B	Type 2B vein	3484	Chl	21.88	0.00	21.05	39.52	0.57	0.71	0.00	0.23	0.04
MA20-054B	Type 2B vein	3485	Chl	21.56	0.00	22.22	39.38	0.47	0.87	0.08	0.21	0.00
MA20-054B	Type 2B vein	3486	Chl	20.28	0.00	24.55	38.69	0.19	0.62	0.09	0.34	0.04
MA20-054B	Type 2B vein	3487	Chl	20.98	0.01	23.58	38.71	0.67	0.79	0.13	0.28	0.06
MA20-054B	Type 2B vein	3488	Wmica	42.54	0.11	30.80	3.99	0.36	0.95	0.00	0.61	9.55
MA20-054B	Type 2B vein	3489	Wmica	43.21	0.21	30.72	3.62	0.09	0.92	0.08	0.74	9.55
MA20-054B	Type 2B vein	3491	Wmica	42.65	0.00	32.83	3.23	0.00	0.41	0.00	0.83	9.67
MA20-054B	Type 2B vein	3492	Wmica	42.87	0.21	30.95	3.74	0.00	1.13	0.00	0.96	9.74
MA20-054B	Type 2B vein	3493	Wmica	42.95	0.08	31.60	3.30	0.04	0.88	0.00	0.87	9.75

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-054B	Type 2B vein	3494	Wmica	42.94	0.03	32.28	3.63	0.12	0.37	0.00	0.68	9.68
MA20-054B	Type 2B vein	3495	Wmica	42.50	0.02	32.86	3.33	0.14	0.58	0.00	0.97	9.62
MA20-054B	Type 2B vein	3496	Wmica	42.18	0.00	32.62	3.54	0.00	0.59	0.00	0.88	9.91
MA20-054B	Type 2B vein	3497	Wmica	42.91	0.06	32.59	2.61	0.06	0.77	0.00	0.83	9.86
MA20-054B	Type 2B vein	3498	Wmica	42.70	0.07	31.81	3.76	0.00	0.92	0.03	0.74	9.95
MA20-054B	Type 2B vein	3499	Wmica	44.14	0.23	30.90	3.70	0.01	0.88	0.00	0.78	9.43
MA20-054B	Type 2B vein	3500	Wmica	44.07	0.10	31.44	3.10	0.11	0.62	0.10	0.99	9.64
MA20-054B	Type 2B vein	3501	Wmica	42.79	0.00	32.43	3.76	0.13	0.61	0.00	0.73	9.75
MA20-054B	Type 2B vein	3502	Wmica	42.66	0.02	33.65	2.86	0.00	0.57	0.00	0.87	9.51
MA20-054B	Type 2B vein	3506	Wmica	43.51	0.11	31.90	3.06	0.00	1.02	0.00	0.77	9.96
MA20-054B	Type 2B vein	3507	Wmica	43.03	0.13	31.59	4.14	0.00	1.00	0.00	0.66	9.85
MA20-054B	Type 2B vein	3508	Wmica	43.29	0.13	31.74	3.74	0.07	0.95	0.01	0.82	9.81
MA20-054B	Type 2B vein	3509	Wmica	43.23	0.13	32.39	3.03	0.07	0.92	0.00	0.87	9.66
MA20-054B	Type 2B vein	3510	Wmica	42.79	0.01	33.77	2.97	0.03	0.59	0.00	0.89	9.55
MA20-054B	Type 2B vein	3511	Wmica	43.08	0.08	33.42	2.90	0.00	0.80	0.00	0.76	9.72
MA20-054B	Type 2B vein	3512	Wmica	44.21	0.07	32.24	3.13	0.06	0.76	0.00	0.85	9.72
MA20-054B	Type 2B vein	3513	Wmica	44.74	0.04	33.04	3.25	0.10	0.48	0.36	1.04	7.75
MA20-054B	Type 2B vein	3514	Wmica	44.85	0.07	31.83	3.06	0.10	0.65	0.00	0.79	9.41
MA20-054B	Type 2B vein	3515	Wmica	42.66	0.05	33.07	3.49	0.11	0.59	0.00	0.93	9.60
MA20-054B	Type 2B vein	3516	Wmica	44.12	0.00	32.47	3.08	0.00	0.77	0.00	0.78	9.52
MA20-054B	Type 2B vein	3518	Wmica	42.78	0.06	32.60	3.70	0.15	0.92	0.00	0.98	9.89
MA20-054B	Type 2B vein	3519	Wmica	43.15	0.00	34.00	2.71	0.14	0.49	0.00	0.90	9.62
MA20-054B	Type 2B vein	3520	Wmica	43.98	0.07	33.20	2.42	0.04	0.71	0.00	0.97	9.71
MA20-054B	Type 2B vein	3521	Wmica	43.65	0.10	33.01	2.77	0.07	0.96	0.00	0.94	9.82
MA20-054B	Type 2B vein	3522	Wmica	43.43	0.16	32.22	3.44	0.26	0.99	0.00	0.77	9.81
MA20-054B	Type 2B vein	3523	Wmica	43.02	0.05	32.98	3.82	0.36	0.67	0.00	0.87	9.49
MA20-040	SQ vein	3524	Chl	25.90	0.09	21.23	23.62	0.23	10.51	0.09	0.00	0.37
MA20-040	SQ vein	3525	Chl	26.68	0.03	22.35	24.51	0.26	13.14	0.10	0.00	0.17
MA20-040	SQ vein	3526	Chl	26.08	0.00	23.53	24.22	0.29	12.77	0.00	0.54	0.33
MA20-040	SQ vein	3527	Chl	26.70	0.09	23.08	23.42	0.43	13.31	0.00	0.39	0.25
MA20-040	SQ vein	3528	Chl	27.01	0.04	23.28	23.66	0.19	13.33	0.07	0.43	0.31
MA20-040	SQ vein	3529	Chl	26.21	0.03	24.39	24.15	0.21	12.77	0.02	0.46	0.22
MA20-040	SQ vein	3530	Chl	26.73	0.21	22.85	24.60	0.51	13.61	0.04	0.51	0.24
MA20-040	SQ vein	3531	Chl	26.46	0.00	23.75	24.27	0.19	13.37	0.05	0.37	0.16

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-040	SQvein	3533	Chl	26.22	0.00	23.86	25.37	0.16	13.04	0.01	0.37	0.20
MA20-040	SQvein	3534	Chl	27.08	0.12	23.06	24.66	0.13	13.60	0.10	0.52	0.21
MA20-040	SQvein	3535	Chl	27.13	0.06	24.10	24.30	0.21	13.11	0.02	0.59	0.26
MA20-040	SQvein	3536	Chl	27.58	0.07	23.59	23.67	0.25	13.56	0.00	0.69	0.27
MA20-040	SQvein	3537	Chl	26.67	0.06	23.51	24.69	0.26	13.57	0.10	0.53	0.26
MA20-040	SQvein	3538	Chl	27.02	0.05	23.81	24.14	0.28	13.45	0.07	0.48	0.34
MA20-040	SQvein	3540	Chl	26.78	0.04	24.34	24.34	0.22	13.13	0.00	0.52	0.33
MA20-040	SQvein	3541	Chl	26.84	0.02	24.09	24.59	0.13	13.17	0.10	0.54	0.33
MA20-040	SQvein	3542	Wmica	46.46	0.36	32.66	1.89	0.18	1.25	0.00	1.12	10.50
MA20-040	SQvein	3543	Wmica	45.34	0.19	34.97	2.79	0.00	0.61	0.00	1.08	9.90
MA20-040	SQvein	3544	Wmica	45.52	0.23	34.68	2.57	0.01	0.89	0.00	1.46	9.86
MA20-040	SQvein	3545	Wmica	46.23	0.55	33.81	1.56	0.00	1.15	0.00	1.14	10.48
MA20-040	SQvein	3546	Wmica	46.01	0.18	35.99	1.04	0.08	0.69	0.00	1.64	9.79
MA20-040	SQvein	3547	Wmica	45.86	0.24	34.42	2.45	0.20	0.82	0.00	0.97	10.24
MA20-040	SQvein	3548	Wmica	46.45	0.15	35.77	1.42	0.09	0.62	0.00	1.29	9.83
MA20-040	SQvein	3549	Wmica	46.17	0.23	33.58	2.26	0.07	1.37	0.00	1.30	10.41
MA20-040	SQvein	3550	Wmica	45.81	0.17	35.90	1.84	0.00	0.85	0.00	1.36	9.99
MA20-040	SQvein	3551	Wmica	46.32	0.27	35.26	1.87	0.08	0.72	0.00	1.10	10.32
MA20-040	SQvein	3552	Wmica	47.09	0.34	33.60	2.20	0.00	1.14	0.00	1.04	10.56
MA20-040	SQvein	3553	Wmica	46.20	0.08	35.82	1.46	0.00	0.81	0.00	1.25	10.38
MA20-040	SQvein	3554	Wmica	46.49	0.04	35.74	1.49	0.00	0.89	0.00	1.47	10.06
MA20-040	SQvein	3555	Wmica	46.50	0.26	33.66	2.06	0.11	1.22	0.05	1.22	10.84
MA20-040	SQvein	3556	Wmica	46.30	0.23	35.42	1.65	0.00	0.81	0.00	1.42	10.51
MA20-040	SQvein	3557	Wmica	46.11	0.25	35.94	1.76	0.00	0.88	0.00	1.34	10.27
MA20-040	SQvein	3558	Wmica	46.31	0.22	35.50	1.84	0.10	0.93	0.00	1.32	10.27
MA20-040	SQvein	3559	Wmica	46.50	0.23	36.47	1.15	0.00	0.77	0.00	1.56	9.95
MA20-040	SQvein	3560	Wmica	46.78	0.21	34.99	1.73	0.05	1.08	0.00	1.20	10.41
MA20-040	SQvein	3561	Wmica	46.63	0.20	34.18	2.64	0.00	1.14	0.00	1.28	10.45
MA20-040	SQvein	3562	Wmica	46.29	0.14	35.60	1.78	0.23	0.97	0.00	1.27	10.39
MA20-040	SQvein	3563	Wmica	46.59	0.14	36.17	1.30	0.03	0.94	0.00	1.06	10.39
MA20-040	SQvein	3564	Wmica	47.41	0.42	33.14	2.42	0.00	1.60	0.00	1.06	10.60
MA20-040	SQvein	3566	Wmica	46.86	0.40	34.02	2.50	0.02	1.33	0.00	1.01	10.16
MA20-040	SQvein	3567	Wmica	47.37	0.24	33.38	2.30	0.04	1.37	0.00	1.06	10.79
MA20-040	SQvein	3568	Wmica	46.71	0.36	35.69	1.52	0.06	1.01	0.00	1.32	10.13

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-040	SQ vein	3569	Wmica	47.00	0.38	33.18	2.83	0.22	1.28	0.00	1.06	10.38
MA20-040	SQ vein	3570	Wmica	46.36	0.15	35.44	1.99	0.01	1.00	0.00	1.42	10.52
MA20-040	SQ vein	3571	Wmica	46.78	0.23	35.16	2.19	0.30	0.97	0.00	1.08	10.38
MA20-040	SQ vein	3572	Wmica	46.37	0.25	35.26	2.17	0.00	1.24	0.00	1.46	10.34
MA20-040	SQ vein	3573	Wmica	46.67	0.05	36.86	1.30	0.09	0.76	0.00	1.72	9.58
MA20-040	SQ vein	3574	Wmica	47.36	0.09	34.92	2.14	0.00	0.87	0.00	1.22	10.42
MA20-040	SQ vein	3575	Wmica	46.45	0.13	36.29	1.79	0.00	0.78	0.00	1.43	10.35
MA20-040	SQ vein	3576	Chl	32.15	0.00	20.83	29.69	0.00	4.56	0.00	0.47	1.91
MA20-040	SQ vein	3577	Chl	33.32	0.01	22.28	27.25	0.30	4.48	0.00	0.65	2.30
MA20-040	SQ vein	3578	Chl	30.02	0.02	20.42	33.27	0.48	5.42	0.10	0.30	0.34
MA20-040	SQ vein	3579	Chl	31.03	0.02	20.02	34.78	0.15	5.49	0.10	0.50	0.29
MA20-040	SQ vein	3580	Chl	32.09	0.03	21.37	31.24	0.19	5.29	0.05	0.55	1.35
MA20-040	SQ vein	3582	Chl	30.24	0.00	20.15	35.06	0.10	5.87	0.05	0.28	0.36
MA20-040	SQ vein	3583	Chl	32.92	0.05	22.01	29.55	0.17	5.03	0.02	0.59	1.74
MA20-040	SQ vein	3585	Chl	31.92	0.03	21.04	32.12	0.49	5.09	0.02	0.49	1.24
MA20-040	SQ vein	3586	Chl	33.12	0.00	21.68	28.91	0.37	4.50	0.00	0.84	2.54
MA20-040	SQ vein	3587	Chl	30.11	0.00	20.68	35.90	0.29	5.55	0.11	0.20	0.22
MA20-040	SQ vein	3588	Chl	30.75	0.00	20.04	36.62	0.00	5.40	0.08	0.53	0.35
MA20-040	SQ vein	3589	Chl	31.11	0.02	19.91	37.50	0.16	5.19	0.13	0.32	0.37
MA20-040	SQ vein	3590	Wmica	48.17	0.23	33.81	1.31	0.00	0.74	0.00	1.07	10.34
MA20-040	SQ vein	3591	Wmica	48.03	0.06	33.54	2.42	0.00	0.90	0.00	1.06	10.09
MA20-040	SQ vein	3592	Wmica	47.76	0.18	34.53	1.62	0.00	0.89	0.00	1.22	10.08
MA20-040	SQ vein	3593	Wmica	48.28	0.20	34.71	1.45	0.08	0.70	0.00	1.31	10.32
MA20-040	SQ vein	3594	Wmica	48.69	0.14	34.23	1.83	0.04	0.79	0.00	1.10	10.20
MA20-040	SQ vein	3595	Wmica	48.92	0.15	34.06	1.66	0.00	0.97	0.00	1.07	10.29
MA20-040	SQ vein	3596	Wmica	48.14	0.21	34.75	1.78	0.00	0.80	0.00	1.20	10.34
MA20-040	SQ vein	3597	Wmica	47.92	0.22	33.94	2.93	0.00	1.07	0.00	1.25	9.78
MA20-040	SQ vein	3598	Wmica	48.51	0.14	34.52	2.61	0.00	0.83	0.00	1.27	9.73
MA20-040	SQ vein	3599	Wmica	48.32	0.14	34.90	1.97	0.00	0.81	0.00	1.24	10.31
MA20-040	SQ vein	3600	Wmica	47.74	0.14	34.51	2.23	0.05	1.06	0.00	1.47	10.18
MA20-040	SQ vein	3601	Wmica	49.20	0.05	33.76	2.13	0.14	0.95	0.00	1.16	10.44
MA20-040	SQ vein	3602	Wmica	48.47	0.24	34.81	2.05	0.01	0.92	0.00	1.35	10.21
MA20-040	SQ vein	3603	Wmica	48.56	0.16	34.50	2.47	0.21	0.90	0.00	1.08	10.24
MA20-040	SQ vein	3604	Wmica	48.61	0.08	34.62	1.98	0.00	1.01	0.00	1.43	10.07

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-040	SQ vein	3605	Wmica	48.36	0.22	35.55	2.17	0.00	1.00	0.00	1.16	10.04
MA20-040	SQ vein	3606	Wmica	49.01	0.02	34.86	2.03	0.03	0.77	0.00	1.04	10.18
MA20-040	SQ vein	3607	Wmica	48.80	0.01	34.49	2.72	0.07	1.05	0.00	1.21	10.22
MA20-040	SQ vein	3608	Wmica	48.79	0.13	34.96	2.08	0.11	0.88	0.00	1.28	10.37
MA20-040	SQ vein	3609	Wmica	48.88	0.11	35.14	1.88	0.00	0.98	0.00	1.52	9.96
MA20-040	SQ vein	3610	Wmica	49.07	0.24	34.49	2.23	0.08	0.86	0.00	1.35	10.18
MA20-040	SQ vein	3611	Wmica	49.04	0.15	35.45	1.67	0.00	0.91	0.00	1.48	10.04
MA20-040	SQ vein	3612	Wmica	48.94	0.22	35.40	1.84	0.00	0.79	0.00	1.06	10.33
MA20-040	SQ vein	3613	Wmica	48.77	0.21	35.45	1.64	0.06	0.87	0.00	1.45	10.30
MA20-040	SQ vein	3614	Wmica	49.30	0.13	34.54	2.16	0.07	0.84	0.00	1.36	10.16
MA20-040	SQ vein	3615	Wmica	49.30	0.17	34.84	1.75	0.24	0.83	0.00	1.37	10.31
MA20-040	SQ vein	3616	Wmica	49.26	0.07	34.82	2.43	0.07	0.96	0.00	1.05	10.34
MA20-040	SQ vein	3617	Wmica	48.97	0.13	34.84	2.30	0.17	1.03	0.00	1.48	10.29
MA20-040	SQ vein	3618	Wmica	49.37	0.21	35.13	2.06	0.14	0.99	0.00	1.36	10.05
MA20-040	SQ vein	3619	Wmica	49.08	0.07	35.32	2.05	0.07	0.83	0.00	1.36	10.54
MA20-040	SQ vein	3621	Wmica	49.86	0.04	35.36	2.31	0.00	1.02	0.00	1.28	10.29
MA20-040	SQ vein	3622	Chl	28.51	0.00	20.62	29.90	0.15	7.04	0.14	0.35	0.29
MA20-040	SQ vein	3623	Chl	29.42	0.00	21.80	29.49	0.10	6.99	0.10	0.00	0.07
MA20-040	SQ vein	3624	Chl	29.66	0.01	22.13	28.31	0.25	8.10	0.11	0.42	0.21
MA20-040	SQ vein	3625	Chl	28.90	0.00	21.62	32.04	0.11	5.79	0.20	0.45	0.27
MA20-040	SQ vein	3626	Chl	30.07	0.07	22.64	29.70	0.00	7.30	0.05	0.39	0.15
MA20-040	SQ vein	3627	Chl	29.26	0.05	21.48	33.74	0.36	6.02	0.03	0.22	0.23
MA20-040	SQ vein	3628	Chl	30.74	0.00	23.22	28.73	0.13	7.67	0.11	0.47	0.25
MA20-040	SQ vein	3629	Chl	30.31	0.12	22.90	30.38	0.29	7.20	0.09	0.00	0.26
MA20-040	SQ vein	3630	Chl	30.54	0.03	22.78	30.66	0.19	7.36	0.09	0.39	0.24
MA20-040	SQ vein	3631	Chl	30.40	0.02	22.32	31.24	0.32	6.44	0.09	0.45	0.32
MA20-040	SQ vein	3632	Wmica	46.98	0.28	33.59	1.93	0.05	1.14	0.00	0.75	10.48
MA20-040	SQ vein	3633	Wmica	47.23	0.22	32.77	2.52	0.21	1.16	0.00	0.79	10.82
MA20-040	SQ vein	3634	Wmica	46.06	0.21	32.36	4.20	0.00	1.38	0.08	1.02	10.42
MA20-040	SQ vein	3635	Wmica	47.30	0.05	32.96	2.91	0.30	1.15	0.00	0.83	10.94
MA20-040	SQ vein	3636	Wmica	47.22	0.22	35.06	2.31	0.00	0.51	0.00	0.92	10.55
MA20-040	SQ vein	3637	Wmica	47.31	0.23	32.94	2.71	0.10	1.32	0.00	0.84	10.75
MA20-040	SQ vein	3638	Wmica	47.34	0.36	35.24	1.90	0.00	0.88	0.00	0.97	10.52
MA20-040	SQ vein	3639	Wmica	47.26	0.28	34.30	2.18	0.01	0.98	0.00	0.90	10.75

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-040	SQ vein	3640	Wmica	47.20	0.19	35.48	1.87	0.00	0.74	0.00	0.82	10.62
MA20-040	SQ vein	3641	Wmica	47.20	0.03	35.91	1.87	0.00	0.84	0.00	1.23	10.34
MA20-040	SQ vein	3642	Wmica	47.42	0.34	34.21	2.81	0.14	1.10	0.00	1.02	10.42
MA20-040	SQ vein	3643	Wmica	47.42	0.40	33.90	2.72	0.00	1.15	0.00	0.95	10.91
MA20-040	SQ vein	3644	Wmica	48.20	0.21	34.39	2.66	0.05	0.87	0.00	0.73	10.52
MA20-040	SQ vein	3645	Wmica	48.29	0.20	35.27	1.91	0.00	0.94	0.00	1.05	10.60
MA20-040	SQ vein	3646	Wmica	48.08	0.23	34.55	2.68	0.23	1.16	0.00	1.04	10.85
MA20-040	SQ vein	3647	Wmica	48.84	0.36	35.38	2.05	0.14	1.01	0.00	0.89	10.61
MA20-050B	Type 2A	3649	Wmica	45.77	0.12	33.23	2.76	0.08	0.60	0.00	1.26	9.97
MA20-050B	Type 2A	3650	Wmica	46.56	0.05	33.34	2.90	0.00	1.00	0.00	1.19	10.20
MA20-050B	Type 2A	3651	Wmica	46.96	0.16	33.08	2.57	0.06	0.90	0.00	1.40	10.16
MA20-050B	Type 2A	3652	Wmica	46.60	0.16	34.06	2.47	0.27	0.65	0.03	1.62	9.80
MA20-050B	Type 2A	3653	Wmica	46.44	0.24	33.32	3.12	0.03	0.91	0.00	1.43	10.07
MA20-050B	Type 2A	3654	Wmica	46.26	0.11	33.36	3.21	0.06	0.94	0.00	1.25	10.29
MA20-050B	Type 2A	3655	Wmica	46.51	0.10	34.13	2.53	0.00	0.80	0.00	1.61	9.72
MA20-050B	Type 2A	3656	Wmica	46.91	0.21	33.05	3.12	0.00	1.09	0.00	1.28	10.26
MA20-050B	Type 2A	3657	Wmica	46.66	0.04	33.39	3.24	0.00	1.06	0.00	1.43	10.22
MA20-050B	Type 2A	3658	Wmica	46.54	0.04	33.80	3.07	0.09	0.79	0.00	1.25	10.14
MA20-050B	Type 2A	3659	Wmica	46.60	0.19	33.42	3.04	0.08	1.12	0.03	1.39	10.40
MA20-050B	Type 2A	3660	Wmica	47.10	0.07	33.96	3.16	0.00	1.07	0.00	1.43	10.01
MA20-050B	Type 2A	3661	Wmica	46.68	0.12	33.79	3.43	0.27	0.90	0.00	1.36	10.14
MA20-050B	Type 2A	3662	Wmica	47.43	0.13	33.40	3.08	0.00	1.20	0.00	1.25	10.49
MA20-050B	Type 2A	3663	Wmica	47.35	0.04	33.74	3.15	0.08	0.91	0.06	1.51	10.06
MA20-050B	Type 2A	3664	Fspar	63.40	0.00	22.16	0.19	0.15	0.00	3.05	8.75	0.00
MA20-050B	Type 2A	3665	Fspar	63.39	0.01	21.97	0.17	0.00	0.00	3.40	8.97	0.13
MA20-050B	Type 2A	3666	Fspar	62.96	0.01	22.42	0.23	0.00	0.00	3.18	9.18	0.03
MA20-050B	Type 2A	3667	Fspar	65.41	0.00	21.10	0.00	0.26	0.01	1.90	9.33	0.10
MA20-050B	Type 2A	3668	Fspar	63.52	0.00	22.35	0.04	0.06	0.00	3.09	8.97	0.10
MA20-050B	Type 2A	3669	Fspar	62.18	0.00	23.25	0.09	0.00	0.00	4.50	8.25	0.13
MA20-050B	Type 2A	3670	Fspar	63.76	0.02	22.00	0.01	0.00	0.04	3.24	9.29	0.01
MA20-050B	Type 2A	3671	Fspar	63.50	0.00	22.47	0.18	0.00	0.00	3.17	8.86	0.12
MA20-050B	Type 2A	3672	Fspar	63.54	0.00	22.35	0.06	0.00	0.00	3.39	8.88	0.00
MA20-050B	Type 2A	3673	Fspar	66.22	0.00	20.82	0.00	0.04	0.01	1.44	9.95	0.08
MA20-050B	Type 2A	3674	Fspar	65.62	0.05	20.91	0.10	0.00	0.00	1.54	10.09	0.06

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050B	Type 2A	3675	Fspar	65.84	0.00	21.19	0.06	0.00	0.00	1.88	9.73	0.04
MA20-050B	Type 2A	3676	Fspar	64.20	0.00	22.27	0.13	0.00	0.02	3.09	8.92	0.01
MA20-050B	Type 2A	3677	Fspar	63.74	0.00	22.19	0.09	0.06	0.00	3.32	8.94	0.13
MA20-050B	Type 2A	3678	Fspar	64.03	0.02	22.08	0.18	0.16	0.02	2.87	9.06	0.13
MA20-050B	Type 2A	3679	Fspar	64.84	0.08	21.68	0.17	0.00	0.02	2.35	9.67	0.06
MA20-050B	Type 2A	3680	Fspar	64.08	0.00	22.24	0.22	0.10	0.00	2.95	9.22	0.05
MA20-050B	Type 2A	3681	Fspar	64.10	0.00	22.46	0.12	0.07	0.03	3.19	8.81	0.05
MA20-050B	Type 2A	3682	Fspar	64.42	0.03	22.04	0.22	0.06	0.00	2.88	9.15	0.03
MA20-050B	Type 2A	3683	Fspar	64.19	0.00	22.39	0.19	0.02	0.00	2.74	9.20	0.14
MA20-050B	Type 2A	3684	Fspar	65.70	0.04	21.88	0.07	0.06	0.00	2.14	9.29	0.07
MA20-050B	Type 2A	3685	Fspar	63.94	0.08	22.68	0.17	0.14	0.02	3.08	9.14	0.09
MA20-050B	Type 2A	3686	Fspar	65.56	0.00	21.60	0.21	0.00	0.00	2.25	9.65	0.15
MA20-050B	Type 2A	3687	Fspar	64.77	0.00	22.25	0.08	0.00	0.01	2.93	9.12	0.17
MA20-050B	Type 2A	3688	Fspar	67.14	0.07	20.52	0.12	0.18	0.01	0.99	10.41	0.09
MA20-050B	Type 2A	3689	Wmica	45.99	0.21	32.90	2.95	0.00	0.96	0.00	1.32	10.24
MA20-050B	Type 2A	3690	Wmica	46.21	0.13	33.54	2.83	0.12	1.00	0.00	1.35	10.19
MA20-050B	Type 2A	3691	Wmica	48.11	0.19	33.47	2.31	0.00	0.98	0.00	1.34	9.97
MA20-050B	Type 2A	3692	Wmica	46.94	0.26	34.09	3.19	0.26	0.94	0.00	1.06	10.43
MA20-050B	Type 2A	3693	Wmica	46.74	0.10	35.41	2.62	0.00	0.72	0.00	1.42	10.14
MA20-050B	Type 2A	3694	Wmica	47.12	0.27	34.79	2.58	0.00	0.93	0.02	1.38	10.29
MA20-050B	Type 2A	3695	Wmica	46.95	0.13	34.50	3.28	0.26	0.63	0.00	1.10	10.14
MA20-050B	Type 2A	3696	Wmica	46.75	0.20	34.03	3.08	0.08	0.99	0.00	1.13	10.60
MA20-050B	Type 2A	3697	Wmica	47.33	0.03	35.27	2.36	0.07	0.99	0.00	1.47	10.05
MA20-050B	Type 2A	3698	Wmica	48.56	0.17	33.68	2.64	0.00	1.02	0.00	1.32	10.05
MA20-050B	Type 2A	3699	Wmica	46.89	0.32	35.39	2.31	0.02	0.84	0.00	1.44	10.27
MA20-050B	Type 2A	3700	Wmica	46.88	0.22	35.45	2.54	0.00	0.72	0.00	1.47	10.31
MA20-050B	Type 2A	3701	Wmica	47.67	0.29	34.19	2.64	0.05	1.19	0.00	1.38	10.34
MA20-050B	Type 2A	3702	Wmica	47.03	0.19	34.38	3.22	0.06	1.16	0.00	1.40	10.48
MA20-050B	Type 2A	3703	Wmica	47.25	0.12	35.48	2.71	0.08	0.68	0.00	1.61	10.12
MA20-050B	Type 2A	3704	Wmica	47.07	0.05	34.81	2.64	0.09	1.11	0.00	1.47	10.28
MA20-050B	Type 2A	3705	Wmica	48.15	0.17	34.27	2.61	0.00	1.18	0.00	1.38	10.36
MA20-050B	Type 2A	3706	Wmica	48.24	0.17	35.90	2.28	0.00	0.71	0.02	1.93	9.41
MA20-050B	Type 2A	3707	Wmica	48.68	0.24	34.02	3.05	0.00	1.06	0.00	1.39	10.05
MA20-050B	Type 2A	3708	Wmica	48.95	0.03	33.61	2.86	0.23	1.36	0.00	1.41	10.40

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050B	Type 2A	3709	Fspar	65.38	0.02	22.52	0.17	0.00	0.00	3.43	8.96	0.07
MA20-050B	Type 2A	3710	Fspar	66.18	0.07	22.55	0.01	0.00	0.01	3.02	9.31	0.02
MA20-050B	Type 2A	3711	Fspar	62.55	0.02	24.58	0.00	0.00	0.01	5.86	7.99	0.05
MA20-050B	Type 2A	3712	Fspar	63.11	0.00	24.53	0.03	0.06	0.00	5.15	8.31	0.09
MA20-050B	Type 2A	3713	Fspar	68.68	0.00	21.19	0.04	0.00	0.00	1.41	10.07	0.08
MA20-050B	Type 2A	3714	Fspar	68.30	0.07	21.36	0.12	0.13	0.01	1.29	10.29	0.04
MA20-050B	Type 2A	3715	Fspar	63.41	0.07	24.72	0.13	0.00	0.00	5.12	8.21	0.09
MA20-050B	Type 2A	3716	Fspar	66.60	0.00	22.63	0.03	0.00	0.00	2.70	9.51	0.14
MA20-050B	Type 2A	3717	Fspar	71.22	0.02	19.52	0.25	0.12	0.00	1.10	9.73	0.03
MA20-050B	Type 2A	3718	Fspar	68.44	0.02	21.93	0.06	0.00	0.00	1.46	10.17	0.08
MA20-050B	Type 2A	3719	Fspar	68.39	0.03	21.76	0.03	0.00	0.00	1.75	9.95	0.14
MA20-050B	Type 2A	3720	Fspar	68.78	0.00	21.63	0.30	0.00	0.01	1.43	10.11	0.08
MA20-050B	Type 2A	3721	Fspar	63.66	0.00	25.02	0.10	0.11	0.00	5.40	8.31	0.11
MA20-050B	Type 2A	3722	Fspar	63.82	0.04	24.73	0.02	0.00	0.00	5.36	8.35	0.26
MA20-050B	Type 2A	3723	Fspar	74.25	0.00	18.67	0.21	0.00	0.01	1.17	9.13	0.09
MA20-050B	Type 2A	3724	Chl	26.18	0.05	21.17	24.05	0.23	13.41	0.16	0.06	0.04
MA20-050B	Type 2A	3725	Chl	25.60	0.02	20.90	24.92	0.02	13.50	0.06	0.20	0.08
MA20-050B	Type 2A	3726	Chl	25.79	0.09	21.50	23.99	0.19	13.72	0.12	0.38	0.08
MA20-050B	Type 2A	3727	Chl	26.16	0.00	21.17	24.27	0.01	13.83	0.00	0.38	0.00
MA20-050B	Type 2A	3728	Chl	26.24	0.18	21.80	23.96	0.04	13.45	0.11	0.41	0.01
MA20-050B	Type 2A	3729	Chl	25.92	0.00	22.13	24.42	0.35	13.71	0.00	0.08	0.00
MA20-050B	Type 2A	3730	Chl	25.58	0.00	21.92	24.78	0.00	13.82	0.02	0.51	0.03
MA20-050B	Type 2A	3731	Chl	26.75	0.04	21.72	23.31	0.32	14.72	0.06	0.05	0.00
MA20-050B	Type 2A	3732	Chl	26.20	0.00	21.64	24.55	0.21	13.89	0.08	0.30	0.06
MA20-050B	Type 2A	3733	Chl	26.24	0.01	21.88	24.17	0.30	14.01	0.00	0.39	0.00
MA20-050B	Type 2A	3734	Chl	26.12	0.02	22.70	24.71	0.21	13.61	0.05	0.30	0.00
MA20-050B	Type 2A	3735	Chl	26.09	0.12	22.01	24.89	0.46	13.72	0.00	0.43	0.01
MA20-050B	Type 2A	3736	Chl	26.69	0.00	22.45	23.98	0.00	14.53	0.07	0.00	0.00
MA20-050B	Type 2A	3737	Chl	26.88	0.00	23.09	23.78	0.34	14.29	0.00	0.27	0.04
MA20-050B	Type 2A	3738	Chl	26.79	0.05	22.50	23.66	0.38	14.98	0.04	0.31	0.00
MA20-050B	Type 2A	3739	Chl	26.79	0.02	22.18	25.02	0.49	14.45	0.00	0.00	0.02
MA20-050B	Type 2A	3740	Chl	27.00	0.01	22.77	24.32	0.19	14.83	0.02	0.52	0.08
MA20-050B	Type 2A	3741	Chl	27.31	0.02	22.85	23.82	0.10	15.06	0.00	0.55	0.03
MA20-050B	Type 2A	3742	Chl	27.17	0.07	22.86	23.92	0.21	14.89	0.05	0.31	0.00

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050B	Type 2A	3743	Chl	26.74	0.05	22.83	24.68	0.40	15.06	0.04	0.42	0.08
MA20-050B	Type 2A	3744	Chl	23.89	0.01	20.65	24.79	0.45	12.29	0.00	0.00	0.10
MA20-050B	Type 2A	3745	Chl	26.70	0.01	22.52	23.98	0.23	14.16	0.04	0.00	0.07
MA20-050B	Type 2A	3746	Chl	26.90	0.13	22.20	24.56	0.31	13.87	0.00	0.04	0.08
MA20-050B	Type 2A	3747	Chl	26.60	0.11	22.42	24.79	0.03	13.65	0.11	0.00	0.06
MA20-050B	Type 2A	3748	Chl	26.47	0.07	22.48	25.04	0.29	14.48	0.10	0.49	0.08
MA20-050B	Type 2A	3749	Chl	26.58	0.06	22.54	24.95	0.21	14.26	0.05	0.49	0.06
MA20-050B	Type 2A	3750	Chl	25.97	0.15	23.01	24.64	0.10	14.76	0.05	0.34	0.22
MA20-050B	Type 2A	3751	Chl	26.47	0.04	22.71	25.77	0.24	14.02	0.06	0.40	0.11
MA20-050B	Type 2A	3752	Chl	27.12	0.03	23.00	24.45	0.33	14.38	0.04	0.18	0.08
MA20-050B	Type 2A	3753	Chl	26.39	0.04	22.65	25.43	0.46	14.20	0.11	0.33	0.09
MA20-050B	Type 2A	3754	Chl	26.97	0.04	22.88	25.01	0.32	14.29	0.10	0.43	0.02
MA20-050B	Type 2A	3755	Chl	26.57	0.07	23.21	24.86	0.25	13.89	0.18	0.45	0.07
MA20-050B	Type 2A	3756	Chl	26.88	0.05	22.81	24.91	0.20	14.53	0.08	0.48	0.14
MA20-050B	Type 2A	3757	Chl	26.80	0.04	22.84	25.11	0.18	14.45	0.00	0.26	0.08
MA20-050B	Type 2A	3758	Chl	26.78	0.04	22.94	25.30	0.10	14.37	0.11	0.40	0.02
MA20-050B	Type 2A	3759	Chl	26.39	0.04	22.55	26.20	0.13	14.58	0.03	0.42	0.02
MA20-050B	Type 2A	3760	Chl	26.90	0.14	23.43	24.93	0.21	14.39	0.02	0.61	0.09
MA20-050B	Type 2A	3761	Chl	27.26	0.05	23.16	24.47	0.28	15.41	0.14	0.49	0.12
MA20-050B	Type 2A	3771	Chl	23.18	0.01	21.15	24.33	0.18	11.99	0.64	0.07	0.00
MA20-050B	Type 2A	3772	Chl	23.70	0.07	21.54	24.49	0.00	12.51	0.53	0.35	0.00
MA20-050B	Type 2A	3773	Chl	23.96	0.01	21.81	24.66	0.02	13.00	0.48	0.00	0.00
MA20-050B	Type 2A	3774	Chl	24.12	0.00	21.87	25.00	0.10	13.19	0.48	0.26	0.03
MA20-050B	Type 2A	3775	Chl	25.72	0.01	23.07	23.86	0.53	13.96	0.73	0.00	0.03
MA20-050B	Type 2A	3776	Chl	26.43	0.04	23.40	23.98	0.08	14.78	0.69	0.35	0.01
MA20-050B	Type 2A	3805	Chl	23.80	0.12	22.10	24.16	0.25	13.32	0.98	0.52	0.00
MA20-050B	Type 2A	3806	Chl	24.25	0.06	22.27	24.03	0.55	13.40	1.08	0.42	0.00
MA20-050B	Type 2A	3807	Chl	23.76	0.00	22.53	24.54	0.36	13.28	0.91	0.05	0.00
MA20-050B	Type 2A	3808	Chl	24.23	0.18	21.64	25.07	0.14	13.63	0.89	0.00	0.14
MA20-050B	Type 2A	3809	Chl	24.59	0.01	22.75	24.63	0.19	13.58	0.78	0.33	0.05
MA20-050B	Type 2A	3810	Chl	24.25	0.03	23.00	24.39	0.07	13.72	0.89	0.36	0.08
MA20-050B	Type 2A	3811	Chl	24.77	0.06	22.88	24.31	0.30	13.75	0.92	0.34	0.13
MA20-050B	Type 2A	3812	Chl	24.85	0.03	23.06	24.78	0.19	13.81	0.97	0.49	0.00
MA20-050B	Type 2A	3813	Chl	24.79	0.21	22.92	24.63	0.36	13.99	0.95	0.56	0.02

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050B	Type 2A	3814	Wmica	45.65	0.27	32.54	3.27	0.02	1.04	0.00	1.01	10.45
MA20-050B	Type 2A	3815	Wmica	45.91	0.15	32.82	3.17	0.02	1.17	0.08	1.23	10.01
MA20-050B	Type 2A	3816	Wmica	45.12	0.25	33.61	2.87	0.00	0.81	0.00	0.97	10.33
MA20-050B	Type 2A	3817	Wmica	45.01	0.20	33.58	2.91	0.24	0.92	0.00	1.15	10.33
MA20-050B	Type 2A	3818	Wmica	45.04	0.23	33.81	3.14	0.00	0.85	0.00	1.19	10.37
MA20-050B	Type 2A	3819	Wmica	45.17	0.30	34.25	2.81	0.03	0.71	0.00	1.08	10.21
MA20-050B	Type 2A	3820	Wmica	45.61	0.25	34.79	2.37	0.00	0.72	0.00	1.46	9.71
MA20-050B	Type 2A	3821	Wmica	47.12	0.22	32.79	2.65	0.00	1.00	0.00	1.81	9.09
MA20-050B	Type 2A	3822	Wmica	45.42	0.20	34.40	2.91	0.00	0.73	0.00	1.26	10.08
MA20-050B	Type 2A	3823	Wmica	45.76	0.39	33.66	2.73	0.00	0.89	0.00	1.03	10.40
MA20-050B	Type 2A	3824	Wmica	46.40	0.30	32.21	3.39	0.02	1.21	0.00	1.03	10.22
MA20-050B	Type 2A	3825	Wmica	46.05	0.23	33.01	3.12	0.02	1.14	0.00	1.14	10.48
MA20-050B	Type 2A	3826	Wmica	45.17	0.20	34.57	2.63	0.23	0.75	0.00	1.51	10.09
MA20-050B	Type 2A	3827	Wmica	45.39	0.22	33.65	3.42	0.03	0.90	0.00	1.09	10.28
MA20-050B	Type 2A	3828	Wmica	46.41	0.39	32.52	3.12	0.09	1.33	0.00	1.19	10.46
MA20-050B	Type 2A	3829	Wmica	45.30	0.23	35.31	2.15	0.07	0.74	0.00	1.47	9.93
MA20-050B	Type 2A	3830	Wmica	45.01	0.23	34.68	2.96	0.00	0.76	0.00	1.35	10.45
MA20-050B	Type 2A	3831	Wmica	45.36	0.28	33.59	3.32	0.19	1.18	0.00	1.26	10.37
MA20-050B	Type 2A	3832	Wmica	45.42	0.27	34.25	2.76	0.00	0.99	0.00	1.26	10.37
MA20-050B	Type 2A	3833	Wmica	45.99	0.27	33.93	3.01	0.00	1.02	0.00	1.09	10.31
MA20-050B	Type 2A	3834	Wmica	46.45	0.37	33.48	2.85	0.10	1.03	0.00	1.27	10.21
MA20-050B	Type 2A	3835	Wmica	46.04	0.22	35.16	2.06	0.07	0.78	0.00	1.44	9.71
MA20-050B	Type 2A	3836	Wmica	45.25	0.36	34.99	2.71	0.12	0.86	0.00	1.32	10.18
MA20-050B	Type 2A	3838	Wmica	45.67	0.26	35.14	2.82	0.04	0.99	0.00	1.35	10.32
MA20-050B	Type 2A	3839	Wmica	45.85	0.18	34.92	2.59	0.13	0.84	0.00	1.58	10.03
MA20-050B	Type 2A	3840	Fspar	64.15	0.00	21.71	0.01	0.06	0.00	2.32	9.46	0.23
MA20-050B	Type 2A	3841	Fspar	65.79	0.00	21.07	0.20	0.00	0.03	1.19	9.97	0.25
MA20-050B	Type 2A	3842	Fspar	65.13	0.03	21.34	0.04	0.00	0.03	1.66	9.99	0.28
MA20-050B	Type 2A	3843	Fspar	63.56	0.07	22.22	0.90	0.05	0.42	2.01	9.04	0.22
MA20-050B	Type 2A	3844	Fspar	64.04	0.14	21.87	0.26	0.00	0.01	2.27	9.47	0.36
MA20-050B	Type 2A	3845	Fspar	63.95	0.00	22.20	0.12	0.00	0.00	2.70	9.31	0.29
MA20-050B	Type 2A	3846	Fspar	64.50	0.00	22.25	0.00	0.00	0.04	2.68	9.41	0.21
MA20-050B	Type 2A	3847	Fspar	62.33	0.00	23.66	0.39	0.00	0.05	3.43	8.64	0.63
MA20-050B	Type 2A	3848	Fspar	64.26	0.04	22.53	0.10	0.03	0.01	2.51	9.36	0.29

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA20-050B	Type 2A	3849	Fspar	66.51	0.00	21.21	0.00	0.00	0.03	1.32	10.03	0.19
MA20-050B	Type 2A	3850	Fspar	65.91	0.04	21.25	0.15	0.03	0.01	1.38	10.11	0.25
MA20-050B	Type 2A	3851	Fspar	66.10	0.02	21.53	0.03	0.08	0.04	1.68	9.74	0.16
MA20-050B	Type 2A	3852	Fspar	64.81	0.02	22.37	0.19	0.03	0.02	2.16	9.22	0.33
MA20-050B	Type 2A	3853	Fspar	66.79	0.03	20.97	0.17	0.00	0.01	1.00	10.09	0.18
MA20-050B	Type 2A	3854	Fspar	65.45	0.00	22.02	0.25	0.00	0.00	2.39	9.62	0.24
MA20-050B	Type 2A	3855	Fspar	62.53	0.09	23.72	0.04	0.00	0.00	4.48	8.73	0.29
MA20-050B	Type 2A	3856	Fspar	66.10	0.00	21.39	0.45	0.00	0.04	1.72	9.95	0.20
MA20-050B	Type 2A	3857	Fspar	66.06	0.00	21.26	0.10	0.20	0.02	1.57	10.23	0.22
MA20-050B	Type 2A	3858	Fspar	64.81	0.07	22.61	0.29	0.00	0.01	1.94	9.37	0.61
MA20-050B	Type 2A	3859	Fspar	66.48	0.06	21.41	0.18	0.06	0.01	1.49	10.14	0.18
MA20-050B	Type 2A	3860	Fspar	66.59	0.00	21.60	0.12	0.00	0.02	1.65	10.03	0.25
MA20-050B	Type 2A	3861	Fspar	66.48	0.00	21.92	0.17	0.01	0.03	1.99	10.05	0.33
MA21-063	SQvein	3862	Chl	26.86	0.00	20.58	25.74	0.32	9.94	0.07	0.40	0.13
MA21-063	SQvein	3863	Chl	26.54	0.00	21.44	28.47	0.00	8.68	0.12	0.27	0.24
MA21-063	SQvein	3864	Chl	26.94	0.02	21.50	29.50	0.00	8.41	0.08	0.34	0.29
MA21-063	SQvein	3865	Chl	26.67	0.00	21.72	31.39	0.00	6.74	0.18	0.29	0.46
MA21-063	SQvein	3866	Chl	26.94	0.00	21.71	31.84	0.00	6.68	0.00	0.39	0.53
MA21-063	SQvein	3867	Fspar	50.65	0.00	25.06	1.92	0.00	1.74	0.39	4.59	5.74
MA21-063	SQvein	3868	Wmica	42.76	0.17	32.87	1.73	0.00	0.97	0.00	0.91	10.91
MA21-063	SQvein	3869	Wmica	43.05	0.14	32.56	1.69	0.00	1.25	0.00	0.94	10.78
MA21-063	SQvein	3870	Wmica	43.96	0.00	34.37	1.69	0.00	0.97	0.00	1.01	10.67
MA21-063	SQvein	3871	Wmica	44.22	0.19	34.50	1.96	0.00	0.77	0.00	0.88	10.57
MA21-063	SQvein	3872	Wmica	43.69	0.18	33.64	2.81	0.00	1.24	0.00	0.87	10.73
MA21-063	SQvein	3873	Wmica	44.27	0.22	34.66	1.41	0.00	0.80	0.00	0.99	10.82
MA21-063	SQvein	3874	Wmica	44.40	0.17	34.65	1.47	0.00	0.89	0.00	1.13	10.69
MA21-063	SQvein	3875	Wmica	43.77	0.16	33.96	2.44	0.00	0.91	0.00	0.83	11.13
MA21-063	SQvein	3876	Wmica	43.74	0.15	34.70	2.07	0.00	0.73	0.00	0.92	10.96
MA21-063	SQvein	3877	Wmica	44.08	0.00	33.77	2.41	0.00	0.95	0.00	0.81	11.12
MA21-063	SQvein	3878	Wmica	44.15	0.17	35.23	1.28	0.03	0.85	0.00	1.16	10.72
MA21-063	SQvein	3879	Wmica	43.87	0.08	34.81	1.95	0.00	0.83	0.00	0.95	11.20
MA21-063	SQvein	3880	Wmica	44.68	0.14	35.15	1.53	0.00	0.78	0.00	0.85	10.88
MA21-063	SQvein	3881	Wmica	44.19	0.24	35.02	1.87	0.00	0.80	0.00	1.19	10.96
MA21-063	SQvein	3882	Wmica	44.82	0.00	34.31	1.55	0.00	1.05	0.00	1.01	10.98

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQ vein	3883	Wmica	45.43	0.21	33.96	2.20	0.00	1.05	0.00	1.10	10.78
MA21-063	SQ vein	3884	Wmica	45.51	0.24	34.15	1.61	0.00	1.21	0.00	0.69	10.98
MA21-063	SQ vein	3885	Wmica	43.86	0.19	34.64	2.43	0.00	0.95	0.00	1.09	11.11
MA21-063	SQ vein	3886	Wmica	44.80	0.00	34.71	1.66	0.00	1.04	0.00	0.99	11.10
MA21-063	SQ vein	3887	Wmica	44.01	0.08	34.70	2.44	0.14	0.81	0.00	0.88	11.34
MA21-063	SQ vein	3888	Wmica	44.61	0.09	35.75	1.37	0.00	0.86	0.04	1.16	11.09
MA21-063	SQ vein	3889	Wmica	44.63	0.20	34.79	2.03	0.00	1.19	0.00	1.16	11.15
MA21-063	SQ vein	3890	Fspar	64.28	0.02	19.53	0.30	0.14	0.06	0.15	10.26	0.65
MA21-063	SQ vein	3891	Fspar	66.15	0.02	18.96	0.11	0.08	0.03	0.13	10.49	0.14
MA21-063	SQ vein	3892	Fspar	53.22	0.09	29.40	1.09	0.17	0.64	0.26	4.58	6.41
MA21-063	SQ vein	3893	Wmica	45.01	0.08	34.86	2.37	0.00	1.09	0.00	0.91	11.38
MA21-063	SQ vein	3894	Fspar	66.23	0.00	19.18	0.06	0.00	0.03	0.19	10.93	0.14
MA21-063	SQ vein	3895	Fspar	65.11	0.00	19.53	0.23	0.00	0.03	0.15	9.99	1.63
MA21-063	SQ vein	3896	Fspar	65.35	0.03	20.31	0.21	0.00	0.00	0.98	10.58	0.16
MA21-063	SQ vein	3897	Fspar	66.06	0.02	19.86	0.10	0.17	0.01	0.17	11.08	0.12
MA21-063	SQ vein	3898	Fspar	66.10	0.05	20.27	0.24	0.00	0.01	0.48	10.74	0.15
MA21-063	SQ vein	3899	Fspar	64.78	0.02	21.17	0.26	0.00	0.02	1.57	10.04	0.28
MA21-063	SQ vein	3900	Wmica	44.49	0.33	33.64	2.50	0.00	1.08	0.00	0.87	11.20
MA21-063	SQ vein	3911	Wmica	45.15	0.17	32.97	2.20	0.00	1.41	0.00	0.93	11.11
MA21-063	SQ vein	3912	Wmica	47.51	0.13	31.39	1.80	0.01	0.88	0.00	1.52	11.23
MA21-063	SQ vein	3913	Fspar	55.30	0.09	26.39	0.97	0.00	0.66	0.73	5.83	5.11
MA21-063	SQ vein	3914	Wmica	45.46	0.29	33.07	2.60	0.20	1.47	0.00	0.99	10.93
MA21-063	SQ vein	3915	Wmica	45.10	0.20	33.69	2.23	0.00	1.37	0.00	1.01	11.34
MA21-063	SQ vein	3916	Wmica	46.94	0.32	32.49	2.22	0.00	0.96	0.00	1.05	11.50
MA21-063	SQ vein	3917	Wmica	47.37	0.14	33.07	1.41	0.05	0.75	0.33	1.85	9.84
MA21-063	SQ vein	3918	Wmica	45.07	0.18	34.38	1.83	0.01	1.32	0.00	1.09	11.29
MA21-063	SQ vein	3919	Wmica	45.92	0.17	33.48	2.30	0.00	1.44	0.00	0.99	11.03
MA21-063	SQ vein	3920	Fspar	59.67	0.00	22.72	0.98	0.14	0.52	3.53	8.70	0.46
MA21-063	SQ vein	3921	Fspar	56.80	0.04	26.32	1.18	0.00	0.48	0.38	6.48	5.05
MA21-063	SQ vein	3922	Fspar	60.68	0.01	22.95	0.00	0.00	0.04	4.42	8.71	0.22
MA21-063	SQ vein	3923	Fspar	60.60	0.00	23.20	0.11	0.00	0.04	4.48	8.43	0.27
MA21-063	SQ vein	3927	Fspar	62.52	0.02	22.09	0.12	0.00	0.01	2.82	9.40	0.29
MA21-063	SQ vein	3928	Fspar	65.16	0.00	19.84	0.20	0.24	0.04	0.42	10.66	0.48
MA21-063	SQ vein	3929	Fspar	60.93	0.05	22.79	0.23	0.02	0.02	4.18	8.67	0.45

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQvein	3930	Fspar	61.06	0.00	23.22	0.16	0.00	0.11	4.16	8.60	0.22
MA21-063	SQvein	3931	Fspar	60.36	0.00	19.06	0.28	0.00	0.00	0.00	0.41	17.65
MA21-063	SQvein	3932	Fspar	61.22	0.00	22.97	0.15	0.00	0.00	4.31	8.75	0.26
MA21-063	SQvein	3933	Fspar	61.81	0.11	20.96	2.78	0.00	0.93	0.62	9.87	0.45
MA21-063	SQvein	3934	Fspar	63.18	0.02	22.06	0.17	0.00	0.00	3.13	9.24	0.23
MA21-063	SQvein	3935	Fspar	62.09	0.12	22.72	0.23	0.00	0.00	3.63	9.15	0.24
MA21-063	SQvein	3936	Fspar	59.28	0.01	25.09	0.00	0.15	0.14	5.18	7.92	0.66
MA21-063	SQvein	3937	Fspar	59.91	0.00	24.21	0.20	0.00	0.00	5.65	8.06	0.30
MA21-063	SQvein	3939	Fspar	62.33	0.00	22.65	0.16	0.00	0.00	3.51	9.42	0.18
MA21-063	SQvein	3940	Fspar	62.41	0.00	22.62	0.12	0.00	0.01	3.53	9.39	0.25
MA21-063	SQvein	3941	Chl	26.41	0.00	21.78	28.70	0.00	8.65	0.18	0.00	0.14
MA21-063	SQvein	3942	Chl	27.76	0.00	23.09	25.06	0.00	9.35	0.11	0.45	0.84
MA21-063	SQvein	3943	Wmica	43.14	0.23	32.80	2.27	0.00	1.18	0.06	0.88	10.44
MA21-063	SQvein	3944	Wmica	42.65	0.19	32.20	3.95	0.00	1.47	0.00	0.88	9.38
MA21-063	SQvein	3945	Wmica	41.83	0.00	32.43	4.40	0.00	1.87	0.00	1.04	9.58
MA21-063	SQvein	3946	Wmica	43.28	0.18	32.91	3.12	0.00	1.66	0.00	0.79	9.97
MA21-063	SQvein	3947	Wmica	43.73	0.22	33.04	2.34	0.00	1.24	0.00	0.97	10.62
MA21-063	SQvein	3948	Wmica	43.76	0.16	34.02	2.47	0.00	1.08	0.00	0.86	10.51
MA21-063	SQvein	3949	Wmica	43.62	0.05	34.21	2.55	0.00	1.10	0.07	1.07	10.09
MA21-063	SQvein	3950	Wmica	43.81	0.13	34.32	2.42	0.00	0.81	0.03	0.96	10.85
MA21-063	SQvein	3952	Wmica	44.20	0.00	34.03	1.83	0.00	1.07	0.00	0.98	10.91
MA21-063	SQvein	3953	Wmica	43.01	0.24	32.86	4.32	0.00	1.76	0.00	0.96	10.08
MA21-063	SQvein	3954	Wmica	43.36	0.14	34.57	2.26	0.00	1.08	0.00	1.08	10.58
MA21-063	SQvein	3955	Wmica	44.47	0.12	34.28	2.18	0.00	0.98	0.00	1.04	10.48
MA21-063	SQvein	3956	Wmica	43.91	0.11	34.43	2.19	0.18	1.00	0.00	1.21	10.82
MA21-063	SQvein	3957	Wmica	44.89	0.18	34.05	2.53	0.00	1.40	0.00	0.93	10.79
MA21-063	SQvein	3958	Wmica	45.32	0.09	35.34	1.42	0.00	0.93	0.00	1.16	11.01
MA21-063	SQvein	3959	Fspar	65.03	0.00	20.69	0.15	0.00	0.00	1.29	10.34	0.15
MA21-063	SQvein	3960	Fspar	60.50	0.03	23.45	0.18	0.00	0.00	4.99	8.55	0.32
MA21-063	SQvein	3961	Fspar	66.25	0.11	19.84	0.28	0.00	0.00	0.08	11.09	0.13
MA21-063	SQvein	3962	Fspar	62.43	0.00	18.86	0.09	0.00	0.00	0.00	0.47	17.37
MA21-063	SQvein	3963	Fspar	62.53	0.00	18.73	0.32	0.00	0.05	0.00	0.19	18.41
MA21-063	SQvein	3964	Chl	23.44	0.12	21.77	24.70	0.00	12.28	0.00	0.00	0.08
MA21-063	SQvein	3965	Chl	24.22	0.08	21.58	25.16	0.00	12.38	0.00	0.03	0.15

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQvein	3966	Chl	23.78	0.00	22.12	25.15	0.00	12.42	0.09	0.00	0.23
MA21-063	SQvein	3967	Chl	26.45	0.02	23.43	21.53	0.00	12.11	0.13	0.42	0.26
MA21-063	SQvein	3968	Chl	25.31	0.00	21.37	29.38	0.00	7.52	0.13	0.34	0.26
MA21-063	SQvein	3969	Chl	29.95	0.17	22.04	22.01	0.00	10.05	0.31	0.86	0.73
MA21-063	SQvein	3970	Chl	33.52	0.57	20.91	21.28	0.00	7.34	0.10	2.36	0.18
MA21-063	SQvein	3971	Wmica	43.03	0.23	33.54	2.45	0.00	0.73	0.00	0.90	10.81
MA21-063	SQvein	3972	Wmica	43.12	0.12	34.83	1.36	0.00	0.87	0.00	1.11	10.39
MA21-063	SQvein	3973	Wmica	44.04	0.10	33.12	1.93	0.00	1.22	0.00	0.96	10.32
MA21-063	SQvein	3974	Wmica	43.37	0.00	33.15	2.60	0.00	1.03	0.00	0.75	11.03
MA21-063	SQvein	3975	Wmica	43.54	0.02	33.74	2.25	0.00	1.01	0.00	0.84	10.57
MA21-063	SQvein	3976	Wmica	43.18	0.07	34.70	1.53	0.00	0.87	0.00	0.89	10.67
MA21-063	SQvein	3977	Wmica	43.31	0.19	33.99	2.43	0.00	0.75	0.00	0.90	10.50
MA21-063	SQvein	3978	Wmica	42.91	0.12	33.27	2.82	0.00	1.05	0.00	0.89	10.90
MA21-063	SQvein	3979	Wmica	45.03	0.09	31.50	2.51	0.00	2.44	0.00	0.94	9.77
MA21-063	SQvein	3980	Wmica	44.16	0.09	33.19	2.41	0.00	1.07	0.00	1.00	10.18
MA21-063	SQvein	3981	Wmica	43.92	0.12	34.51	1.42	0.00	0.80	0.00	0.88	10.59
MA21-063	SQvein	3982	Wmica	44.14	0.09	33.75	1.96	0.00	0.97	0.00	0.87	10.87
MA21-063	SQvein	3983	Wmica	43.58	0.20	33.05	2.79	0.00	1.15	0.00	0.75	11.28
MA21-063	SQvein	3984	Wmica	44.01	0.31	34.30	1.73	0.00	1.01	0.00	1.10	10.57
MA21-063	SQvein	3985	Wmica	43.84	0.00	33.62	2.77	0.04	1.12	0.00	0.87	10.95
MA21-063	SQvein	3986	Wmica	44.57	0.18	34.65	1.25	0.00	0.91	0.00	1.20	10.38
MA21-063	SQvein	3987	Wmica	44.49	0.08	33.73	2.12	0.00	1.30	0.00	0.91	10.39
MA21-063	SQvein	3988	Wmica	44.75	0.31	34.18	1.68	0.00	1.09	0.00	0.86	10.84
MA21-063	SQvein	3989	Wmica	44.14	0.12	33.73	2.68	0.39	0.97	0.00	0.92	10.53
MA21-063	SQvein	3990	Wmica	44.38	0.22	33.21	2.86	0.00	1.24	0.00	0.79	10.82
MA21-063	SQvein	3991	Wmica	43.92	0.07	34.25	2.34	0.00	1.21	0.00	1.02	10.79
MA21-063	SQvein	3992	Wmica	44.04	0.16	34.33	2.23	0.00	0.99	0.00	1.03	10.80
MA21-063	SQvein	3993	Wmica	44.30	0.09	35.09	1.82	0.14	0.89	0.00	1.14	10.73
MA21-063	SQvein	3994	Chl	24.48	0.03	22.57	23.72	0.00	12.36	0.02	0.04	0.17
MA21-063	SQvein	3996	Chl	27.16	0.07	24.28	16.74	0.00	14.91	0.11	0.07	0.47
MA21-063	SQvein	3997	Chl	24.33	0.11	21.86	25.64	0.00	12.23	0.00	0.03	0.16
MA21-063	SQvein	3998	Chl	24.10	0.00	22.04	26.03	0.00	12.03	0.13	0.32	0.05
MA21-063	SQvein	3999	Chl	24.87	0.20	22.79	23.84	0.00	12.87	0.00	0.35	0.06
MA21-063	SQvein	4000	Chl	28.44	0.00	24.97	16.78	0.00	13.83	0.04	0.18	1.20

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQvein	4001	Chl	24.16	0.00	22.72	25.42	0.00	12.64	0.02	0.43	0.10
MA21-063	SQvein	4002	Chl	24.92	0.02	22.38	25.31	0.00	13.02	0.00	0.35	0.10
MA21-063	SQvein	4003	Wmica	41.45	0.07	30.41	4.78	0.00	3.11	0.00	0.82	9.21
MA21-063	SQvein	4004	Wmica	41.81	0.10	30.86	5.07	0.00	3.58	0.00	0.86	8.25
MA21-063	SQvein	4005	Wmica	43.90	0.08	31.22	3.43	0.00	2.67	0.00	0.85	9.67
MA21-063	SQvein	4006	Wmica	43.02	0.16	32.19	4.04	0.02	1.93	0.00	0.97	9.83
MA21-063	SQvein	4007	Wmica	42.81	0.15	32.38	4.09	0.00	2.06	0.00	0.92	9.98
MA21-063	SQvein	4008	Wmica	43.45	0.24	32.30	3.32	0.00	1.74	0.02	0.93	10.61
MA21-063	SQvein	4009	Wmica	43.87	0.15	33.52	2.61	0.05	1.04	0.00	0.88	10.79
MA21-063	SQvein	4010	Wmica	43.71	0.13	32.66	2.88	0.00	1.67	0.00	0.95	10.22
MA21-063	SQvein	4011	Wmica	43.69	0.10	34.41	2.07	0.10	1.17	0.00	1.05	10.21
MA21-063	SQvein	4012	Wmica	43.96	0.18	34.15	2.26	0.00	1.10	0.00	1.04	10.73
MA21-063	SQvein	4013	Wmica	43.63	0.19	33.72	2.85	0.00	1.68	0.00	1.03	10.25
MA21-063	SQvein	4014	Fspar	65.40	0.04	19.54	0.08	0.03	0.01	0.12	10.82	0.34
MA21-063	SQvein	4015	Fspar	64.65	0.02	20.09	0.66	0.00	0.46	0.09	10.24	0.41
MA21-063	SQvein	4016	Fspar	65.50	0.19	19.69	0.27	0.06	0.00	0.14	10.91	0.28
MA21-063	SQvein	4017	Fspar	65.55	0.04	19.63	0.16	0.00	0.04	0.20	10.69	0.48
MA21-063	SQvein	4018	Fspar	62.75	0.00	18.58	0.16	0.00	0.01	0.00	2.96	13.14
MA21-063	SQvein	4019	Fspar	61.52	0.00	18.23	0.38	0.14	0.03	0.00	0.36	17.97
MA21-063	SQvein	4020	Fspar	62.01	0.07	18.33	0.28	0.00	0.02	0.00	0.11	17.90
MA21-063	SQvein	4021	Fspar	61.20	0.00	18.76	0.31	0.00	0.44	0.00	0.29	17.44
MA21-063	SQvein	4022	Fspar	61.69	0.00	18.55	0.12	0.02	0.00	0.00	0.21	18.23
MA21-063	SQvein	4023	Fspar	62.07	0.02	18.30	0.30	0.14	0.01	0.00	0.32	17.99
MA21-063	SQvein	4024	Fspar	62.11	0.02	18.67	0.41	0.00	0.01	0.00	0.30	17.73
MA21-063	SQvein	4025	Fspar	61.93	0.02	18.57	0.19	0.25	0.02	0.00	0.13	18.22
MA21-063	SQvein	4026	Fspar	62.51	0.00	18.22	0.29	0.19	0.02	0.00	0.82	17.42
MA21-063	SQvein	4027	Chl	26.82	0.17	22.32	20.09	0.00	12.94	0.14	0.00	0.16
MA21-063	SQvein	4028	Chl	27.35	0.10	24.91	16.64	0.00	15.71	0.09	0.08	0.32
MA21-063	SQvein	4029	Chl	28.17	0.04	24.60	16.85	0.00	14.73	0.07	0.47	0.66
MA21-063	SQvein	4030	Chl	27.36	0.12	23.33	20.22	0.00	13.59	0.20	0.67	0.19
MA21-063	SQvein	4031	Chl	28.28	0.05	26.15	15.49	0.00	14.53	0.07	0.59	0.87
MA21-063	SQvein	4032	Chl	27.87	0.03	24.82	16.60	0.00	15.69	0.21	0.52	0.35
MA21-063	SQvein	4033	Chl	28.37	0.07	23.65	18.37	0.00	14.71	0.11	0.85	0.19
MA21-063	SQvein	4034	Chl	25.18	0.12	23.37	23.53	0.00	13.84	0.04	0.54	0.13

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQ vein	4035	Chl	27.82	0.00	25.11	18.39	0.00	14.31	0.02	0.48	0.62
MA21-063	SQ vein	4036	Chl	29.04	0.17	25.82	17.00	0.00	13.91	0.07	0.49	0.85
MA21-063	SQ vein	4037	Wmica	41.17	0.14	31.55	4.94	0.03	4.53	0.00	0.84	8.00
MA21-063	SQ vein	4038	Wmica	42.99	0.04	33.57	3.21	0.00	2.29	0.00	1.17	9.60
MA21-063	Type 2B vein	4039	Chl	26.96	0.00	20.33	24.39	0.00	11.49	0.14	0.36	0.02
MA21-063	Type 2B vein	4041	Chl	23.71	0.07	21.84	25.73	0.00	12.48	0.00	0.00	0.00
MA21-063	Type 2B vein	4042	Chl	23.64	0.19	21.45	25.52	0.00	12.62	0.18	0.34	0.11
MA21-063	Type 2B vein	4043	Chl	24.32	0.01	21.92	25.22	0.00	12.71	0.13	0.05	0.00
MA21-063	Type 2B vein	4044	Chl	23.87	0.04	22.11	25.73	0.00	12.51	0.11	0.06	0.06
MA21-063	Type 2B vein	4045	Chl	24.07	0.00	21.63	25.41	0.00	13.07	0.14	0.00	0.00
MA21-063	Type 2B vein	4046	Chl	25.31	0.00	22.03	24.75	0.00	12.37	0.04	0.01	0.02
MA21-063	Type 2B vein	4047	Chl	25.03	0.04	22.14	25.76	0.00	12.06	0.00	0.00	0.02
MA21-063	Type 2B vein	4048	Chl	24.19	0.12	21.73	25.71	0.00	12.80	0.02	0.03	0.01
MA21-063	Type 2B vein	4049	Chl	24.01	0.10	22.17	25.98	0.00	12.66	0.04	0.00	0.01
MA21-063	Type 2B vein	4050	Chl	24.22	0.02	22.04	25.54	0.00	13.03	0.03	0.03	0.00
MA21-063	Type 2B vein	4051	Chl	23.99	0.06	22.50	26.29	0.00	12.41	0.06	0.00	0.10
MA21-063	Type 2B vein	4052	Chl	24.29	0.00	22.12	25.39	0.00	12.81	0.13	0.49	0.07
MA21-063	Type 2B vein	4053	Chl	24.27	0.02	22.25	25.46	0.00	12.77	0.14	0.39	0.00
MA21-063	Type 2B vein	4054	Chl	27.63	0.00	22.41	24.20	0.00	10.73	0.13	0.51	0.08
MA21-063	Type 2B vein	4055	Chl	25.23	0.01	22.41	24.36	0.00	13.20	0.07	0.36	0.02
MA21-063	Type 2B vein	4056	Chl	24.60	0.03	22.91	25.71	0.00	12.83	0.02	0.00	0.05
MA21-063	Type 2B vein	4057	Chl	24.54	0.00	22.28	26.13	0.00	12.87	0.00	0.03	0.02
MA21-063	Type 2B vein	4058	Chl	24.03	0.06	22.31	26.93	0.00	12.49	0.07	0.02	0.00
MA21-063	Type 2B vein	4059	Chl	24.26	0.04	22.76	25.85	0.00	12.81	0.09	0.06	0.03
MA21-063	Type 2B vein	4060	Chl	24.24	0.03	22.89	25.93	0.00	13.02	0.08	0.33	0.05
MA21-063	Type 2B vein	4061	Chl	24.16	0.04	22.40	25.97	0.00	13.10	0.05	0.42	0.00
MA21-063	Type 2B vein	4062	Chl	24.20	0.02	23.49	26.09	0.00	12.98	0.00	0.26	0.04
MA21-063	Type 2B vein	4063	Chl	24.01	0.01	23.03	26.21	0.00	12.96	0.04	0.28	0.00
MA21-063	Type 2B vein	4064	Chl	24.35	0.00	22.10	26.28	0.00	13.14	0.16	0.35	0.01
MA21-063	Type 2B vein	4065	Chl	24.16	0.02	22.44	26.33	0.00	13.04	0.08	0.49	0.00
MA21-063	Type 2B vein	4066	Chl	25.45	0.00	22.95	24.53	0.00	12.92	0.22	0.37	0.10
MA21-063	Type 2B vein	4067	Chl	25.62	0.02	23.44	24.28	0.00	13.50	0.22	0.57	0.03
MA21-063	Type 2B vein	4068	Chl	24.02	0.00	23.45	26.62	0.00	12.94	0.00	0.18	0.03
MA21-063	SQ vein	4069	Wmica	42.66	0.15	33.67	2.38	0.00	0.69	0.00	0.77	11.00

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQvein	4070	Wmica	43.04	0.24	33.44	2.27	0.00	0.90	0.00	0.85	10.86
MA21-063	SQvein	4071	Wmica	43.50	0.22	32.55	2.75	0.04	1.14	0.00	0.90	10.88
MA21-063	SQvein	4072	Wmica	43.24	0.25	33.73	2.30	0.13	0.77	0.00	0.77	11.05
MA21-063	SQvein	4073	Wmica	43.47	0.12	33.29	2.75	0.03	1.14	0.00	1.03	10.88
MA21-063	SQvein	4074	Wmica	43.36	0.12	33.97	2.61	0.00	0.84	0.00	0.91	11.05
MA21-063	SQvein	4075	Wmica	43.59	0.23	34.49	2.27	0.00	0.78	0.00	0.85	10.84
MA21-063	SQvein	4076	Wmica	43.79	0.25	33.70	2.74	0.00	0.97	0.00	0.78	11.09
MA21-063	SQvein	4077	Wmica	43.49	0.11	34.11	2.53	0.41	0.84	0.00	0.98	11.02
MA21-063	SQvein	4078	Wmica	43.43	0.22	34.82	2.26	0.00	0.81	0.00	1.02	11.00
MA21-063	SQvein	4080	Wmica	44.29	0.16	32.92	2.64	0.03	1.25	0.00	0.87	11.08
MA21-063	SQvein	4081	Wmica	43.79	0.23	34.34	2.29	0.00	0.85	0.00	1.01	10.95
MA21-063	SQvein	4082	Wmica	43.86	0.20	35.18	1.92	0.04	0.79	0.00	0.99	10.80
MA21-063	SQvein	4083	Wmica	44.10	0.32	32.33	2.86	0.07	1.14	0.00	0.72	11.13
MA21-063	SQvein	4084	Wmica	43.50	0.31	34.65	2.30	0.00	0.89	0.00	1.07	10.86
MA21-063	SQvein	4085	Wmica	43.82	0.19	34.18	2.25	0.00	1.00	0.00	1.02	10.98
MA21-063	SQvein	4086	Wmica	43.45	0.11	35.55	1.65	0.02	0.65	0.00	1.07	10.90
MA21-063	SQvein	4087	Wmica	44.11	0.09	34.35	2.02	0.10	0.91	0.00	1.13	10.71
MA21-063	SQvein	4088	Wmica	43.81	0.18	34.50	2.18	0.06	0.89	0.00	0.99	11.07
MA21-063	SQvein	4089	Wmica	43.86	0.18	34.53	2.38	0.00	0.85	0.00	1.00	11.08
MA21-063	SQvein	4090	Wmica	43.78	0.18	34.13	2.63	0.08	1.00	0.00	0.97	11.14
MA21-063	SQvein	4091	Wmica	44.55	0.19	33.46	2.48	0.15	0.93	0.00	0.81	11.15
MA21-063	SQvein	4092	Wmica	43.66	0.15	34.14	2.78	0.14	0.96	0.00	0.95	11.13
MA21-063	SQvein	4093	Wmica	44.54	0.18	33.67	2.58	0.00	1.08	0.00	0.83	11.23
MA21-063	SQvein	4094	Wmica	44.23	0.04	33.91	2.54	0.00	1.21	0.00	1.01	11.50
MA21-063	SQvein	4096	Wmica	44.82	0.12	33.81	2.68	0.00	1.20	0.00	0.78	11.06
MA21-063	SQvein	4097	Wmica	44.00	0.14	35.06	2.40	0.12	1.03	0.00	1.01	11.01
MA21-063	SQvein	4098	Wmica	44.45	0.10	34.80	2.20	0.06	0.88	0.00	0.96	10.95
MA21-063	SQvein	4101	Wmica	44.72	0.21	35.22	1.72	0.00	0.93	0.00	1.01	10.86
MA21-063	SQvein	4103	Fspar	65.05	0.02	19.74	0.05	0.04	0.01	0.49	10.59	0.02
MA21-063	SQvein	4104	Wmica	45.30	0.21	33.73	2.75	0.11	1.35	0.00	1.07	11.20
MA21-063	SQvein	4105	Wmica	42.86	0.10	33.34	2.60	0.00	0.89	0.00	0.80	10.80
MA21-063	SQvein	4106	Wmica	43.02	0.00	34.12	2.29	0.00	0.81	0.00	0.90	11.10
MA21-063	SQvein	4107	Wmica	44.17	0.25	32.99	2.52	0.00	1.14	0.00	0.84	11.03
MA21-063	SQvein	4108	Wmica	43.77	0.10	33.20	2.53	0.15	1.20	0.00	0.92	10.95

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQ vein	4109	Wmica	43.66	0.10	33.90	2.38	0.00	0.96	0.00	0.94	11.13
MA21-063	SQ vein	4110	Wmica	44.00	0.20	34.25	2.20	0.00	1.01	0.00	0.95	10.71
MA21-063	SQ vein	4111	Wmica	43.29	0.11	34.90	2.11	0.00	0.85	0.00	1.09	11.02
MA21-063	SQ vein	4112	Wmica	43.87	0.11	35.05	1.78	0.00	0.92	0.00	0.90	10.76
MA21-063	SQ vein	4113	Wmica	44.27	0.15	33.62	2.46	0.00	1.09	0.00	0.88	10.73
MA21-063	SQ vein	4114	Wmica	43.68	0.17	33.78	2.09	0.04	1.04	0.00	1.22	11.00
MA21-063	SQ vein	4115	Wmica	44.23	0.23	32.98	2.41	0.00	1.33	0.00	0.95	11.21
MA21-063	SQ vein	4116	Wmica	43.87	0.37	34.31	1.85	0.03	1.07	0.00	1.20	10.98
MA21-063	SQ vein	4117	Wmica	44.11	0.22	33.26	2.35	0.00	1.24	0.00	0.82	11.27
MA21-063	SQ vein	4118	Wmica	44.46	0.17	33.57	2.26	0.00	1.17	0.00	0.77	11.45
MA21-063	SQ vein	4119	Wmica	44.15	0.06	33.59	2.61	0.00	1.05	0.00	0.95	10.78
MA21-063	SQ vein	4120	Wmica	44.33	0.11	32.88	2.89	0.00	1.34	0.00	0.91	10.93
MA21-063	SQ vein	4121	Wmica	43.71	0.06	34.43	2.43	0.00	0.99	0.00	1.05	10.74
MA21-063	SQ vein	4122	Wmica	44.42	0.02	34.47	2.17	0.00	1.02	0.00	1.03	10.98
MA21-063	SQ vein	4123	Wmica	46.92	0.23	32.71	1.91	0.00	1.22	0.06	1.45	9.84
MA21-063	SQ vein	4124	Wmica	44.71	0.17	33.32	2.40	0.00	1.29	0.00	1.03	11.20
MA21-063	SQ vein	4125	Wmica	45.11	0.27	33.77	2.12	0.00	1.16	0.00	0.90	11.00
MA21-063	SQ vein	4126	Wmica	44.74	0.29	33.63	2.33	0.00	1.38	0.00	1.09	11.15
MA21-063	SQ vein	4127	Wmica	45.89	0.22	34.09	1.76	0.00	1.21	0.00	1.06	10.94
MA21-063	SQ vein	4128	Wmica	44.66	0.07	35.07	2.54	0.00	0.88	0.00	1.01	10.98
MA21-063	SQ vein	4129	Wmica	44.60	0.23	35.55	1.95	0.00	0.86	0.00	1.15	10.83
MA21-063	SQ vein	4130	Wmica	45.08	0.16	34.45	2.45	0.00	1.14	0.00	0.85	10.92
MA21-063	SQ vein	4131	Wmica	44.97	0.13	35.00	2.03	0.00	1.16	0.00	1.05	10.89
MA21-063	SQ vein	4132	Fspar	61.49	0.08	22.23	0.13	0.00	0.00	3.10	9.06	0.58
MA21-063	SQ vein	4133	Fspar	58.84	0.00	23.37	0.00	0.07	0.00	5.32	7.95	0.23
MA21-063	SQ vein	4134	Fspar	57.38	0.00	24.66	0.00	0.00	0.01	6.52	7.31	0.26
MA21-063	SQ vein	4135	Fspar	59.22	0.01	23.64	0.09	0.00	0.00	5.39	8.00	0.32
MA21-063	SQ vein	4136	Fspar	62.07	0.00	22.22	0.05	0.03	0.00	2.35	9.26	0.80
MA21-063	SQ vein	4137	Fspar	58.44	0.00	24.21	0.15	0.00	0.05	6.05	7.78	0.20
MA21-063	SQ vein	4138	Fspar	59.61	0.00	23.67	0.00	0.00	0.01	5.18	8.37	0.38
MA21-063	SQ vein	4139	Fspar	59.07	0.00	24.05	0.07	0.17	0.00	5.63	7.91	0.29
MA21-063	SQ vein	4140	Fspar	59.89	0.00	24.08	0.11	0.05	0.00	4.41	8.28	0.60
MA21-063	SQ vein	4141	Fspar	58.83	0.00	24.40	0.13	0.00	0.00	5.92	7.96	0.24
MA21-063	SQ vein	4142	Fspar	62.26	0.12	22.13	0.10	0.14	0.00	2.91	9.48	0.46

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQvein	4143	Fspar	65.50	0.00	20.38	0.02	0.07	0.00	0.35	10.98	0.35
MA21-063	SQvein	4144	Fspar	63.73	0.00	21.31	0.00	0.00	0.03	2.00	10.24	0.28
MA21-063	SQvein	4145	Fspar	59.25	0.00	24.29	0.11	0.00	0.01	5.95	7.82	0.21
MA21-063	SQvein	4146	Fspar	65.46	0.00	22.88	0.23	0.00	0.01	2.73	10.35	0.24
MA21-063	SQvein	4148	Chl	23.68	0.00	22.16	24.94	0.00	12.55	0.21	0.47	0.12
MA21-063	SQvein	4150	Chl	23.93	0.01	22.28	25.52	0.00	12.42	0.15	0.58	0.09
MA21-063	SQvein	4151	Chl	24.17	0.04	22.59	24.72	0.00	12.36	0.22	0.71	0.12
MA21-063	SQvein	4152	Chl	24.12	0.10	22.78	25.74	0.00	11.90	0.03	0.02	0.10
MA21-063	SQvein	4153	Chl	24.06	0.00	22.46	25.34	0.00	12.26	0.10	0.58	0.10
MA21-063	SQvein	4154	Chl	25.65	0.00	22.31	24.01	0.00	12.42	0.02	0.83	0.04
MA21-063	SQvein	4155	Chl	24.29	0.06	23.13	24.10	0.00	12.77	0.22	0.59	0.02
MA21-063	SQvein	4156	Chl	23.75	0.01	22.83	25.49	0.00	12.59	0.08	0.53	0.06
MA21-063	SQvein	4157	Chl	24.08	0.00	22.51	25.94	0.00	12.52	0.11	0.50	0.12
MA21-063	SQvein	4158	Chl	24.15	0.06	22.43	25.29	0.00	12.81	0.11	0.44	0.13
MA21-063	SQvein	4159	Chl	24.38	0.02	22.55	25.50	0.00	12.51	0.06	0.40	0.09
MA21-063	SQvein	4160	Chl	24.47	0.01	22.61	25.74	0.00	12.72	0.06	0.56	0.07
MA21-063	SQvein	4161	Chl	24.99	0.00	23.44	24.96	0.00	13.14	0.12	0.69	0.07
MA21-063	SQvein	4163	Chl	25.03	0.03	23.37	25.62	0.00	12.80	0.06	0.56	0.03
MA21-063	SQvein	4164	Wmica	42.74	0.10	33.66	2.45	0.00	0.67	0.00	1.03	10.79
MA21-063	SQvein	4165	Wmica	43.40	0.24	34.52	1.89	0.00	0.90	0.04	1.25	10.43
MA21-063	SQvein	4166	Wmica	44.20	0.09	33.46	2.03	0.00	1.15	0.07	1.00	10.84
MA21-063	SQvein	4167	Wmica	43.35	0.22	33.83	2.67	0.00	0.83	0.00	0.99	10.81
MA21-063	SQvein	4168	Wmica	44.28	0.05	32.91	2.57	0.00	1.27	0.01	1.01	10.75
MA21-063	SQvein	4169	Wmica	43.40	0.17	34.11	1.70	0.00	0.88	0.44	1.06	10.75
MA21-063	SQvein	4170	Wmica	43.54	0.11	34.02	2.80	0.00	1.10	0.08	0.96	11.02
MA21-063	SQvein	4171	Wmica	45.01	0.12	32.70	2.76	0.00	1.02	0.00	1.06	10.50
MA21-063	SQvein	4172	Wmica	44.14	0.04	33.23	2.98	0.00	1.04	0.02	0.99	10.94
MA21-063	SQvein	4173	Wmica	43.61	0.07	33.69	2.97	0.00	1.12	0.05	1.05	10.75
MA21-063	SQvein	4174	Wmica	44.17	0.10	34.07	2.20	0.00	1.07	0.00	1.19	10.76
MA21-063	SQvein	4175	Wmica	43.43	0.37	34.88	2.22	0.02	0.82	0.00	1.18	10.66
MA21-063	SQvein	4176	Wmica	44.05	0.05	33.40	2.38	0.00	1.28	0.00	1.09	10.80
MA21-063	SQvein	4177	Wmica	45.02	0.15	33.43	2.43	0.00	1.29	0.00	0.98	10.94
MA21-063	SQvein	4178	Fspar	63.79	0.01	20.20	0.00	0.03	0.03	0.97	10.23	0.02
MA21-063	SQvein	4179	Wmica	44.81	0.05	33.29	2.96	0.00	1.23	0.00	1.00	11.11

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-063	SQ vein	4180	Fspar	60.90	0.00	21.91	0.08	0.00	0.00	3.62	9.18	0.14
MA21-063	SQ vein	4181	Fspar	62.99	0.00	20.86	0.09	0.00	0.00	1.67	10.10	0.14
MA21-063	SQ vein	4182	Fspar	63.76	0.00	20.49	0.12	0.00	0.00	1.44	10.16	0.10
MA21-063	SQ vein	4183	Fspar	60.80	0.02	22.50	0.07	0.00	0.00	4.11	8.79	0.12
MA21-063	SQ vein	4184	Fspar	61.21	0.00	22.48	0.04	0.00	0.01	3.74	9.04	0.14
MA21-063	SQ vein	4185	Fspar	63.76	0.01	20.51	0.13	0.03	0.01	1.40	10.54	0.10
MA21-063	SQ vein	4186	Fspar	65.35	0.00	19.54	0.05	0.08	0.02	1.40	9.82	0.00
MA21-063	SQ vein	4187	Fspar	63.36	0.00	21.00	0.10	0.00	0.00	1.82	10.14	0.15
MA21-063	SQ vein	4188	Fspar	61.75	0.00	22.32	0.02	0.00	0.00	3.11	9.33	0.02
MA21-063	SQ vein	4189	Fspar	59.49	0.00	23.80	0.07	0.04	0.00	5.02	8.27	0.23
MA21-063	SQ vein	4190	Fspar	59.00	0.07	21.37	3.84	0.00	1.56	1.34	9.58	0.07
MA21-063	SQ vein	4191	Fspar	59.25	0.00	23.67	0.10	0.16	0.00	5.58	8.13	0.23
MA21-063	SQ vein	4192	Fspar	59.87	0.00	23.77	0.00	0.00	0.03	5.13	8.09	0.23
MA21-063	SQ vein	4193	Fspar	62.18	0.00	21.98	0.19	0.01	0.02	2.97	9.45	0.09
MA21-063	SQ vein	4194	Fspar	59.87	0.11	23.31	0.11	0.14	0.00	5.18	8.11	0.18
MA21-063	SQ vein	4195	Fspar	59.65	0.00	23.86	0.20	0.07	0.00	5.40	8.16	0.18
MA21-063	SQ vein	4196	Fspar	60.51	0.08	23.71	0.15	0.00	0.00	4.70	8.61	0.21
MA21-063	SQ vein	4197	Chl	24.68	0.02	19.95	33.17	0.00	5.38	0.14	0.31	0.04
MA21-063	SQ vein	4198	Chl	26.40	0.02	21.55	29.60	0.00	7.02	0.07	0.46	0.65
MA21-063	SQ vein	4199	Chl	26.86	0.00	21.56	31.00	0.00	6.65	0.11	0.50	0.53
MA21-063	SQ vein	4200	Wmica	44.00	0.13	32.24	2.06	0.00	1.02	0.00	1.09	10.70
MA21-063	SQ vein	4201	Wmica	43.10	0.02	33.59	2.49	0.00	0.86	0.00	0.93	10.80
MA21-063	SQ vein	4202	Wmica	43.59	0.06	33.37	2.24	0.00	1.00	0.00	1.09	10.30
MA21-063	SQ vein	4203	Wmica	43.36	0.14	33.68	2.68	0.00	0.83	0.00	0.99	10.76
MA21-063	SQ vein	4204	Wmica	43.35	0.13	33.33	2.54	0.00	0.78	0.00	0.88	10.93
MA21-063	SQ vein	4205	Wmica	44.04	0.08	33.28	2.11	0.00	1.05	0.00	1.01	10.86
MA21-063	SQ vein	4206	Wmica	44.25	0.15	33.49	2.16	0.00	1.05	0.00	1.00	10.63
MA21-063	SQ vein	4207	Wmica	44.00	0.09	33.20	2.63	0.00	0.99	0.01	1.04	10.73
MA21-063	SQ vein	4208	Wmica	44.27	0.00	33.08	2.05	0.00	1.23	0.00	1.05	10.81
MA21-063	SQ vein	4209	Wmica	44.09	0.07	33.98	1.99	0.00	0.93	0.00	0.84	10.92
MA21-063	SQ vein	4210	Wmica	43.82	0.17	33.59	2.31	0.00	1.20	0.00	1.28	10.28
MA21-063	SQ vein	4211	Wmica	43.92	0.08	32.92	2.55	0.00	1.18	0.00	0.95	11.00
MA21-063	SQ vein	4213	Wmica	44.33	0.00	32.79	2.49	0.00	1.26	0.00	0.80	11.22
MA21-063	SQ vein	4214	Wmica	44.03	0.18	33.88	2.41	0.00	0.96	0.00	0.99	10.71

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MA21-063	SQ vein	4215	Wmica	44.25	0.08	33.41	2.06	0.00	1.10	0.00	0.91	10.97
MA21-063	SQ vein	4216	Wmica	44.12	0.10	33.39	2.50	0.00	1.03	0.00	1.22	10.67
MA21-063	SQ vein	4217	Wmica	43.99	0.12	35.26	1.62	0.00	0.83	0.00	1.29	10.47
MA21-063	SQ vein	4218	Wmica	44.27	0.17	33.41	2.12	0.00	1.25	0.00	1.08	10.92
MA21-063	SQ vein	4219	Wmica	44.24	0.08	34.60	2.04	0.00	0.96	0.00	1.21	10.75
MA21-063	SQ vein	4230	Wmica	44.63	0.18	33.60	2.45	0.00	1.08	0.01	1.02	10.99
MA21-063	SQ vein	4231	Wmica	44.31	0.08	33.83	2.43	0.00	1.19	0.00	0.98	11.09
MA21-063	SQ vein	4232	Wmica	44.69	0.03	33.02	2.93	0.00	1.23	0.00	0.98	11.01
MA21-063	SQ vein	4233	Fspar	57.20	0.19	24.12	0.00	0.00	0.00	6.13	7.48	0.16
MA21-063	SQ vein	4234	Fspar	58.89	0.04	23.12	0.02	0.00	0.00	5.35	7.98	0.25
MA21-063	SQ vein	4235	Fspar	59.73	0.00	22.93	0.03	0.00	0.00	4.40	8.36	0.11
MA21-063	SQ vein	4236	Fspar	60.14	0.00	22.22	0.19	0.00	0.00	4.11	8.70	0.25
MA21-063	SQ vein	4237	Fspar	58.94	0.00	23.41	0.00	0.00	0.02	5.15	8.14	0.21
MA21-063	SQ vein	4238	Fspar	61.02	0.00	22.14	0.11	0.00	0.00	3.85	8.73	0.19
MA21-063	SQ vein	4239	Fspar	58.12	0.00	23.75	0.00	0.04	0.00	6.06	7.59	0.21
MA21-063	SQ vein	4240	Fspar	59.75	0.00	23.06	0.05	0.00	0.00	4.55	8.59	0.16
MA21-063	SQ vein	4241	Fspar	59.22	0.00	23.33	0.00	0.15	0.00	5.23	8.18	0.12
MA21-063	SQ vein	4242	Fspar	57.51	0.02	24.47	0.06	0.00	0.00	6.61	7.33	0.22
MA21-063	SQ vein	4243	Fspar	58.48	0.01	24.25	0.01	0.00	0.03	6.08	7.24	0.19
MA21-063	SQ vein	4244	Fspar	57.80	0.14	24.39	0.02	0.00	0.00	6.30	7.48	0.14
MA21-063	SQ vein	4245	Fspar	57.83	0.00	24.38	0.00	0.00	0.01	6.25	7.66	0.17
MA21-063	SQ vein	4246	Fspar	59.14	0.27	23.57	0.00	0.00	0.03	5.29	8.02	0.23
MA21-063	SQ vein	4247	Fspar	57.40	0.04	24.84	0.07	0.00	0.04	6.31	7.58	0.13
MA21-063	SQ vein	4248	Fspar	57.60	0.00	24.55	0.00	0.00	0.00	6.63	7.54	0.28
MA21-063	SQ vein	4249	Fspar	58.97	0.00	23.82	0.11	0.00	0.00	5.37	8.21	0.20
MA21-063	SQ vein	4251	Fspar	58.62	0.08	23.91	0.21	0.10	0.04	5.56	7.87	0.22
MA21-063	SQ vein	4252	Fspar	59.09	0.00	24.02	0.19	0.00	0.03	5.33	8.16	0.23
MA21-063	SQ vein	4253	Fspar	58.23	0.01	24.60	0.01	0.00	0.04	6.32	7.74	0.25
MA21-063	SQ vein	4254	Fspar	60.25	0.16	23.32	0.00	0.04	0.00	4.98	8.56	0.19
MA21-071A-1	Int Type 1A	4255	Chl	24.35	0.04	21.06	22.26	0.32	15.15	0.00	0.37	0.04
MA21-071A-1	Int Type 1A	4256	Chl	24.82	0.12	20.61	22.36	0.23	15.32	0.06	0.32	0.01
MA21-071A-1	Int Type 1A	4257	Chl	25.07	0.11	20.59	22.15	0.39	15.04	0.09	0.40	0.07
MA21-071A-1	Int Type 1A	4258	Chl	24.67	0.14	21.04	22.28	0.25	15.21	0.00	0.43	0.08
MA21-071A-1	Int Type 1A	4259	Chl	24.40	0.00	21.07	22.98	0.27	15.02	0.05	0.30	0.09

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4261	Chl	24.66	0.05	21.32	22.38	0.42	15.37	0.05	0.47	0.00
MA21-071A-1	Int Type 1A	4262	Chl	24.51	0.20	21.28	22.57	0.35	15.17	0.02	0.46	0.02
MA21-071A-1	Int Type 1A	4269	Chl	24.79	0.04	21.10	22.76	0.27	15.22	0.12	0.45	0.07
MA21-071A-1	Int Type 1A	4270	Chl	24.79	0.13	21.14	22.87	0.34	15.16	0.08	0.58	0.10
MA21-071A-1	Int Type 1A	4271	Chl	24.71	0.00	21.44	22.84	0.28	15.05	0.11	0.50	0.04
MA21-071A-1	Int Type 1A	4272	Chl	24.43	0.05	21.31	22.66	0.24	15.14	0.09	0.57	0.09
MA21-071A-1	Int Type 1A	4273	Chl	24.67	0.12	21.10	23.43	0.19	15.10	0.10	0.31	0.04
MA21-071A-1	Int Type 1A	4274	Chl	24.62	0.00	21.46	23.01	0.26	15.35	0.15	0.47	0.06
MA21-071A-1	Int Type 1A	4275	Chl	24.96	0.08	21.41	22.71	0.34	15.37	0.08	0.37	0.14
MA21-071A-1	Int Type 1A	4276	Chl	24.68	0.06	21.41	22.82	0.41	15.11	0.16	0.50	0.07
MA21-071A-1	Int Type 1A	4277	Fspar	57.10	0.00	22.39	0.38	0.02	0.02	4.77	8.01	0.16
MA21-071A-1	Int Type 1A	4278	Fspar	56.02	0.01	23.21	0.20	0.00	0.01	5.98	7.45	0.18
MA21-071A-1	Int Type 1A	4280	Fspar	56.03	0.02	23.56	0.30	0.00	0.00	6.01	7.24	0.04
MA21-071A-1	Int Type 1A	4283	Fspar	56.64	0.00	22.95	0.41	0.01	0.04	5.42	7.78	0.18
MA21-071A-1	Int Type 1A	4284	Fspar	55.55	0.00	23.67	0.39	0.05	0.03	6.38	7.16	0.16
MA21-071A-1	Int Type 1A	4286	Fspar	55.93	0.03	23.68	0.35	0.00	0.00	6.47	6.93	0.15
MA21-071A-1	Int Type 1A	4287	Fspar	56.83	0.01	23.07	0.25	0.00	0.04	5.51	7.66	0.21
MA21-071A-1	Int Type 1A	4289	Fspar	57.36	0.00	22.73	0.34	0.07	0.00	5.07	7.93	0.15
MA21-071A-1	Int Type 1A	4290	Fspar	56.55	0.00	23.24	0.26	0.00	0.02	5.70	7.61	0.22
MA21-071A-1	Int Type 1A	4291	Fspar	55.92	0.05	23.64	0.67	0.12	0.01	6.12	7.23	0.22
MA21-071A-1	Int Type 1A	4293	Fspar	55.63	0.03	23.91	0.46	0.00	0.01	6.54	7.04	0.22
MA21-071A-1	Int Type 1A	4294	Fspar	56.09	0.01	23.63	0.38	0.05	0.03	5.93	7.53	0.11
MA21-071A-1	Int Type 1A	4296	Fspar	57.82	0.04	22.76	0.47	0.00	0.02	4.56	7.98	0.14
MA21-071A-1	Int Type 1A	4297	Fspar	55.58	0.14	24.18	0.47	0.00	0.01	6.54	6.85	0.18
MA21-071A-1	Int Type 1A	4298	Fspar	56.88	0.00	23.62	0.46	0.07	0.18	5.66	7.73	0.19
MA21-071A-1	Int Type 1A	4299	Chl	24.44	0.02	20.85	22.89	0.36	15.04	0.02	0.06	0.15
MA21-071A-1	Int Type 1A	4300	Chl	25.16	0.12	20.45	22.46	0.30	15.60	0.06	0.32	0.31
MA21-071A-1	Int Type 1A	4301	Chl	25.88	0.20	20.19	22.06	0.25	15.12	0.01	0.26	0.97
MA21-071A-1	Int Type 1A	4302	Chl	25.55	0.21	20.62	21.90	0.40	15.41	0.08	0.42	0.45
MA21-071A-1	Int Type 1A	4303	Chl	24.63	0.01	20.86	22.78	0.30	15.60	0.07	0.39	0.03
MA21-071A-1	Int Type 1A	4304	Chl	24.53	0.11	21.15	22.83	0.21	15.68	0.12	0.27	0.13
MA21-071A-1	Int Type 1A	4305	Chl	24.74	0.07	21.05	22.89	0.38	15.88	0.00	0.37	0.05
MA21-071A-1	Int Type 1A	4306	Chl	25.57	0.14	20.72	22.20	0.37	15.43	0.01	0.34	0.33
MA21-071A-1	Int Type 1A	4307	Chl	24.71	0.22	20.98	22.54	0.27	15.79	0.03	0.44	0.12

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4308	Chl	24.37	0.03	21.28	23.09	0.28	15.64	0.10	0.26	0.04
MA21-071A-1	Int Type 1A	4309	Chl	26.94	0.05	20.33	21.80	0.08	15.19	0.07	0.45	0.46
MA21-071A-1	Int Type 1A	4310	Chl	24.95	0.00	20.92	22.54	0.30	16.09	0.10	0.43	0.06
MA21-071A-1	Int Type 1A	4312	Chl	24.64	0.04	21.35	23.26	0.38	15.62	0.01	0.44	0.06
MA21-071A-1	Int Type 1A	4313	Biotite	29.67	0.69	18.90	20.26	0.22	13.32	0.07	0.38	4.44
MA21-071A-1	Int Type 1A	4314	Biotite	30.28	0.86	18.14	19.79	0.08	12.64	0.00	0.37	5.82
MA21-071A-1	Int Type 1A	4315	Biotite	30.83	0.78	17.83	20.18	0.20	12.08	0.00	0.28	5.76
MA21-071A-1	Int Type 1A	4316	Wmica	42.92	0.38	30.76	2.75	0.00	1.20	0.00	0.51	10.87
MA21-071A-1	Int Type 1A	4317	Biotite	30.78	0.97	18.08	19.92	0.03	12.47	0.00	0.47	5.54
MA21-071A-1	Int Type 1A	4318	Biotite	31.65	0.87	18.07	19.85	0.02	11.96	0.00	0.24	6.67
MA21-071A-1	Int Type 1A	4319	Wmica	42.88	0.50	30.11	3.54	0.00	1.66	0.00	0.52	10.74
MA21-071A-1	Int Type 1A	4320	Biotite	31.76	0.92	17.75	20.17	0.22	11.74	0.00	0.38	6.72
MA21-071A-1	Int Type 1A	4322	Wmica	42.50	0.35	31.92	3.25	0.00	1.09	0.00	0.57	10.76
MA21-071A-1	Int Type 1A	4323	Wmica	43.54	0.64	30.29	3.37	0.00	1.59	0.00	0.56	10.84
MA21-071A-1	Int Type 1A	4324	Wmica	43.26	0.52	30.53	2.92	0.00	1.45	0.00	0.58	11.08
MA21-071A-1	Int Type 1A	4325	Wmica	43.25	0.71	30.39	3.28	0.04	1.49	0.00	0.62	10.94
MA21-071A-1	Int Type 1A	4326	Wmica	43.16	0.53	30.69	3.02	0.00	1.43	0.00	0.52	11.11
MA21-071A-1	Int Type 1A	4327	Wmica	42.69	0.35	31.66	3.10	0.00	1.31	0.00	0.69	10.72
MA21-071A-1	Int Type 1A	4328	Wmica	43.47	0.67	30.46	3.51	0.04	1.45	0.00	0.40	10.87
MA21-071A-1	Int Type 1A	4329	Wmica	43.31	0.46	31.33	3.04	0.00	1.27	0.00	0.52	10.91
MA21-071A-1	Int Type 1A	4330	Wmica	43.68	0.62	30.26	3.29	0.00	1.62	0.00	0.56	11.05
MA21-071A-1	Int Type 1A	4331	Wmica	43.46	0.41	30.91	3.13	0.14	1.55	0.00	0.57	11.01
MA21-071A-1	Int Type 1A	4332	Wmica	43.92	0.58	30.57	3.36	0.00	1.56	0.00	0.58	10.93
MA21-071A-1	Int Type 1A	4333	Wmica	42.83	0.57	31.48	3.50	0.02	1.36	0.00	0.51	11.16
MA21-071A-1	Int Type 1A	4334	Wmica	43.16	0.53	31.39	3.51	0.04	1.59	0.00	0.67	11.10
MA21-071A-1	Int Type 1A	4335	Chl	25.91	0.07	20.03	21.39	0.10	14.87	0.27	0.64	0.08
MA21-071A-1	Int Type 1A	4336	Chl	25.29	0.03	20.85	21.78	0.28	15.30	0.08	0.52	0.08
MA21-071A-1	Int Type 1A	4337	Chl	26.51	0.11	19.84	21.02	0.37	15.69	0.18	0.58	0.14
MA21-071A-1	Int Type 1A	4338	Chl	25.93	0.00	20.04	22.11	0.34	15.30	0.19	0.59	0.11
MA21-071A-1	Int Type 1A	4339	Chl	25.39	0.08	20.60	22.23	0.43	15.52	0.13	0.51	0.08
MA21-071A-1	Int Type 1A	4340	Chl	25.36	0.06	21.31	21.90	0.35	15.50	0.14	0.46	0.11
MA21-071A-1	Int Type 1A	4341	Chl	26.38	0.04	20.11	21.73	0.22	15.47	0.17	0.75	0.18
MA21-071A-1	Int Type 1A	4342	Chl	25.19	0.03	21.17	21.84	0.27	15.38	0.15	0.61	0.13
MA21-071A-1	Int Type 1A	4343	Chl	25.61	0.11	20.92	21.90	0.26	15.39	0.13	0.97	0.08

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4344	Chl	25.51	0.00	21.37	22.42	0.28	15.77	0.12	0.43	0.01
MA21-071A-1	Int Type 1A	4352	Chl	25.57	0.04	21.34	22.65	0.37	15.57	0.16	0.39	0.00
MA21-071A-1	Int Type 1A	4353	Chl	25.93	0.01	21.44	22.41	0.30	15.53	0.11	0.38	0.16
MA21-071A-1	Int Type 1A	4354	Chl	25.94	0.07	21.48	22.93	0.45	15.35	0.08	0.50	0.11
MA21-071A-1	Int Type 1A	4355	Biotite	32.99	1.02	16.67	18.37	0.04	10.62	0.00	0.80	7.70
MA21-071A-1	Int Type 1A	4356	Biotite	33.02	1.01	16.76	18.48	0.20	10.48	0.02	0.65	8.07
MA21-071A-1	Int Type 1A	4357	Biotite	32.33	1.35	16.78	20.16	0.02	10.69	0.01	0.62	6.88
MA21-071A-1	Int Type 1A	4358	Biotite	33.92	1.13	16.51	17.77	0.27	10.64	0.02	0.71	8.89
MA21-071A-1	Int Type 1A	4360	Biotite	33.48	1.11	16.45	19.32	0.08	10.67	0.00	0.49	8.12
MA21-071A-1	Int Type 1A	4362	Biotite	34.90	1.17	17.09	17.17	0.23	10.45	0.00	0.64	9.55
MA21-071A-1	Int Type 1A	4364	Biotite	33.68	1.36	16.76	18.36	0.26	10.49	0.00	0.63	9.07
MA21-071A-1	Int Type 1A	4365	Biotite	34.53	1.21	16.67	18.01	0.06	10.61	0.00	0.59	9.21
MA21-071A-1	Int Type 1A	4366	Biotite	34.46	1.21	16.61	18.40	0.08	10.46	0.03	0.59	9.47
MA21-071A-1	Int Type 1A	4367	Biotite	34.19	1.12	17.09	18.51	0.29	10.59	0.00	0.59	8.56
MA21-071A-1	Int Type 1A	4368	Biotite	33.94	1.28	16.74	18.82	0.23	10.57	0.02	0.66	9.15
MA21-071A-1	Int Type 1A	4369	Fspar	56.35	0.01	22.93	0.12	0.03	0.02	5.85	7.11	0.20
MA21-071A-1	Int Type 1A	4370	Biotite	34.25	1.21	17.29	18.50	0.15	11.08	0.00	0.54	8.66
MA21-071A-1	Int Type 1A	4371	Fspar	57.74	0.05	22.37	0.24	0.00	0.03	5.16	7.72	0.06
MA21-071A-1	Int Type 1A	4372	Fspar	56.21	0.00	23.39	0.22	0.00	0.01	6.05	7.34	0.09
MA21-071A-1	Int Type 1A	4374	Fspar	57.95	0.00	22.34	0.15	0.15	0.02	4.85	7.94	0.12
MA21-071A-1	Int Type 1A	4375	Fspar	56.66	0.01	23.17	0.17	0.00	0.04	6.01	7.29	0.18
MA21-071A-1	Int Type 1A	4376	Fspar	56.62	0.03	22.68	0.13	0.00	0.01	5.69	7.80	0.24
MA21-071A-1	Int Type 1A	4377	Fspar	55.02	0.03	24.20	0.24	0.10	0.01	7.01	6.79	0.17
MA21-071A-1	Int Type 1A	4378	Fspar	55.77	0.00	23.84	0.21	0.00	0.05	6.52	6.96	0.17
MA21-071A-1	Int Type 1A	4379	Fspar	58.17	0.01	22.17	0.38	0.00	0.03	4.33	8.26	0.13
MA21-071A-1	Int Type 1A	4380	Biotite	35.84	1.19	17.31	17.37	0.30	10.50	0.00	0.62	9.81
MA21-071A-1	Int Type 1A	4381	Fspar	56.18	0.00	23.71	0.31	0.00	0.01	6.82	7.02	0.17
MA21-071A-1	Int Type 1A	4382	Fspar	58.41	0.00	22.54	0.15	0.15	0.01	4.90	7.93	0.14
MA21-071A-1	Int Type 1A	4383	Fspar	56.93	0.00	23.20	0.27	0.03	0.02	5.87	7.45	0.15
MA21-071A-1	Int Type 1A	4384	Biotite	35.10	1.24	17.36	17.57	0.24	10.81	0.02	0.92	9.80
MA21-071A-1	Int Type 1A	4387	Fspar	56.31	0.00	23.67	0.35	0.04	0.03	6.24	7.24	0.15
MA21-071A-1	Int Type 1A	4389	Fspar	56.75	0.01	23.56	0.14	0.00	0.06	6.18	7.58	0.07
MA21-071A-1	Int Type 1A	4390	Fspar	58.57	0.00	22.39	0.14	0.11	0.00	4.77	8.12	0.16
MA21-071A-1	Int Type 1A	4391	Chl	25.51	0.08	20.09	21.65	0.26	16.11	0.08	0.57	0.00

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4392	Chl	25.22	0.08	20.74	22.17	0.32	15.42	0.14	0.42	0.03
MA21-071A-1	Int Type 1A	4393	Chl	25.01	0.03	20.83	22.08	0.38	15.50	0.14	0.47	0.07
MA21-071A-1	Int Type 1A	4394	Chl	25.47	0.00	20.67	21.95	0.24	15.28	0.27	0.55	0.08
MA21-071A-1	Int Type 1A	4396	Chl	24.91	0.15	21.20	22.20	0.31	15.35	0.19	0.37	0.06
MA21-071A-1	Int Type 1A	4397	Chl	25.15	0.00	20.92	22.29	0.44	15.22	0.26	0.49	0.02
MA21-071A-1	Int Type 1A	4398	Chl	25.14	0.00	21.06	21.91	0.45	15.02	0.39	0.71	0.05
MA21-071A-1	Int Type 1A	4406	Chl	25.40	0.03	20.74	22.30	0.45	15.65	0.15	0.51	0.00
MA21-071A-1	Int Type 1A	4407	Chl	25.23	0.04	21.14	21.84	0.15	15.64	0.13	0.48	0.06
MA21-071A-1	Int Type 1A	4408	Chl	25.67	0.10	20.42	22.23	0.20	15.66	0.21	0.35	0.10
MA21-071A-1	Int Type 1A	4409	Chl	25.41	0.01	21.27	22.05	0.27	15.18	0.28	0.42	0.18
MA21-071A-1	Int Type 1A	4410	Biotite	34.13	1.12	17.01	17.43	0.07	10.56	0.00	0.42	9.12
MA21-071A-1	Int Type 1A	4411	Biotite	33.88	1.15	16.89	17.88	0.18	10.57	0.01	0.40	9.08
MA21-071A-1	Int Type 1A	4412	Biotite	33.52	1.13	17.36	18.32	0.21	10.93	0.01	0.38	8.32
MA21-071A-1	Int Type 1A	4413	Biotite	32.98	1.10	17.39	19.18	0.08	10.84	0.06	0.63	8.02
MA21-071A-1	Int Type 1A	4414	Biotite	33.67	1.02	17.52	18.53	0.00	11.13	0.00	0.31	8.43
MA21-071A-1	Int Type 1A	4415	Biotite	33.63	1.09	17.16	18.45	0.31	10.96	0.00	0.30	8.81
MA21-071A-1	Int Type 1A	4416	Biotite	33.12	1.23	17.27	19.01	0.19	10.98	0.01	0.36	8.45
MA21-071A-1	Int Type 1A	4417	Biotite	34.23	1.24	17.07	17.57	0.12	10.67	0.26	0.63	9.13
MA21-071A-1	Int Type 1A	4418	Biotite	34.03	1.25	17.13	18.09	0.33	10.90	0.00	0.48	8.89
MA21-071A-1	Int Type 1A	4419	Biotite	32.95	1.15	16.80	17.71	0.29	10.52	0.01	2.23	8.28
MA21-071A-1	Int Type 1A	4420	Biotite	34.38	1.22	17.15	17.43	0.07	10.74	0.00	0.51	9.78
MA21-071A-1	Int Type 1A	4422	Biotite	33.69	1.16	17.06	17.72	0.31	11.04	0.45	0.55	8.72
MA21-071A-1	Int Type 1A	4423	Biotite	34.47	1.18	17.29	17.55	0.19	10.78	0.20	0.60	9.32
MA21-071A-1	Int Type 1A	4424	Biotite	34.70	1.29	17.00	17.78	0.12	10.60	0.00	0.50	9.42
MA21-071A-1	Int Type 1A	4425	Biotite	34.70	1.22	17.35	17.52	0.00	10.80	0.06	0.64	9.45
MA21-071A-1	Int Type 1A	4426	Biotite	34.50	1.12	17.35	18.12	0.06	10.96	0.03	0.63	9.04
MA21-071A-1	Int Type 1A	4427	Biotite	34.71	1.23	17.11	18.22	0.06	10.77	0.00	0.50	9.39
MA21-071A-1	Int Type 1A	4428	Biotite	34.65	1.15	17.38	17.81	0.27	10.58	0.02	0.63	9.53
MA21-071A-1	Int Type 1A	4429	Biotite	34.93	1.39	17.34	17.42	0.32	10.57	0.03	0.53	9.22
MA21-071A-1	Int Type 1A	4430	Biotite	34.82	1.18	17.25	17.86	0.20	10.50	0.00	0.52	9.62
MA21-071A-1	Int Type 1A	4431	Biotite	34.30	1.13	17.35	18.27	0.22	10.66	0.29	0.51	9.42
MA21-071A-1	Int Type 1A	4432	Biotite	34.88	1.23	17.29	17.78	0.36	10.62	0.10	0.45	9.56
MA21-071A-1	Int Type 1A	4433	Fspar	59.32	0.02	21.25	0.23	0.02	0.02	3.60	8.60	0.14
MA21-071A-1	Int Type 1A	4434	Biotite	35.13	1.14	17.41	17.57	0.15	10.85	0.05	0.53	9.90

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4435	Biotite	35.05	1.37	17.28	17.76	0.10	10.71	0.03	0.62	9.27
MA21-071A-1	Int Type 1A	4436	Biotite	34.32	1.02	17.86	18.69	0.14	11.29	0.00	0.40	8.58
MA21-071A-1	Int Type 1A	4437	Fspar	55.97	0.02	23.56	0.20	0.00	0.00	6.03	7.34	0.15
MA21-071A-1	Int Type 1A	4438	Fspar	57.11	0.00	22.70	0.21	0.02	0.01	5.48	7.86	0.11
MA21-071A-1	Int Type 1A	4439	Biotite	35.20	1.22	17.29	17.74	0.26	10.78	0.00	0.40	9.89
MA21-071A-1	Int Type 1A	4441	Fspar	56.21	0.14	23.66	0.10	0.00	0.02	6.21	7.26	0.20
MA21-071A-1	Int Type 1A	4442	Biotite	34.61	1.20	17.53	17.79	0.17	10.73	0.17	0.79	9.52
MA21-071A-1	Int Type 1A	4443	Fspar	57.03	0.09	23.06	0.22	0.04	0.02	5.69	7.53	0.11
MA21-071A-1	Int Type 1A	4444	Fspar	56.88	0.05	23.26	0.26	0.15	0.01	5.86	7.51	0.14
MA21-071A-1	Int Type 1A	4445	Fspar	57.28	0.00	23.10	0.34	0.00	0.00	5.71	7.65	0.09
MA21-071A-1	Int Type 1A	4447	Fspar	56.43	0.13	23.73	0.18	0.00	0.00	6.31	7.19	0.12
MA21-071A-1	Int Type 1A	4448	Fspar	57.24	0.02	23.09	0.14	0.07	0.02	5.63	7.61	0.12
MA21-071A-1	Int Type 1A	4449	Fspar	57.04	0.00	23.40	0.27	0.00	0.03	5.67	7.56	0.07
MA21-071A-1	Int Type 1A	4450	Fspar	56.74	0.00	23.75	0.13	0.00	0.03	6.04	7.49	0.18
MA21-071A-1	Int Type 1A	4451	Wmica	42.98	0.69	30.54	2.89	0.07	1.14	0.00	0.48	10.93
MA21-071A-1	Int Type 1A	4453	Wmica	42.71	0.34	31.89	2.30	0.00	1.00	0.00	0.77	10.62
MA21-071A-1	Int Type 1A	4454	Wmica	42.74	0.15	32.00	2.47	0.00	1.13	0.00	0.80	10.79
MA21-071A-1	Int Type 1A	4455	Wmica	42.33	0.25	32.74	2.36	0.01	0.71	0.00	0.78	10.78
MA21-071A-1	Int Type 1A	4456	Wmica	42.73	0.23	32.43	2.49	0.06	0.88	0.00	0.72	10.94
MA21-071A-1	Int Type 1A	4457	Wmica	42.76	0.23	32.39	2.59	0.00	1.06	0.01	0.78	10.85
MA21-071A-1	Int Type 1A	4458	Wmica	42.02	0.39	31.73	3.03	0.22	1.27	0.03	0.77	10.87
MA21-071A-1	Int Type 1A	4460	Wmica	43.39	0.16	31.97	2.54	0.04	0.96	0.00	0.69	10.88
MA21-071A-1	Int Type 1A	4462	Wmica	43.04	0.31	31.78	2.45	0.07	1.26	0.00	0.67	10.95
MA21-071A-1	Int Type 1A	4463	Wmica	43.47	0.27	31.95	2.60	0.00	1.15	0.00	0.66	10.88
MA21-071A-1	Int Type 1A	4465	Wmica	43.03	0.50	31.70	2.73	0.01	1.20	0.00	0.74	10.87
MA21-071A-1	Int Type 1A	4466	Wmica	43.46	0.31	31.77	2.48	0.02	1.14	0.00	0.66	10.89
MA21-071A-1	Int Type 1A	4467	Wmica	43.25	0.46	31.29	2.63	0.00	1.26	0.02	0.73	11.01
MA21-071A-1	Int Type 1A	4468	Wmica	42.46	0.40	32.39	2.76	0.00	0.93	0.00	0.77	10.96
MA21-071A-1	Int Type 1A	4469	Wmica	42.83	0.30	32.35	2.62	0.00	1.08	0.00	1.16	10.69
MA21-071A-1	Int Type 1A	4470	Wmica	43.47	0.41	31.59	2.58	0.01	1.33	0.00	0.74	10.71
MA21-071A-1	Int Type 1A	4471	Wmica	43.01	0.44	31.83	2.95	0.00	1.05	0.00	0.70	11.03
MA21-071A-1	Int Type 1A	4472	Wmica	43.83	0.38	30.98	2.62	0.04	1.47	0.00	0.68	10.83
MA21-071A-1	Int Type 1A	4473	Wmica	43.31	0.15	31.53	3.43	0.04	1.49	0.00	0.79	10.38
MA21-071A-1	Int Type 1A	4474	Wmica	44.05	0.43	30.96	2.84	0.18	1.29	0.02	0.53	11.03

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4475	Wmica	43.60	0.26	32.13	2.58	0.00	0.94	0.01	0.72	10.78
MA21-071A-1	Int Type 1A	4476	Wmica	42.84	0.27	32.63	2.57	0.03	0.89	0.04	0.76	10.84
MA21-071A-1	Int Type 1A	4477	Wmica	43.64	0.25	31.84	2.97	0.00	1.22	0.00	0.61	10.53
MA21-071A-1	Int Type 1A	4479	Wmica	43.84	0.44	30.94	2.75	0.00	1.37	0.03	0.73	10.94
MA21-071A-1	Int Type 1A	4481	Wmica	43.28	0.42	31.83	2.92	0.04	1.42	0.01	0.85	10.89
MA21-071A-1	Int Type 1A	4482	Wmica	44.08	0.38	30.86	2.91	0.17	1.51	0.03	0.71	11.05
MA21-071A-1	Int Type 1A	4483	Wmica	44.16	0.48	31.10	2.90	0.26	1.44	0.00	0.66	10.91
MA21-071A-1	Int Type 1A	4484	Wmica	42.83	0.34	32.46	2.67	0.11	1.14	0.03	1.00	11.11
MA21-071A-1	Int Type 1A	4485	Wmica	44.05	0.23	31.96	2.42	0.00	1.38	0.00	0.77	10.82
MA21-071A-1	Int Type 1A	4486	Wmica	42.82	0.18	31.75	4.13	0.00	1.75	0.00	0.95	10.15
MA21-071A-1	Int Type 1A	4487	Wmica	44.18	0.47	31.74	2.71	0.00	1.34	0.01	0.74	11.15
MA21-071A-1	Int Type 1A	4488	Fspar	57.13	0.00	22.61	0.16	0.07	0.01	4.98	8.06	0.12
MA21-071A-1	Int Type 1A	4489	Fspar	56.61	0.00	23.18	0.06	0.00	0.02	5.94	7.38	0.19
MA21-071A-1	Int Type 1A	4490	Fspar	56.81	0.01	23.21	0.11	0.00	0.00	5.90	7.36	0.26
MA21-071A-1	Int Type 1A	4491	Fspar	58.51	0.04	22.17	0.07	0.00	0.03	4.45	8.19	0.26
MA21-071A-1	Int Type 1A	4492	Fspar	56.90	0.00	23.43	0.07	0.00	0.00	5.92	7.56	0.21
MA21-071A-1	Int Type 1A	4493	Fspar	56.56	0.02	23.00	0.09	0.05	0.02	5.43	8.22	0.19
MA21-071A-1	Int Type 1A	4494	Fspar	57.12	0.00	22.99	0.19	0.00	0.01	5.81	7.78	0.14
MA21-071A-1	Int Type 1A	4495	Fspar	57.54	0.01	23.18	0.11	0.14	0.04	5.37	7.69	0.13
MA21-071A-1	Int Type 1A	4496	Fspar	60.18	0.00	21.59	0.07	0.04	0.00	3.27	8.92	0.17
MA21-071A-1	Int Type 1A	4498	Fspar	57.78	0.03	23.05	0.00	0.00	0.00	5.38	7.80	0.19
MA21-071A-1	Int Type 1A	4499	Fspar	56.75	0.01	23.76	0.22	0.07	0.05	6.06	7.50	0.20
MA21-071A-1	Int Type 1A	4500	Fspar	57.36	0.00	23.59	0.12	0.02	0.00	5.85	7.62	0.11
MA21-071A-1	Int Type 1A	4501	Fspar	57.10	0.00	23.32	0.15	0.00	0.02	5.96	7.59	0.19
MA21-071A-1	Int Type 1A	4502	Fspar	56.93	0.02	23.96	0.24	0.06	0.00	6.02	7.39	0.20
MA21-071A-1	Int Type 1A	4503	Fspar	57.60	0.04	23.48	0.20	0.02	0.00	5.86	7.53	0.13
MA21-071A-1	Int Type 1A	4505	Biotite	31.33	1.07	17.04	19.93	0.22	10.52	0.03	0.77	6.31
MA21-071A-1	Int Type 1A	4506	Biotite	32.01	1.14	16.75	19.62	0.01	10.46	0.00	0.55	7.48
MA21-071A-1	Int Type 1A	4507	Wmica	42.25	0.33	31.66	2.78	0.00	1.10	0.07	0.76	10.46
MA21-071A-1	Int Type 1A	4509	Biotite	32.79	1.13	16.81	19.05	0.14	10.23	0.03	0.76	8.25
MA21-071A-1	Int Type 1A	4510	Wmica	42.43	0.41	31.58	2.63	0.00	1.16	0.00	0.77	10.53
MA21-071A-1	Int Type 1A	4511	Biotite	32.97	1.07	17.18	18.49	0.00	10.22	0.00	0.70	8.50
MA21-071A-1	Int Type 1A	4512	Wmica	42.84	0.48	31.03	2.62	0.00	1.27	0.00	0.79	10.55
MA21-071A-1	Int Type 1A	4513	Wmica	42.24	0.52	31.75	2.49	0.00	1.05	0.06	0.84	10.49

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4514	Wmica	43.33	0.32	31.26	2.72	0.03	1.28	0.01	0.72	10.65
MA21-071A-1	Int Type 1A	4516	Wmica	43.07	0.52	31.32	2.55	0.00	1.39	0.00	0.84	10.70
MA21-071A-1	Int Type 1A	4517	Biotite	32.07	1.12	17.30	19.77	0.27	10.67	0.00	0.55	7.52
MA21-071A-1	Int Type 1A	4518	Wmica	43.14	0.47	31.33	2.93	0.00	1.23	0.02	0.71	10.66
MA21-071A-1	Int Type 1A	4519	Wmica	42.79	0.48	31.68	2.80	0.02	1.17	0.00	0.65	10.80
MA21-071A-1	Int Type 1A	4520	Biotite	33.48	1.19	16.76	18.13	0.27	10.23	0.00	0.42	9.32
MA21-071A-1	Int Type 1A	4521	Biotite	33.25	1.09	16.96	18.66	0.16	10.40	0.00	0.49	8.97
MA21-071A-1	Int Type 1A	4522	Wmica	42.68	0.26	32.05	2.73	0.00	1.20	0.00	0.79	10.87
MA21-071A-1	Int Type 1A	4523	Wmica	43.43	0.55	30.62	2.82	0.05	1.42	0.00	0.66	10.95
MA21-071A-1	Int Type 1A	4524	Wmica	42.95	0.39	31.22	2.57	0.04	1.37	0.00	0.74	11.21
MA21-071A-1	Int Type 1A	4527	Wmica	43.01	0.51	31.54	2.81	0.00	1.24	0.00	0.69	11.09
MA21-071A-1	Int Type 1A	4528	Biotite	33.34	1.19	16.92	19.04	0.18	10.57	0.00	0.61	8.68
MA21-071A-1	Int Type 1A	4529	Fspar	56.56	0.00	23.20	0.20	0.04	0.01	5.54	7.49	0.09
MA21-071A-1	Int Type 1A	4531	Fspar	56.53	0.00	23.34	0.24	0.00	0.03	5.85	7.36	0.25
MA21-071A-1	Int Type 1A	4534	Fspar	56.41	0.04	23.18	0.41	0.00	0.01	5.58	7.65	0.15
MA21-071A-1	Int Type 1A	4535	Fspar	56.05	0.01	23.56	0.21	0.01	0.01	5.94	7.40	0.23
MA21-071A-1	Int Type 1A	4536	Fspar	56.48	0.00	23.19	0.35	0.00	0.02	5.93	7.55	0.19
MA21-071A-1	Int Type 1A	4537	Fspar	56.39	0.02	23.62	0.17	0.00	0.01	5.99	7.23	0.20
MA21-071A-1	Int Type 1A	4549	Fspar	56.76	0.00	23.28	0.21	0.00	0.00	5.79	7.63	0.28
MA21-071A-1	Int Type 1A	4560	Fspar	56.10	0.00	23.87	0.40	0.00	0.03	6.10	7.41	0.15
MA21-071A-1	Int Type 1A	4561	Fspar	56.63	0.00	23.64	0.29	0.02	0.00	6.06	7.42	0.17
MA21-071A-1	Int Type 1A	4567	Fspar	56.63	0.00	23.77	0.21	0.03	0.01	6.10	7.34	0.21
MA21-071A-1	Int Type 1A	4568	Chl	25.09	0.12	20.53	22.25	0.17	14.98	0.06	0.44	0.38
MA21-071A-1	Int Type 1A	4593	Chl	25.56	0.10	20.30	21.92	0.31	14.97	0.07	0.37	0.62
MA21-071A-1	Int Type 1A	4601	Chl	25.49	0.14	20.17	21.94	0.30	14.87	0.02	0.44	0.74
MA21-071A-1	Int Type 1A	4602	Chl	25.37	0.19	20.35	22.31	0.43	14.80	0.10	0.50	0.39
MA21-071A-1	Int Type 1A	4616	Chl	25.91	0.18	20.41	21.34	0.24	15.17	0.05	0.32	0.65
MA21-071A-1	Int Type 1A	4618	Chl	25.42	0.06	20.56	22.23	0.34	15.12	0.08	0.39	0.51
MA21-071A-1	Int Type 1A	4623	Chl	25.32	0.17	20.34	22.14	0.35	14.94	0.04	0.37	0.71
MA21-071A-1	Int Type 1A	4627	Chl	25.28	0.07	20.39	22.09	0.39	15.32	0.07	0.71	0.40
MA21-071A-1	Int Type 1A	4628	Chl	25.16	0.02	20.43	21.76	0.28	15.78	0.13	0.90	0.18
MA21-071A-1	Int Type 1A	4630	Chl	26.20	0.13	20.43	21.64	0.34	15.41	0.06	0.64	1.11
MA21-071A-1	Int Type 1A	4631	Biotite	31.88	0.99	17.59	19.72	0.20	10.94	0.00	0.27	6.77
MA21-071A-1	Int Type 1A	4632	Biotite	30.96	1.07	17.60	21.50	0.34	10.70	0.00	0.37	5.81

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-1	Int Type 1A	4633	Wmica	42.67	1.06	29.34	3.35	0.00	1.50	0.00	0.53	11.00
MA21-071A-1	Int Type 1A	4634	Biotite	32.49	1.00	17.22	19.45	0.34	10.70	0.00	0.46	7.80
MA21-071A-1	Int Type 1A	4635	Biotite	31.18	1.01	17.57	21.49	0.07	10.93	0.01	0.42	5.70
MA21-071A-1	Int Type 1A	4636	Wmica	41.80	1.00	30.88	3.56	0.03	1.15	0.12	0.52	10.59
MA21-071A-1	Int Type 1A	4637	Wmica	42.64	0.92	30.07	3.36	0.00	1.50	0.00	0.41	10.62
MA21-071A-1	Int Type 1A	4638	Biotite	32.90	1.26	17.12	18.68	0.20	10.72	0.00	0.40	8.31
MA21-071A-1	Int Type 1A	4639	Wmica	42.51	0.99	30.06	3.52	0.12	1.48	0.00	0.50	10.78
MA21-071A-1	Int Type 1A	4640	Wmica	42.81	1.14	30.24	3.51	0.04	1.66	0.00	0.62	10.56
MA21-071A-1	Int Type 1A	4641	Wmica	43.30	0.94	29.91	3.49	0.00	1.74	0.00	0.63	10.86
MA21-071A-1	Int Type 1A	4642	Biotite	31.82	1.10	17.72	21.64	0.07	10.80	0.01	0.46	6.35
MA21-071A-1	Int Type 1A	4643	Biotite	32.94	1.14	17.41	19.78	0.37	10.74	0.00	0.31	7.77
MA21-071A-1	Int Type 1A	4645	Biotite	31.99	0.97	17.49	21.55	0.19	10.83	0.00	0.46	6.78
MA21-071A-1	Int Type 1A	4646	Wmica	43.02	1.18	30.71	3.61	0.00	1.49	0.00	0.52	10.72
MA21-071A-1	Int Type 1A	4647	Wmica	43.22	0.92	30.81	3.31	0.01	1.57	0.04	0.59	10.90
MA21-071A-1	Int Type 1A	4648	Biotite	33.33	1.12	17.69	19.08	0.22	11.01	0.00	0.50	8.15
MA21-071A-1	Int Type 1A	4649	Biotite	33.22	1.12	17.60	19.83	0.03	10.86	0.00	0.44	7.84
MA21-071A-1	Int Type 1A	4650	Biotite	33.23	1.23	17.58	18.69	0.15	11.07	0.00	0.91	7.99
MA21-071A-1	Int Type 1A	4651	Biotite	33.66	1.31	17.80	18.90	0.00	10.85	0.00	0.32	8.22
MA21-071A-1	Int Type 1A	4652	Biotite	33.41	1.24	17.58	19.41	0.42	10.90	0.03	0.55	8.17
MA21-071A-2	Int Type 1B	4653	Wmica	43.23	0.21	33.27	2.63	0.07	0.92	0.04	0.82	11.06
MA21-071A-2	Int Type 1B	4654	Wmica	43.90	0.59	32.14	2.73	0.08	1.25	0.00	0.52	11.39
MA21-071A-2	Int Type 1B	4655	Wmica	43.48	0.36	33.24	2.77	0.01	1.02	0.00	0.85	10.96
MA21-071A-2	Int Type 1B	4656	Wmica	43.63	0.31	33.07	3.12	0.11	0.91	0.07	0.54	11.01
MA21-071A-2	Int Type 1B	4657	Wmica	44.08	0.25	32.68	2.63	0.00	0.98	0.15	0.71	11.09
MA21-071A-2	Int Type 1B	4658	Wmica	43.76	0.20	33.50	2.68	0.21	0.97	0.03	0.88	11.19
MA21-071A-2	Int Type 1B	4659	Wmica	44.03	0.26	33.48	2.85	0.00	0.79	0.00	0.77	10.92
MA21-071A-2	Int Type 1B	4660	Wmica	44.36	0.49	32.40	2.84	0.00	1.12	0.04	0.56	11.31
MA21-071A-2	Int Type 1B	4661	Wmica	44.03	0.34	33.34	2.72	0.00	0.94	0.01	0.69	10.97
MA21-071A-2	Int Type 1B	4662	Wmica	44.53	0.42	32.54	2.76	0.05	1.24	0.02	0.81	11.12
MA21-071A-2	Int Type 1B	4663	Wmica	44.39	0.41	32.75	2.76	0.00	1.14	0.00	0.69	11.27
MA21-071A-2	Int Type 1B	4664	Wmica	44.32	0.15	33.50	2.37	0.00	1.11	0.15	0.81	11.15
MA21-071A-2	Int Type 1B	4665	Wmica	44.63	0.45	32.85	2.63	0.00	1.18	0.00	0.91	11.00
MA21-071A-2	Int Type 1B	4666	Wmica	44.56	0.51	32.66	3.09	0.08	1.18	0.02	0.79	10.98
MA21-071A-2	Int Type 1B	4667	Wmica	44.59	0.55	32.37	2.95	0.00	1.26	0.00	0.69	11.33

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-2	Int Type 1B	4668	Wmica	44.45	0.67	32.35	2.83	0.00	1.28	0.02	0.68	11.18
MA21-071A-2	Int Type 1B	4669	Wmica	44.23	0.42	32.88	2.74	0.00	1.23	0.00	0.68	11.37
MA21-071A-2	Int Type 1B	4671	Wmica	43.72	0.25	34.10	2.45	0.05	0.95	0.09	0.89	11.37
MA21-071A-2	Int Type 1B	4672	Wmica	43.89	0.30	33.33	2.69	0.20	0.81	0.00	1.00	10.88
MA21-071A-2	Int Type 1B	4673	Wmica	44.92	0.51	32.69	2.67	0.06	1.22	0.02	0.76	11.40
MA21-071A-2	Int Type 1B	4674	Wmica	43.96	0.41	33.44	2.93	0.00	1.22	0.04	0.73	11.34
MA21-071A-2	Int Type 1B	4675	Wmica	44.80	0.44	32.36	2.98	0.00	1.19	0.00	0.64	11.09
MA21-071A-2	Int Type 1B	4676	Wmica	44.47	0.40	32.60	2.84	0.00	1.26	0.06	0.68	11.38
MA21-071A-2	Int Type 1B	4677	Wmica	44.38	0.25	33.84	2.42	0.22	0.99	0.22	0.85	11.16
MA21-071A-2	Int Type 1B	4678	Wmica	44.69	0.39	33.05	2.81	0.00	1.20	0.05	0.74	11.33
MA21-071A-2	Int Type 1B	4679	Wmica	44.41	0.41	33.40	2.51	0.04	1.30	0.00	0.89	11.15
MA21-071A-2	Int Type 1B	4680	Fspar	57.40	0.00	24.25	0.12	0.01	0.00	5.88	7.55	0.22
MA21-071A-2	Int Type 1B	4681	Fspar	57.76	0.03	23.90	0.21	0.00	0.01	5.86	7.52	0.23
MA21-071A-2	Int Type 1B	4682	Fspar	57.75	0.03	23.81	0.28	0.02	0.06	5.79	7.54	0.32
MA21-071A-2	Int Type 1B	4683	Fspar	57.81	0.11	23.70	0.37	0.00	0.03	5.57	7.85	0.24
MA21-071A-2	Int Type 1B	4684	Fspar	57.90	0.01	24.03	0.14	0.00	0.03	6.06	7.62	0.25
MA21-071A-2	Int Type 1B	4685	Fspar	58.16	0.01	24.10	0.29	0.05	0.00	5.90	7.55	0.41
MA21-071A-2	Int Type 1B	4686	Fspar	61.28	0.00	22.18	0.26	0.00	0.01	3.25	9.25	0.23
MA21-071A-2	Int Type 1B	4687	Fspar	59.55	0.00	23.52	0.12	0.03	0.00	5.12	8.08	0.27
MA21-071A-2	Int Type 1B	4688	Fspar	64.00	0.00	20.78	0.21	0.00	0.02	1.57	10.03	0.33
MA21-071A-2	Int Type 1B	4689	Fspar	58.36	0.15	24.17	0.07	0.03	0.01	5.99	7.66	0.34
MA21-071A-2	Int Type 1B	4690	Fspar	57.92	0.02	24.50	0.27	0.00	0.02	6.20	7.61	0.36
MA21-071A-2	Int Type 1B	4691	Fspar	59.91	0.16	23.54	0.16	0.00	0.00	4.67	8.19	0.34
MA21-071A-2	Int Type 1B	4692	Fspar	58.55	0.04	24.19	0.14	0.00	0.00	5.81	7.87	0.33
MA21-071A-2	Int Type 1B	4693	Fspar	64.12	0.02	20.95	0.16	0.02	0.00	1.63	9.95	0.31
MA21-071A-2	Int Type 1B	4694	Fspar	63.82	0.02	21.02	0.20	0.00	0.00	1.72	10.11	0.36
MA21-071A-2	Int Type 1B	4695	Fspar	58.33	0.01	24.80	0.22	0.12	0.00	6.16	7.64	0.20
MA21-071A-2	Int Type 1B	4697	Fspar	58.65	0.02	24.56	0.16	0.14	0.03	5.97	7.61	0.29
MA21-071A-2	Int Type 1B	4698	Chl	24.19	0.03	21.22	22.85	0.25	14.63	0.00	0.04	0.14
MA21-071A-2	Int Type 1B	4699	Chl	24.18	0.03	21.63	22.98	0.21	14.55	0.05	0.40	0.16
MA21-071A-2	Int Type 1B	4701	Chl	24.32	0.03	21.37	23.13	0.29	14.69	0.06	0.29	0.15
MA21-071A-2	Int Type 1B	4702	Chl	24.02	0.02	21.14	23.75	0.30	14.76	0.03	0.06	0.07
MA21-071A-2	Int Type 1B	4703	Chl	24.49	0.04	21.68	23.34	0.28	14.63	0.00	0.32	0.12
MA21-071A-2	Int Type 1B	4704	Chl	24.46	0.04	21.65	23.04	0.13	15.10	0.02	0.40	0.14

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-2	Int Type 1B	4705	Chl	24.53	0.00	21.48	22.96	0.11	15.21	0.00	0.33	0.22
MA21-071A-2	Int Type 1B	4706	Chl	24.24	0.04	21.72	23.08	0.25	15.01	0.00	0.46	0.16
MA21-071A-2	Int Type 1B	4707	Chl	24.40	0.03	21.36	23.68	0.15	14.91	0.07	0.39	0.15
MA21-071A-2	Int Type 1B	4709	Chl	24.43	0.03	21.78	23.14	0.13	15.04	0.08	0.40	0.15
MA21-071A-2	Int Type 1B	4710	Chl	24.41	0.17	21.76	23.47	0.18	15.00	0.09	0.36	0.09
MA21-071A-2	Int Type 1B	4711	Chl	24.34	0.13	21.59	23.26	0.23	15.01	0.00	0.43	0.09
MA21-071A-2	Int Type 1B	4712	Chl	24.64	0.12	21.75	23.68	0.22	15.16	0.04	0.43	0.11
MA21-071A-2	Int Type 1B	4713	Chl	24.84	0.02	21.95	23.49	0.38	15.15	0.07	0.31	0.05
MA21-071A-2	Int Type 1B	4714	Wmica	42.86	0.38	31.32	2.94	0.01	1.19	0.00	0.50	10.97
MA21-071A-2	Int Type 1B	4715	Wmica	43.88	0.44	30.97	2.49	0.01	1.50	0.00	0.53	11.05
MA21-071A-2	Int Type 1B	4716	Wmica	44.00	0.32	30.93	2.72	0.00	1.49	0.00	0.53	10.93
MA21-071A-2	Int Type 1B	4717	Wmica	43.06	0.30	31.88	2.52	0.01	1.21	0.00	0.49	11.01
MA21-071A-2	Int Type 1B	4718	Wmica	43.49	0.39	31.46	3.03	0.00	1.27	0.00	0.43	11.17
MA21-071A-2	Int Type 1B	4719	Wmica	43.17	0.14	32.73	3.05	0.01	0.95	0.00	0.70	10.83
MA21-071A-2	Int Type 1B	4720	Wmica	43.59	0.30	32.19	2.61	0.06	1.23	0.01	0.65	10.94
MA21-071A-2	Int Type 1B	4721	Wmica	43.65	0.34	31.72	3.05	0.00	1.36	0.00	0.65	10.82
MA21-071A-2	Int Type 1B	4722	Wmica	43.14	0.36	32.82	2.81	0.04	1.11	0.00	0.64	11.14
MA21-071A-2	Int Type 1B	4723	Wmica	43.01	0.30	32.80	2.95	0.01	0.97	0.00	0.60	11.13
MA21-071A-2	Int Type 1B	4724	Wmica	42.99	0.14	33.36	2.98	0.00	0.87	0.00	0.63	11.05
MA21-071A-2	Int Type 1B	4726	Wmica	42.53	0.24	33.47	3.16	0.12	1.06	0.00	0.73	11.00
MA21-071A-2	Int Type 1B	4727	Wmica	43.17	0.28	32.97	3.02	0.02	1.10	0.00	0.66	10.98
MA21-071A-2	Int Type 1B	4728	Wmica	42.93	0.46	32.37	3.29	0.00	1.42	0.00	0.61	10.79
MA21-071A-2	Int Type 1B	4729	Wmica	43.13	0.18	33.48	3.07	0.03	1.04	0.00	0.68	11.10
MA21-071A-2	Int Type 1B	4746	Wmica	43.42	0.28	33.03	2.71	0.17	1.12	0.00	0.72	10.96
MA21-071A-2	Int Type 1B	4748	Wmica	42.68	0.14	32.74	2.47	0.10	0.90	0.00	0.56	10.95
MA21-071A-2	Int Type 1B	4749	Wmica	43.30	0.47	31.99	2.54	0.00	1.16	0.00	0.65	11.12
MA21-071A-2	Int Type 1B	4750	Wmica	43.07	0.46	32.19	2.59	0.01	1.14	0.00	0.58	11.03
MA21-071A-2	Int Type 1B	4751	Wmica	43.42	0.47	31.44	2.76	0.11	1.17	0.00	0.54	11.09
MA21-071A-2	Int Type 1B	4753	Wmica	42.66	0.20	33.41	2.57	0.00	0.73	0.00	0.66	10.99
MA21-071A-2	Int Type 1B	4755	Wmica	42.70	0.16	33.19	2.48	0.00	0.90	0.00	0.70	11.12
MA21-071A-2	Int Type 1B	4757	Wmica	42.58	0.29	32.84	2.71	0.01	0.94	0.00	0.64	10.96
MA21-071A-2	Int Type 1B	4758	Wmica	42.90	0.18	33.00	2.74	0.00	1.03	0.00	0.70	11.01
MA21-071A-2	Int Type 1B	4759	Wmica	43.43	0.33	32.91	2.46	0.00	0.95	0.00	0.50	11.05
MA21-071A-2	Int Type 1B	4760	Wmica	42.74	0.29	33.61	2.85	0.02	0.68	0.00	0.58	10.92

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-2	Int Type 1B	4761	Wmica	42.86	0.20	33.54	2.72	0.00	0.88	0.00	0.79	10.98
MA21-071A-2	Int Type 1B	4762	Fspar	56.77	0.00	23.18	0.00	0.02	0.00	5.49	7.58	0.26
MA21-071A-2	Int Type 1B	4763	Fspar	56.57	0.03	23.68	0.03	0.00	0.01	5.95	7.50	0.23
MA21-071A-2	Int Type 1B	4764	Fspar	56.76	0.02	23.81	0.15	0.00	0.00	5.94	7.39	0.27
MA21-071A-2	Int Type 1B	4765	Fspar	56.79	0.00	23.79	0.08	0.00	0.00	5.86	7.57	0.24
MA21-071A-2	Int Type 1B	4766	Fspar	57.07	0.07	23.80	0.00	0.00	0.00	5.86	7.41	0.28
MA21-071A-2	Int Type 1B	4769	Fspar	57.03	0.01	23.79	0.14	0.00	0.00	5.82	7.42	0.23
MA21-071A-2	Int Type 1B	4770	Fspar	56.68	0.03	23.77	0.05	0.07	0.01	5.99	7.36	0.23
MA21-071A-2	Int Type 1B	4772	Fspar	56.76	0.00	23.79	0.16	0.00	0.00	5.88	7.49	0.17
MA21-071A-2	Int Type 1B	4774	Fspar	56.92	0.03	23.84	0.15	0.01	0.01	5.98	7.47	0.26
MA21-071A-2	Int Type 1B	4775	Fspar	57.03	0.15	23.88	0.17	0.00	0.00	6.11	7.43	0.30
MA21-071A-2	Int Type 1B	4776	Fspar	62.10	0.00	20.77	0.20	0.16	0.00	2.07	9.55	0.15
MA21-071A-2	Int Type 1B	4792	Wmica	41.91	0.13	31.91	2.79	0.04	0.88	0.06	0.66	10.56
MA21-071A-2	Int Type 1B	4793	Wmica	41.76	0.39	30.98	2.80	0.00	1.11	0.40	0.67	10.51
MA21-071A-2	Int Type 1B	4794	Wmica	41.49	0.28	31.44	2.71	0.11	1.01	0.18	0.55	10.63
MA21-071A-2	Int Type 1B	4795	Wmica	42.08	0.30	32.20	2.66	0.03	0.94	0.00	0.55	10.84
MA21-071A-2	Int Type 1B	4796	Wmica	42.56	0.39	31.08	2.67	0.11	1.29	0.03	0.57	10.98
MA21-071A-2	Int Type 1B	4797	Wmica	43.53	0.37	30.70	2.48	0.08	1.38	0.00	0.47	10.96
MA21-071A-2	Int Type 1B	4798	Wmica	43.00	0.41	31.52	2.53	0.00	1.22	0.00	0.56	10.89
MA21-071A-2	Int Type 1B	4800	Wmica	42.72	0.29	31.50	2.78	0.00	1.15	0.00	0.61	11.00
MA21-071A-2	Int Type 1B	4801	Wmica	43.45	0.45	30.63	2.76	0.00	1.51	0.00	0.62	10.83
MA21-071A-2	Int Type 1B	4803	Wmica	42.57	0.29	31.84	2.63	0.00	1.29	0.00	0.78	10.90
MA21-071A-2	Int Type 1B	4804	Wmica	42.73	0.32	31.49	2.66	0.34	1.23	0.00	0.68	10.92
MA21-071A-2	Int Type 1B	4805	Wmica	43.46	0.34	30.74	2.55	0.00	1.51	0.08	0.63	11.10
MA21-071A-2	Int Type 1B	4807	Wmica	43.09	0.38	31.55	2.53	0.00	1.32	0.00	0.64	10.98
MA21-071A-2	Int Type 1B	4808	Wmica	43.65	0.32	31.31	2.48	0.00	1.29	0.00	0.56	11.18
MA21-071A-2	Int Type 1B	4809	Wmica	43.16	0.42	31.55	2.67	0.00	1.29	0.00	0.64	11.08
MA21-071A-2	Int Type 1B	4810	Wmica	43.36	0.40	31.58	2.71	0.16	1.31	0.00	0.59	10.86
MA21-071A-2	Int Type 1B	4811	Wmica	43.19	0.43	31.72	2.73	0.00	1.38	0.00	0.57	11.13
MA21-071A-2	Int Type 1B	4812	Fspar	59.66	0.17	20.98	0.23	0.05	0.01	2.00	8.95	0.67
MA21-071A-2	Int Type 1B	4813	Fspar	56.08	0.00	23.24	0.26	0.01	0.00	6.02	7.16	0.20
MA21-071A-2	Int Type 1B	4814	Fspar	60.40	0.00	20.81	0.30	0.00	0.00	1.94	8.97	0.60
MA21-071A-2	Int Type 1B	4815	Fspar	56.47	0.03	23.38	0.09	0.00	0.00	5.64	7.39	0.27
MA21-071A-2	Int Type 1B	4816	Fspar	60.31	0.10	20.71	0.18	0.02	0.03	2.02	9.08	0.63

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-2	Int Type 1B	4817	Fspar	61.45	0.00	20.21	0.24	0.05	0.00	1.50	9.39	0.36
MA21-071A-2	Int Type 1B	4818	Fspar	56.42	0.00	23.52	0.26	0.00	0.00	5.80	7.27	0.20
MA21-071A-2	Int Type 1B	4819	Fspar	56.17	0.00	23.58	0.24	0.02	0.00	6.32	7.17	0.18
MA21-071A-2	Int Type 1B	4820	Fspar	56.17	0.03	23.39	0.10	0.21	0.00	6.07	7.22	0.35
MA21-071A-2	Int Type 1B	4823	Fspar	56.36	0.00	23.81	0.01	0.00	0.00	6.07	7.10	0.33
MA21-071A-2	Int Type 1B	4824	Fspar	56.30	0.00	23.77	0.15	0.00	0.00	6.09	7.22	0.27
MA21-071A-2	Int Type 1B	4825	Fspar	56.75	0.00	23.34	0.18	0.09	0.04	5.89	7.28	0.33
MA21-071A-2	Int Type 1B	4826	Fspar	56.61	0.00	23.79	0.09	0.09	0.00	5.86	7.41	0.37
MA21-071A-2	Int Type 1B	4827	Fspar	56.73	0.14	24.00	0.08	0.07	0.00	6.01	7.39	0.30
MA21-071A-2	Int Type 1B	4836	Chl	25.90	0.05	19.67	22.21	0.33	14.76	0.19	0.69	0.11
MA21-071A-2	Int Type 1B	4837	Chl	26.56	0.10	19.52	21.67	0.17	15.43	0.20	0.63	0.13
MA21-071A-2	Int Type 1B	4838	Chl	25.20	0.03	20.93	23.24	0.25	14.19	0.17	0.60	0.15
MA21-071A-2	Int Type 1B	4839	Chl	25.52	0.12	21.02	22.55	0.24	14.69	0.20	0.50	0.14
MA21-071A-2	Int Type 1B	4840	Chl	25.37	0.10	20.74	22.89	0.19	14.45	0.16	0.55	0.08
MA21-071A-2	Int Type 1B	4842	Chl	25.46	0.05	21.25	22.60	0.18	14.36	0.22	0.58	0.11
MA21-071A-2	Int Type 1B	4845	Chl	25.45	0.09	21.51	22.43	0.25	14.52	0.24	0.46	0.09
MA21-071A-2	Int Type 1B	4849	Chl	25.63	0.10	20.89	22.82	0.27	14.70	0.19	0.58	0.10
MA21-071A-2	Int Type 1B	4850	Wmica	43.41	0.30	31.84	2.36	0.00	1.15	0.04	0.66	10.54
MA21-071A-2	Int Type 1B	4851	Wmica	44.68	0.13	31.09	2.54	0.00	1.28	0.05	0.99	10.16
MA21-071A-2	Int Type 1B	4852	Wmica	43.56	0.37	32.11	2.13	0.00	1.12	0.06	0.76	10.72
MA21-071A-2	Int Type 1B	4853	Wmica	44.10	0.48	31.46	2.34	0.00	1.18	0.06	0.74	10.74
MA21-071A-2	Int Type 1B	4854	Wmica	43.15	0.24	32.64	2.43	0.00	0.89	0.06	0.87	10.88
MA21-071A-2	Int Type 1B	4855	Wmica	42.84	0.40	32.68	2.62	0.04	0.89	0.00	0.63	10.93
MA21-071A-2	Int Type 1B	4856	Wmica	42.94	0.39	32.42	2.75	0.03	1.13	0.00	0.72	11.06
MA21-071A-2	Int Type 1B	4859	Wmica	43.61	0.47	32.18	2.31	0.00	1.15	0.08	0.70	10.92
MA21-071A-2	Int Type 1B	4860	Wmica	43.31	0.34	32.93	2.52	0.11	0.88	0.02	0.76	10.60
MA21-071A-2	Int Type 1B	4861	Wmica	43.30	0.26	32.94	2.46	0.00	0.89	0.00	0.81	10.87
MA21-071A-2	Int Type 1B	4862	Wmica	43.07	0.32	32.59	2.78	0.02	1.05	0.00	0.79	11.11
MA21-071A-2	Int Type 1B	4864	Wmica	43.60	0.37	32.56	2.55	0.00	1.11	0.03	0.72	11.06
MA21-071A-2	Int Type 1B	4865	Wmica	43.51	0.29	32.51	2.45	0.03	0.97	0.14	0.75	10.90
MA21-071A-2	Int Type 1B	4866	Wmica	43.66	0.43	32.06	2.51	0.29	1.20	0.00	0.65	11.13
MA21-071A-2	Int Type 1B	4867	Wmica	43.25	0.34	32.62	2.76	0.00	1.16	0.00	0.82	10.87
MA21-071A-2	Int Type 1B	4868	Wmica	43.56	0.34	32.74	2.65	0.00	0.90	0.08	0.83	10.67
MA21-071A-2	Int Type 1B	4870	Wmica	43.36	0.18	32.91	2.48	0.04	1.10	0.00	0.77	10.99

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-2	Int Type 1B	4874	Wmica	44.24	0.35	31.46	2.67	0.12	1.46	0.00	0.73	11.09
MA21-071A-2	Int Type 1B	4875	Wmica	43.97	0.40	32.75	2.45	0.23	1.12	0.00	0.62	11.14
MA21-071A-2	Int Type 1B	4876	Wmica	43.41	0.28	33.25	2.48	0.05	0.90	0.16	0.86	11.17
MA21-071A-2	Int Type 1B	4878	Fspar	58.90	0.12	22.06	0.17	0.00	0.00	4.10	8.49	0.07
MA21-071A-2	Int Type 1B	4880	Fspar	58.27	0.00	22.58	0.22	0.00	0.01	4.79	7.99	0.28
MA21-071A-2	Int Type 1B	4881	Fspar	56.82	0.00	23.68	0.25	0.00	0.01	5.93	7.42	0.25
MA21-071A-2	Int Type 1B	4882	Fspar	60.05	0.00	21.75	0.23	0.05	0.00	3.29	8.72	0.12
MA21-071A-2	Int Type 1B	4884	Fspar	63.10	0.00	19.68	0.28	0.02	0.05	1.16	9.96	0.12
MA21-071A-2	Int Type 1B	4885	Fspar	56.93	0.02	23.71	0.20	0.06	0.00	6.11	7.28	0.15
MA21-071A-2	Int Type 1B	4886	Fspar	59.39	0.00	22.17	0.12	0.04	0.00	3.94	8.62	0.18
MA21-071A-2	Int Type 1B	4887	Fspar	56.59	0.15	23.96	0.26	0.02	0.05	6.19	7.37	0.22
MA21-071A-2	Int Type 1B	4888	Fspar	59.31	0.01	22.57	0.17	0.00	0.00	4.43	8.26	0.17
MA21-071A-2	Int Type 1B	4889	Fspar	57.27	0.00	23.80	0.19	0.02	0.02	6.26	7.27	0.27
MA21-071A-2	Int Type 1B	4890	Fspar	63.00	0.03	20.19	0.37	0.00	0.02	1.20	10.06	0.11
MA21-071A-2	Int Type 1B	4891	Fspar	59.15	0.03	22.80	0.11	0.00	0.01	4.75	7.98	0.21
MA21-071A-2	Int Type 1B	4893	Fspar	61.05	0.00	21.64	0.22	0.05	0.02	2.92	9.15	0.27
MA21-071A-2	Int Type 1B	4894	Fspar	59.32	0.02	22.68	0.12	0.03	0.01	4.35	8.44	0.25
MA21-071A-2	Int Type 1B	4895	Fspar	57.19	0.00	24.00	0.30	0.08	0.02	5.93	7.53	0.22
MA21-071A-2	Int Type 1B	4896	Fspar	63.74	0.00	20.27	0.33	0.00	0.06	1.22	10.02	0.18
MA21-071A-2	Int Type 1B	4897	Fspar	63.41	0.00	20.30	0.35	0.06	0.00	1.29	10.27	0.18
MA21-071A-2	Int Type 1B	4898	Fspar	63.70	0.14	20.12	0.34	0.00	0.05	1.32	10.05	0.19
MA21-071A-2	Int Type 1B	4900	Wmica	43.28	0.45	31.66	2.55	0.00	1.17	0.07	0.53	10.94
MA21-071A-2	Int Type 1B	4901	Wmica	43.30	0.39	31.41	2.71	0.00	1.29	0.06	0.57	11.18
MA21-071A-2	Int Type 1B	4902	Wmica	43.29	0.30	31.79	2.43	0.04	1.09	0.05	0.54	11.14
MA21-071A-2	Int Type 1B	4904	Wmica	43.35	0.24	31.78	2.62	0.00	1.30	0.00	0.55	11.00
MA21-071A-2	Int Type 1B	4905	Wmica	43.05	0.15	33.08	2.60	0.00	0.94	0.00	0.67	10.80
MA21-071A-2	Int Type 1B	4906	Wmica	42.69	0.30	33.12	2.57	0.00	0.88	0.00	0.68	10.74
MA21-071A-2	Int Type 1B	4907	Wmica	43.15	0.55	31.46	2.78	0.04	1.23	0.06	0.58	10.94
MA21-071A-2	Int Type 1B	4908	Wmica	43.29	0.22	32.37	2.57	0.11	0.93	0.00	0.71	10.88
MA21-071A-2	Int Type 1B	4909	Wmica	43.55	0.46	31.79	2.67	0.00	1.25	0.03	0.66	10.88
MA21-071A-2	Int Type 1B	4910	Wmica	43.20	0.42	31.80	2.88	0.12	1.25	0.00	0.58	10.84
MA21-071A-2	Int Type 1B	4911	Wmica	43.53	0.35	31.83	2.65	0.00	1.22	0.00	0.66	11.02
MA21-071A-2	Int Type 1B	4914	Wmica	43.00	0.29	32.76	2.82	0.00	0.97	0.00	0.76	10.78
MA21-071A-2	Int Type 1B	4916	Wmica	43.67	0.35	31.79	2.94	0.00	1.20	0.01	0.64	10.90

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-2	Int Type 1B	4917	Wmica	43.00	0.25	33.11	2.56	0.04	0.96	0.00	0.75	10.99
MA21-071A-2	Int Type 1B	4918	Wmica	44.19	0.41	31.58	2.73	0.00	1.42	0.04	0.64	11.15
MA21-071A-2	Int Type 1B	4919	Fspar	57.06	0.04	23.03	0.19	0.00	0.00	5.52	7.37	0.25
MA21-071A-2	Int Type 1B	4920	Fspar	57.45	0.01	23.08	0.09	0.00	0.00	5.47	7.62	0.18
MA21-071A-2	Int Type 1B	4922	Fspar	57.52	0.00	23.36	0.30	0.19	0.00	5.70	7.52	0.16
MA21-071A-2	Int Type 1B	4923	Fspar	57.63	0.02	23.52	0.06	0.00	0.00	5.87	7.22	0.26
MA21-071A-2	Int Type 1B	4924	Fspar	57.19	0.00	23.75	0.14	0.06	0.00	6.28	7.39	0.27
MA21-071A-2	Int Type 1B	4925	Fspar	57.25	0.09	23.79	0.15	0.06	0.00	6.12	7.37	0.25
MA21-071A-2	Int Type 1B	4937	Wmica	41.97	0.31	30.80	2.55	0.01	1.12	0.83	0.72	10.55
MA21-071A-2	Int Type 1B	4938	Wmica	42.96	0.10	30.55	2.70	0.00	1.33	0.30	0.68	10.86
MA21-071A-2	Int Type 1B	4939	Wmica	42.43	0.32	31.40	2.60	0.00	0.88	0.43	0.57	10.79
MA21-071A-2	Int Type 1B	4940	Wmica	42.61	0.30	31.92	2.44	0.00	0.94	0.00	0.68	10.77
MA21-071A-2	Int Type 1B	4941	Wmica	42.67	0.34	31.83	2.55	0.00	0.94	0.16	0.76	10.54
MA21-071A-2	Int Type 1B	4942	Wmica	43.39	0.05	30.97	2.73	0.00	1.33	0.19	0.64	10.78
MA21-071A-2	Int Type 1B	4943	Wmica	42.65	0.36	31.84	2.37	0.00	1.08	0.30	0.77	10.72
MA21-071A-2	Int Type 1B	4944	Wmica	42.39	0.30	32.49	2.62	0.03	0.85	0.00	0.79	10.92
MA21-071A-2	Int Type 1B	4946	Wmica	42.43	0.20	32.20	2.48	0.13	0.92	0.00	0.64	10.97
MA21-071A-2	Int Type 1B	4947	Wmica	42.31	0.29	32.32	2.62	0.07	0.98	0.00	0.68	10.97
MA21-071A-2	Int Type 1B	4948	Wmica	42.58	0.32	31.67	2.39	0.11	1.00	0.00	0.84	10.92
MA21-071A-2	Int Type 1B	4950	Wmica	42.82	0.50	31.47	2.64	0.05	1.04	0.00	0.82	10.84
MA21-071A-2	Int Type 1B	4951	Wmica	42.95	0.43	31.88	2.30	0.10	1.07	0.00	0.66	10.84
MA21-071A-2	Int Type 1B	4953	Wmica	43.04	0.31	31.22	2.70	0.02	1.21	0.00	0.55	11.08
MA21-071A-2	Int Type 1B	4954	Wmica	43.06	0.40	30.82	2.99	0.04	1.38	0.00	0.62	11.03
MA21-071A-2	Int Type 1B	4955	Wmica	43.54	0.14	30.85	2.96	0.19	1.32	0.25	0.74	10.67
MA21-071A-2	Int Type 1B	4956	Wmica	42.63	0.14	32.48	2.75	0.00	0.91	0.00	0.85	10.80
MA21-071A-2	Int Type 1B	4957	Wmica	42.10	0.20	33.21	2.65	0.07	0.87	0.00	0.74	10.76
MA21-071A-2	Int Type 1B	4958	Wmica	43.31	0.14	31.08	2.71	0.06	1.41	0.41	0.72	10.95
MA21-071A-2	Int Type 1B	4959	Fspar	56.20	0.00	22.99	0.03	0.00	0.00	5.74	7.42	0.30
MA21-071A-2	Int Type 1B	4960	Fspar	56.00	0.00	23.55	0.13	0.01	0.02	5.82	7.12	0.36
MA21-071A-2	Int Type 1B	4961	Fspar	56.38	0.00	23.13	0.17	0.00	0.02	5.45	7.62	0.17
MA21-071A-2	Int Type 1B	4962	Fspar	61.11	0.03	20.66	0.00	0.11	0.00	2.17	9.38	0.13
MA21-071A-2	Int Type 1B	4963	Fspar	56.91	0.06	23.24	0.00	0.00	0.02	5.33	7.66	0.33
MA21-071A-2	Int Type 1B	4964	Fspar	57.00	0.00	23.10	0.11	0.06	0.00	5.54	7.36	0.28
MA21-071A-2	Int Type 1B	4965	Fspar	56.86	0.01	23.25	0.04	0.00	0.02	5.33	7.58	0.33

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071A-2	Int Type 1B	4966	Fspar	56.63	0.00	23.47	0.00	0.00	0.00	5.77	7.50	0.23
MA21-071A-2	Int Type 1B	4967	Fspar	55.47	0.00	24.12	0.15	0.13	0.00	6.59	6.94	0.37
MA21-071A-2	Int Type 1B	4968	Fspar	56.63	0.00	23.58	0.30	0.11	0.02	5.79	7.26	0.22
MA21-071A-2	Int Type 1B	4969	Fspar	56.37	0.00	23.76	0.11	0.00	0.00	5.82	7.31	0.22
MA21-071A-2	Int Type 1B	4970	Fspar	56.52	0.00	23.56	0.17	0.04	0.01	5.93	7.45	0.16
MA21-071A-2	Int Type 1B	4971	Fspar	57.58	0.04	22.72	0.03	0.00	0.02	4.77	8.03	0.32
MA21-071A-2	Int Type 1B	4972	Fspar	56.77	0.01	23.51	0.20	0.00	0.00	5.78	7.47	0.25
MA21-071A-2	Int Type 1B	4973	Fspar	56.63	0.00	23.56	0.13	0.00	0.01	5.48	7.56	0.31
MA21-071A-2	Int Type 1B	4974	Fspar	56.40	0.00	23.53	0.10	0.18	0.00	6.08	7.47	0.20
MA21-071A-2	Int Type 1B	4975	Fspar	56.62	0.00	23.61	0.10	0.00	0.00	6.01	7.32	0.33
MA21-071A-2	Int Type 1B	4977	Fspar	56.74	0.00	23.57	0.10	0.00	0.01	5.73	7.46	0.31
MA21-071A-2	Int Type 1B	4978	Fspar	61.70	0.07	20.85	0.03	0.00	0.00	2.05	9.62	0.23
MA21-071A-2	Int Type 1B	4979	Fspar	59.38	0.00	22.38	0.12	0.00	0.00	4.12	8.23	0.27
MA21-071D	Int Type 1A	4980	Wmica	44.62		31.57	2.02	0.00	0.63	0.00	0.57	8.82
MA21-071D	Int Type 1A	4981	Wmica	44.34		33.28	1.91	0.02	0.50	0.00	0.57	9.06
MA21-071D	Int Type 1A	4982	Wmica	45.26		32.52	2.50	0.00	0.48	0.00	0.60	8.53
MA21-071D	Int Type 1A	4984	Wmica	44.98		33.26	2.41	0.06	0.64	0.00	0.56	8.91
MA21-071D	Int Type 1A	4985	Wmica	45.39		32.25	2.52	0.08	0.66	0.00	0.63	9.09
MA21-071D	Int Type 1A	4986	Wmica	45.67		32.30	2.61	0.02	0.92	0.00	0.56	9.80
MA21-071D	Int Type 1A	4987	Wmica	46.41		33.30	2.23	0.00	0.65	0.00	0.79	8.73
MA21-071D	Int Type 1A	4988	Wmica	46.34		34.61	2.93	0.03	0.48	0.00	0.68	8.89
MA21-071D	Int Type 1A	4989	Wmica	47.62		33.59	2.29	0.00	0.75	0.00	0.74	8.77
MA21-071D	Int Type 1A	4990	Wmica	47.46		34.70	2.35	0.00	0.47	0.00	0.79	8.86
MA21-071D	Int Type 1A	4991	Wmica	43.78	0.49	33.68	2.51	0.07	1.24	0.00	0.56	11.51
MA21-071D	Int Type 1A	4992	Wmica	43.52	0.13	34.93	2.51	0.21	0.84	0.00	0.63	11.30
MA21-071D	Int Type 1A	4993	Wmica	43.89	0.17	34.83	2.49	0.02	0.78	0.01	0.57	11.35
MA21-071D	Int Type 1A	4994	Wmica	44.12	0.55	33.96	2.34	0.12	1.14	0.00	0.69	11.31
MA21-071D	Int Type 1A	4995	Wmica	45.02	0.46	34.14	2.04	0.00	1.34	0.00	0.74	11.46
MA21-071D	Int Type 1A	4996	Wmica	44.46	0.43	34.12	2.74	0.00	1.31	0.00	0.61	11.39
MA21-071D	Int Type 1A	4998	Wmica	44.39	0.47	34.92	2.26	0.04	0.78	0.00	0.66	11.31
MA21-071D	Int Type 1A	4999	Wmica	44.12	0.19	35.39	2.46	0.00	0.99	0.00	0.79	11.36
MA21-071D	Int Type 1A	5000	Wmica	44.39	0.22	35.46	2.41	0.09	1.02	0.00	0.81	11.42
MA21-071D	Int Type 1A	5001	Wmica	45.04	0.40	34.30	2.33	0.00	1.25	0.00	0.78	11.50
MA21-071D	Int Type 1A	5002	Wmica	44.50	0.22	35.34	2.16	0.49	1.05	0.00	0.67	11.35

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5003	Wmica	45.46	0.25	33.99	2.16	0.05	1.33	0.06	0.61	11.75
MA21-071D	Int Type 1A	5004	Wmica	45.46	0.31	34.52	2.38	0.03	1.38	0.00	0.81	11.48
MA21-071D	Int Type 1A	5005	Fspar	58.57	0.00	25.36	0.00	0.07	0.00	6.04	7.60	0.05
MA21-071D	Int Type 1A	5006	Fspar	58.53	0.04	25.29	0.00	0.03	0.01	5.93	7.88	0.23
MA21-071D	Int Type 1A	5007	Fspar	60.47	0.06	23.98	0.05	0.00	0.00	4.50	8.74	0.15
MA21-071D	Int Type 1A	5008	Fspar	58.67	0.00	25.20	0.04	0.00	0.01	6.07	7.89	0.17
MA21-071D	Int Type 1A	5009	Fspar	58.85	0.00	25.21	0.06	0.24	0.00	5.73	7.77	0.13
MA21-071D	Int Type 1A	5010	Fspar	59.11	0.05	25.14	0.30	0.00	0.00	5.79	7.70	0.08
MA21-071D	Int Type 1A	5011	Fspar	58.44	0.00	25.50	0.00	0.00	0.00	6.23	7.88	0.08
MA21-071D	Int Type 1A	5012	Fspar	58.69	0.02	25.24	0.01	0.06	0.00	6.18	7.80	0.24
MA21-071D	Int Type 1A	5013	Fspar	59.70	0.00	25.05	0.00	0.00	0.01	5.63	7.85	0.06
MA21-071D	Int Type 1A	5014	Fspar	59.79	0.04	24.68	0.00	0.00	0.00	5.25	8.10	0.12
MA21-071D	Int Type 1A	5015	Fspar	58.53	0.08	25.63	0.02	0.00	0.04	6.00	7.79	0.23
MA21-071D	Int Type 1A	5016	Fspar	59.31	0.04	25.33	0.05	0.00	0.00	5.69	7.81	0.19
MA21-071D	Int Type 1A	5017	Fspar	58.46	0.00	25.53	0.00	0.07	0.00	6.32	7.75	0.14
MA21-071D	Int Type 1A	5018	Fspar	58.99	0.00	25.73	0.00	0.02	0.00	6.01	7.67	0.15
MA21-071D	Int Type 1A	5019	Fspar	61.62	0.00	23.80	0.00	0.00	0.00	4.51	8.45	0.19
MA21-071D	Int Type 1A	5020	Fspar	58.81	0.00	25.75	0.00	0.00	0.00	6.07	7.68	0.13
MA21-071D	Int Type 1A	5021	Fspar	59.20	0.02	25.47	0.02	0.00	0.00	6.15	7.64	0.09
MA21-071D	Int Type 1A	5022	Fspar	59.06	0.00	25.56	0.00	0.00	0.01	6.26	7.78	0.13
MA21-071D	Int Type 1A	5023	Fspar	59.70	0.00	25.22	0.07	0.00	0.04	5.30	8.19	0.03
MA21-071D	Int Type 1A	5024	Fspar	58.73	0.03	25.65	0.18	0.22	0.00	6.50	7.62	0.13
MA21-071D	Int Type 1A	5025	Fspar	59.07	0.01	25.56	0.01	0.04	0.00	6.03	7.79	0.15
MA21-071D	Int Type 1A	5026	Fspar	58.83	0.00	25.76	0.00	0.00	0.00	6.14	7.76	0.16
MA21-071D	Int Type 1A	5027	Fspar	58.98	0.15	25.56	0.05	0.00	0.00	6.19	7.76	0.17
MA21-071D	Int Type 1A	5028	Fspar	59.15	0.00	25.65	0.04	0.00	0.00	6.03	8.04	0.14
MA21-071D	Int Type 1A	5029	Fspar	58.83	0.00	26.23	0.25	0.00	0.00	6.81	7.65	0.09
MA21-071D	Int Type 1A	5030	Fspar	59.90	0.00	25.71	0.25	0.00	0.00	6.20	7.68	0.13
MA21-071D	Int Type 1A	5031	Chl	26.75	0.00	21.56	19.16	0.09	17.56	0.12	0.33	0.38
MA21-071D	Int Type 1A	5032	Chl	27.04	0.07	21.52	19.69	0.02	17.80	0.10	0.25	0.40
MA21-071D	Int Type 1A	5033	Chl	27.05	0.21	21.55	19.35	0.31	17.71	0.14	0.43	0.48
MA21-071D	Int Type 1A	5034	Chl	26.61	0.02	21.81	19.78	0.18	17.79	0.19	0.45	0.09
MA21-071D	Int Type 1A	5035	Chl	27.37	0.07	21.93	19.98	0.16	17.81	0.09	0.26	0.25
MA21-071D	Int Type 1A	5036	Wmica	44.02	0.56	32.62	2.40	0.00	1.40	0.13	0.78	11.39

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5037	Biotite	34.34	1.21	18.63	16.86	0.00	12.94	0.00	0.41	8.84
MA21-071D	Int Type 1A	5038	Wmica	44.85	0.86	31.99	2.64	0.00	1.49	0.12	0.55	11.36
MA21-071D	Int Type 1A	5039	Biotite	35.92	1.08	17.69	15.73	0.19	11.99	0.00	0.52	10.04
MA21-071D	Int Type 1A	5040	Wmica	44.55	0.52	32.92	2.56	0.00	1.27	0.22	0.54	11.56
MA21-071D	Int Type 1A	5041	Wmica	44.65	0.55	33.17	2.56	0.00	1.34	0.17	0.73	11.25
MA21-071D	Int Type 1A	5043	Biotite	36.36	1.41	17.60	16.13	0.00	12.37	0.01	0.35	10.12
MA21-071D	Int Type 1A	5044	Wmica	44.77	0.54	32.88	2.62	0.05	1.57	0.28	0.68	11.30
MA21-071D	Int Type 1A	5045	Biotite	35.60	1.26	18.30	16.02	0.12	12.76	0.00	0.90	9.04
MA21-071D	Int Type 1A	5046	Wmica	44.74	0.77	32.90	2.28	0.03	1.41	0.12	0.59	11.71
MA21-071D	Int Type 1A	5047	Biotite	35.78	1.36	18.39	15.82	0.17	12.29	0.05	0.49	10.11
MA21-071D	Int Type 1A	5048	Biotite	35.75	1.31	18.37	16.10	0.00	12.37	0.01	0.58	9.59
MA21-071D	Int Type 1A	5049	Biotite	35.81	1.22	18.51	16.17	0.00	11.85	0.00	0.03	10.60
MA21-071D	Int Type 1A	5050	Biotite	35.60	1.39	18.56	16.18	0.01	12.71	0.05	0.59	9.35
MA21-071D	Int Type 1A	5051	Biotite	36.31	1.36	18.38	16.27	0.00	12.42	0.00	0.56	9.80
MA21-071D	Int Type 1A	5052	Biotite	36.09	1.25	18.51	16.05	0.00	12.45	0.10	0.63	9.80
MA21-071D	Int Type 1A	5053	Biotite	36.00	1.47	18.72	16.73	0.00	12.02	0.00	0.04	10.41
MA21-071D	Int Type 1A	5054	Biotite	36.65	1.32	17.85	16.16	0.11	12.79	0.00	0.42	9.86
MA21-071D	Int Type 1A	5055	Biotite	35.74	1.31	18.61	16.28	0.01	12.47	0.00	0.61	9.97
MA21-071D	Int Type 1A	5057	Biotite	36.05	1.27	18.33	16.30	0.00	12.09	0.00	0.47	10.36
MA21-071D	Int Type 1A	5074	Biotite	36.42	1.32	18.34	16.58	0.12	12.41	0.00	0.23	10.33
MA21-071D	Int Type 1A	5113	Biotite	36.10	1.32	18.90	15.98	0.00	12.75	0.00	0.44	10.24
MA21-071D	Int Type 1A	5114	Biotite	36.64	1.25	18.56	16.03	0.14	12.76	0.02	0.30	10.31
MA21-071D	Int Type 1A	5115	Biotite	35.62	1.30	18.58	17.13	0.16	12.78	0.00	0.37	9.97
MA21-071D	Int Type 1A	5116	Biotite	36.03	1.09	18.70	16.16	0.27	12.54	0.00	0.42	10.17
MA21-071D	Int Type 1A	5117	Biotite	36.12	1.11	18.98	16.46	0.43	12.74	0.00	0.54	9.99
MA21-071D	Int Type 1A	5118	Biotite	36.27	1.14	18.84	16.12	0.17	12.75	0.00	0.66	10.07
MA21-071D	Int Type 1A	5119	Biotite	36.25	1.26	18.79	16.20	0.33	12.44	0.00	0.41	10.67
MA21-071D	Int Type 1A	5120	Biotite	36.62	1.45	18.89	16.03	0.16	12.49	0.00	0.39	10.24
MA21-071D	Int Type 1A	5121	Biotite	36.57	1.29	18.32	16.11	0.07	12.94	0.00	0.58	10.19
MA21-071D	Int Type 1A	5122	Biotite	36.40	1.33	18.29	16.83	0.17	12.48	0.07	0.50	10.08
MA21-071D	Int Type 1A	5123	Biotite	36.35	1.33	19.20	16.87	0.32	12.73	0.00	0.41	10.00
MA21-071D	Int Type 1A	5124	Biotite	35.97	1.15	19.24	16.97	0.33	13.34	0.00	0.49	9.79
MA21-071D	Int Type 1A	5125	Chl	26.46	0.07	20.79	19.45	0.00	18.00	0.19	0.03	0.13
MA21-071D	Int Type 1A	5126	Chl	26.24	0.00	21.83	18.79	0.00	17.89	0.01	0.00	0.16

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5127	Chl	27.48	0.23	20.27	19.05	0.00	16.56	0.00	0.04	1.74
MA21-071D	Int Type 1A	5128	Chl	26.38	0.07	21.70	19.21	0.00	17.90	0.04	0.00	0.18
MA21-071D	Int Type 1A	5129	Chl	26.58	0.02	21.95	19.31	0.00	17.82	0.08	0.09	0.24
MA21-071D	Int Type 1A	5130	Chl	27.58	0.17	19.96	19.75	0.00	16.15	0.00	0.00	2.04
MA21-071D	Int Type 1A	5131	Chl	25.74	0.00	21.89	20.71	0.00	17.27	0.11	0.31	0.03
MA21-071D	Int Type 1A	5132	Chl	26.55	0.07	21.26	19.99	0.00	17.91	0.13	0.00	0.49
MA21-071D	Int Type 1A	5133	Chl	26.92	0.16	21.58	19.44	0.00	17.59	0.05	0.23	0.86
MA21-071D	Int Type 1A	5134	Chl	26.51	0.07	21.63	19.64	0.00	18.64	0.04	0.25	0.15
MA21-071D	Int Type 1A	5135	Chl	27.76	0.06	21.04	19.15	0.00	17.46	0.00	0.06	1.08
MA21-071D	Int Type 1A	5136	Chl	27.32	0.18	21.70	19.64	0.00	17.60	0.11	0.00	0.66
MA21-071D	Int Type 1A	5137	Chl	26.90	0.22	22.06	19.12	0.00	18.22	0.03	0.38	0.15
MA21-071D	Int Type 1A	5138	Chl	27.08	0.09	21.54	19.23	0.00	18.84	0.00	0.45	0.04
MA21-071D	Int Type 1A	5139	Chl	26.98	0.00	21.69	19.92	0.00	17.98	0.15	0.49	0.65
MA21-071D	Int Type 1A	5140	Biotite	29.00	0.29	20.02	18.67	0.00	16.14	0.17	0.47	3.09
MA21-071D	Int Type 1A	5141	Chl	26.97	0.19	22.16	20.17	0.00	17.90	0.04	0.49	0.44
MA21-071D	Int Type 1A	5142	Chl	27.40	0.21	21.95	19.68	0.00	17.70	0.09	0.45	0.70
MA21-071D	Int Type 1A	5143	Chl	29.62	0.34	19.91	18.70	0.00	15.90	0.00	0.00	3.09
MA21-071D	Int Type 1A	5144	Biotite	28.65	0.30	21.32	19.38	0.00	16.94	0.10	0.43	2.20
MA21-071D	Int Type 1A	5145	Chl	27.78	0.25	21.65	19.45	0.00	17.89	0.03	0.37	1.12
MA21-071D	Int Type 1A	5147	Biotite	29.99	0.50	20.83	18.74	0.00	16.55	0.00	0.47	3.61
MA21-071D	Int Type 1A	5148	Biotite	30.48	0.52	19.94	19.02	0.00	16.06	0.01	0.36	4.01
MA21-071D	Int Type 1A	5149	Biotite	31.96	0.67	19.88	17.92	0.00	15.40	0.05	0.65	5.21
MA21-071D	Int Type 1A	5150	Biotite	32.42	0.60	20.11	18.19	0.00	15.26	0.13	0.65	4.98
MA21-071D	Int Type 1A	5151	Biotite	32.06	0.60	20.06	18.37	0.00	15.52	0.07	0.36	5.16
MA21-071D	Int Type 1A	5152	Biotite	32.42	0.67	19.21	18.66	0.00	14.94	0.00	0.54	5.66
MA21-071D	Int Type 1A	5153	Biotite	34.67	1.02	18.24	16.97	0.00	13.32	0.00	0.42	7.95
MA21-071D	Int Type 1A	5154	Biotite	33.92	0.79	18.55	17.66	0.00	13.83	0.06	0.67	7.04
MA21-071D	Int Type 1A	5155	Biotite	34.37	0.89	18.48	17.35	0.00	13.85	0.00	0.46	7.80
MA21-071D	Int Type 1A	5156	Wmica	44.33	0.03	34.88	2.43	0.00	1.00	0.00	0.74	11.49
MA21-071D	Int Type 1A	5157	Biotite	34.64	0.83	18.52	17.40	0.00	13.83	0.00	0.63	7.92
MA21-071D	Int Type 1A	5158	Biotite	36.70	0.92	17.80	16.53	0.00	12.48	0.00	0.57	8.98
MA21-071D	Int Type 1A	5160	Wmica	45.27	0.33	33.25	2.77	0.00	1.35	0.00	0.60	11.61
MA21-071D	Int Type 1A	5161	Biotite	34.88	1.00	18.51	17.52	0.00	13.35	0.00	0.39	8.61
MA21-071D	Int Type 1A	5162	Biotite	35.98	1.01	18.11	16.60	0.00	12.63	0.00	0.60	8.92

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5163	Biotite	36.54	1.04	17.80	15.86	0.00	12.45	0.00	0.55	10.19
MA21-071D	Int Type 1A	5164	Biotite	36.26	0.96	17.82	16.19	0.00	12.10	0.00	0.43	10.81
MA21-071D	Int Type 1A	5165	Biotite	35.10	0.80	18.79	17.52	0.00	13.73	0.03	0.48	8.08
MA21-071D	Int Type 1A	5167	Wmica	44.91	0.17	34.66	2.53	0.00	0.96	0.00	0.65	11.69
MA21-071D	Int Type 1A	5168	Wmica	44.68	0.18	34.88	2.63	0.17	1.04	0.00	0.81	11.68
MA21-071D	Int Type 1A	5169	Biotite	36.58	1.06	17.57	15.96	0.00	12.30	0.00	0.40	10.76
MA21-071D	Int Type 1A	5171	Biotite	34.73	0.82	18.52	17.91	0.00	14.04	0.01	0.42	7.92
MA21-071D	Int Type 1A	5172	Wmica	45.01	0.14	34.31	2.57	0.00	1.27	0.00	0.60	11.77
MA21-071D	Int Type 1A	5173	Wmica	45.75	0.39	33.34	2.87	0.00	1.61	0.00	0.67	11.53
MA21-071D	Int Type 1A	5174	Biotite	36.96	1.09	17.87	16.47	0.00	12.26	0.00	0.29	10.31
MA21-071D	Int Type 1A	5175	Biotite	36.10	1.00	18.24	16.93	0.00	13.02	0.00	0.40	9.35
MA21-071D	Int Type 1A	5176	Biotite	36.64	1.01	17.50	16.42	0.00	12.42	0.00	0.64	10.26
MA21-071D	Int Type 1A	5177	Wmica	45.53	0.22	34.74	2.44	0.00	1.28	0.00	0.87	11.62
MA21-071D	Int Type 1A	5178	Wmica	45.56	0.10	33.96	2.78	0.00	1.36	0.00	0.60	11.74
MA21-071D	Int Type 1A	5179	Wmica	46.37	1.34	31.47	2.72	0.00	1.90	0.00	0.72	12.01
MA21-071D	Int Type 1A	5180	Wmica	46.63	0.45	32.96	2.54	0.00	1.68	0.00	0.56	11.76
MA21-071D	Int Type 1A	5181	Biotite	36.67	0.88	18.05	15.85	0.00	12.51	0.05	0.44	10.68
MA21-071D	Int Type 1A	5182	Biotite	36.84	0.99	18.24	15.88	0.00	12.36	0.00	0.41	10.42
MA21-071D	Int Type 1A	5183	Wmica	45.90	0.25	33.61	3.13	0.00	1.54	0.00	0.67	11.75
MA21-071D	Int Type 1A	5184	Biotite	37.04	1.07	17.94	16.01	0.00	12.06	0.00	0.39	10.81
MA21-071D	Int Type 1A	5185	Wmica	45.24	0.09	35.52	2.71	0.00	0.97	0.00	0.71	11.64
MA21-071D	Int Type 1A	5186	Wmica	45.94	0.31	33.79	2.85	0.00	1.51	0.00	0.64	11.85
MA21-071D	Int Type 1A	5187	Wmica	45.87	0.32	32.78	3.22	0.00	2.13	0.00	0.41	11.63
MA21-071D	Int Type 1A	5189	Biotite	37.11	1.07	18.02	16.13	0.00	12.51	0.00	0.52	10.45
MA21-071D	Int Type 1A	5192	Wmica	46.25	0.22	33.56	2.94	0.00	1.60	0.00	0.52	11.61
MA21-071D	Int Type 1A	5193	Biotite	36.38	0.95	18.04	17.36	0.00	13.04	0.00	0.58	9.40
MA21-071D	Int Type 1A	5194	Wmica	46.08	0.32	32.59	3.06	0.00	2.05	0.00	0.62	11.96
MA21-071D	Int Type 1A	5195	Biotite	36.97	1.06	18.13	16.04	0.00	12.80	0.00	0.61	10.00
MA21-071D	Int Type 1A	5196	Wmica	46.22	0.55	33.75	2.74	0.00	1.64	0.00	0.71	11.84
MA21-071D	Int Type 1A	5197	Wmica	46.67	1.44	31.28	2.77	0.00	2.07	0.00	0.73	11.71
MA21-071D	Int Type 1A	5198	Wmica	46.33	0.31	33.62	2.66	0.00	1.62	0.00	0.65	11.88
MA21-071D	Int Type 1A	5201	Biotite	37.40	1.06	18.08	16.54	0.00	12.52	0.00	0.50	10.52
MA21-071D	Int Type 1A	5203	Wmica	46.55	0.57	33.22	3.07	0.00	1.83	0.00	0.70	11.84
MA21-071D	Int Type 1A	5207	Wmica	46.64	0.88	32.70	2.86	0.00	1.62	0.00	0.53	11.90

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5208	Biotite	37.21	0.84	18.13	17.00	0.00	12.98	0.00	0.48	9.70
MA21-071D	Int Type 1A	5209	Wmica	46.94	0.40	33.32	2.77	0.00	1.77	0.00	0.61	12.06
MA21-071D	Int Type 1A	5210	Chl	26.07	0.11	21.43	20.36	0.49	18.04	0.08	0.31	0.11
MA21-071D	Int Type 1A	5211	Chl	26.22	0.09	21.17	20.83	0.21	18.32	0.09	0.42	0.00
MA21-071D	Int Type 1A	5212	Chl	26.80	0.07	21.42	20.83	0.00	18.24	0.15	0.45	0.06
MA21-071D	Int Type 1A	5213	Chl	26.95	0.30	21.53	20.67	0.01	18.13	0.08	0.29	0.70
MA21-071D	Int Type 1A	5214	Chl	27.21	0.05	21.17	20.70	0.35	18.55	0.13	0.31	0.04
MA21-071D	Int Type 1A	5215	Chl	27.20	0.12	21.27	19.98	0.28	19.14	0.03	0.38	0.04
MA21-071D	Int Type 1A	5217	Chl	27.32	0.06	21.86	20.71	0.48	18.46	0.17	0.51	0.06
MA21-071D	Int Type 1A	5221	Biotite	30.71	0.63	19.24	19.45	0.35	15.44	0.00	0.43	5.01
MA21-071D	Int Type 1A	5222	Biotite	29.07	0.53	20.96	20.58	0.08	17.51	0.00	0.21	2.38
MA21-071D	Int Type 1A	5223	Biotite	31.51	0.68	19.41	19.72	0.12	15.34	0.00	0.38	4.72
MA21-071D	Int Type 1A	5224	Biotite	32.02	0.88	18.81	18.90	0.31	15.04	0.00	0.58	6.27
MA21-071D	Int Type 1A	5225	Biotite	31.56	0.68	20.14	19.48	0.15	16.04	0.00	0.29	4.72
MA21-071D	Int Type 1A	5226	Biotite	33.55	1.03	18.70	18.50	0.11	14.65	0.00	0.39	7.36
MA21-071D	Int Type 1A	5229	Biotite	33.03	0.93	19.46	18.95	0.47	14.97	0.03	0.46	6.23
MA21-071D	Int Type 1A	5230	Biotite	33.67	1.00	19.04	18.54	0.05	14.09	0.00	0.35	7.14
MA21-071D	Int Type 1A	5232	Biotite	31.91	0.66	20.05	19.48	0.14	15.90	0.00	0.48	5.03
MA21-071D	Int Type 1A	5233	Biotite	35.96	1.39	17.42	16.64	0.13	12.41	0.00	0.47	10.16
MA21-071D	Int Type 1A	5235	Wmica	45.50	0.36	33.40	2.51	0.00	1.31	0.00	0.87	11.28
MA21-071D	Int Type 1A	5236	Biotite	35.74	1.38	17.62	17.03	0.05	12.48	0.00	0.37	10.25
MA21-071D	Int Type 1A	5238	Wmica	44.19	0.08	35.25	2.74	0.00	0.96	0.00	0.73	11.47
MA21-071D	Int Type 1A	5240	Wmica	45.45	0.52	33.03	2.38	0.17	1.39	0.00	0.66	11.80
MA21-071D	Int Type 1A	5241	Wmica	44.71	0.30	34.89	2.73	0.04	0.87	0.01	0.77	11.51
MA21-071D	Int Type 1A	5247	Biotite	36.43	1.43	17.53	17.42	0.00	12.09	0.00	0.05	10.59
MA21-071D	Int Type 1A	5252	Biotite	35.21	1.28	18.13	17.85	0.27	13.58	0.00	0.48	8.63
MA21-071D	Int Type 1A	5254	Biotite	35.17	1.08	18.72	17.50	0.25	13.81	0.00	0.64	8.41
MA21-071D	Int Type 1A	5256	Biotite	36.59	1.35	17.54	17.13	0.06	12.29	0.00	0.02	10.93
MA21-071D	Int Type 1A	5257	Wmica	45.82	0.51	33.61	2.59	0.00	1.57	0.00	0.89	11.73
MA21-071D	Int Type 1A	5258	Biotite	36.49	1.42	17.96	16.95	0.00	12.34	0.00	0.10	10.69
MA21-071D	Int Type 1A	5261	Biotite	36.77	1.53	17.68	17.12	0.00	12.57	0.00	0.00	10.82
MA21-071D	Int Type 1A	5271	Wmica	45.22	0.24	35.21	2.79	0.23	1.14	0.00	0.89	11.58
MA21-071D	Int Type 1A	5272	Biotite	36.81	1.46	17.92	17.31	0.02	12.91	0.00	0.46	10.52
MA21-071D	Int Type 1A	5273	Biotite	36.66	1.54	17.89	17.54	0.44	12.54	0.00	0.41	10.53

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5274	Biotite	37.11	1.38	17.79	17.20	0.17	12.54	0.00	0.41	10.63
MA21-071D	Int Type 1A	5283	Biotite	37.24	1.35	17.75	17.28	0.26	12.98	0.00	0.39	10.53
MA21-071D	Int Type 1A	5290	Biotite	36.93	1.26	17.66	17.52	0.23	12.83	0.00	0.37	10.81
MA21-071D	Int Type 1A	5303	Fspar	59.46	0.00	24.98	0.21	0.00	0.00	6.38	7.57	0.13
MA21-071D	Int Type 1A	5304	Biotite	36.89	1.49	17.59	17.93	0.40	12.75	0.01	0.38	10.94
MA21-071D	Int Type 1A	5314	Biotite	37.06	1.56	17.90	17.69	0.00	13.04	0.00	0.50	10.52
MA21-071D	Int Type 1A	5316	Fspar	59.56	0.00	24.52	0.35	0.13	0.00	5.91	8.11	0.10
MA21-071D	Int Type 1A	5317	Biotite	37.34	1.47	17.57	17.32	0.23	12.96	0.01	0.57	10.72
MA21-071D	Int Type 1A	5336	Biotite	37.16	1.37	18.20	17.22	0.25	12.78	0.00	0.45	10.85
MA21-071D	Int Type 1A	5347	Biotite	37.25	1.37	18.16	17.25	0.15	12.71	0.00	0.51	10.76
MA21-071D	Int Type 1A	5350	Fspar	58.85	0.04	25.24	0.17	0.02	0.00	6.91	7.52	0.15
MA21-071D	Int Type 1A	5363	Biotite	37.02	1.54	18.22	17.18	0.13	13.08	0.00	0.55	10.75
MA21-071D	Int Type 1A	5368	Biotite	37.16	1.32	18.10	17.58	0.00	12.82	0.00	0.34	10.91
MA21-071D	Int Type 1A	5378	Fspar	59.12	0.00	25.18	0.35	0.00	0.05	6.75	7.55	0.21
MA21-071D	Int Type 1A	5388	Fspar	59.05	0.02	25.34	0.43	0.00	0.03	6.85	7.48	0.19
MA21-071D	Int Type 1A	5390	Fspar	60.89	0.06	24.56	0.28	0.01	0.05	5.32	8.26	0.03
MA21-071D	Int Type 1A	5394	Fspar	61.50	0.17	23.72	0.44	0.00	0.00	4.74	8.63	0.26
MA21-071D	Int Type 1A	5395	Fspar	59.42	0.00	25.37	0.35	0.00	0.00	6.26	7.80	0.22
MA21-071D	Int Type 1A	5396	Fspar	60.46	0.02	24.45	0.36	0.00	0.04	5.98	8.15	0.28
MA21-071D	Int Type 1A	5397	Fspar	61.16	0.02	24.24	0.42	0.00	0.00	5.39	8.51	0.20
MA21-071D	Int Type 1A	5398	Fspar	58.92	0.00	25.82	0.52	0.00	0.02	6.97	7.47	0.23
MA21-071D	Int Type 1A	5399	Fspar	62.29	0.01	23.94	0.10	0.00	0.04	4.41	8.68	0.18
MA21-071D	Int Type 1A	5400	Fspar	59.64	0.04	25.16	0.48	0.00	0.03	6.25	7.95	0.18
MA21-071D	Int Type 1A	5401	Fspar	59.28	0.00	25.30	0.58	0.00	0.00	6.84	7.72	0.19
MA21-071D	Int Type 1A	5402	Fspar	60.20	0.01	24.89	0.53	0.08	0.04	6.02	8.00	0.09
MA21-071D	Int Type 1A	5403	Fspar	59.70	0.01	25.28	0.61	0.00	0.04	6.57	7.75	0.23
MA21-071D	Int Type 1A	5404	Fspar	59.82	0.01	25.34	0.34	0.17	0.23	6.18	7.74	0.18
MA21-071D	Int Type 1A	5405	Fspar	60.46	0.04	25.12	0.22	0.00	0.00	6.28	7.85	0.15
MA21-071D	Int Type 1A	5406	Fspar	60.14	0.00	25.54	0.32	0.00	0.02	6.55	7.77	0.16
MA21-071D	Int Type 1A	5407	Fspar	61.03	0.00	25.32	0.34	0.00	0.00	6.33	7.89	0.19
MA21-071D	Int Type 1A	5418	Biotite	35.34	1.03	17.60	15.75	0.00	12.05	0.01	0.00	9.79
MA21-071D	Int Type 1A	5419	Biotite	35.08	0.81	17.90	15.26	0.00	12.50	0.28	0.45	10.02
MA21-071D	Int Type 1A	5420	Wmica	44.15	0.38	32.69	2.69	0.00	1.33	0.00	0.66	11.29
MA21-071D	Int Type 1A	5421	Biotite	34.85	0.86	18.03	16.03	0.00	12.52	0.00	0.31	9.54

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5422	Biotite	35.55	0.85	17.63	15.56	0.00	12.14	0.04	0.03	10.32
MA21-071D	Int Type 1A	5423	Wmica	43.97	0.23	33.17	2.56	0.00	1.37	0.00	0.72	11.46
MA21-071D	Int Type 1A	5424	Wmica	44.59	0.21	33.42	2.56	0.00	1.28	0.00	0.63	11.34
MA21-071D	Int Type 1A	5425	Wmica	44.51	0.18	33.49	2.65	0.00	1.28	0.00	0.79	11.07
MA21-071D	Int Type 1A	5426	Wmica	44.09	0.30	33.08	2.87	0.00	1.57	0.00	0.75	11.38
MA21-071D	Int Type 1A	5427	Biotite	35.35	0.99	18.65	15.19	0.00	12.63	0.12	0.55	9.59
MA21-071D	Int Type 1A	5428	Biotite	35.95	1.17	17.81	15.40	0.00	12.59	0.11	0.38	10.52
MA21-071D	Int Type 1A	5429	Wmica	44.26	0.18	33.47	2.78	0.00	1.36	0.00	0.68	11.39
MA21-071D	Int Type 1A	5430	Biotite	35.39	0.94	18.28	16.20	0.00	12.77	0.00	0.41	9.38
MA21-071D	Int Type 1A	5431	Wmica	44.67	0.21	33.51	2.54	0.00	1.41	0.00	0.77	11.45
MA21-071D	Int Type 1A	5432	Biotite	36.03	0.87	18.19	15.61	0.00	12.56	0.04	0.31	10.20
MA21-071D	Int Type 1A	5434	Biotite	36.20	1.01	17.92	15.77	0.00	12.40	0.18	0.03	10.68
MA21-071D	Int Type 1A	5442	Biotite	35.84	0.94	18.31	15.76	0.00	12.73	0.14	0.50	10.38
MA21-071D	Int Type 1A	5443	Biotite	36.21	0.90	18.21	15.47	0.00	12.68	0.45	0.44	10.64
MA21-071D	Int Type 1A	5444	Wmica	43.21	0.47	32.17	2.64	0.00	1.21	0.00	0.55	11.06
MA21-071D	Int Type 1A	5445	Wmica	43.94	0.98	30.73	2.28	0.00	1.56	0.00	0.59	11.18
MA21-071D	Int Type 1A	5446	Wmica	44.24	0.63	30.92	2.59	0.00	1.60	0.00	0.61	10.85
MA21-071D	Int Type 1A	5447	Wmica	42.78	0.12	32.76	2.85	0.04	0.99	0.00	0.80	11.06
MA21-071D	Int Type 1A	5448	Wmica	42.88	0.60	32.42	2.47	0.07	1.08	0.00	0.51	11.20
MA21-071D	Int Type 1A	5449	Wmica	43.77	0.40	32.41	2.45	0.15	1.09	0.00	0.58	11.05
MA21-071D	Int Type 1A	5450	Wmica	42.87	0.10	33.34	2.52	0.00	0.99	0.00	0.86	11.09
MA21-071D	Int Type 1A	5451	Wmica	43.88	1.01	30.93	2.34	0.00	1.42	0.00	0.52	11.56
MA21-071D	Int Type 1A	5452	Wmica	43.69	0.31	32.92	2.57	0.01	1.03	0.00	0.79	10.96
MA21-071D	Int Type 1A	5453	Biotite	34.48	1.34	16.57	16.68	0.06	11.50	0.00	0.45	10.21
MA21-071D	Int Type 1A	5454	Biotite	34.16	1.29	17.39	16.96	0.00	12.54	0.00	0.28	9.08
MA21-071D	Int Type 1A	5455	Wmica	43.74	0.50	32.20	2.37	0.00	1.38	0.05	0.62	11.30
MA21-071D	Int Type 1A	5456	Wmica	42.95	0.20	33.94	2.67	0.08	0.86	0.00	0.82	10.75
MA21-071D	Int Type 1A	5457	Wmica	43.13	0.17	33.45	2.61	0.03	1.06	0.00	0.79	11.06
MA21-071D	Int Type 1A	5458	Wmica	44.18	0.37	31.66	2.67	0.11	1.35	0.00	0.62	11.30
MA21-071D	Int Type 1A	5459	Biotite	34.55	1.41	16.49	16.31	0.02	11.73	0.00	0.46	10.38
MA21-071D	Int Type 1A	5460	Wmica	44.18	1.10	31.24	2.48	0.00	1.77	0.00	0.58	11.14
MA21-071D	Int Type 1A	5461	Wmica	44.47	0.59	31.13	2.73	0.03	1.66	0.02	0.72	11.33
MA21-071D	Int Type 1A	5462	Wmica	43.46	0.54	32.76	2.47	0.04	1.22	0.00	0.63	11.26
MA21-071D	Int Type 1A	5463	Wmica	43.16	0.13	33.63	2.56	0.00	1.06	0.00	1.06	10.98

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5464	Wmica	44.56	0.44	32.01	2.43	0.00	1.44	0.05	0.76	11.00
MA21-071D	Int Type 1A	5465	Biotite	34.86	1.37	17.03	16.84	0.00	11.76	0.00	0.39	10.28
MA21-071D	Int Type 1A	5466	Biotite	34.34	1.22	17.48	16.87	0.09	12.56	0.00	0.41	9.06
MA21-071D	Int Type 1A	5467	Wmica	44.22	0.84	31.47	2.70	0.00	1.59	0.00	0.63	11.30
MA21-071D	Int Type 1A	5468	Biotite	34.84	1.46	16.91	16.66	0.06	11.91	0.00	0.51	10.13
MA21-071D	Int Type 1A	5469	Wmica	44.06	0.89	31.28	2.46	0.00	1.46	0.00	0.58	11.26
MA21-071D	Int Type 1A	5470	Wmica	44.45	0.69	31.63	2.66	0.09	1.51	0.00	0.63	11.27
MA21-071D	Int Type 1A	5471	Biotite	34.82	1.24	17.58	16.59	0.05	12.58	0.00	0.33	9.42
MA21-071D	Int Type 1A	5472	Wmica	44.81	0.47	31.88	2.55	0.03	1.57	0.03	0.89	11.05
MA21-071D	Int Type 1A	5473	Biotite	35.54	1.34	16.69	16.43	0.00	12.05	0.00	0.35	10.27
MA21-071D	Int Type 1A	5474	Biotite	34.01	1.12	18.02	17.08	0.21	13.30	0.00	0.50	8.55
MA21-071D	Int Type 1A	5475	Biotite	34.44	1.17	17.96	16.65	0.00	13.26	0.00	0.55	8.74
MA21-071D	Int Type 1A	5476	Biotite	35.42	1.29	17.34	16.42	0.01	12.81	0.00	0.46	9.42
MA21-071D	Int Type 1A	5477	Biotite	35.12	1.36	17.31	16.34	0.03	12.32	0.00	0.34	10.27
MA21-071D	Int Type 1A	5478	Biotite	35.06	1.34	17.19	16.73	0.12	11.78	0.00	0.39	10.14
MA21-071D	Int Type 1A	5479	Biotite	34.52	1.24	17.60	16.96	0.16	12.59	0.00	0.44	9.49
MA21-071D	Int Type 1A	5480	Fspar	58.31	0.01	22.48	0.40	0.00	0.00	4.69	7.97	0.19
MA21-071D	Int Type 1A	5481	Biotite	35.13	1.27	17.39	16.60	0.15	11.85	0.00	0.39	10.22
MA21-071D	Int Type 1A	5482	Biotite	35.39	1.30	17.34	16.57	0.00	12.24	0.00	0.39	10.31
MA21-071D	Int Type 1A	5483	Biotite	35.28	1.19	17.43	16.50	0.24	12.29	0.00	0.42	10.01
MA21-071D	Int Type 1A	5484	Biotite	35.73	1.42	17.52	16.04	0.04	12.26	0.00	0.39	10.13
MA21-071D	Int Type 1A	5485	Biotite	35.77	1.33	17.09	16.26	0.09	12.33	0.00	0.48	10.38
MA21-071D	Int Type 1A	5486	Biotite	35.63	1.28	17.34	16.75	0.07	12.25	0.00	0.47	10.30
MA21-071D	Int Type 1A	5487	Biotite	35.74	1.34	17.19	16.66	0.20	12.27	0.00	0.41	10.12
MA21-071D	Int Type 1A	5488	Biotite	35.30	1.23	17.50	16.69	0.36	12.44	0.00	0.25	9.81
MA21-071D	Int Type 1A	5489	Biotite	35.84	1.26	17.23	16.29	0.20	12.04	0.00	0.43	10.38
MA21-071D	Int Type 1A	5490	Biotite	35.69	1.24	17.63	16.12	0.27	12.18	0.00	0.60	10.35
MA21-071D	Int Type 1A	5491	Biotite	35.56	1.40	17.53	16.39	0.21	12.06	0.00	0.48	10.33
MA21-071D	Int Type 1A	5492	Fspar	60.14	0.02	22.05	0.29	0.00	0.01	3.94	8.62	0.19
MA21-071D	Int Type 1A	5493	Biotite	35.85	1.35	17.38	16.39	0.33	12.29	0.00	0.48	10.36
MA21-071D	Int Type 1A	5494	Fspar	58.87	0.00	23.02	0.35	0.00	0.00	4.98	8.04	0.15
MA21-071D	Int Type 1A	5495	Biotite	35.87	1.21	17.21	16.55	0.12	12.49	0.00	0.44	10.16
MA21-071D	Int Type 1A	5496	Fspar	57.05	0.00	24.29	0.15	0.00	0.01	6.75	7.16	0.16
MA21-071D	Int Type 1A	5497	Biotite	36.25	1.45	17.17	16.48	0.17	12.48	0.00	0.51	10.35

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-071D	Int Type 1A	5499	Fspar	59.82	0.00	22.45	0.31	0.08	0.02	4.14	8.58	0.25
MA21-071D	Int Type 1A	5500	Fspar	59.28	0.02	22.84	0.54	0.00	0.02	4.68	8.22	0.16
MA21-071D	Int Type 1A	5501	Fspar	57.45	0.00	24.04	0.31	0.00	0.01	6.20	7.70	0.22
MA21-071D	Int Type 1A	5502	Fspar	57.51	0.00	24.11	0.27	0.00	0.00	6.50	7.56	0.11
MA21-071D	Int Type 1A	5503	Fspar	58.65	0.00	23.46	0.21	0.07	0.02	5.45	8.05	0.07
MA21-071D	Int Type 1A	5504	Fspar	59.24	0.06	23.17	0.39	0.00	0.01	4.47	8.31	0.13
MA21-071D	Int Type 1A	5505	Fspar	57.53	0.00	24.15	0.27	0.00	0.00	6.13	7.66	0.15
MA21-071D	Int Type 1A	5506	Fspar	58.14	0.00	23.89	0.18	0.13	0.03	5.80	7.74	0.12
MA21-071D	Int Type 1A	5507	Fspar	57.27	0.00	24.26	0.23	0.00	0.02	6.60	7.51	0.14
MA21-071D	Int Type 1A	5508	Fspar	57.22	0.00	24.70	0.24	0.01	0.00	6.70	7.27	0.18
MA21-071D	Int Type 1A	5509	Fspar	58.06	0.03	24.01	0.26	0.00	0.02	6.16	7.63	0.22
MA21-071D	Int Type 1A	5510	Fspar	58.34	0.00	24.32	0.20	0.00	0.00	5.98	7.76	0.19
MA21-075C-2	SQ vein	5511	Chl	26.45	0.02	21.31	22.02	0.17	12.57	0.15	0.47	0.16
MA21-075C-2	SQ vein	5512	Chl	26.80	0.02	21.53	22.56	0.02	12.93	0.09	0.00	0.10
MA21-075C-2	SQ vein	5513	Chl	27.98	0.03	21.45	22.26	0.42	12.91	0.13	0.61	0.09
MA21-075C-2	SQ vein	5514	Chl	26.71	0.00	21.52	23.58	0.24	12.49	0.10	0.42	0.09
MA21-075C-2	SQ vein	5515	Chl	27.02	0.00	21.67	24.02	0.12	12.56	0.01	0.04	0.00
MA21-075C-2	SQ vein	5516	Chl	26.80	0.00	21.49	23.55	0.30	13.02	0.20	0.00	0.00
MA21-075C-2	SQ vein	5517	Chl	27.59	0.12	21.62	23.03	0.17	13.09	0.19	0.00	0.00
MA21-075C-2	SQ vein	5518	Chl	27.88	0.00	21.30	23.39	0.29	12.79	0.09	0.42	0.02
MA21-075C-2	SQ vein	5519	Chl	27.27	0.11	21.31	23.54	0.34	13.21	0.05	0.00	0.02
MA21-075C-2	SQ vein	5520	Chl	27.18	0.00	21.85	23.74	0.15	13.01	0.13	0.00	0.00
MA21-075C-2	SQ vein	5521	Chl	27.90	0.20	21.40	23.46	0.10	13.37	0.08	0.00	0.07
MA21-075C-2	SQ vein	5522	Chl	27.39	0.00	22.07	23.23	0.24	13.30	0.15	0.41	0.00
MA21-075C-2	SQ vein	5523	Chl	27.32	0.06	21.68	23.72	0.20	13.16	0.07	0.40	0.07
MA21-075C-2	SQ vein	5524	Chl	27.05	0.01	22.43	23.33	0.32	13.21	0.13	0.31	0.08
MA21-075C-2	SQ vein	5525	Chl	27.82	0.03	21.93	22.94	0.51	13.51	0.08	0.08	0.10
MA21-075C-2	SQ vein	5526	Chl	27.90	0.07	22.20	22.89	0.32	13.16	0.06	0.40	0.17
MA21-075C-2	SQ vein	5527	Chl	26.75	0.00	20.71	23.09	0.19	12.13	0.30	0.44	0.10
MA21-075C-2	SQ vein	5528	Chl	26.00	0.00	21.22	23.46	0.07	12.06	0.27	0.54	0.09
MA21-075C-2	SQ vein	5529	Chl	26.35	0.00	21.61	22.78	0.21	12.14	0.16	0.39	0.10
MA21-075C-2	SQ vein	5530	Chl	26.04	0.08	21.80	23.66	0.17	12.37	0.23	0.42	0.04
MA21-075C-2	SQ vein	5531	Chl	27.98	0.06	20.44	22.82	0.40	12.79	0.14	0.03	0.00
MA21-075C-2	SQ vein	5532	Chl	26.58	0.03	21.06	23.01	0.50	12.76	0.21	0.40	0.01

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-075C-2	SQ vein	5533	Chl	27.07	0.00	21.29	23.32	0.07	12.29	0.14	0.54	0.17
MA21-075C-2	SQ vein	5534	Chl	27.74	0.09	20.84	22.69	0.00	13.17	0.05	0.43	0.00
MA21-075C-2	SQ vein	5535	Chl	26.51	0.13	21.71	23.51	0.12	12.41	0.21	0.50	0.11
MA21-075C-2	SQ vein	5537	Chl	26.89	0.00	21.60	23.47	0.28	12.12	0.17	0.55	0.14
MA21-075C-2	SQ vein	5538	Chl	27.41	0.05	21.54	23.17	0.28	12.34	0.15	0.46	0.09
MA21-075C-2	SQ vein	5539	Chl	26.46	0.06	21.40	24.01	0.23	12.77	0.27	0.29	0.02
MA21-075C-2	SQ vein	5540	Chl	26.94	0.05	21.39	23.01	0.00	12.89	0.13	0.49	0.17
MA21-075C-2	SQ vein	5541	Chl	26.75	0.00	21.90	23.20	0.11	12.28	0.17	0.60	0.16
MA21-075C-2	SQ vein	5542	Chl	27.83	0.05	21.30	22.92	0.31	12.87	0.11	0.29	0.02
MA21-075C-2	SQ vein	5544	Chl	27.43	0.10	21.43	23.96	0.14	12.45	0.20	0.05	0.02
MA21-075C-2	SQ vein	5545	Chl	26.40	0.04	21.83	23.56	0.35	12.75	0.25	0.50	0.07
MA21-075C-2	SQ vein	5546	Chl	26.59	0.06	21.95	23.47	0.08	12.82	0.24	0.45	0.00
MA21-075C-2	SQ vein	5547	Chl	26.77	0.05	21.54	24.35	0.13	12.79	0.23	0.28	0.00
MA21-075C-2	SQ vein	5548	Chl	27.51	0.00	21.29	22.85	0.36	12.65	0.14	0.41	0.25
MA21-075C-2	SQ vein	5549	Chl	27.53	0.03	22.29	23.53	0.10	12.76	0.14	0.46	0.04
MA21-075C-2	SQ vein	5550	Wmica	46.73	0.29	31.68	1.60	0.02	1.11	0.08	1.20	10.01
MA21-075C-2	SQ vein	5551	Wmica	48.61	0.44	32.78	2.25	0.01	1.10	0.00	1.19	10.02
MA21-075C-2	SQ vein	5552	Wmica	48.97	0.18	33.22	1.74	0.10	0.83	0.00	1.51	9.79
MA21-075C-2	SQ vein	5553	Wmica	48.34	0.64	32.60	2.35	0.00	1.14	0.00	1.20	10.35
MA21-075C-2	SQ vein	5554	Wmica	49.49	0.27	32.78	2.19	0.11	1.08	0.00	1.72	9.51
MA21-075C-2	SQ vein	5556	Wmica	48.82	0.14	33.39	1.80	0.02	0.94	0.05	1.49	9.85
MA21-075C-2	SQ vein	5557	Wmica	49.19	0.40	32.95	2.19	0.00	1.20	0.00	1.39	10.11
MA21-075C-2	SQ vein	5558	Wmica	49.03	0.43	33.31	2.27	0.17	1.06	0.00	1.27	10.24
MA21-075C-2	SQ vein	5559	Wmica	47.78	0.17	34.63	1.61	0.00	0.71	0.00	1.31	9.89
MA21-075C-2	SQ vein	5560	Wmica	47.06	0.24	34.46	1.76	0.23	0.91	0.00	1.62	9.72
MA21-075C-2	SQ vein	5562	Wmica	47.86	0.12	34.83	1.96	0.00	0.73	0.00	1.43	9.82
MA21-075C-2	SQ vein	5564	Wmica	47.87	0.18	34.36	2.00	0.00	0.75	0.00	1.40	9.89
MA21-075C-2	SQ vein	5565	Wmica	47.95	0.08	34.86	1.67	0.00	0.75	0.00	1.39	10.06
MA21-075C-2	SQ vein	5566	Wmica	48.40	0.27	35.96	0.92	0.02	0.59	0.00	1.76	9.49
MA21-075C-2	SQ vein	5567	Wmica	49.03	0.40	34.25	1.64	0.07	0.92	0.00	1.38	9.71
MA21-075C-2	SQ vein	5568	Wmica	48.62	0.20	34.66	1.65	0.13	0.87	0.00	1.48	9.76
MA21-075C-2	SQ vein	5570	Wmica	48.58	0.20	34.55	1.92	0.13	0.84	0.00	1.41	10.00
MA21-075C-2	SQ vein	5572	Wmica	48.35	0.18	35.02	1.90	0.04	0.85	0.00	1.40	9.74
MA21-075C-2	SQ vein	5573	Wmica	48.47	0.04	36.22	1.09	0.00	0.65	0.00	1.80	9.51

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-075C-2	SQ vein	5574	Wmica	48.81	0.19	34.70	2.02	0.00	0.68	0.00	1.49	9.82
MA21-075C-2	SQ vein	5575	Wmica	49.19	0.26	34.75	1.59	0.00	1.00	0.00	1.47	9.86
MA21-075C-2	SQ vein	5576	Wmica	48.48	0.23	35.86	1.82	0.00	0.77	0.00	1.61	9.67
MA21-075C-2	SQ vein	5577	Wmica	48.74	0.50	34.48	1.78	0.05	0.90	0.00	1.45	10.11
MA21-075C-2	SQ vein	5578	Wmica	46.50	0.04	33.84	1.66	0.08	0.77	0.00	1.32	9.99
MA21-075C-2	SQ vein	5579	Wmica	46.69	0.25	33.14	2.38	0.00	1.01	0.00	1.29	10.11
MA21-075C-2	SQ vein	5580	Wmica	47.38	0.23	34.18	1.68	0.08	0.60	0.00	1.28	10.12
MA21-075C-2	SQ vein	5581	Wmica	47.17	0.14	34.55	1.65	0.00	0.68	0.00	1.31	9.86
MA21-075C-2	SQ vein	5582	Wmica	47.13	0.27	33.97	2.23	0.10	0.83	0.00	1.38	10.08
MA21-075C-2	SQ vein	5584	Wmica	46.76	0.16	34.57	2.04	0.17	0.74	0.06	1.52	10.03
MA21-075C-2	SQ vein	5585	Wmica	47.64	0.21	34.57	1.93	0.15	0.81	0.00	1.31	10.01
MA21-075C-2	SQ vein	5586	Wmica	47.76	0.23	34.24	1.68	0.19	0.92	0.00	1.32	10.13
MA21-075C-2	SQ vein	5587	Wmica	47.68	0.23	36.22	0.98	0.00	0.54	0.00	1.73	9.53
MA21-075C-2	SQ vein	5588	Wmica	47.79	0.37	33.74	2.07	0.00	1.32	0.00	1.38	10.21
MA21-075C-2	SQ vein	5589	Wmica	48.41	0.48	33.75	1.82	0.00	1.08	0.00	1.43	10.16
MA21-075C-2	SQ vein	5590	Wmica	47.91	0.37	35.60	1.76	0.05	0.88	0.00	1.43	9.83
MA21-075C-2	SQ vein	5591	Wmica	48.21	0.42	34.47	1.88	0.07	0.96	0.00	1.24	10.37
MA21-075C-2	SQ vein	5592	Wmica	48.48	0.23	35.88	1.26	0.00	0.56	0.00	1.71	9.50
MA21-075C-2	SQ vein	5593	Wmica	48.77	0.12	35.28	1.77	0.00	0.96	0.00	1.49	9.83
MA21-075C-2	SQ vein	5594	Wmica	48.70	0.07	36.14	1.31	0.11	0.42	0.00	1.54	9.83
MA21-075C-2	SQ vein	5595	Wmica	48.19	0.27	35.57	1.70	0.00	0.82	0.03	1.64	9.95
MA21-075C-2	SQ vein	5597	Wmica	48.71	0.29	35.06	1.92	0.09	1.04	0.00	1.50	10.16
MA21-075C-2	SQ vein	5598	Wmica	49.77	0.11	36.49	1.35	0.00	0.62	0.00	1.86	9.82
MA21-075C-2	SQ vein	5599	Wmica	46.60	0.23	36.04	1.35	0.05	0.52	0.00	1.36	9.72
MA21-075C-2	SQ vein	5600	Wmica	47.50	0.49	33.40	2.29	0.00	1.09	0.00	0.91	10.50
MA21-075C-2	SQ vein	5601	Wmica	46.94	0.21	34.45	2.20	0.00	0.84	0.00	1.06	10.54
MA21-075C-2	SQ vein	5602	Wmica	46.90	0.24	34.21	2.55	0.00	1.10	0.00	1.14	10.64
MA21-075C-2	SQ vein	5603	Wmica	46.67	0.26	35.28	2.18	0.04	0.92	0.00	1.42	10.26
MA21-075C-2	SQ vein	5604	Wmica	46.95	0.09	35.56	1.81	0.29	1.02	0.00	1.46	9.88
MA21-075C-2	SQ vein	5605	Wmica	46.98	0.35	34.77	2.18	0.00	1.00	0.00	1.38	10.63
MA21-075C-2	SQ vein	5606	Wmica	47.10	0.46	34.43	2.55	0.19	1.10	0.01	1.01	10.68
MA21-075C-2	SQ vein	5607	Wmica	47.53	0.34	35.99	1.56	0.00	0.75	0.00	1.29	10.51
MA21-075C-2	SQ vein	5608	Wmica	47.41	0.32	36.01	1.79	0.00	0.76	0.00	1.35	10.10
MA21-075C-2	SQ vein	5609	Wmica	47.24	0.24	35.66	2.23	0.06	0.91	0.00	1.24	10.35

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-075C-2	SQ vein	5610	Wmica	48.27	0.25	33.97	2.36	0.00	1.44	0.00	1.11	10.80
MA21-075C-2	SQ vein	5611	Wmica	47.59	0.46	34.39	2.10	0.32	1.27	0.00	1.23	10.55
MA21-075C-2	SQ vein	5612	Wmica	48.26	0.45	34.33	2.02	0.00	1.20	0.00	1.18	10.76
MA21-075C-2	SQ vein	5613	Wmica	48.48	0.36	34.43	1.92	0.00	1.26	0.00	1.09	10.51
MA21-075C-2	SQ vein	5614	Wmica	47.71	0.15	35.80	1.95	0.09	0.99	0.00	1.61	10.26
MA21-075C-2	SQ vein	5615	Wmica	47.64	0.24	36.52	1.53	0.24	0.75	0.00	1.34	10.21
MA21-075C-2	SQ vein	5616	Wmica	48.25	0.12	36.30	1.38	0.00	0.79	0.00	1.37	10.14
MA21-075C-2	SQ vein	5617	Wmica	48.20	0.45	34.35	2.44	0.00	1.30	0.00	1.00	10.55
MA21-075C-2	SQ vein	5618	Wmica	48.24	0.25	36.98	1.17	0.00	0.79	0.00	1.47	10.41
MA21-075C-2	SQ vein	5619	Wmica	47.98	0.12	36.62	1.87	0.00	0.82	0.00	1.42	10.55
MA21-075C-2	SQ vein	5620	Wmica	48.52	0.34	37.16	1.48	0.01	0.92	0.00	1.30	10.32
MA21-075C-2	SQ vein	5621	Wmica	48.84	0.26	37.19	1.35	0.04	1.04	0.00	1.61	10.21
MA21-075C-2	SQ vein	5622	Chl	27.29	0.09	21.89	23.54	0.15	13.28	0.15	0.56	0.00
MA21-075C-2	SQ vein	5623	Chl	27.17	0.04	22.40	23.49	0.35	12.86	0.08	0.53	0.21
MA21-075C-2	SQ vein	5624	Chl	27.81	0.09	22.39	23.89	0.25	13.74	0.11	0.54	0.17
MA21-075C-2	SQ vein	5625	Chl	27.00	0.02	23.10	24.74	0.21	13.25	0.08	0.61	0.03
MA21-075C-2	SQ vein	5626	Chl	28.15	0.04	22.69	23.79	0.19	13.77	0.08	0.47	0.09
MA21-075C-2	SQ vein	5627	Chl	27.62	0.03	23.19	24.14	0.08	13.41	0.18	0.54	0.25
MA21-075C-2	SQ vein	5628	Chl	27.44	0.00	23.81	24.45	0.11	13.25	0.09	0.38	0.10
MA21-075C-2	SQ vein	5629	Chl	27.22	0.00	24.10	24.81	0.17	12.82	0.00	0.48	0.25
MA21-075C-2	SQ vein	5630	Chl	27.95	0.04	22.63	24.40	0.38	14.14	0.02	0.42	0.05
MA21-075C-2	SQ vein	5631	Chl	26.97	0.06	23.40	25.36	0.55	13.09	0.08	0.53	0.19
MA21-075C-2	SQ vein	5632	Chl	27.81	0.06	23.64	24.49	0.38	13.54	0.06	0.68	0.04
MA21-075C-2	SQ vein	5634	Chl	27.19	0.09	23.54	25.17	0.19	13.17	0.03	0.51	0.13
MA21-075C-2	SQ vein	5635	Chl	27.45	0.04	23.47	24.99	0.37	13.06	0.13	0.60	0.25
MA21-075C-2	SQ vein	5636	Chl	28.25	0.00	23.96	23.95	0.23	13.65	0.01	0.40	0.27
MA21-075C-2	SQ vein	5637	Chl	28.57	0.05	23.42	23.94	0.20	13.81	0.08	0.50	0.22
MA21-075C-2	SQ vein	5638	Chl	28.37	0.07	23.19	24.75	0.16	14.10	0.05	0.39	0.02
MA21-075C-2	SQ vein	5639	Wmica	45.91	0.19	33.93	2.26	0.00	0.88	0.00	1.24	10.05
MA21-075C-2	SQ vein	5640	Wmica	46.47	0.27	32.64	2.81	0.00	1.34	0.00	0.94	10.76
MA21-075C-2	SQ vein	5641	Wmica	47.25	0.29	34.41	2.21	0.00	1.09	0.00	1.16	10.27
MA21-075C-2	SQ vein	5642	Wmica	47.15	0.53	32.63	2.62	0.00	1.28	0.00	0.91	10.90
MA21-075C-2	SQ vein	5643	Wmica	47.95	0.25	33.56	2.02	0.02	1.25	0.00	1.14	10.35
MA21-075C-2	SQ vein	5644	Wmica	47.28	0.26	34.23	2.72	0.03	1.13	0.00	1.14	10.13

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-075C-2	SQ vein	5645	Wmica	47.75	0.25	35.07	1.83	0.05	1.09	0.00	1.33	9.87
MA21-075C-2	SQ vein	5646	Wmica	47.37	0.12	34.84	2.67	0.04	0.93	0.05	1.12	10.17
MA21-075C-2	SQ vein	5648	Wmica	47.76	0.48	33.42	3.26	0.02	1.47	0.00	1.17	10.31
MA21-075C-2	SQ vein	5649	Wmica	46.96	0.21	36.39	2.09	0.01	0.95	0.00	1.36	10.11
MA21-075C-2	SQ vein	5650	Wmica	47.72	0.18	34.78	2.49	0.02	1.02	0.00	1.36	10.42
MA21-075C-2	SQ vein	5651	Wmica	48.28	0.20	35.05	2.32	0.00	1.08	0.00	1.40	10.07
MA21-075C-2	SQ vein	5652	Wmica	47.91	0.46	35.00	2.25	0.00	1.02	0.00	1.46	10.23
MA21-075C-2	SQ vein	5653	Wmica	47.89	0.24	34.85	2.30	0.27	1.40	0.00	1.28	10.47
MA21-075C-2	SQ vein	5654	Wmica	47.81	0.22	35.67	2.34	0.00	1.16	0.00	1.28	10.18
MA21-075C-2	SQ vein	5655	Wmica	47.92	0.21	35.92	2.54	0.30	0.92	0.00	1.30	10.05
MA21-075C-2	SQ vein	5656	Wmica	47.40	0.13	36.56	2.42	0.07	0.82	0.00	1.34	10.39
MA21-075C-2	SQ vein	5657	Wmica	48.50	0.33	34.19	3.04	0.00	1.41	0.00	1.13	10.62
MA21-075C-2	SQ vein	5658	Wmica	48.57	0.35	34.09	2.43	0.11	1.33	0.00	1.16	10.88
MA21-075C-2	SQ vein	5659	Wmica	48.31	0.52	33.71	2.99	0.01	1.67	0.00	1.21	10.66
MA21-075C-2	SQ vein	5660	Chl	26.19	0.06	21.50	24.12	0.06	13.70	0.17	0.05	0.02
MA21-075C-2	SQ vein	5661	Chl	26.68	0.11	21.75	23.66	0.30	13.87	0.14	0.51	0.14
MA21-075C-2	SQ vein	5662	Chl	27.19	0.08	22.45	23.47	0.20	13.25	0.13	0.53	0.08
MA21-075C-2	SQ vein	5663	Chl	26.70	0.25	21.95	24.08	0.16	14.15	0.17	0.37	0.02
MA21-075C-2	SQ vein	5664	Chl	27.29	0.03	23.51	23.11	0.27	13.45	0.04	0.23	0.06
MA21-075C-2	SQ vein	5665	Chl	26.94	0.47	22.45	23.55	0.16	13.91	0.07	0.42	0.10
MA21-075C-2	SQ vein	5666	Chl	27.06	0.01	23.00	23.66	0.23	13.21	0.07	0.34	0.08
MA21-075C-2	SQ vein	5667	Chl	26.92	0.20	22.52	24.01	0.03	13.47	0.16	0.54	0.02
MA21-075C-2	SQ vein	5668	Chl	27.31	0.32	22.65	23.55	0.09	14.26	0.09	0.49	0.00
MA21-075C-2	SQ vein	5669	Chl	27.08	0.01	22.26	24.36	0.20	14.29	0.11	0.41	0.00
MA21-075C-2	SQ vein	5670	Chl	28.02	0.11	23.19	23.18	0.20	13.98	0.08	0.26	0.01
MA21-075C-2	SQ vein	5671	Chl	27.96	0.13	23.33	23.28	0.03	13.54	0.09	0.55	0.11
MA21-075C-2	SQ vein	5673	Chl	28.06	0.06	23.49	23.38	0.27	13.97	0.07	0.37	0.07
MA21-075C-2	SQ vein	5674	Chl	28.04	0.19	23.39	23.57	0.06	14.31	0.12	0.46	0.07
MA21-075C-2	SQ vein	5675	Chl	27.59	0.09	22.36	24.05	0.37	14.34	0.19	0.45	0.03
MA21-075C-2	SQ vein	5676	Wmica	46.28	0.18	33.56	2.65	0.10	1.12	0.00	1.24	9.47
MA21-075C-2	SQ vein	5677	Wmica	47.34	0.24	33.83	1.79	0.00	1.03	0.00	1.17	10.27
MA21-075C-2	SQ vein	5678	Wmica	46.14	0.22	34.14	2.82	0.02	0.98	0.00	1.13	9.97
MA21-075C-2	SQ vein	5679	Wmica	45.94	0.25	33.85	2.84	0.01	0.75	0.00	0.95	10.29
MA21-075C-2	SQ vein	5680	Wmica	47.60	0.25	33.55	2.45	0.10	1.11	0.00	1.10	9.95

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MA21-075C-2	SQ vein	5681	Wmica	47.29	0.44	32.41	2.92	0.02	1.30	0.00	1.01	10.30
MA21-075C-2	SQ vein	5682	Wmica	47.61	0.26	33.23	2.61	0.03	1.25	0.00	1.09	9.80
MA21-075C-2	SQ vein	5683	Wmica	46.36	0.19	35.08	2.45	0.05	0.81	0.03	1.32	9.77
MA21-075C-2	SQ vein	5684	Wmica	48.10	0.22	32.85	2.49	0.12	1.27	0.02	1.20	10.13
MA21-075C-2	SQ vein	5685	Wmica	46.95	0.14	35.15	1.88	0.05	0.90	0.00	1.34	9.85
MA21-075C-2	SQ vein	5686	Wmica	47.44	0.19	33.06	2.94	0.00	1.33	0.09	1.07	10.37
MA21-075C-2	SQ vein	5687	Wmica	45.83	0.08	34.32	3.29	0.20	0.74	0.00	1.12	10.03
MA21-075C-2	SQ vein	5688	Wmica	48.09	0.32	33.44	2.31	0.00	1.30	0.06	1.17	10.29
MA21-075C-2	SQ vein	5690	Wmica	48.10	0.40	33.52	2.40	0.00	1.20	0.00	1.27	9.87
MA21-075C-2	SQ vein	5691	Wmica	47.85	0.39	34.19	2.03	0.27	0.88	0.00	1.42	9.91
MA21-075C-2	SQ vein	5692	Wmica	46.75	0.23	34.87	2.92	0.05	0.88	0.00	1.07	10.24
MA21-078	Biotite stringe	5794	Wmica	43.26	0.11	34.00	1.86	0.00	0.51	0.00	0.80	10.66
MA21-078	Biotite stringe	5795	Wmica	43.41	0.00	34.24	1.86	0.07	0.59	0.00	0.94	10.88
MA21-078	Biotite stringe	5796	Fspar	59.74	0.13	21.69	0.08	0.13	0.00	3.41	9.05	0.16
MA21-078	Biotite stringe	5797	Fspar	59.73	0.00	21.72	0.14	0.00	0.00	3.35	9.01	0.25
MA21-078	Biotite stringe	5798	Fspar	59.26	0.00	22.34	0.04	0.05	0.01	4.28	8.45	0.23
MA21-078	Biotite stringe	5800	Wmica	42.68	0.00	32.25	2.58	0.02	1.09	0.09	0.86	10.47
MA21-078	Biotite stringe	5801	Chl	23.60	0.03	19.42	28.16	0.02	11.93	0.10	0.36	0.08
MA21-078	Biotite stringe	5802	Chl	23.73	0.04	19.65	28.12	0.31	12.17	0.14	0.31	0.03
MA21-078	Biotite stringe	5803	Chl	22.97	0.05	20.64	29.40	0.12	11.42	0.13	0.17	0.03
MA21-078	Biotite stringe	5804	Chl	24.60	0.05	19.48	28.53	0.17	11.96	0.14	0.37	0.00
MA21-078	Biotite stringe	5805	Chl	24.24	0.11	20.00	28.22	0.00	11.93	0.04	0.29	0.06
MA21-078	Biotite stringe	5808	Chl	23.86	0.06	19.82	29.06	0.20	11.73	0.03	0.38	0.00
MA21-078	Biotite stringe	5809	Chl	23.80	0.05	19.51	29.10	0.15	11.90	0.07	0.24	0.05
MA21-078	Biotite stringe	5810	Chl	23.60	0.01	20.35	28.73	0.19	11.89	0.03	0.40	0.00
MA21-078	Biotite stringe	5811	Chl	23.93	0.11	19.84	28.46	0.15	12.19	0.06	0.34	0.05
MA21-078	Biotite stringe	5812	Chl	24.40	0.01	20.55	28.50	0.00	11.78	0.05	0.41	0.03
MA21-078	Biotite stringe	5813	Chl	24.58	0.08	20.33	28.16	0.07	11.98	0.06	0.33	0.07
MA21-078	Biotite stringe	5815	Chl	23.88	0.03	20.18	28.67	0.00	12.22	0.07	0.34	0.06
MA21-078	Biotite stringe	5816	Chl	24.06	0.05	20.22	28.89	0.08	12.12	0.10	0.39	0.06
MA21-078	Biotite stringe	5817	Chl	24.31	0.00	20.43	28.99	0.36	12.05	0.04	0.36	0.05
MA21-078	Biotite stringe	5819	Chl	25.18	0.08	20.27	28.22	0.02	12.27	0.06	0.37	0.00
MA21-078	Biotite stringe	5820	Chl	24.80	0.11	20.80	28.22	0.22	12.17	0.04	0.23	0.09
MA21-078	Biotite stringe	5822	Chl	25.11	0.13	19.88	28.23	0.12	12.30	0.08	0.37	0.09

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-078	Biotite stringe	5823	Chl	25.43	0.09	20.74	28.48	0.00	12.44	0.04	0.33	0.12
MA21-078	Biotite stringe	5829	Chl	24.56	0.04	20.92	28.74	0.07	12.37	0.14	0.42	0.04
MA21-078	Biotite stringe	5830	Chl	25.08	0.00	21.59	28.42	0.15	12.44	0.07	0.39	0.08
MA21-078	Biotite stringe	5831	Chl	23.45	0.07	20.82	28.81	0.16	11.56	0.07	0.39	0.05
MA21-078	Biotite stringe	5832	Chl	23.52	0.03	20.96	28.37	0.09	11.74	0.05	0.35	0.08
MA21-078	Biotite stringe	5833	Chl	23.42	0.04	21.28	28.54	0.01	11.82	0.02	0.37	0.05
MA21-078	Biotite stringe	5834	Chl	23.53	0.05	21.08	28.03	0.08	12.09	0.00	0.40	0.12
MA21-078	Biotite stringe	5835	Chl	23.63	0.12	21.19	28.62	0.15	11.57	0.00	0.39	0.05
MA21-078	Biotite stringe	5836	Chl	23.45	0.13	20.95	28.90	0.40	11.60	0.02	0.39	0.07
MA21-078	Biotite stringe	5837	Chl	24.05	0.05	20.76	28.41	0.04	12.04	0.02	0.47	0.08
MA21-078	Biotite stringe	5838	Chl	23.64	0.11	21.14	28.98	0.06	11.43	0.00	0.29	0.14
MA21-078	Biotite stringe	5839	Chl	24.08	0.06	20.67	28.66	0.21	11.79	0.00	0.36	0.05
MA21-078	Biotite stringe	5840	Chl	23.69	0.08	20.98	29.07	0.06	11.89	0.00	0.35	0.12
MA21-078	Biotite stringe	5841	Chl	24.00	0.10	20.94	28.58	0.27	12.16	0.05	0.36	0.00
MA21-078	Biotite stringe	5842	Chl	23.62	0.08	21.33	28.78	0.31	11.67	0.08	0.33	0.06
MA21-078	Biotite stringe	5843	Chl	23.79	0.04	20.83	29.24	0.33	11.43	0.05	0.46	0.15
MA21-078	Biotite stringe	5844	Chl	23.42	0.07	21.20	29.04	0.22	11.49	0.00	0.43	0.06
MA21-078	Biotite stringe	5845	Chl	23.63	0.12	21.73	28.63	0.24	11.94	0.08	0.32	0.00
MA21-078	Biotite stringe	5846	Chl	24.32	0.18	20.77	28.51	0.05	12.48	0.00	0.28	0.05
MA21-078	Biotite stringe	5847	Chl	26.67	0.39	19.33	26.29	0.35	11.59	0.00	0.45	2.61
MA21-078	Biotite stringe	5848	Chl	26.59	0.51	19.35	26.31	0.01	11.75	0.00	0.40	2.40
MA21-078	Biotite stringe	5849	Chl	23.26	0.14	20.75	28.83	0.00	11.78	0.00	0.32	0.05
MA21-078	Biotite stringe	5850	Chl	26.67	0.39	19.33	26.29	0.35	11.59	0.00	0.45	2.61
MA21-078	Biotite stringe	5851	Chl	26.59	0.51	19.35	26.31	0.01	11.75	0.00	0.40	2.40
MA21-078	Biotite stringe	5852	Chl	26.79	0.49	19.41	26.24	0.04	11.30	0.00	0.41	2.99
MA21-078	Biotite stringe	5853	Chl	27.48	0.59	19.08	25.59	0.03	11.24	0.00	0.42	3.42
MA21-078	Biotite stringe	5854	Biotite	28.39	0.65	18.60	24.71	0.14	11.10	0.00	0.36	4.31
MA21-078	Biotite stringe	5855	Biotite	28.27	0.67	18.87	25.57	0.02	11.00	0.00	0.33	4.40
MA21-078	Biotite stringe	5856	Biotite	29.70	0.98	17.61	23.91	0.01	10.15	0.05	0.41	5.97
MA21-078	Biotite stringe	5857	Biotite	29.89	0.79	18.14	24.19	0.19	10.82	0.00	0.33	5.61
MA21-078	Biotite stringe	5858	Biotite	31.99	1.00	17.29	22.27	0.14	9.15	0.00	0.25	8.34
MA21-078	Biotite stringe	5859	Biotite	31.59	1.28	16.87	22.88	0.02	9.38	0.00	0.03	7.88
MA21-078	Biotite stringe	5860	Biotite	30.32	0.94	18.16	23.78	0.06	10.24	0.00	0.26	6.73
MA21-078	Biotite stringe	5861	Biotite	31.54	1.07	17.69	22.38	0.02	9.29	0.00	0.33	8.18

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-078	Biotite stringe	5862	Biotite	30.59	0.95	18.16	23.67	0.05	10.37	0.00	0.32	6.61
MA21-078	Biotite stringe	5863	Biotite	30.85	0.94	17.87	23.23	0.07	10.04	0.00	0.40	6.94
MA21-078	Biotite stringe	5864	Biotite	31.14	1.00	17.90	23.35	0.04	9.69	0.01	0.33	7.16
MA21-078	Biotite stringe	5865	Biotite	31.18	1.07	17.69	23.58	0.06	9.75	0.00	0.36	7.32
MA21-078	Biotite stringe	5866	Biotite	30.63	1.00	17.83	24.66	0.00	10.35	0.00	0.24	6.34
MA21-078	Biotite stringe	5867	Biotite	30.86	0.93	17.56	24.00	0.01	10.05	0.00	0.48	6.89
MA21-078	Biotite stringe	5868	Biotite	31.29	0.94	17.89	23.31	0.00	10.36	0.00	0.43	7.11
MA21-078	Biotite stringe	5869	Biotite	31.72	0.96	17.66	23.12	0.10	10.07	0.00	0.35	7.70
MA21-078	Biotite stringe	5870	Biotite	31.86	1.09	17.59	22.57	0.04	9.73	0.00	0.33	8.40
MA21-078	Biotite stringe	5871	Biotite	32.05	1.15	17.53	22.56	0.00	9.55	0.00	0.36	7.79
MA21-078	Biotite stringe	5872	Biotite	30.85	1.03	17.85	24.34	0.02	10.22	0.00	0.33	6.76
MA21-078	Biotite stringe	5873	Biotite	32.26	1.22	17.04	22.81	0.02	9.53	0.00	0.31	8.64
MA21-078	Biotite stringe	5874	Biotite	31.56	0.99	17.86	23.45	0.07	9.68	0.00	0.37	8.01
MA21-078	Biotite stringe	5875	Biotite	32.54	1.18	17.55	21.94	0.29	8.97	0.00	0.35	9.36
MA21-078	Biotite stringe	5876	Biotite	32.18	1.23	17.83	22.21	0.05	9.49	0.00	0.44	8.57
MA21-078	Biotite stringe	5877	Biotite	32.13	1.15	17.18	23.09	0.14	9.58	0.00	0.38	8.11
MA21-078	Biotite stringe	5878	Biotite	32.81	1.32	16.91	21.94	0.19	9.57	0.00	0.27	8.98
MA21-078	Biotite stringe	5879	Biotite	31.71	1.21	17.89	23.00	0.22	9.56	0.00	0.44	8.26
MA21-078	Biotite stringe	5880	Biotite	32.48	1.17	17.80	22.41	0.14	9.24	0.00	0.27	9.11
MA21-078	Biotite stringe	5881	Biotite	32.23	1.07	17.64	23.18	0.16	9.81	0.00	0.40	8.28
MA21-078	Biotite stringe	5882	Biotite	32.56	1.23	17.58	22.43	0.17	9.66	0.00	0.37	8.96
MA21-078	Biotite stringe	5883	Biotite	32.17	1.15	17.47	23.07	0.27	10.04	0.00	0.45	8.17
MA21-078	Biotite stringe	5884	Biotite	32.81	1.33	17.65	22.25	0.00	9.19	0.00	0.30	9.40
MA21-078	Biotite stringe	5885	Biotite	33.00	1.24	17.14	22.60	0.00	9.43	0.00	0.33	9.18
MA21-078	Biotite stringe	5886	Fspar	56.93	0.00	22.35	0.56	0.00	0.03	4.70	7.79	0.09
MA21-078	Biotite stringe	5887	Fspar	58.09	0.14	22.33	0.71	0.00	0.05	2.19	8.11	1.30
MA21-078	Biotite stringe	5888	Fspar	56.63	0.00	23.09	0.49	0.00	0.03	5.29	7.67	0.05
MA21-078	Biotite stringe	5889	Fspar	59.22	0.00	21.33	0.58	0.05	0.02	3.31	8.85	0.05
MA21-078	Biotite stringe	5890	Fspar	59.12	0.00	21.47	0.61	0.07	0.05	3.59	8.36	0.14
MA21-078	Biotite stringe	5891	Fspar	61.99	0.05	19.81	0.52	0.06	0.03	1.20	9.92	0.10
MA21-078	Biotite stringe	5892	Fspar	56.42	0.15	23.17	0.40	0.00	0.04	5.79	7.55	0.14
MA21-078	Biotite stringe	5893	Fspar	58.04	0.00	22.08	0.38	0.08	0.03	4.38	8.16	0.11
MA21-078	Biotite stringe	5894	Fspar	60.17	0.12	21.00	0.28	0.00	0.04	2.75	8.81	0.00
MA21-078	Biotite stringe	5895	Fspar	56.99	0.00	22.96	0.35	0.00	0.04	5.37	7.48	0.16

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-078	Biotite stringe	5896	Fspar	57.39	0.00	22.56	0.70	0.00	0.04	4.94	7.87	0.14
MA21-078	Biotite stringe	5897	Fspar	58.81	0.03	21.74	0.54	0.00	0.03	3.73	8.51	0.14
MA21-078	Biotite stringe	5898	Fspar	59.70	0.01	21.28	0.54	0.00	0.05	2.97	8.83	0.09
MA21-078	Biotite stringe	5899	Fspar	57.98	0.07	22.45	0.41	0.03	0.02	4.47	8.30	0.10
MA21-078	Biotite stringe	5900	Fspar	62.07	0.02	20.01	0.24	0.00	0.00	1.41	9.83	0.11
MA21-078	Biotite stringe	5901	Fspar	56.79	0.00	23.16	0.40	0.00	0.03	5.66	7.60	0.08
MA21-078	Biotite stringe	5902	Fspar	59.11	0.00	21.58	0.54	0.00	0.03	3.53	8.80	0.17
MA21-078	Biotite stringe	5903	Fspar	59.45	0.00	21.82	0.32	0.00	0.00	3.73	8.60	0.16
MA21-078	Biotite stringe	5904	Fspar	59.38	0.02	21.74	0.42	0.00	0.04	3.42	8.66	0.34
MA21-078	Biotite stringe	5905	Fspar	56.71	0.01	23.63	0.30	0.00	0.06	5.60	7.50	0.13
MA21-078	Biotite stringe	5906	Fspar	59.16	0.03	22.16	0.54	0.00	0.12	3.73	8.30	0.11
MA21-078	Biotite stringe	5907	Fspar	59.85	0.00	21.47	0.53	0.00	0.04	3.10	8.94	0.09
MA21-078	Biotite stringe	5908	Fspar	59.86	0.01	21.50	0.32	0.00	0.05	3.43	8.84	0.03
MA21-078	Biotite stringe	5909	Fspar	59.07	0.00	21.81	0.49	0.05	0.10	3.75	8.60	0.08
MA21-078	Biotite stringe	5928	Fspar	57.06	0.01	23.33	0.36	0.01	0.00	5.29	7.72	0.08
MA21-078	Biotite stringe	5929	Fspar	57.64	0.00	22.84	0.46	0.02	0.19	5.31	7.77	0.08
MA21-078	Biotite stringe	5930	Fspar	57.94	0.10	22.83	0.36	0.00	0.02	5.00	7.83	0.14
MA21-078	Biotite stringe	5931	Fspar	59.55	0.00	21.71	0.49	0.03	0.05	3.34	8.74	0.15
MA21-078	Biotite stringe	5932	Fspar	60.31	0.00	21.47	0.31	0.00	0.02	2.91	9.12	0.11
MA21-078	Biotite stringe	5933	Fspar	57.26	0.01	23.18	0.61	0.00	0.19	5.74	7.44	0.04
MA21-078	Biotite stringe	5934	Fspar	59.99	0.04	21.29	0.69	0.00	0.04	3.11	8.95	0.11
MA21-078	Biotite stringe	5935	Fspar	59.54	0.00	21.67	0.71	0.08	0.17	3.52	8.58	0.16
MA21-078	Biotite stringe	5936	Fspar	56.83	0.05	23.37	0.73	0.06	0.27	5.34	7.53	0.04
MA21-078	Biotite stringe	5937	Fspar	59.00	0.00	22.16	0.64	0.00	0.29	3.66	8.58	0.14
MA21-078	Biotite stringe	5938	Fspar	59.46	0.00	21.88	0.35	0.00	0.02	3.52	8.64	0.22
MA21-078	Biotite stringe	5939	Fspar	60.52	0.02	21.41	0.49	0.00	0.03	2.74	9.19	0.02
MA21-078	Biotite stringe	5940	Fspar	62.40	0.00	20.15	0.33	0.06	0.10	1.37	9.87	0.13
MA21-078	Biotite stringe	5941	Fspar	59.58	0.02	22.05	0.43	0.13	0.12	3.69	8.49	0.10
MA21-078	Biotite stringe	5942	Fspar	59.58	0.14	21.85	0.44	0.00	0.02	3.60	8.60	0.06
MA21-078	Biotite stringe	5943	Fspar	61.12	0.02	20.90	0.36	0.13	0.03	2.32	9.54	0.14
MA21-078	Biotite stringe	5944	Fspar	62.47	0.06	20.09	0.34	0.14	0.02	1.35	9.92	0.07
MA21-078	Biotite stringe	5945	Fspar	57.06	0.00	23.49	0.53	0.00	0.04	5.49	7.67	0.13
MA21-078	Biotite stringe	5946	Fspar	57.21	0.07	23.89	0.25	0.05	0.17	5.47	7.51	0.17
MA21-078	Biotite stringe	5947	Fspar	59.75	0.18	21.53	0.89	0.03	0.21	3.17	8.89	0.15

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MA21-078	Biotite stringe	5948	Fspar	60.69	0.02	21.45	0.53	0.07	0.03	2.86	8.94	0.24
MA21-078	Biotite stringe	5949	Fspar	57.50	0.00	23.79	0.33	0.00	0.20	5.52	7.47	0.11
MA21-078	Biotite stringe	5950	Fspar	62.83	0.00	19.33	0.74	0.00	0.03	0.49	10.29	0.08
MA21-078	Biotite stringe	5951	Fspar	62.40	0.06	19.47	0.87	0.01	0.15	0.71	10.26	0.00
MA21-078	Biotite stringe	5952	Fspar	63.45	0.00	19.17	0.78	0.00	0.08	0.21	10.40	0.06
MA21-078	Biotite stringe	5953	Fspar	62.68	0.07	19.63	0.88	0.08	0.06	0.76	10.12	0.10
MA21-078	Biotite stringe	5954	Fspar	61.04	0.19	20.48	0.82	0.10	0.04	1.92	9.59	0.23
MA21-078	Biotite stringe	5955	Fspar	63.28	0.01	19.50	0.56	0.00	0.09	0.61	10.16	0.01
MA21-078	Biotite stringe	5956	Fspar	63.16	0.01	19.62	0.63	0.00	0.01	0.55	10.22	0.11
MA21-078	Biotite stringe	5957	Fspar	62.62	0.00	19.66	0.85	0.09	0.21	0.74	10.32	0.10
MA21-078	Biotite stringe	5958	Fspar	62.21	0.02	20.05	0.79	0.09	0.05	1.32	10.01	0.09
MA21-078	Biotite stringe	5959	Fspar	62.40	0.01	20.13	0.57	0.00	0.09	1.36	9.86	0.04
MA21-078	Biotite stringe	5960	Fspar	62.69	0.02	19.79	0.72	0.02	0.09	0.92	10.34	0.07
MA21-078	Biotite stringe	5961	Fspar	62.83	0.06	19.96	0.80	0.00	0.04	0.96	10.14	0.03
MA21-078	Biotite stringe	5962	Fspar	63.29	0.02	19.48	0.83	0.09	0.04	0.65	10.27	0.10
MA21-078	Biotite stringe	5963	Fspar	63.30	0.00	19.90	0.66	0.01	0.22	0.99	10.34	0.09
MA21-078	Biotite stringe	5973	Fspar	63.26	0.04	19.96	0.71	0.05	0.22	0.59	10.37	0.11
MA21-078	Biotite stringe	5974	Fspar	63.97	0.16	19.38	0.68	0.07	0.04	0.44	10.38	0.09
MA21-078	Biotite stringe	5975	Wmica	44.36	0.27	32.07	3.65	0.00	1.01	0.00	0.55	10.71
MA21-078	Biotite stringe	5976	Wmica	44.35	0.32	32.03	3.40	0.02	1.02	0.00	0.52	10.75
MA21-078	Biotite stringe	5977	Biotite	35.14	1.29	16.93	20.82	0.10	9.10	0.00	0.07	9.16
MA21-078	Biotite stringe	5978	Wmica	44.94	0.54	31.71	3.47	0.00	1.10	0.00	0.68	10.39
MA21-078	Biotite stringe	5979	Wmica	44.94	0.29	32.19	3.45	0.17	1.13	0.00	0.66	10.47
MA21-078	Biotite stringe	5980	Wmica	45.03	0.49	32.01	3.31	0.00	1.14	0.00	0.65	10.46
MA21-078	Biotite stringe	5981	Wmica	45.06	0.24	31.81	3.58	0.00	1.44	0.00	0.67	10.34
MA21-078	Biotite stringe	5982	Wmica	44.56	0.42	32.16	3.57	0.00	1.21	0.00	0.71	10.38
MA21-078	Biotite stringe	5983	Wmica	44.86	0.20	32.28	3.44	0.24	1.22	0.00	0.57	10.47
MA21-078	Biotite stringe	5984	Wmica	44.49	0.44	32.59	3.56	0.00	1.06	0.00	0.69	10.66
MA21-078	Biotite stringe	5985	Wmica	44.81	0.43	32.25	3.62	0.00	1.25	0.00	0.74	10.57
MA21-078	Biotite stringe	5986	Wmica	44.94	0.46	32.13	3.40	0.00	1.24	0.00	0.75	10.73
MA21-078	Biotite stringe	5987	Wmica	45.38	0.50	31.99	3.52	0.05	1.29	0.00	0.74	10.56
MA21-078	Biotite stringe	5988	Wmica	44.74	0.33	32.06	3.38	0.13	1.39	0.00	0.82	10.70
MA21-078	Biotite stringe	5989	Wmica	45.17	0.54	32.27	3.59	0.00	1.30	0.00	0.78	10.34
MA21-078	Biotite stringe	5990	Biotite	35.25	1.27	17.33	21.57	0.16	9.56	0.00	0.47	8.86

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-078	Biotite stringe	5991	Biotite	35.65	1.37	17.18	20.71	0.09	9.62	0.00	0.42	9.18
MA21-078	Biotite stringe	5992	Biotite	35.83	1.37	17.20	20.70	0.15	9.59	0.00	0.42	9.24
MA21-078	Biotite stringe	5993	Biotite	35.57	1.23	17.79	21.73	0.11	9.47	0.00	0.30	8.53
MA21-078	Biotite stringe	5994	Biotite	35.65	1.34	17.64	21.45	0.05	9.46	0.00	0.38	8.93
MA21-078	Biotite stringe	5995	Wmica	45.20	0.19	31.91	2.74	0.00	1.20	0.00	0.71	10.81
MA21-078	Biotite stringe	5996	Wmica	44.96	0.32	32.54	2.92	0.00	0.97	0.00	0.77	10.82
MA21-078	Biotite stringe	5997	Wmica	45.06	0.23	31.72	4.15	0.00	1.16	0.00	0.65	10.41
MA21-078	Biotite stringe	5998	Wmica	44.64	0.17	32.24	2.87	0.02	1.20	0.02	0.79	11.03
MA21-078	Biotite stringe	5999	Wmica	45.22	0.23	32.39	3.00	0.00	0.96	0.00	0.92	10.68
MA21-078	Biotite stringe	6000	Wmica	45.58	0.30	32.35	2.59	0.00	1.10	0.00	0.67	10.77
MA21-078	Biotite stringe	6001	Wmica	45.51	0.31	32.38	2.75	0.00	1.04	0.00	0.91	10.64
MA21-078	Biotite stringe	6012	Wmica	45.94	0.21	32.17	2.62	0.11	1.09	0.03	1.06	10.37
MA21-078	Biotite stringe	6013	Wmica	45.75	0.27	32.76	2.72	0.03	0.99	0.00	0.78	10.54
MA21-078	Biotite stringe	6014	Wmica	45.12	0.18	32.48	3.19	0.05	0.87	0.00	0.78	10.52
MA21-078	Biotite stringe	6015	Wmica	45.53	0.11	32.86	3.04	0.00	0.95	0.00	0.84	10.40
MA21-078	Biotite stringe	6016	Wmica	45.43	0.25	32.34	2.80	0.00	1.19	0.00	0.80	11.02
MA21-078	Biotite stringe	6017	Wmica	45.32	0.19	32.23	3.45	0.00	1.13	0.00	0.79	10.80
MA21-078	Biotite stringe	6018	Wmica	45.46	0.17	32.76	2.65	0.00	1.12	0.00	0.73	10.71
MA21-078	Biotite stringe	6019	Wmica	45.16	0.19	32.62	3.06	0.00	1.01	0.00	0.85	10.86
MA21-078	Biotite stringe	6020	Wmica	46.01	0.19	32.50	2.50	0.00	1.16	0.00	0.83	10.81
MA21-078	Biotite stringe	6021	Wmica	45.83	0.21	32.67	2.93	0.00	1.16	0.00	0.76	10.84
MA21-078	Biotite stringe	6022	Wmica	45.53	0.16	32.81	2.91	0.00	1.01	0.00	0.78	10.90
MA21-078	Biotite stringe	6023	Wmica	45.87	0.24	32.95	2.73	0.00	1.07	0.03	1.00	10.54
MA21-078	Biotite stringe	6024	Wmica	46.21	0.23	32.48	2.82	0.35	1.33	0.04	1.02	10.89
MA21-078	Biotite stringe	6025	Fspar	59.82	0.00	23.48	0.04	0.04	0.00	5.41	7.59	0.15
MA21-078	Biotite stringe	6026	Fspar	59.69	0.00	23.99	0.06	0.00	0.00	5.22	7.76	0.19
MA21-078	Biotite stringe	6027	Fspar	62.60	0.00	22.02	0.03	0.00	0.00	3.08	8.96	0.16
MA21-078	Biotite stringe	6028	Fspar	59.88	0.16	23.71	0.09	0.00	0.01	5.15	7.83	0.19
MA21-078	Biotite stringe	6029	Fspar	59.71	0.02	23.71	0.00	0.02	0.02	5.45	7.66	0.17
MA21-078	Biotite stringe	6030	Fspar	62.91	0.02	21.94	0.06	0.00	0.01	2.62	9.18	0.14
MA21-078	Biotite stringe	6031	Fspar	62.78	0.00	21.94	0.12	0.00	0.00	2.92	9.07	0.11
MA21-078	Biotite stringe	6032	Fspar	62.79	0.03	22.17	0.06	0.00	0.01	2.93	9.05	0.07
MA21-078	Biotite stringe	6033	Fspar	62.57	0.02	22.03	0.04	0.09	0.00	3.08	9.07	0.20
MA21-078	Biotite stringe	6034	Fspar	63.34	0.00	21.55	0.04	0.13	0.03	2.58	9.33	0.11

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-078	Biotite stringe	6035	Fspar	62.28	0.00	22.67	0.07	0.00	0.00	3.35	8.78	0.05
MA21-078	Biotite stringe	6036	Fspar	62.70	0.00	22.35	0.00	0.00	0.00	3.07	9.10	0.20
MA21-078	Biotite stringe	6037	Fspar	63.24	0.00	21.92	0.00	0.08	0.00	2.81	9.03	0.16
MA21-078	Biotite stringe	6038	Fspar	59.68	0.00	24.16	0.06	0.00	0.01	5.43	7.67	0.24
MA21-078	Biotite stringe	6039	Fspar	60.77	0.05	23.64	0.17	0.00	0.00	4.98	7.90	0.15
MA21-078	Biotite stringe	6040	Fspar	62.76	0.00	22.34	0.10	0.00	0.00	3.04	9.02	0.12
MA21-078	Biotite stringe	6041	Fspar	63.09	0.00	22.10	0.00	0.00	0.01	2.74	9.23	0.14
MA21-078	Biotite stringe	6042	Fspar	63.36	0.01	22.18	0.06	0.00	0.01	2.86	8.97	0.10
MA21-078	Biotite stringe	6043	Fspar	63.25	0.00	22.22	0.00	0.00	0.01	3.04	9.10	0.16
MA21-078	Biotite stringe	6044	Fspar	60.29	0.03	24.01	0.00	0.00	0.01	5.38	7.71	0.23
MA21-078	Biotite stringe	6045	Fspar	61.45	0.00	23.51	0.13	0.04	0.03	4.51	8.05	0.05
MA21-078	Biotite stringe	6046	Fspar	59.89	0.00	24.17	0.18	0.08	0.00	5.40	7.81	0.13
MA21-078	Biotite stringe	6047	Fspar	61.52	0.00	23.38	0.06	0.00	0.00	4.47	8.33	0.04
MA21-078	Biotite stringe	6048	Fspar	62.04	0.01	23.04	0.10	0.00	0.02	3.88	8.66	0.21
MA21-078	Biotite stringe	6049	Fspar	64.13	0.01	21.56	0.13	0.00	0.00	2.36	9.42	0.15
MA21-078	Biotite stringe	6050	Fspar	60.29	0.09	24.10	0.04	0.13	0.00	5.39	7.89	0.26
MA21-078	Biotite stringe	6051	Fspar	63.11	0.00	21.91	0.14	0.00	0.04	3.12	9.16	0.22
MA21-078	Biotite stringe	6052	Fspar	63.72	0.00	22.16	0.10	0.00	0.00	2.92	9.29	0.02
MA21-078	Biotite stringe	6053	Fspar	64.48	0.00	21.90	0.07	0.00	0.00	2.49	9.41	0.16
MA21-078	Biotite stringe	6054	Fspar	64.08	0.08	21.93	0.13	0.15	0.01	2.58	9.41	0.18
MA21-078	Biotite stringe	6055	Fspar	62.05	0.00	23.49	0.13	0.18	0.00	3.85	8.66	0.32
MA21-078	Biotite stringe	6056	Wmica	43.99	0.00	34.35	3.20	0.03	0.90	0.08	0.95	10.69
MA21-078	Biotite stringe	6057	Wmica	44.66	0.20	34.22	2.75	0.00	1.09	0.00	0.76	10.71
MA21-078	Biotite stringe	6058	Wmica	45.18	0.05	33.91	3.00	0.03	1.04	0.00	0.81	10.72
MA21-078	Biotite stringe	6059	Wmica	45.32	0.05	34.07	2.97	0.01	1.01	0.00	0.82	10.70
MA21-078	Biotite stringe	6060	Wmica	45.47	0.04	34.24	2.90	0.11	0.92	0.00	0.75	10.73
MA21-078	Biotite stringe	6061	Wmica	45.02	0.22	33.78	2.90	0.03	1.00	0.00	0.85	10.66
MA21-078	Biotite stringe	6062	Wmica	45.48	0.23	33.71	2.89	0.00	1.22	0.00	0.94	10.93
MA21-078	Biotite stringe	6063	Wmica	45.64	0.12	33.83	2.84	0.00	1.17	0.00	0.95	11.05
MA21-078	Biotite stringe	6096	Wmica	45.11	0.21	34.52	2.86	0.09	1.14	0.00	1.03	10.63
MA21-078	Biotite stringe	6097	Wmica	45.27	0.09	34.22	2.74	0.13	1.05	0.04	0.83	10.77
MA21-078	Biotite stringe	6098	Wmica	45.12	0.02	34.78	3.38	0.21	1.15	0.00	0.83	10.55
MA21-078	Biotite stringe	6099	Wmica	45.76	0.15	33.90	3.15	0.00	1.11	0.00	0.86	10.87
MA21-078	Biotite stringe	6100	Wmica	45.68	0.10	34.26	2.97	0.00	1.21	0.00	0.87	10.62

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-078	Biotite stringe	6101	Wmica	45.83	0.10	33.93	2.73	0.00	1.28	0.00	1.03	10.82
MA21-078	Biotite stringe	6102	Wmica	46.05	0.09	34.28	3.03	0.06	1.31	0.00	0.88	10.84
MA21-078	Biotite stringe	6103	Wmica	45.80	0.20	33.77	3.01	0.18	1.28	0.02	0.83	10.93
MA21-078	Biotite stringe	6104	Wmica	46.18	0.18	33.86	2.95	0.00	1.09	0.00	0.90	10.75
MA21-078	Biotite stringe	6105	Wmica	46.69	0.23	34.33	2.59	0.05	1.10	0.00	0.99	10.69
MA21-078	Biotite stringe	6106	Fspar	60.87	0.00	24.14	0.03	0.18	0.01	4.07	8.55	0.12
MA21-078	Biotite stringe	6107	Fspar	63.20	0.04	22.81	0.16	0.05	0.01	2.46	9.15	0.10
MA21-078	Biotite stringe	6108	Fspar	63.39	0.00	22.96	0.08	0.00	0.01	2.37	9.09	0.19
MA21-078	Biotite stringe	6109	Fspar	62.72	0.01	23.34	0.01	0.00	0.00	3.23	8.90	0.10
MA21-078	Biotite stringe	6110	Fspar	62.32	0.00	23.59	0.06	0.06	0.01	3.03	8.94	0.13
MA21-078	Biotite stringe	6111	Fspar	63.33	0.08	22.97	0.09	0.00	0.02	2.39	9.28	0.15
MA21-078	Biotite stringe	6112	Fspar	63.33	0.00	22.99	0.00	0.00	0.04	2.65	9.33	0.09
MA21-078	Biotite stringe	6113	Fspar	63.42	0.02	22.88	0.08	0.00	0.01	2.84	9.06	0.14
MA21-078	Biotite stringe	6114	Fspar	64.34	0.02	22.53	0.20	0.00	0.02	2.15	9.14	0.26
MA21-078	Biotite stringe	6115	Fspar	63.69	0.05	23.00	0.11	0.00	0.00	2.42	9.25	0.17
MA21-078	Biotite stringe	6116	Fspar	63.34	0.00	23.18	0.01	0.00	0.01	2.96	8.99	0.12
MA21-078	Biotite stringe	6117	Fspar	64.29	0.00	22.95	0.03	0.07	0.01	2.33	9.36	0.00
MA21-078	Biotite stringe	6118	Fspar	62.02	0.00	24.32	0.07	0.00	0.01	3.92	8.56	0.07
MA21-078	Biotite stringe	6119	Fspar	63.16	0.05	23.48	0.00	0.07	0.01	2.94	9.05	0.27
MA21-078	Biotite stringe	6120	Fspar	63.40	0.06	23.59	0.13	0.10	0.03	2.80	8.89	0.18
MA21-078	Biotite stringe	6121	Fspar	62.79	0.01	23.51	0.19	0.07	0.00	3.28	9.05	0.12
MA21-078	Biotite stringe	6122	Fspar	63.61	0.04	23.14	0.21	0.00	0.04	2.64	9.14	0.19
MA21-078	Biotite stringe	6123	Fspar	63.13	0.15	23.75	0.10	0.09	0.00	2.99	9.15	0.06
MA21-078	Biotite stringe	6124	Fspar	62.87	0.02	24.00	0.15	0.00	0.00	3.62	8.83	0.13
MA21-078	Biotite stringe	6125	Fspar	63.51	0.03	23.53	0.03	0.05	0.05	3.13	9.01	0.14
MA21-078	Biotite stringe	6126	Fspar	65.51	0.00	22.27	0.15	0.00	0.03	1.45	10.01	0.09
MA21-078	Biotite stringe	6127	Fspar	64.41	0.02	23.23	0.05	0.00	0.00	2.42	9.46	0.15
MA21-078	Biotite stringe	6128	Fspar	63.72	0.00	23.32	0.15	0.01	0.01	2.88	9.35	0.15
MA21-078	Biotite stringe	6129	Fspar	63.46	0.11	23.83	0.00	0.00	0.00	3.21	9.23	0.18
MA21-080W1	Wk Type 1A	6130	Wmica	45.87	0.37	31.74	5.48	0.00	1.44	0.00	0.55	11.39
MA21-080W1	Wk Type 1A	6131	Biotite	35.32	1.54	17.88	23.02	0.20	9.04	0.64	0.39	8.67
MA21-080W1	Wk Type 1A	6132	Wmica	45.89	0.63	32.42	4.28	0.00	1.56	0.00	0.68	11.62
MA21-080W1	Wk Type 1A	6133	Wmica	46.11	0.56	31.60	5.21	0.02	1.59	0.00	0.63	11.69
MA21-080W1	Wk Type 1A	6134	Biotite	35.78	1.50	18.06	22.81	0.09	9.04	0.37	0.36	8.94

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6135	Wmica	46.48	0.49	32.25	4.63	0.04	1.50	0.00	0.47	11.76
MA21-080W1	Wk Type 1A	6136	Biotite	35.62	1.71	18.00	22.64	0.32	8.95	0.08	0.32	9.82
MA21-080W1	Wk Type 1A	6137	Wmica	45.84	0.55	31.99	5.83	0.02	1.56	0.04	0.58	11.52
MA21-080W1	Wk Type 1A	6138	Wmica	46.70	0.55	32.24	4.55	0.12	1.57	0.00	0.64	12.02
MA21-080W1	Wk Type 1A	6139	Fspar	61.98	0.00	22.55	0.48	0.09	0.03	3.76	9.14	0.22
MA21-080W1	Wk Type 1A	6140	Fspar	61.93	0.02	23.11	0.37	0.00	0.00	4.02	8.93	0.18
MA21-080W1	Wk Type 1A	6141	Biotite	36.04	1.66	17.97	22.85	0.32	9.44	0.59	0.55	8.78
MA21-080W1	Wk Type 1A	6142	Biotite	35.89	1.58	18.20	23.11	0.00	9.27	0.22	0.54	9.13
MA21-080W1	Wk Type 1A	6143	Wmica	45.92	0.46	31.77	5.99	0.06	1.79	0.00	0.44	11.63
MA21-080W1	Wk Type 1A	6144	Wmica	46.84	0.55	32.64	4.54	0.00	1.58	0.00	0.52	11.95
MA21-080W1	Wk Type 1A	6145	Biotite	35.66	1.61	18.23	23.16	0.37	9.14	0.27	0.40	9.50
MA21-080W1	Wk Type 1A	6146	Wmica	47.40	0.58	32.30	4.50	0.00	1.72	0.00	0.53	11.99
MA21-080W1	Wk Type 1A	6147	Biotite	35.78	1.93	17.76	23.43	0.32	9.20	0.28	0.27	9.55
MA21-080W1	Wk Type 1A	6148	Wmica	46.60	0.52	32.72	4.46	0.00	1.75	0.00	0.58	11.93
MA21-080W1	Wk Type 1A	6149	Biotite	36.08	1.63	18.23	22.93	0.24	9.25	0.15	0.53	9.49
MA21-080W1	Wk Type 1A	6150	Biotite	35.73	1.61	18.33	23.23	0.09	9.19	0.25	0.66	9.40
MA21-080W1	Wk Type 1A	6151	Biotite	36.22	1.62	18.29	22.54	0.18	9.08	0.02	0.48	10.03
MA21-080W1	Wk Type 1A	6152	Fspar	63.16	0.13	22.71	0.50	0.00	0.02	3.45	9.42	0.21
MA21-080W1	Wk Type 1A	6153	Biotite	36.00	1.67	18.13	23.39	0.08	9.22	0.19	0.48	9.55
MA21-080W1	Wk Type 1A	6154	Fspar	61.85	0.00	23.70	0.45	0.00	0.02	4.61	8.80	0.26
MA21-080W1	Wk Type 1A	6155	Fspar	62.92	0.15	23.07	0.37	0.00	0.02	3.84	9.12	0.14
MA21-080W1	Wk Type 1A	6156	Biotite	36.62	1.46	18.49	23.18	0.37	9.54	0.30	0.39	9.06
MA21-080W1	Wk Type 1A	6157	Biotite	36.34	1.57	18.35	23.38	0.03	9.28	0.16	0.53	9.69
MA21-080W1	Wk Type 1A	6158	Fspar	64.38	0.00	22.37	0.38	0.00	0.03	2.74	9.88	0.15
MA21-080W1	Wk Type 1A	6159	Wmica	46.74	0.40	33.21	5.58	0.00	1.68	0.00	0.67	11.55
MA21-080W1	Wk Type 1A	6160	Fspar	63.10	0.04	23.29	0.36	0.00	0.00	3.93	9.22	0.24
MA21-080W1	Wk Type 1A	6161	Fspar	62.42	0.02	23.77	0.36	0.00	0.01	4.47	9.03	0.23
MA21-080W1	Wk Type 1A	6162	Biotite	36.13	1.46	18.33	24.00	0.23	9.43	0.00	0.42	9.97
MA21-080W1	Wk Type 1A	6163	Fspar	62.83	0.00	23.88	0.48	0.00	0.00	4.14	8.93	0.18
MA21-080W1	Wk Type 1A	6164	Fspar	63.09	0.04	23.72	0.42	0.06	0.04	4.48	9.03	0.12
MA21-080W1	Wk Type 1A	6165	Biotite	36.96	1.36	18.57	23.33	0.29	9.59	0.00	0.59	9.98
MA21-080W1	Wk Type 1A	6166	Fspar	62.61	0.05	23.45	0.61	0.00	0.03	4.48	9.13	0.17
MA21-080W1	Wk Type 1A	6167	Biotite	37.01	1.40	18.86	22.90	0.28	9.67	0.05	0.53	9.96
MA21-080W1	Wk Type 1A	6168	Biotite	37.16	1.47	19.02	22.85	0.22	9.87	0.02	0.46	9.29

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6169	Biotite	37.00	1.41	18.87	23.53	0.12	9.97	0.02	0.49	9.57
MA21-080W1	Wk Type 1A	6170	Fspar	63.88	0.03	23.98	0.68	0.00	0.02	4.22	9.40	0.27
MA21-080W1	Wk Type 1A	6171	Fspar	63.40	0.02	24.13	0.69	0.06	0.04	4.74	9.28	0.26
MA21-080W1	Wk Type 1A	6172	Fspar	64.46	0.10	23.56	0.80	0.14	0.03	3.88	9.61	0.18
MA21-080W1	Wk Type 1A	6173	Chl	32.15	1.29	16.45	19.55	0.25	8.91	4.54	0.67	0.36
MA21-080W1	Wk Type 1A	6174	Chl	33.32	1.35	16.84	20.49	0.22	9.38	4.23	0.78	0.28
MA21-080W1	Wk Type 1A	6175	Biotite	33.04	1.49	16.54	22.22	0.09	8.02	0.19	0.56	8.61
MA21-080W1	Wk Type 1A	6176	Biotite	33.87	1.46	16.60	22.59	0.10	8.19	0.28	0.50	7.91
MA21-080W1	Wk Type 1A	6177	Chl	35.27	1.55	17.85	21.66	0.02	9.64	2.44	0.83	2.01
MA21-080W1	Wk Type 1A	6178	Chl	35.43	1.57	18.17	21.56	0.17	9.98	3.27	1.07	0.38
MA21-080W1	Wk Type 1A	6179	Biotite	33.90	1.53	16.98	22.30	0.21	8.71	0.44	0.58	8.04
MA21-080W1	Wk Type 1A	6180	Biotite	34.03	1.50	17.06	22.40	0.19	8.53	0.26	0.64	8.49
MA21-080W1	Wk Type 1A	6181	Chl	35.63	1.49	18.44	21.38	0.09	10.07	2.59	1.17	0.67
MA21-080W1	Wk Type 1A	6182	Chl	35.69	1.53	18.17	21.49	0.31	9.97	2.64	0.96	1.61
MA21-080W1	Wk Type 1A	6183	Biotite	34.62	1.40	17.05	22.18	0.22	8.33	0.13	0.63	8.56
MA21-080W1	Wk Type 1A	6184	Biotite	35.42	1.48	17.55	22.30	0.08	8.68	0.17	0.65	8.32
MA21-080W1	Wk Type 1A	6185	Biotite	34.95	1.38	17.52	22.32	0.00	8.69	0.00	0.36	10.38
MA21-080W1	Wk Type 1A	6186	Biotite	34.86	1.63	17.43	22.44	0.18	8.87	0.00	0.49	10.07
MA21-080W1	Wk Type 1A	6187	Biotite	35.04	1.80	17.54	22.66	0.17	8.68	0.04	0.39	10.12
MA21-080W1	Wk Type 1A	6188	Biotite	34.66	1.68	17.67	22.73	0.09	8.86	0.00	0.48	10.21
MA21-080W1	Wk Type 1A	6189	Biotite	35.39	1.49	17.76	22.80	0.07	8.85	0.00	0.52	10.47
MA21-080W1	Wk Type 1A	6190	Fspar	59.66	0.09	23.70	0.30	0.00	0.00	5.53	8.19	0.09
MA21-080W1	Wk Type 1A	6191	Fspar	59.41	0.06	23.74	0.30	0.20	0.00	5.54	8.10	0.26
MA21-080W1	Wk Type 1A	6192	Biotite	35.02	1.46	17.70	22.78	0.10	8.99	0.00	0.44	10.28
MA21-080W1	Wk Type 1A	6193	Biotite	35.12	1.68	17.81	22.90	0.25	8.99	0.00	0.40	10.42
MA21-080W1	Wk Type 1A	6194	Biotite	35.53	1.75	17.59	22.81	0.34	8.90	0.00	0.55	10.10
MA21-080W1	Wk Type 1A	6195	Biotite	35.51	1.61	17.77	22.46	0.19	9.09	0.00	0.46	10.29
MA21-080W1	Wk Type 1A	6196	Biotite	35.33	1.52	17.98	22.58	0.18	8.97	0.00	0.59	10.17
MA21-080W1	Wk Type 1A	6197	Fspar	59.62	0.00	24.06	0.27	0.03	0.01	5.60	8.19	0.21
MA21-080W1	Wk Type 1A	6198	Fspar	60.14	0.00	23.96	0.33	0.01	0.02	5.33	8.39	0.30
MA21-080W1	Wk Type 1A	6199	Biotite	35.30	1.59	17.89	23.07	0.04	8.93	0.00	0.54	10.38
MA21-080W1	Wk Type 1A	6200	Fspar	60.04	0.14	24.25	0.59	0.00	0.02	5.53	8.32	0.24
MA21-080W1	Wk Type 1A	6201	Fspar	59.80	0.11	24.73	0.46	0.00	0.04	5.82	8.20	0.25
MA21-080W1	Wk Type 1A	6202	Wmica	44.89	0.57	31.24	4.58	0.00	1.60	0.00	0.52	11.48

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6203	Wmica	44.76	0.56	31.25	4.53	0.00	1.61	0.00	0.52	11.47
MA21-080W1	Wk Type 1A	6204	Biotite	34.40	1.90	17.32	23.12	0.05	8.68	0.05	0.47	8.90
MA21-080W1	Wk Type 1A	6205	Wmica	44.76	0.60	31.85	3.94	0.04	1.54	0.00	0.73	11.25
MA21-080W1	Wk Type 1A	6206	Wmica	44.59	0.35	32.19	4.02	0.10	1.51	0.00	0.64	11.47
MA21-080W1	Wk Type 1A	6207	Biotite	34.78	1.64	17.59	22.99	0.15	8.56	0.15	0.40	9.27
MA21-080W1	Wk Type 1A	6208	Wmica	45.35	0.51	32.16	3.62	0.07	1.61	0.00	0.56	11.74
MA21-080W1	Wk Type 1A	6209	Wmica	45.72	0.45	31.49	4.18	0.11	1.55	0.00	0.49	11.69
MA21-080W1	Wk Type 1A	6210	Wmica	46.22	0.16	31.85	4.08	0.05	1.62	0.00	0.55	11.67
MA21-080W1	Wk Type 1A	6211	Wmica	46.02	0.39	31.42	4.01	0.08	1.83	0.00	0.58	11.61
MA21-080W1	Wk Type 1A	6212	Wmica	46.15	0.39	31.52	4.04	0.00	1.86	0.00	0.68	11.53
MA21-080W1	Wk Type 1A	6213	Biotite	34.64	1.60	17.66	22.81	0.39	8.84	0.00	0.43	10.14
MA21-080W1	Wk Type 1A	6214	Wmica	46.13	0.42	32.62	3.46	0.00	1.58	0.00	0.55	11.57
MA21-080W1	Wk Type 1A	6215	Biotite	35.02	1.60	17.71	23.12	0.34	8.71	0.08	0.37	9.76
MA21-080W1	Wk Type 1A	6216	Biotite	34.69	1.77	17.62	23.30	0.26	8.76	0.12	0.43	9.25
MA21-080W1	Wk Type 1A	6217	Biotite	35.06	1.73	17.86	23.23	0.05	8.85	0.07	0.48	9.69
MA21-080W1	Wk Type 1A	6218	Biotite	34.79	1.69	17.99	22.84	0.30	8.78	0.00	0.21	10.47
MA21-080W1	Wk Type 1A	6219	Biotite	34.90	1.64	17.89	22.97	0.45	8.90	0.00	0.59	9.79
MA21-080W1	Wk Type 1A	6220	Biotite	34.83	1.75	17.84	22.96	0.26	8.82	0.03	0.61	10.03
MA21-080W1	Wk Type 1A	6221	Biotite	35.01	1.59	18.04	22.41	0.35	9.08	0.00	0.59	10.18
MA21-080W1	Wk Type 1A	6222	Fspar	59.32	0.12	24.31	0.21	0.05	0.04	5.77	8.21	0.21
MA21-080W1	Wk Type 1A	6223	Fspar	59.66	0.00	24.38	0.11	0.01	0.03	5.88	8.07	0.15
MA21-080W1	Wk Type 1A	6224	Fspar	62.11	0.00	22.93	0.31	0.00	0.00	3.92	9.04	0.18
MA21-080W1	Wk Type 1A	6225	Fspar	61.88	0.00	23.27	0.18	0.00	0.01	4.08	9.03	0.14
MA21-080W1	Wk Type 1A	6226	Fspar	61.83	0.02	23.54	0.04	0.00	0.00	4.27	8.84	0.26
MA21-080W1	Wk Type 1A	6227	Fspar	59.82	0.02	24.60	0.20	0.00	0.00	6.08	8.13	0.18
MA21-080W1	Wk Type 1A	6228	Fspar	61.95	0.00	23.34	0.26	0.00	0.02	4.26	9.00	0.22
MA21-080W1	Wk Type 1A	6229	Fspar	59.75	0.12	24.73	0.25	0.01	0.01	5.75	8.18	0.26
MA21-080W1	Wk Type 1A	6230	Fspar	61.63	0.02	24.01	0.31	0.00	0.02	4.47	8.95	0.15
MA21-080W1	Wk Type 1A	6231	Fspar	60.81	0.00	24.72	0.11	0.10	0.02	5.82	8.18	0.25
MA21-080W1	Wk Type 1A	6232	Biotite	36.61	1.55	17.73	23.60	0.26	8.80	0.00	0.23	10.28
MA21-080W1	Wk Type 1A	6233	Biotite	36.16	1.61	18.01	24.06	0.28	9.23	0.22	0.43	9.80
MA21-080W1	Wk Type 1A	6234	Biotite	36.67	1.57	18.03	23.81	0.18	9.02	0.00	0.44	10.16
MA21-080W1	Wk Type 1A	6235	Biotite	36.73	1.60	18.10	24.40	0.21	9.21	0.34	0.19	9.48
MA21-080W1	Wk Type 1A	6236	Biotite	36.33	1.59	18.21	23.91	0.02	9.37	0.31	0.38	9.73

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6237	Biotite	36.42	1.78	17.86	24.52	0.37	9.01	0.02	0.32	10.11
MA21-080W1	Wk Type 1A	6238	Biotite	36.75	1.47	18.25	24.36	0.20	9.28	0.16	0.27	10.07
MA21-080W1	Wk Type 1A	6239	Biotite	36.88	1.61	18.27	23.57	0.29	9.16	0.00	0.41	10.48
MA21-080W1	Wk Type 1A	6240	Biotite	36.92	1.58	18.05	24.19	0.40	9.31	0.32	0.37	9.80
MA21-080W1	Wk Type 1A	6241	Biotite	36.93	1.54	18.04	24.12	0.04	9.33	0.00	0.43	10.38
MA21-080W1	Wk Type 1A	6242	Biotite	36.62	1.61	18.28	24.21	0.40	9.43	0.30	0.40	9.69
MA21-080W1	Wk Type 1A	6243	Biotite	36.66	1.49	18.53	24.16	0.27	9.31	0.00	0.39	10.24
MA21-080W1	Wk Type 1A	6244	Biotite	36.93	1.53	18.49	24.36	0.00	9.43	0.34	0.58	9.63
MA21-080W1	Wk Type 1A	6245	Chl	32.87	1.46	16.24	21.33	0.16	9.46	2.87	0.52	1.62
MA21-080W1	Wk Type 1A	6246	Chl	33.10	1.45	16.42	21.59	0.04	9.74	2.78	0.38	1.45
MA21-080W1	Wk Type 1A	6247	Chl	33.63	1.35	16.68	21.61	0.16	9.52	2.46	0.53	1.89
MA21-080W1	Wk Type 1A	6248	Chl	33.30	1.29	16.61	21.55	0.16	9.76	2.30	0.47	2.39
MA21-080W1	Wk Type 1A	6249	Biotite	31.81	1.53	15.73	22.16	0.33	7.80	0.36	0.62	7.90
MA21-080W1	Wk Type 1A	6250	Chl	33.45	1.34	16.58	21.93	0.16	9.72	2.69	0.47	1.95
MA21-080W1	Wk Type 1A	6251	Chl	33.49	1.42	16.67	22.15	0.29	9.63	2.29	0.45	2.03
MA21-080W1	Wk Type 1A	6252	Biotite	33.40	1.42	16.83	21.67	0.09	9.22	1.19	0.53	4.86
MA21-080W1	Wk Type 1A	6253	Biotite	33.37	1.52	16.47	22.53	0.20	8.20	0.17	0.53	8.37
MA21-080W1	Wk Type 1A	6254	Biotite	33.77	1.51	16.90	22.54	0.16	9.10	0.81	0.57	6.09
MA21-080W1	Wk Type 1A	6255	Biotite	34.32	1.42	16.69	22.65	0.30	8.92	0.72	0.64	6.55
MA21-080W1	Wk Type 1A	6256	Biotite	33.88	1.47	16.86	22.41	0.34	8.59	0.23	0.66	8.17
MA21-080W1	Wk Type 1A	6257	Biotite	34.07	1.63	16.99	22.36	0.39	8.37	0.26	0.50	8.61
MA21-080W1	Wk Type 1A	6258	Wmica	45.58	0.46	30.93	3.15	0.12	1.39	0.00	0.57	11.52
MA21-080W1	Wk Type 1A	6259	Wmica	45.46	0.46	31.09	3.30	0.00	1.69	0.00	0.58	11.43
MA21-080W1	Wk Type 1A	6260	Wmica	44.25	0.67	32.21	3.50	0.02	1.22	0.00	0.65	11.42
MA21-080W1	Wk Type 1A	6261	Wmica	44.74	0.54	31.73	3.48	0.04	1.26	0.00	0.57	11.65
MA21-080W1	Wk Type 1A	6262	Wmica	45.58	0.48	31.03	3.46	0.00	1.58	0.00	0.58	11.59
MA21-080W1	Wk Type 1A	6263	Wmica	45.77	0.61	30.51	3.61	0.21	1.83	0.00	0.64	11.60
MA21-080W1	Wk Type 1A	6264	Wmica	45.52	0.67	31.13	3.26	0.00	1.62	0.00	0.64	11.42
MA21-080W1	Wk Type 1A	6265	Wmica	45.66	0.49	31.21	3.46	0.03	1.71	0.00	0.64	11.55
MA21-080W1	Wk Type 1A	6266	Wmica	46.54	0.30	30.46	3.78	0.00	1.80	0.00	0.58	11.54
MA21-080W1	Wk Type 1A	6267	Wmica	45.59	0.40	31.71	3.60	0.05	1.51	0.01	0.69	11.46
MA21-080W1	Wk Type 1A	6268	Wmica	46.43	0.35	30.99	3.42	0.00	1.66	0.00	0.65	11.61
MA21-080W1	Wk Type 1A	6269	Wmica	46.09	0.50	31.51	3.67	0.06	1.45	0.00	0.72	11.52
MA21-080W1	Wk Type 1A	6270	Wmica	45.47	0.66	32.07	3.36	0.04	1.52	0.00	0.68	11.63

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6271	Wmica	46.01	0.80	31.73	3.41	0.10	1.56	0.00	0.74	11.30
MA21-080W1	Wk Type 1A	6272	Fspar	64.95	0.01	20.23	0.20	0.05	0.00	1.21	10.27	0.09
MA21-080W1	Wk Type 1A	6273	Fspar	64.08	0.14	20.48	0.45	0.00	0.00	1.29	10.50	0.08
MA21-080W1	Wk Type 1A	6274	Biotite	35.77	1.50	17.99	22.31	0.19	9.01	0.24	0.61	8.80
MA21-080W1	Wk Type 1A	6275	Fspar	64.67	0.04	20.46	0.25	0.03	0.00	1.18	10.32	0.05
MA21-080W1	Wk Type 1A	6276	Fspar	64.82	0.02	20.62	0.31	0.00	0.01	1.26	10.33	0.03
MA21-080W1	Wk Type 1A	6277	Fspar	64.95	0.08	20.29	0.30	0.07	0.02	1.16	10.48	0.03
MA21-080W1	Wk Type 1A	6278	Fspar	60.47	0.00	23.00	0.46	0.03	0.02	4.57	8.60	0.24
MA21-080W1	Wk Type 1A	6279	Fspar	64.50	0.00	20.74	0.42	0.00	0.00	1.31	10.34	0.08
MA21-080W1	Wk Type 1A	6280	Fspar	60.98	0.00	22.83	0.53	0.00	0.03	4.33	8.78	0.16
MA21-080W1	Wk Type 1A	6281	Fspar	65.70	0.02	20.28	0.23	0.00	0.02	0.72	10.71	0.06
MA21-080W1	Wk Type 1A	6282	Fspar	65.88	0.00	19.99	0.38	0.20	0.04	0.63	10.87	0.06
MA21-080W1	Wk Type 1A	6283	Fspar	66.39	0.13	19.82	0.24	0.00	0.01	0.33	10.98	0.15
MA21-080W1	Wk Type 1A	6284	Biotite	32.53	1.29	16.09	17.73	0.11	8.29	0.00	0.54	8.76
MA21-080W1	Wk Type 1A	6285	Biotite	32.93	1.20	16.33	18.19	0.20	8.39	0.00	0.49	9.23
MA21-080W1	Wk Type 1A	6286	Biotite	33.44	1.30	16.65	18.79	0.26	8.43	0.00	0.35	9.36
MA21-080W1	Wk Type 1A	6287	Wmica	42.45	0.50	30.05	3.88	0.00	1.30	0.00	0.62	11.07
MA21-080W1	Wk Type 1A	6288	Wmica	43.21	0.58	30.05	3.77	0.00	1.39	0.00	0.64	11.11
MA21-080W1	Wk Type 1A	6289	Wmica	43.83	0.63	29.32	3.89	0.00	1.59	0.02	0.63	11.32
MA21-080W1	Wk Type 1A	6290	Wmica	44.58	0.73	30.23	3.89	0.00	1.57	0.00	0.59	11.18
MA21-080W1	Wk Type 1A	6291	Wmica	44.36	0.73	30.56	3.95	0.03	1.45	0.00	0.62	11.42
MA21-080W1	Wk Type 1A	6292	Wmica	44.79	0.65	30.77	3.88	0.00	1.37	0.01	0.53	11.52
MA21-080W1	Wk Type 1A	6293	Wmica	44.94	0.76	31.23	3.75	0.03	1.42	0.00	0.46	11.43
MA21-080W1	Wk Type 1A	6294	Wmica	45.45	0.59	31.22	3.82	0.00	1.39	0.00	0.59	11.47
MA21-080W1	Wk Type 1A	6295	Biotite	34.61	1.51	17.16	21.44	0.04	8.70	0.00	0.47	9.79
MA21-080W1	Wk Type 1A	6296	Wmica	45.55	0.71	31.22	3.88	0.00	1.42	0.00	0.57	11.57
MA21-080W1	Wk Type 1A	6297	Wmica	45.62	0.67	30.90	3.81	0.00	1.59	0.00	0.55	11.70
MA21-080W1	Wk Type 1A	6298	Wmica	45.88	0.54	30.80	3.72	0.00	1.52	0.04	0.76	11.64
MA21-080W1	Wk Type 1A	6299	Wmica	45.76	0.71	30.43	4.30	0.00	1.63	0.00	0.61	11.71
MA21-080W1	Wk Type 1A	6300	Wmica	45.39	0.70	31.10	4.08	0.00	1.57	0.00	0.61	11.44
MA21-080W1	Wk Type 1A	6301	Biotite	34.99	1.58	17.29	22.03	0.08	8.52	0.00	0.29	9.86
MA21-080W1	Wk Type 1A	6302	Biotite	34.92	1.53	17.29	22.16	0.06	8.46	0.00	0.57	9.83
MA21-080W1	Wk Type 1A	6303	Wmica	46.30	0.79	31.14	3.93	0.08	1.48	0.00	0.57	11.33
MA21-080W1	Wk Type 1A	6304	Wmica	46.92	0.51	30.44	3.81	0.06	1.78	0.00	0.60	11.56

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6305	Wmica	46.02	0.48	31.11	3.97	0.03	1.52	0.00	0.52	11.63
MA21-080W1	Wk Type 1A	6306	Biotite	35.10	1.34	17.34	22.15	0.30	8.70	0.00	0.36	10.22
MA21-080W1	Wk Type 1A	6307	Wmica	46.11	0.53	31.13	3.60	0.04	1.69	0.00	0.79	11.43
MA21-080W1	Wk Type 1A	6322	Biotite	35.22	1.31	17.48	21.78	0.28	8.87	0.00	0.50	10.09
MA21-080W1	Wk Type 1A	6323	Biotite	34.95	1.57	17.30	23.03	0.15	8.58	0.00	0.28	9.97
MA21-080W1	Wk Type 1A	6324	Wmica	46.21	0.52	31.54	3.93	0.00	1.59	0.00	0.60	11.42
MA21-080W1	Wk Type 1A	6325	Wmica	46.13	0.64	31.42	3.85	0.11	1.45	0.00	0.54	11.36
MA21-080W1	Wk Type 1A	6326	Biotite	35.72	1.45	17.48	21.84	0.25	8.87	0.00	0.55	9.88
MA21-080W1	Wk Type 1A	6327	Wmica	47.19	0.39	30.67	3.95	0.10	1.96	0.00	0.64	11.42
MA21-080W1	Wk Type 1A	6328	Biotite	35.61	1.37	17.46	21.48	0.33	8.50	0.00	0.92	10.17
MA21-080W1	Wk Type 1A	6329	Biotite	35.67	1.53	17.29	22.42	0.25	8.78	0.00	0.29	10.14
MA21-080W1	Wk Type 1A	6330	Biotite	35.19	1.29	17.46	21.05	0.19	8.71	0.00	1.65	10.22
MA21-080W1	Wk Type 1A	6331	Biotite	35.64	1.46	17.58	22.08	0.07	8.78	0.00	0.38	10.02
MA21-080W1	Wk Type 1A	6332	Biotite	36.01	1.51	17.46	21.68	0.23	8.77	0.00	0.43	9.88
MA21-080W1	Wk Type 1A	6333	Biotite	35.64	1.61	17.48	21.82	0.39	8.90	0.00	0.42	10.26
MA21-080W1	Wk Type 1A	6334	Biotite	35.81	1.46	17.70	21.70	0.15	8.82	0.00	0.44	10.29
MA21-080W1	Wk Type 1A	6335	Biotite	35.20	1.49	17.45	22.80	0.22	8.63	0.00	0.39	10.19
MA21-080W1	Wk Type 1A	6336	Biotite	36.11	1.52	17.34	22.31	0.25	8.98	0.00	0.49	10.04
MA21-080W1	Wk Type 1A	6337	Biotite	35.45	1.50	17.43	22.78	0.12	8.71	0.00	0.44	10.04
MA21-080W1	Wk Type 1A	6338	Biotite	35.80	1.42	17.67	22.16	0.20	8.77	0.00	0.56	10.08
MA21-080W1	Wk Type 1A	6339	Biotite	36.60	1.48	17.84	21.75	0.00	9.23	0.03	0.44	10.01
MA21-080W1	Wk Type 1A	6340	Biotite	36.21	1.36	17.83	22.63	0.19	9.24	0.00	0.57	10.03
MA21-080W1	Wk Type 1A	6341	Biotite	35.96	1.47	18.00	22.00	0.36	9.27	0.00	0.50	10.09
MA21-080W1	Wk Type 1A	6342	Wmica	44.74	0.49	31.55	3.74	0.02	1.38	0.00	0.69	11.36
MA21-080W1	Wk Type 1A	6343	Wmica	45.37	0.47	31.24	3.61	0.00	1.63	0.00	0.62	11.50
MA21-080W1	Wk Type 1A	6344	Wmica	44.83	0.76	31.71	3.72	0.01	1.41	0.00	0.59	11.60
MA21-080W1	Wk Type 1A	6345	Wmica	45.27	0.50	31.76	3.56	0.00	1.32	0.00	0.60	11.53
MA21-080W1	Wk Type 1A	6346	Wmica	44.60	0.52	32.42	3.72	0.00	1.21	0.00	0.75	11.37
MA21-080W1	Wk Type 1A	6347	Wmica	44.79	0.48	32.03	3.84	0.15	1.27	0.00	0.61	11.66
MA21-080W1	Wk Type 1A	6348	Wmica	44.93	0.43	32.19	3.74	0.05	1.33	0.00	0.85	11.44
MA21-080W1	Wk Type 1A	6349	Wmica	45.37	0.33	31.46	3.59	0.03	1.62	0.00	0.76	11.64
MA21-080W1	Wk Type 1A	6350	Wmica	45.70	0.57	31.51	3.38	0.06	1.45	0.00	0.78	11.46
MA21-080W1	Wk Type 1A	6351	Wmica	45.08	0.55	32.50	3.64	0.00	1.23	0.00	0.58	11.35
MA21-080W1	Wk Type 1A	6352	Wmica	45.85	0.38	31.13	3.70	0.01	1.70	0.00	0.73	11.72

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6353	Wmica	44.93	0.70	31.76	3.77	0.00	1.73	0.00	0.58	11.79
MA21-080W1	Wk Type 1A	6354	Wmica	45.16	0.71	31.57	3.80	0.18	1.52	0.00	0.67	11.80
MA21-080W1	Wk Type 1A	6355	Wmica	46.24	0.53	31.25	3.68	0.07	1.76	0.00	0.72	11.40
MA21-080W1	Wk Type 1A	6356	Wmica	45.30	0.42	32.46	3.81	0.10	1.34	0.00	0.71	11.49
MA21-080W1	Wk Type 1A	6357	Wmica	45.55	0.53	31.69	3.68	0.00	1.63	0.00	0.88	11.64
MA21-080W1	Wk Type 1A	6358	Wmica	45.55	0.46	32.25	3.78	0.00	1.54	0.00	0.48	11.90
MA21-080W1	Wk Type 1A	6359	Wmica	46.35	0.34	31.61	3.95	0.00	1.68	0.00	0.65	11.51
MA21-080W1	Wk Type 1A	6360	Wmica	46.34	0.55	31.64	3.47	0.00	1.70	0.00	0.87	11.48
MA21-080W1	Wk Type 1A	6361	Wmica	45.67	0.67	31.84	3.97	0.11	1.79	0.00	0.60	11.52
MA21-080W1	Wk Type 1A	6362	Wmica	46.14	0.64	31.55	4.23	0.00	1.62	0.00	0.65	11.67
MA21-080W1	Wk Type 1A	6363	Wmica	45.66	0.40	32.59	4.20	0.00	1.54	0.00	0.78	11.39
MA21-080W1	Wk Type 1A	6364	Wmica	46.01	0.70	32.39	3.94	0.00	1.39	0.01	0.48	11.66
MA21-080W1	Wk Type 1A	6365	Wmica	46.61	0.32	31.64	4.01	0.06	1.62	0.00	0.60	11.83
MA21-080W1	Wk Type 1A	6366	Wmica	46.69	0.48	31.30	4.02	0.01	1.85	0.00	0.73	11.50
MA21-080W1	Wk Type 1A	6367	Wmica	47.23	0.29	31.79	3.71	0.01	1.87	0.00	0.76	11.80
MA21-080W1	Wk Type 1A	6368	Fspar	59.49	0.02	23.82	0.23	0.00	0.02	5.13	8.43	0.25
MA21-080W1	Wk Type 1A	6369	Fspar	60.94	0.00	23.11	0.26	0.00	0.01	4.42	8.82	0.15
MA21-080W1	Wk Type 1A	6370	Fspar	60.28	0.02	23.35	0.20	0.01	0.01	4.93	8.41	0.19
MA21-080W1	Wk Type 1A	6371	Biotite	35.59	1.45	18.04	22.13	0.00	9.31	0.00	0.55	10.45
MA21-080W1	Wk Type 1A	6372	Biotite	35.41	1.55	17.74	23.08	0.13	9.14	0.00	0.51	9.46
MA21-080W1	Wk Type 1A	6373	Fspar	60.94	0.06	23.52	0.20	0.00	0.01	4.57	8.51	0.12
MA21-080W1	Wk Type 1A	6374	Biotite	35.54	1.46	17.69	22.91	0.17	9.04	0.05	0.49	10.38
MA21-080W1	Wk Type 1A	6375	Biotite	35.42	1.63	17.71	23.21	0.07	9.04	0.00	0.50	10.24
MA21-080W1	Wk Type 1A	6376	Biotite	35.90	1.39	17.98	21.97	0.25	9.10	0.00	0.49	10.43
MA21-080W1	Wk Type 1A	6377	Fspar	60.08	0.10	24.03	0.28	0.00	0.02	5.41	8.32	0.20
MA21-080W1	Wk Type 1A	6378	Biotite	35.82	1.49	18.08	22.77	0.25	9.18	0.00	0.56	9.86
MA21-080W1	Wk Type 1A	6379	Fspar	64.28	0.00	21.25	0.15	0.00	0.00	2.16	10.25	0.24
MA21-080W1	Wk Type 1A	6380	Biotite	35.66	1.56	17.78	22.79	0.05	9.05	0.00	0.54	10.34
MA21-080W1	Wk Type 1A	6381	Fspar	60.06	0.01	23.95	0.48	0.00	0.00	5.28	8.36	0.24
MA21-080W1	Wk Type 1A	6382	Fspar	66.38	0.00	20.01	0.49	0.00	0.02	0.52	11.02	0.09
MA21-080W1	Wk Type 1A	6383	Biotite	35.32	1.58	17.90	23.15	0.17	8.94	0.00	0.48	10.31
MA21-080W1	Wk Type 1A	6384	Biotite	35.88	1.48	17.93	22.45	0.25	9.06	0.00	0.45	10.70
MA21-080W1	Wk Type 1A	6385	Biotite	35.52	1.46	17.83	23.00	0.09	9.01	0.06	0.70	10.04
MA21-080W1	Wk Type 1A	6386	Fspar	66.05	0.00	20.57	0.28	0.06	0.00	0.70	10.82	0.14

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6387	Biotite	35.88	1.51	18.32	22.51	0.03	9.17	0.00	0.51	10.29
MA21-080W1	Wk Type 1A	6388	Biotite	36.05	1.48	18.10	22.30	0.18	9.28	0.01	0.45	10.39
MA21-080W1	Wk Type 1A	6389	Fspar	60.75	0.00	24.05	0.28	0.04	0.00	4.98	8.44	0.21
MA21-080W1	Wk Type 1A	6390	Fspar	66.07	0.04	20.34	0.29	0.00	0.02	0.81	11.03	0.16
MA21-080W1	Wk Type 1A	6391	Fspar	65.88	0.02	20.51	0.53	0.00	0.02	0.87	10.84	0.16
MA21-080W1	Wk Type 1A	6392	Fspar	65.60	0.04	20.67	0.28	0.00	0.04	1.21	10.50	0.22
MA21-080W1	Wk Type 1A	6393	Fspar	66.00	0.14	20.45	0.42	0.00	0.01	0.76	10.88	0.26
MA21-080W1	Wk Type 1A	6394	Fspar	66.14	0.16	20.55	0.32	0.00	0.04	0.90	10.78	0.18
MA21-080W1	Wk Type 1A	6395	Fspar	66.23	0.16	20.59	0.16	0.01	0.01	0.74	10.97	0.17
MA21-080W1	Wk Type 1A	6396	Fspar	65.42	0.02	21.04	0.33	0.00	0.02	1.12	10.79	0.17
MA21-080W1	Wk Type 1A	6397	Fspar	61.85	0.00	23.41	0.51	0.01	0.02	4.06	9.20	0.13
MA21-080W1	Wk Type 1A	6398	Fspar	66.77	0.00	20.46	0.44	0.00	0.03	0.59	11.07	0.20
MA21-080W1	Wk Type 1A	6399	Fspar	66.45	0.00	20.53	0.19	0.00	0.05	0.62	11.15	0.14
MA21-080W1	Wk Type 1A	6400	Biotite	35.71	1.64	18.10	23.13	0.19	9.35	0.00	0.50	10.37
MA21-080W1	Wk Type 1A	6401	Fspar	65.44	0.03	21.33	0.38	0.03	0.01	1.46	10.54	0.17
MA21-080W1	Wk Type 1A	6402	Fspar	59.22	0.00	23.96	0.25	0.00	0.00	5.46	7.85	0.17
MA21-080W1	Wk Type 1A	6403	Fspar	59.47	0.00	23.85	0.11	0.02	0.00	5.48	8.23	0.16
MA21-080W1	Wk Type 1A	6404	Fspar	60.39	0.00	23.28	0.15	0.00	0.02	4.98	8.51	0.18
MA21-080W1	Wk Type 1A	6405	Fspar	65.64	0.13	20.01	0.46	0.00	0.00	0.58	10.74	0.04
MA21-080W1	Wk Type 1A	6406	Fspar	60.11	0.00	23.67	0.19	0.00	0.01	5.07	8.56	0.10
MA21-080W1	Wk Type 1A	6407	Fspar	60.08	0.03	23.77	0.20	0.02	0.00	5.00	8.43	0.15
MA21-080W1	Wk Type 1A	6408	Fspar	60.00	0.07	23.75	0.28	0.00	0.00	5.10	8.58	0.13
MA21-080W1	Wk Type 1A	6410	Fspar	65.70	0.05	19.98	0.26	0.00	0.00	0.71	10.88	0.13
MA21-080W1	Wk Type 1A	6411	Fspar	65.66	0.00	20.55	0.33	0.00	0.00	0.77	10.73	0.20
MA21-080W1	Wk Type 1A	6412	Fspar	59.87	0.00	24.38	0.18	0.12	0.01	5.66	8.11	0.21
MA21-080W1	Wk Type 1A	6413	Fspar	61.32	0.00	23.34	0.24	0.01	0.03	4.50	8.83	0.28
MA21-080W1	Wk Type 1A	6414	Fspar	65.88	0.00	20.32	0.25	0.02	0.03	0.93	10.98	0.09
MA21-080W1	Wk Type 1A	6415	Fspar	65.92	0.00	20.52	0.35	0.11	0.00	0.89	10.65	0.19
MA21-080W1	Wk Type 1A	6416	Fspar	60.71	0.00	24.07	0.11	0.00	0.02	5.39	8.30	0.24
MA21-080W1	Wk Type 1A	6417	Fspar	59.74	0.00	24.45	0.27	0.00	0.00	5.80	8.21	0.26
MA21-080W1	Wk Type 1A	6418	Fspar	65.91	0.03	20.48	0.28	0.02	0.02	0.75	10.83	0.27
MA21-080W1	Wk Type 1A	6419	Fspar	66.15	0.03	20.48	0.35	0.00	0.03	0.77	10.90	0.16
MA21-080W1	Wk Type 1A	6420	Fspar	66.11	0.02	20.18	0.35	0.00	0.02	0.62	10.97	0.20
MA21-080W1	Wk Type 1A	6421	Fspar	66.34	0.00	20.33	0.55	0.00	0.04	0.60	10.95	0.19

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6422	Fspar	65.87	0.05	21.05	0.49	0.00	0.02	1.13	10.67	0.20
MA21-080W1	Wk Type 1A	6423	Biotite	32.32	1.56	15.91	20.91	0.04	8.23	1.30	0.58	5.16
MA21-080W1	Wk Type 1A	6424	Biotite	32.10	1.63	15.75	20.80	0.08	8.51	1.18	0.36	7.05
MA21-080W1	Wk Type 1A	6425	Biotite	32.42	1.53	16.28	21.19	0.27	8.45	0.75	0.43	7.23
MA21-080W1	Wk Type 1A	6426	Biotite	32.87	1.55	16.30	21.36	0.06	8.49	0.34	0.33	8.07
MA21-080W1	Wk Type 1A	6427	Biotite	33.11	1.59	16.29	21.43	0.36	8.59	0.54	0.66	7.19
MA21-080W1	Wk Type 1A	6428	Biotite	33.19	1.50	16.73	21.06	0.00	8.55	0.34	0.48	8.08
MA21-080W1	Wk Type 1A	6429	Biotite	32.73	1.57	16.51	21.69	0.26	8.74	0.68	0.37	7.24
MA21-080W1	Wk Type 1A	6430	Biotite	33.28	1.37	16.67	20.80	0.13	8.82	0.96	0.41	7.23
MA21-080W1	Wk Type 1A	6431	Biotite	33.64	1.57	16.63	21.49	0.02	8.47	0.35	0.40	7.82
MA21-080W1	Wk Type 1A	6432	Biotite	33.51	1.38	16.75	21.69	0.08	8.91	0.44	0.39	7.38
MA21-080W1	Wk Type 1A	6433	Biotite	33.56	1.39	16.66	21.40	0.11	9.05	0.57	0.34	7.64
MA21-080W1	Wk Type 1A	6434	Biotite	33.76	1.40	16.96	21.27	0.29	9.10	0.88	0.50	6.98
MA21-080W1	Wk Type 1A	6435	Biotite	33.44	1.66	16.78	21.86	0.38	8.54	0.19	0.38	8.34
MA21-080W1	Wk Type 1A	6436	Biotite	33.73	1.37	17.07	21.91	0.12	9.26	0.23	0.51	7.81
MA21-080W1	Wk Type 1A	6437	Biotite	34.57	1.45	17.16	21.15	0.08	8.90	0.00	0.32	9.39
MA21-080W1	Wk Type 1A	6438	Biotite	34.27	1.47	17.39	21.40	0.09	9.11	0.10	0.38	8.83
MA21-080W1	Wk Type 1A	6439	Biotite	34.22	1.46	17.48	21.54	0.28	9.34	0.31	0.43	8.08
MA21-080W1	Wk Type 1A	6440	Biotite	32.16	1.36	16.50	21.57	0.00	9.14	2.27	0.50	2.11
MA21-080W1	Wk Type 1A	6441	Biotite	32.24	1.50	16.54	22.11	0.10	9.16	1.96	0.50	2.66
MA21-080W1	Wk Type 1A	6442	Biotite	33.72	1.52	17.32	21.43	0.12	9.27	1.43	0.47	4.32
MA21-080W1	Wk Type 1A	6443	Biotite	33.61	1.47	17.31	21.83	0.30	9.54	1.67	0.57	3.16
MA21-080W1	Wk Type 1A	6444	Biotite	33.44	1.34	17.27	22.02	0.16	9.21	1.50	0.47	4.21
MA21-080W1	Wk Type 1A	6445	Biotite	33.81	1.44	17.25	22.05	0.28	8.71	0.97	0.36	5.65
MA21-080W1	Wk Type 1A	6446	Biotite	34.34	1.50	17.36	21.69	0.28	9.23	0.69	0.54	6.80
MA21-080W1	Wk Type 1A	6447	Biotite	34.47	1.38	17.79	21.80	0.07	8.91	0.55	0.40	7.02
MA21-080W1	Wk Type 1A	6448	Biotite	34.09	1.47	17.13	22.37	0.03	8.55	0.00	0.28	9.81
MA21-080W1	Wk Type 1A	6449	Biotite	34.79	1.48	17.64	22.64	0.04	9.20	0.44	0.33	7.24
MA21-080W1	Wk Type 1A	6450	Biotite	34.20	1.54	17.21	22.57	0.06	8.26	0.00	0.40	10.27
MA21-080W1	Wk Type 1A	6451	Biotite	34.45	1.42	17.38	22.47	0.07	8.63	0.00	0.40	10.13
MA21-080W1	Wk Type 1A	6452	Biotite	34.44	1.43	17.56	22.28	0.24	8.52	0.00	0.33	10.23
MA21-080W1	Wk Type 1A	6453	Biotite	34.29	1.64	17.37	22.29	0.23	8.48	0.00	0.44	10.25
MA21-080W1	Wk Type 1A	6454	Biotite	34.35	1.63	17.30	22.55	0.05	8.60	0.00	0.45	10.17
MA21-080W1	Wk Type 1A	6455	Biotite	34.71	1.50	17.95	22.41	0.34	9.39	0.51	0.42	7.81

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-080W1	Wk Type 1A	6456	Biotite	33.83	1.41	17.18	23.37	0.27	8.38	0.01	0.47	9.73
MA21-080W1	Wk Type 1A	6457	Biotite	34.28	1.53	17.68	22.95	0.34	8.76	0.00	0.44	10.38
MA21-083	Int Type 1A	6466	Biotite	37.92	2.87	17.78	19.16	0.00	10.51	0.12	0.24	9.27
MA21-083	Int Type 1A	6467	Biotite	36.90	3.13	17.62	19.15	0.09	10.63	0.17	0.28	9.29
MA21-083	Int Type 1A	6468	Biotite	36.77	2.55	17.44	19.00	0.13	10.64	0.11	0.26	9.43
MA21-083	Int Type 1A	6469	Biotite	36.98	2.87	17.74	19.21	0.13	10.67	0.20	0.18	9.53
MA21-083	Int Type 1A	6470	Biotite	37.02	2.94	17.40	18.75	0.09	10.85	0.23	0.31	9.35
MA21-083	Int Type 1A	6471	Biotite	37.59	3.11	17.59	18.50	0.00	10.65	0.18	0.34	9.37
MA21-083	Int Type 1A	6472	Biotite	38.04	2.74	17.71	18.05	0.05	10.62	0.17	0.25	9.36
MA21-083	Int Type 1A	6473	Biotite	37.11	2.70	17.82	18.54	0.00	10.43	0.23	0.23	9.15
MA21-083	Int Type 1A	6475	Biotite	37.32	2.50	17.61	18.30	0.00	10.96	0.13	0.25	9.38
MA21-083	Int Type 1A	6476	Biotite	37.90	2.61	17.59	17.87	0.06	11.05	0.11	0.24	9.37
MA21-083	Int Type 1A	6477	Biotite	37.41	2.43	17.95	18.21	0.00	10.73	0.18	0.21	9.45
MA21-083	Int Type 1A	6478	Biotite	37.07	2.50	18.06	18.81	0.22	10.84	0.19	0.18	9.24
MA21-083	Int Type 1A	6479	Wmica	45.39	2.07	31.55	5.26	0.02	1.44	0.09	0.56	9.96
MA21-083	Int Type 1A	6480	Wmica	45.97	1.59	31.99	4.81	0.00	1.37	0.06	0.69	10.24
MA21-083	Int Type 1A	6481	Wmica	45.40	2.38	31.60	5.50	0.09	1.47	0.04	0.53	10.04
MA21-083	Int Type 1A	6482	Wmica	45.87	1.81	31.55	5.04	0.00	1.38	0.12	0.59	10.20
MA21-083	Int Type 1A	6483	Wmica	45.50	2.39	31.34	4.95	0.00	1.38	0.14	0.50	10.37
MA21-083	Int Type 1A	6484	Wmica	45.71	1.81	31.53	4.70	0.07	1.37	0.06	0.62	10.14
MA21-083	Int Type 1A	6485	Biotite	36.78	2.87	17.64	18.32	0.05	11.18	0.07	0.18	9.24
MA21-083	Int Type 1A	6486	Biotite	36.20	2.74	17.37	18.84	0.00	11.33	0.06	0.23	9.18
MA21-083	Int Type 1A	6487	Biotite	36.41	2.79	17.42	18.49	0.00	11.17	0.04	0.21	9.19
MA21-083	Int Type 1A	6488	Biotite	36.66	2.77	17.42	18.65	0.03	11.37	0.02	0.19	8.86
MA21-083	Int Type 1A	6489	Biotite	35.80	2.65	17.52	19.96	0.03	11.39	0.06	0.21	8.57
MA21-083	Int Type 1A	6490	Biotite	36.53	2.83	17.58	19.36	0.15	11.14	0.03	0.17	9.16
MA21-083	Int Type 1A	6491	Chl	26.63	1.50	21.74	24.37	0.10	14.99	0.12	0.15	0.16
MA21-083	Int Type 1A	6492	Chl	26.73	1.37	22.03	23.94	0.15	15.36	0.07	0.20	0.12
MA21-083	Int Type 1A	6493	Chl	26.60	1.54	21.64	24.27	0.41	15.29	0.06	0.02	0.06
MA21-083	Int Type 1A	6494	Chl	26.72	1.14	21.88	24.61	0.27	15.48	0.10	0.09	0.05
MA21-083	Int Type 1A	6495	Chl	27.19	1.20	21.11	23.78	0.29	15.69	0.12	0.28	0.10
MA21-083	Int Type 1A	6496	Chl	26.88	0.96	21.68	23.83	0.20	15.27	0.17	0.13	0.02
MA21-083	Int Type 1A	6497	Chl	26.47	0.97	21.62	25.43	0.14	14.83	0.12	0.19	0.10
MA21-083	Int Type 1A	6498	Chl	26.18	1.41	21.53	24.47	0.10	14.79	0.13	0.21	0.10

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6499	Wmica	48.22	1.89	31.13	3.94	0.03	1.20	0.40	0.52	9.99
MA21-083	Int Type 1A	6500	Wmica	47.25	1.61	31.43	3.93	0.09	1.26	0.64	0.54	9.99
MA21-083	Int Type 1A	6501	Wmica	46.66	1.96	30.95	4.51	0.01	1.23	0.98	0.62	10.05
MA21-083	Int Type 1A	6502	Wmica	46.16	1.90	31.64	4.58	0.07	1.03	0.74	0.59	9.98
MA21-083	Int Type 1A	6512	Chl	26.18	1.29	21.77	23.84	0.18	14.98	0.48	0.26	0.06
MA21-083	Int Type 1A	6513	Chl	26.87	0.98	21.67	24.26	0.38	15.42	0.38	0.18	0.03
MA21-083	Int Type 1A	6514	Chl	26.37	1.19	21.72	24.28	0.29	14.91	0.41	0.26	0.05
MA21-083	Int Type 1A	6515	Chl	26.36	1.59	21.95	24.71	0.22	15.26	0.33	0.18	0.04
MA21-083	Int Type 1A	6516	Chl	26.18	1.63	21.69	25.13	0.25	15.00	0.32	0.16	0.11
MA21-083	Int Type 1A	6517	Chl	25.91	1.82	21.47	25.14	0.20	14.68	0.20	0.15	0.11
MA21-083	Int Type 1A	6518	Chl	25.75	1.61	21.60	25.47	0.21	15.02	0.15	0.21	0.05
MA21-083	Int Type 1A	6519	Chl	27.60	1.91	22.05	23.84	0.10	14.92	0.13	0.16	0.29
MA21-083	Int Type 1A	6520	Chl	28.54	1.32	21.80	24.07	0.16	14.57	0.21	0.10	0.30
MA21-083	Int Type 1A	6521	Chl	29.07	1.13	21.44	23.29	0.25	14.68	0.08	0.22	0.14
MA21-083	Int Type 1A	6522	Chl	28.73	1.15	21.60	23.44	0.30	14.50	0.09	0.16	0.14
MA21-083	Int Type 1A	6523	Chl	28.93	1.18	21.54	23.12	0.21	14.57	0.10	0.31	0.15
MA21-083	Int Type 1A	6524	Chl	27.02	1.30	21.68	24.33	0.27	14.78	0.22	0.22	0.17
MA21-083	Int Type 1A	6525	Chl	26.96	1.21	21.19	23.97	0.27	15.02	0.29	0.22	0.13
MA21-083	Int Type 1A	6526	Chl	27.05	1.20	21.15	24.15	0.10	14.93	0.22	0.10	0.07
MA21-083	Int Type 1A	6527	Chl	26.78	1.49	22.04	24.56	0.23	15.04	0.31	0.23	0.12
MA21-083	Int Type 1A	6528	Wmica	45.04	1.93	32.01	5.22	0.00	1.18	0.32	0.62	10.08
MA21-083	Int Type 1A	6529	Wmica	45.73	1.55	32.63	5.38	0.04	1.16	0.24	0.57	10.29
MA21-083	Int Type 1A	6530	Wmica	46.19	1.57	32.30	4.81	0.00	1.20	0.11	0.60	10.21
MA21-083	Int Type 1A	6531	Wmica	45.89	1.85	32.42	5.03	0.00	1.34	0.14	0.64	10.04
MA21-083	Int Type 1A	6532	Wmica	45.64	1.63	32.47	5.10	0.17	1.27	0.15	0.71	10.23
MA21-083	Int Type 1A	6533	Wmica	46.18	1.58	32.01	5.18	0.04	1.28	0.11	0.73	10.25
MA21-083	Int Type 1A	6534	Wmica	45.84	1.70	32.60	4.78	0.00	1.30	0.11	0.76	10.12
MA21-083	Int Type 1A	6535	Chl	26.25	2.03	21.68	23.98	0.12	14.71	0.09	0.20	0.03
MA21-083	Int Type 1A	6536	Chl	26.33	1.54	21.74	24.30	0.17	14.83	0.16	0.22	0.05
MA21-083	Int Type 1A	6537	Chl	27.04	1.66	21.18	23.99	0.11	15.30	0.15	0.12	0.10
MA21-083	Int Type 1A	6538	Chl	27.33	1.56	21.50	23.54	0.21	15.06	0.20	0.28	0.12
MA21-083	Int Type 1A	6539	Chl	27.31	1.48	21.39	23.87	0.25	15.06	0.19	0.18	0.14
MA21-083	Int Type 1A	6540	Chl	28.06	1.21	21.56	23.13	0.15	14.99	0.08	0.27	0.12
MA21-083	Int Type 1A	6551	Fspar	60.96	0.02	23.50	0.41	0.00	0.15	4.77	8.10	0.40

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6552	Fspar	60.94	0.00	23.31	0.48	0.00	0.12	4.83	8.07	0.34
MA21-083	Int Type 1A	6553	Fspar	61.47	0.00	22.63	1.21	0.06	0.11	4.07	8.21	0.26
MA21-083	Int Type 1A	6554	Fspar	61.53	0.13	23.01	0.35	0.08	0.14	4.53	8.14	0.24
MA21-083	Int Type 1A	6555	Fspar	61.98	0.02	22.88	0.34	0.08	0.14	4.72	8.41	0.24
MA21-083	Int Type 1A	6556	Fspar	62.78	0.16	22.04	0.36	0.14	0.09	3.72	8.64	0.13
MA21-083	Int Type 1A	6557	Fspar	63.92	0.00	21.24	0.52	0.21	0.00	3.09	9.22	0.17
MA21-083	Int Type 1A	6558	Fspar	62.97	0.11	22.02	0.36	0.26	0.04	3.89	8.82	0.19
MA21-083	Int Type 1A	6559	Fspar	66.06	0.08	19.53	0.46	0.00	0.05	1.49	9.89	0.18
MA21-083	Int Type 1A	6560	Fspar	64.99	0.12	19.09	0.43	0.04	0.00	2.30	9.87	0.11
MA21-083	Int Type 1A	6561	Fspar	66.62	0.10	19.34	0.34	0.06	0.15	1.18	9.92	0.15
MA21-083	Int Type 1A	6562	Fspar	65.73	0.02	20.01	0.48	0.01	0.11	2.14	9.44	0.17
MA21-083	Int Type 1A	6563	Fspar	65.37	0.00	20.06	0.51	0.00	0.11	2.38	9.48	0.15
MA21-083	Int Type 1A	6564	Fspar	66.21	0.05	19.11	0.42	0.00	0.06	1.45	10.07	0.22
MA21-083	Int Type 1A	6565	Fspar	66.05	0.00	19.38	0.70	0.00	0.13	1.36	9.86	0.17
MA21-083	Int Type 1A	6566	Fspar	65.80	0.07	19.08	0.52	0.03	0.06	1.16	10.02	0.17
MA21-083	Int Type 1A	6567	Fspar	65.72	0.15	19.34	0.50	0.00	0.03	1.43	9.98	0.10
MA21-083	Int Type 1A	6568	Fspar	60.83	0.21	22.54	0.56	0.05	0.06	4.91	8.24	0.18
MA21-083	Int Type 1A	6569	Fspar	61.25	0.00	22.40	0.54	0.00	0.09	4.70	8.15	0.11
MA21-083	Int Type 1A	6570	Fspar	61.53	0.10	22.37	0.56	0.05	0.09	4.56	8.28	0.19
MA21-083	Int Type 1A	6571	Fspar	61.03	0.06	22.50	0.47	0.06	0.16	4.83	8.34	0.11
MA21-083	Int Type 1A	6572	Fspar	60.68	0.01	22.40	0.56	0.05	0.13	4.65	8.25	0.15
MA21-083	Int Type 1A	6573	Fspar	61.68	0.14	22.40	0.76	0.04	0.07	4.43	8.28	0.19
MA21-083	Int Type 1A	6574	Fspar	62.08	0.01	21.27	0.70	0.04	0.09	3.38	8.77	0.19
MA21-083	Int Type 1A	6575	Fspar	65.24	0.00	19.78	0.59	0.00	0.00	2.46	9.03	0.17
MA21-083	Int Type 1A	6576	Fspar	63.47	0.10	20.24	0.90	0.02	0.43	4.66	7.84	0.15
MA21-083	Int Type 1A	6577	Fspar	62.04	0.06	20.67	1.08	0.05	0.33	3.66	9.01	0.20
MA21-083	Int Type 1A	6578	Fspar	59.89	0.00	21.78	0.81	0.02	0.28	5.24	8.12	0.21
MA21-083	Int Type 1A	6579	Fspar	59.80	0.10	21.94	0.89	0.02	0.30	5.21	8.02	0.19
MA21-083	Int Type 1A	6580	Fspar	59.88	0.00	21.55	0.78	0.09	0.24	4.58	8.52	0.28
MA21-083	Int Type 1A	6581	Fspar	59.93	0.00	22.38	0.81	0.12	0.29	5.13	8.00	0.26
MA21-083	Int Type 1A	6582	Wmica	47.59	0.49	30.36	2.68	0.17	0.91	0.61	0.90	9.47
MA21-083	Int Type 1A	6583	Wmica	47.70	0.56	29.86	2.96	0.03	0.99	0.45	0.98	9.36
MA21-083	Int Type 1A	6584	Wmica	47.75	0.41	30.26	2.84	0.23	0.99	0.38	0.94	9.32
MA21-083	Int Type 1A	6585	Wmica	47.34	0.38	29.84	2.84	0.00	1.10	0.54	0.93	9.35

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6586	Wmica	48.20	0.33	30.31	2.61	0.00	1.05	0.50	1.04	9.52
MA21-083	Int Type 1A	6587	Wmica	48.67	0.21	30.21	2.60	0.00	1.10	0.60	1.17	9.48
MA21-083	Int Type 1A	6588	Wmica	47.28	0.32	30.15	2.63	0.05	1.04	0.55	1.10	9.38
MA21-083	Int Type 1A	6589	Wmica	47.10	0.26	29.86	2.55	0.05	1.11	0.59	1.02	9.45
MA21-083	Int Type 1A	6590	Wmica	46.97	0.26	30.98	3.10	0.00	1.04	0.58	1.22	9.23
MA21-083	Int Type 1A	6591	Wmica	46.83	0.10	30.44	2.91	0.08	1.07	0.58	1.16	9.50
MA21-083	Int Type 1A	6592	Wmica	46.31	0.27	29.86	3.20	0.00	1.26	0.52	0.85	9.74
MA21-083	Int Type 1A	6593	Wmica	46.19	0.41	30.16	3.15	0.00	1.14	0.64	0.86	9.67
MA21-083	Int Type 1A	6594	Wmica	45.87	0.66	30.31	3.27	0.01	1.15	0.61	0.92	9.61
MA21-083	Int Type 1A	6595	Wmica	45.64	0.49	30.30	3.33	0.09	1.04	0.62	1.02	9.62
MA21-083	Int Type 1A	6596	Wmica	45.39	0.64	30.27	3.02	0.00	1.17	0.69	1.03	9.24
MA21-083	Int Type 1A	6597	Wmica	44.86	0.51	30.18	3.24	0.01	1.11	0.94	1.07	9.12
MA21-083	Int Type 1A	6598	Wmica	44.41	0.46	30.18	3.43	0.13	1.10	1.02	0.97	9.52
MA21-083	Int Type 1A	6599	Wmica	43.97	0.51	30.17	3.19	0.00	1.19	1.19	1.02	9.30
MA21-083	Int Type 1A	6600	Wmica	43.92	0.30	30.38	3.30	0.00	1.35	1.31	0.96	9.35
MA21-083	Int Type 1A	6601	Wmica	43.82	0.51	29.78	3.12	0.06	1.49	1.71	0.95	9.10
MA21-083	Int Type 1A	6602	Wmica	43.72	0.38	29.75	3.21	0.01	1.41	1.76	1.06	9.16
MA21-083	Int Type 1A	6646	Biotite	35.39	1.81	16.92	17.62	0.01	8.79	0.25	0.30	8.72
MA21-083	Int Type 1A	6647	Biotite	35.85	2.12	16.97	17.78	0.00	8.69	0.23	0.43	8.60
MA21-083	Int Type 1A	6648	Biotite	35.81	1.68	16.78	17.83	0.05	8.52	0.22	0.42	8.45
MA21-083	Int Type 1A	6649	Biotite	36.12	1.70	16.64	17.44	0.05	8.66	0.18	0.60	8.45
MA21-083	Int Type 1A	6650	Biotite	36.21	1.90	16.36	17.35	0.06	8.30	0.23	0.54	8.39
MA21-083	Int Type 1A	6651	Biotite	37.00	1.74	17.15	17.72	0.11	8.74	0.14	0.44	8.47
MA21-083	Int Type 1A	6652	Biotite	36.28	1.78	16.96	16.73	0.15	8.74	0.04	0.52	8.46
MA21-083	Int Type 1A	6653	Biotite	35.90	1.65	17.11	17.17	0.00	8.48	0.25	0.51	8.75
MA21-083	Int Type 1A	6654	Biotite	36.33	1.89	16.93	17.16	0.00	8.70	0.24	0.59	8.58
MA21-083	Int Type 1A	6655	Biotite	36.45	1.92	16.99	17.06	0.13	8.55	0.12	0.62	8.75
MA21-083	Int Type 1A	6656	Biotite	35.98	1.77	16.56	17.27	0.00	8.65	0.23	0.60	8.55
MA21-083	Int Type 1A	6657	Biotite	35.53	1.92	17.32	17.98	0.00	8.69	0.11	0.46	8.74
MA21-083	Int Type 1A	6658	Biotite	35.75	1.91	16.87	17.97	0.12	8.83	0.16	0.29	8.83
MA21-083	Int Type 1A	6659	Biotite	35.79	1.89	17.24	18.26	0.22	8.77	0.21	0.26	8.85
MA21-083	Int Type 1A	6660	Biotite	35.68	1.93	16.87	18.50	0.18	8.76	0.06	0.25	8.68
MA21-083	Int Type 1A	6661	Biotite	35.23	1.94	17.25	18.80	0.10	8.80	0.20	0.31	8.52
MA21-083	Int Type 1A	6662	Biotite	35.51	1.84	17.07	18.56	0.02	8.68	0.22	0.40	8.64

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6663	Biotite	35.47	2.00	17.00	18.76	0.10	8.65	0.17	0.36	8.48
MA21-083	Int Type 1A	6664	Biotite	35.52	1.67	16.94	19.12	0.05	8.72	0.18	0.29	8.45
MA21-083	Int Type 1A	6665	Biotite	35.60	2.01	17.04	18.47	0.00	8.77	0.16	0.35	8.67
MA21-083	Int Type 1A	6666	Biotite	35.34	1.88	16.42	17.32	0.08	8.38	0.20	0.39	8.27
MA21-083	Int Type 1A	6667	Biotite	35.99	1.92	16.73	17.15	0.00	8.49	0.23	0.40	8.58
MA21-083	Int Type 1A	6668	Biotite	35.31	1.93	16.91	18.02	0.16	8.49	0.26	0.46	8.64
MA21-083	Int Type 1A	6669	Biotite	35.84	1.83	16.77	17.00	0.09	8.53	0.18	0.44	8.53
MA21-083	Int Type 1A	6674	Biotite	35.64	1.66	17.04	17.66	0.02	8.56	0.23	0.57	8.18
MA21-083	Int Type 1A	6675	Biotite	35.21	1.69	17.27	17.96	0.02	8.78	0.21	0.36	8.12
MA21-083	Int Type 1A	6676	Biotite	35.55	1.67	17.25	17.82	0.12	9.03	0.26	0.41	7.86
MA21-083	Int Type 1A	6677	Wmica	43.27	0.82	27.77	4.30	0.00	2.07	0.17	0.57	9.55
MA21-083	Int Type 1A	6679	Wmica	44.27	0.76	28.24	4.36	0.14	2.00	0.13	0.58	9.67
MA21-083	Int Type 1A	6680	Wmica	43.17	0.66	28.87	4.30	0.00	1.80	0.17	0.48	9.80
MA21-083	Int Type 1A	6681	Wmica	43.11	0.74	29.22	4.39	0.00	1.84	0.17	0.49	9.80
MA21-083	Int Type 1A	6682	Wmica	43.44	0.71	29.35	4.52	0.07	1.87	0.18	0.47	9.78
MA21-083	Int Type 1A	6683	Wmica	43.01	0.59	28.78	4.34	0.00	1.78	0.16	0.51	9.77
MA21-083	Int Type 1A	6684	Wmica	43.45	0.66	29.60	4.49	0.07	1.81	0.14	0.51	9.83
MA21-083	Int Type 1A	6685	Biotite	35.31	2.02	17.04	17.67	0.03	8.58	0.28	0.40	8.70
MA21-083	Int Type 1A	6686	Biotite	36.37	1.89	17.04	18.09	0.33	9.00	0.24	0.42	8.64
MA21-083	Int Type 1A	6687	Biotite	36.36	1.85	17.00	18.06	0.14	8.71	0.19	0.44	8.81
MA21-083	Int Type 1A	6688	Biotite	35.76	1.81	16.71	17.00	0.01	8.44	0.14	0.44	8.56
MA21-083	Int Type 1A	6689	Biotite	36.11	1.69	16.61	17.34	0.00	8.50	0.25	0.59	8.57
MA21-083	Int Type 1A	6690	Biotite	36.23	1.90	16.78	17.04	0.01	8.39	0.31	0.55	8.59
MA21-083	Int Type 1A	6691	Biotite	36.12	1.81	16.47	16.92	0.06	8.29	0.23	0.47	8.23
MA21-083	Int Type 1A	6692	Biotite	36.44	1.67	16.63	17.51	0.00	8.30	0.27	0.37	8.48
MA21-083	Int Type 1A	6693	Biotite	34.27	1.90	16.95	18.93	0.12	8.78	0.20	0.45	7.71
MA21-083	Int Type 1A	6727	Biotite	34.03	1.68	16.88	18.57	0.08	8.67	0.20	0.38	7.92
MA21-083	Int Type 1A	6728	Biotite	34.93	1.76	16.62	17.97	0.08	8.81	0.24	0.30	8.55
MA21-083	Int Type 1A	6729	Biotite	35.85	1.89	16.52	17.92	0.00	8.90	0.06	0.28	8.67
MA21-083	Int Type 1A	6730	Biotite	35.15	1.79	16.62	17.85	0.09	8.88	0.12	0.27	8.79
MA21-083	Int Type 1A	6731	Biotite	35.36	1.79	16.75	18.17	0.12	8.64	0.16	0.31	8.72
MA21-083	Int Type 1A	6732	Biotite	35.10	1.80	16.54	18.48	0.02	9.01	0.12	0.33	8.65
MA21-083	Int Type 1A	6733	Biotite	35.17	1.96	16.41	18.30	0.14	8.87	0.16	0.33	8.81
MA21-083	Int Type 1A	6734	Biotite	35.39	1.69	16.45	17.96	0.04	8.87	0.12	0.35	8.62

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6735	Biotite	35.07	1.71	16.35	18.12	0.04	8.66	0.22	0.23	8.83
MA21-083	Int Type 1A	6736	Biotite	35.45	1.70	16.52	18.34	0.06	8.88	0.15	0.31	8.62
MA21-083	Int Type 1A	6737	Biotite	35.46	1.78	16.46	18.46	0.03	8.71	0.18	0.36	8.53
MA21-083	Int Type 1A	6738	Biotite	32.75	1.51	12.67	18.08	0.00	3.97	0.17	0.00	8.71
MA21-083	Int Type 1A	6739	Fspar	57.53	0.25	21.98	1.32	0.03	0.34	4.37	7.51	0.53
MA21-083	Int Type 1A	6740	Fspar	57.79	0.27	21.89	1.47	0.13	0.38	4.12	7.80	0.56
MA21-083	Int Type 1A	6741	Fspar	57.79	0.03	22.35	1.19	0.00	0.40	4.54	7.57	0.40
MA21-083	Int Type 1A	6742	Fspar	58.06	0.01	21.99	1.28	0.12	0.41	4.43	7.69	0.53
MA21-083	Int Type 1A	6743	Fspar	59.13	0.10	21.02	1.04	0.00	0.28	3.91	7.98	0.38
MA21-083	Int Type 1A	6744	Fspar	59.94	0.13	20.82	0.94	0.04	0.25	3.28	8.19	0.28
MA21-083	Int Type 1A	6745	Fspar	58.42	0.14	21.75	0.80	0.00	0.22	4.73	7.39	0.28
MA21-083	Int Type 1A	6746	Fspar	59.26	0.03	21.11	1.04	0.03	0.27	3.83	8.02	0.40
MA21-083	Int Type 1A	6747	Fspar	58.99	0.00	21.34	0.84	0.11	0.18	4.22	7.65	0.40
MA21-083	Int Type 1A	6748	Fspar	63.57	0.21	19.03	0.78	0.01	0.19	2.94	7.24	0.19
MA21-083	Int Type 1A	6749	Fspar	60.33	0.10	20.89	0.78	0.00	0.17	3.44	8.09	0.28
MA21-083	Int Type 1A	6750	Fspar	59.64	0.02	21.45	0.64	0.06	0.15	4.17	7.73	0.25
MA21-083	Int Type 1A	6751	Fspar	59.55	0.16	21.15	0.50	0.00	0.16	3.81	8.05	0.27
MA21-083	Int Type 1A	6752	Fspar	60.17	0.12	20.64	0.76	0.09	0.19	3.48	8.31	0.33
MA21-083	Int Type 1A	6753	Fspar	61.09	0.00	19.89	0.74	0.16	0.15	2.39	8.83	0.34
MA21-083	Int Type 1A	6754	Fspar	59.80	0.04	21.12	0.75	0.03	0.22	4.00	8.00	0.32
MA21-083	Int Type 1A	6755	Fspar	58.02	0.06	21.59	1.24	0.01	0.38	3.97	7.94	0.49
MA21-083	Int Type 1A	6756	Fspar	57.87	0.16	21.95	0.78	0.00	0.19	4.43	7.78	0.37
MA21-083	Int Type 1A	6757	Fspar	58.16	0.04	21.98	0.87	0.05	0.13	4.44	7.72	0.31
MA21-083	Int Type 1A	6758	Fspar	58.10	0.05	22.03	0.73	0.00	0.18	4.57	7.60	0.31
MA21-083	Int Type 1A	6759	Fspar	58.28	0.16	22.04	0.72	0.00	0.22	4.53	7.57	0.33
MA21-083	Int Type 1A	6764	Fspar	57.91	0.11	21.56	0.71	0.14	0.11	4.59	7.69	0.29
MA21-083	Int Type 1A	6765	Fspar	57.95	0.08	21.67	0.77	0.00	0.25	4.32	7.71	0.31
MA21-083	Int Type 1A	6766	Fspar	58.46	0.03	21.37	0.91	0.06	0.16	4.11	7.61	0.26
MA21-083	Int Type 1A	6767	Fspar	57.87	0.02	21.61	0.95	0.00	0.35	4.09	7.57	0.36
MA21-083	Int Type 1A	6768	Fspar	56.93	0.09	21.71	0.92	0.07	0.13	4.39	7.53	0.33
MA21-083	Int Type 1A	6769	Fspar	56.77	0.05	21.82	1.91	0.01	0.31	4.06	7.43	0.33
MA21-083	Int Type 1A	6770	Chl	30.61	0.20	19.74	20.00	0.12	11.20	0.49	1.25	0.32
MA21-083	Int Type 1A	6771	Chl	30.30	0.06	20.16	19.54	0.04	11.43	0.41	1.15	0.28
MA21-083	Int Type 1A	6774	Chl	29.92	0.04	19.61	19.81	0.17	11.25	1.22	1.17	0.30

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6775	Chl	29.93	0.12	20.08	19.95	0.08	11.52	0.45	1.04	0.29
MA21-083	Int Type 1A	6787	Biotite	35.73	1.69	16.67	16.82	0.06	8.29	0.32	0.67	8.27
MA21-083	Int Type 1A	6788	Biotite	35.80	1.84	16.44	16.95	0.00	8.10	0.28	0.62	8.29
MA21-083	Int Type 1A	6789	Biotite	35.09	1.69	16.78	17.08	0.17	8.77	0.19	0.69	7.51
MA21-083	Int Type 1A	6790	Biotite	36.41	1.72	16.66	16.68	0.00	8.47	0.30	0.83	8.38
MA21-083	Int Type 1A	6802	Biotite	36.42	1.72	16.54	16.41	0.03	8.20	0.28	0.78	8.34
MA21-083	Int Type 1A	6803	Biotite	36.37	1.72	16.59	16.60	0.13	8.06	0.25	0.82	8.13
MA21-083	Int Type 1A	6804	Biotite	37.35	1.74	16.82	16.61	0.12	8.22	0.31	0.95	8.11
MA21-083	Int Type 1A	6805	Biotite	37.46	1.70	16.87	16.35	0.09	8.07	0.44	0.88	7.95
MA21-083	Int Type 1A	6806	Biotite	36.37	1.83	17.29	17.83	0.12	8.23	0.39	0.86	8.01
MA21-083	Int Type 1A	6807	Biotite	36.42	1.60	17.05	17.24	0.00	8.15	0.30	0.75	8.20
MA21-083	Int Type 1A	6808	Biotite	36.55	1.83	17.11	16.71	0.02	8.00	0.33	0.81	8.11
MA21-083	Int Type 1A	6809	Biotite	36.69	1.80	17.03	17.01	0.12	8.19	0.32	0.93	8.04
MA21-083	Int Type 1A	6810	Biotite	36.43	1.53	17.00	16.86	0.01	8.10	0.38	0.86	8.13
MA21-083	Int Type 1A	6839	Chl	29.50	0.11	20.11	20.20	0.14	11.26	0.60	1.30	0.16
MA21-083	Int Type 1A	6840	Chl	29.51	0.10	20.30	19.89	0.10	11.31	0.52	1.29	0.25
MA21-083	Int Type 1A	6841	Chl	28.95	0.04	19.99	19.91	0.03	11.39	0.52	1.27	0.29
MA21-083	Int Type 1A	6842	Chl	29.08	0.05	19.93	20.30	0.19	11.37	0.47	1.14	0.23
MA21-083	Int Type 1A	6843	Chl	29.18	0.12	19.88	20.28	0.09	11.54	0.52	1.04	0.32
MA21-083	Int Type 1A	6844	Chl	29.24	0.14	19.85	20.13	0.09	11.64	0.47	1.08	0.30
MA21-083	Int Type 1A	6845	Chl	29.00	0.19	19.97	20.54	0.03	11.45	0.42	1.02	0.37
MA21-083	Int Type 1A	6846	Biotite	35.81	1.76	16.47	17.45	0.02	8.29	0.30	0.53	8.01
MA21-083	Int Type 1A	6847	Biotite	36.12	1.54	16.59	17.27	0.02	8.50	0.22	0.65	7.88
MA21-083	Int Type 1A	6848	Biotite	36.57	1.79	16.63	16.80	0.13	8.31	0.28	0.59	8.32
MA21-083	Int Type 1A	6849	Biotite	36.41	1.70	16.05	16.53	0.02	8.22	0.32	0.65	7.99
MA21-083	Int Type 1A	6850	Biotite	37.14	1.67	16.44	16.58	0.00	8.14	0.29	0.72	7.98
MA21-083	Int Type 1A	6851	Biotite	37.41	1.79	16.34	16.56	0.11	8.00	0.30	0.69	8.17
MA21-083	Int Type 1A	6852	Chl	30.34	0.02	19.54	19.76	0.04	10.85	0.41	1.31	0.16
MA21-083	Int Type 1A	6868	Chl	30.31	0.13	19.32	19.55	0.11	11.02	0.42	1.39	0.16
MA21-083	Int Type 1A	6869	Chl	30.45	0.00	19.67	19.52	0.10	10.92	0.39	1.21	0.11
MA21-083	Int Type 1A	6870	Chl	30.61	0.02	19.62	19.62	0.13	10.84	0.42	1.13	0.14
MA21-083	Int Type 1A	6871	Chl	32.27	0.11	19.42	19.94	0.09	10.52	0.42	1.21	0.12
MA21-083	Int Type 1A	6872	Chl	31.36	0.03	19.86	19.64	0.15	10.50	0.44	1.56	0.12
MA21-083	Int Type 1A	6873	Chl	31.05	0.17	19.94	19.76	0.21	10.41	0.44	1.32	0.10

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6874	Chl	31.19	0.23	19.78	19.66	0.09	10.47	0.46	1.48	0.09
MA21-083	Int Type 1A	6875	Fspar	58.52	0.00	21.14	0.54	0.01	0.06	3.83	7.96	0.20
MA21-083	Int Type 1A	6876	Fspar	59.88	0.02	20.55	0.62	0.10	0.10	3.37	8.18	0.17
MA21-083	Int Type 1A	6877	Fspar	59.08	0.07	21.02	0.48	0.02	0.13	4.09	7.46	0.16
MA21-083	Int Type 1A	6878	Fspar	58.54	0.04	20.68	0.56	0.03	0.02	4.08	7.68	0.20
MA21-083	Int Type 1A	6879	Fspar	58.72	0.09	20.65	0.39	0.00	0.03	3.68	7.91	0.22
MA21-083	Int Type 1A	6880	Fspar	59.55	0.00	20.97	0.48	0.00	0.16	3.42	8.28	0.21
MA21-083	Int Type 1A	6881	Fspar	57.93	0.00	21.42	0.50	0.00	0.06	4.00	7.76	0.20
MA21-083	Int Type 1A	6882	Fspar	58.01	0.01	21.49	0.52	0.00	0.19	4.12	8.11	0.17
MA21-083	Int Type 1A	6883	Fspar	57.79	0.08	21.53	0.70	0.00	0.06	4.09	7.85	0.21
MA21-083	Int Type 1A	6884	Fspar	57.16	0.00	21.59	0.66	0.00	0.13	4.68	7.50	0.24
MA21-083	Int Type 1A	6885	Fspar	57.83	0.01	21.65	0.63	0.00	0.18	4.55	7.57	0.33
MA21-083	Int Type 1A	6886	Fspar	58.02	0.00	20.98	0.60	0.02	0.06	4.26	7.49	0.24
MA21-083	Int Type 1A	6887	Fspar	57.84	0.02	20.98	0.62	0.00	0.15	4.02	7.84	0.21
MA21-083	Int Type 1A	6888	Fspar	57.79	0.06	21.38	0.63	0.00	0.20	4.05	7.73	0.18
MA21-083	Int Type 1A	6889	Wmica	45.97	0.28	27.85	2.25	0.03	0.96	0.43	0.86	8.67
MA21-083	Int Type 1A	6890	Wmica	45.61	0.27	27.46	2.39	0.00	1.00	0.33	0.77	8.81
MA21-083	Int Type 1A	6891	Wmica	45.25	0.26	28.18	2.59	0.01	1.01	0.30	0.90	8.91
MA21-083	Int Type 1A	6892	Wmica	44.76	0.09	28.33	2.55	0.12	1.13	0.32	0.73	9.04
MA21-083	Int Type 1A	6893	Wmica	44.85	0.30	28.31	2.65	0.05	0.92	0.42	0.98	8.79
MA21-083	Int Type 1A	6894	Wmica	44.69	0.25	28.51	2.72	0.00	0.90	0.47	0.95	8.89
MA21-083	Int Type 1A	6895	Wmica	45.52	0.62	27.56	2.59	0.00	1.01	0.47	0.72	8.83
MA21-083	Int Type 1A	6896	Wmica	45.01	0.67	27.31	3.09	0.03	1.05	0.43	0.87	8.66
MA21-083	Int Type 1A	6897	Wmica	46.02	0.43	27.38	2.68	0.01	0.96	0.39	0.77	8.82
MA21-083	Int Type 1A	6898	Wmica	45.46	0.32	27.60	2.62	0.05	0.83	0.39	0.74	8.67
MA21-083	Int Type 1A	6899	Wmica	45.57	0.36	27.34	2.40	0.02	0.94	0.32	0.79	8.71
MA21-083	Int Type 1A	6900	Wmica	46.01	0.21	27.22	2.49	0.00	0.95	0.27	0.76	8.75
MA21-083	Int Type 1A	6901	Wmica	45.78	0.29	27.13	2.67	0.00	0.92	0.36	0.68	8.75
MA21-083	Int Type 1A	6902	Wmica	44.74	0.26	27.69	2.61	0.00	0.84	0.26	0.67	8.85
MA21-083	Int Type 1A	6903	Wmica	44.34	0.37	28.19	2.72	0.11	0.89	0.36	0.62	8.96
MA21-083	Int Type 1A	6904	Wmica	44.45	0.43	28.60	2.70	0.17	0.88	0.35	0.70	9.07
MA21-083	Int Type 1A	6905	Wmica	44.61	0.54	28.45	2.86	0.00	0.78	0.36	0.64	9.01
MA21-083	Int Type 1A	6906	Wmica	44.15	0.14	29.04	2.87	0.10	0.71	0.30	0.67	9.00
MA21-083	Int Type 1A	6907	Wmica	45.16	0.33	27.72	2.78	0.00	1.08	0.33	0.64	8.85

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-083	Int Type 1A	6908	Wmica	45.53	0.26	28.16	2.70	0.03	1.10	0.36	0.50	9.07
MA21-083	Int Type 1A	6909	Wmica	45.59	0.26	28.00	2.77	0.10	1.09	0.38	0.66	8.99
MA21-083	Int Type 1A	6910	Wmica	45.00	0.24	27.98	2.86	0.06	0.96	0.27	0.60	8.93
MA21-083	Int Type 1A	6911	Wmica	45.19	0.47	27.68	2.64	0.00	0.92	0.27	0.52	8.94
MA21-083	Int Type 1A	6912	Wmica	44.92	0.27	27.56	2.42	0.17	0.84	0.25	0.49	9.09
MA21-083	Int Type 1A	6913	Wmica	44.48	0.31	27.80	2.77	0.02	0.97	0.35	0.67	9.11
MA21-083	Int Type 1A	6914	Wmica	44.34	0.39	28.08	2.75	0.03	0.95	0.29	0.56	9.00
MA21-083	Int Type 1A	6915	Wmica	44.76	0.49	28.00	2.44	0.00	0.90	0.37	0.59	8.98
MA21-083	Int Type 1A	6916	Wmica	45.52	0.32	27.80	2.25	0.00	0.92	0.30	0.47	9.04
MA21-083	Int Type 1A	6917	Wmica	46.20	0.30	26.84	2.66	0.00	0.91	0.35	0.69	8.58
MA21-083	Int Type 1A	6918	Wmica	45.07	0.27	27.26	2.52	0.10	1.00	0.27	0.75	8.64
MA21-083	Int Type 1A	6919	Wmica	44.41	0.24	27.40	2.62	0.06	0.89	0.35	0.66	8.74
MA21-083	Int Type 1A	6920	Wmica	45.90	0.30	26.95	2.51	0.00	0.92	0.32	0.65	8.76
MA21-089	Type 2B vein	6921	Fspar	61.92	0.00	21.69	0.03	0.00	0.02	3.40	8.23	0.08
MA21-089	Type 2B vein	6922	Fspar	62.10	0.15	21.88	0.18	0.02	0.03	3.31	8.55	0.15
MA21-089	Type 2B vein	6923	Fspar	63.21	0.00	21.73	0.13	0.00	0.00	2.83	8.76	0.05
MA21-089	Type 2B vein	6924	Fspar	62.60	0.01	22.24	0.04	0.01	0.00	3.15	8.76	0.05
MA21-089	Type 2B vein	6925	Fspar	62.04	0.00	22.51	0.08	0.00	0.00	3.99	8.23	0.10
MA21-089	Type 2B vein	6926	Fspar	64.64	0.04	20.80	0.11	0.00	0.05	1.60	9.67	0.20
MA21-089	Type 2B vein	6927	Fspar	63.13	0.04	21.88	0.07	0.00	0.02	3.27	8.64	0.04
MA21-089	Type 2B vein	6928	Fspar	62.61	0.00	22.12	0.00	0.00	0.03	3.46	8.73	0.10
MA21-089	Type 2B vein	6929	Fspar	65.12	0.00	20.63	0.00	0.15	0.02	1.57	9.71	0.10
MA21-089	Type 2B vein	6930	Fspar	64.18	0.02	21.17	0.21	0.01	0.00	2.76	9.00	0.03
MA21-089	Type 2B vein	6931	Fspar	65.14	0.02	20.65	0.10	0.00	0.00	1.73	9.67	0.17
MA21-089	Type 2B vein	6932	Fspar	62.53	0.03	22.65	0.02	0.00	0.05	4.04	8.35	0.00
MA21-089	Type 2B vein	6933	Fspar	63.17	0.00	22.14	0.14	0.00	0.01	3.32	8.80	0.14
MA21-089	Type 2B vein	6934	Fspar	62.83	0.00	22.45	0.00	0.00	0.01	3.45	8.67	0.18
MA21-089	Type 2B vein	6935	Fspar	62.34	0.00	22.32	0.33	0.00	0.00	3.60	8.69	0.23
MA21-089	Type 2B vein	6936	Fspar	62.09	0.00	22.75	0.21	0.02	0.00	3.72	8.53	0.10
MA21-089	Type 2B vein	6937	Fspar	63.39	0.00	21.82	0.20	0.19	0.00	3.07	8.92	0.15
MA21-089	Type 2B vein	6938	Fspar	63.06	0.00	22.39	0.00	0.03	0.00	3.63	8.56	0.14
MA21-089	Type 2B vein	6939	Fspar	63.67	0.03	22.34	0.00	0.00	0.00	3.22	8.81	0.05
MA21-089	Type 2B vein	6940	Fspar	62.83	0.02	21.86	1.08	0.24	0.25	2.56	8.87	0.18
MA21-089	Type 2B vein	6941	Fspar	65.00	0.03	21.28	0.18	0.00	0.00	1.84	9.53	0.21

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-089	Type 2B vein	6942	Fspar	64.03	0.00	21.90	0.03	0.00	0.01	3.03	8.97	0.04
MA21-089	Type 2B vein	6943	Fspar	64.09	0.03	21.64	0.20	0.07	0.01	2.88	8.89	0.10
MA21-089	Type 2B vein	6944	Fspar	63.85	0.04	21.86	0.25	0.12	0.03	2.81	9.07	0.07
MA21-089	Type 2B vein	6945	Fspar	64.78	0.06	21.92	0.00	0.02	0.02	2.81	9.05	0.05
MA21-089	Type 2B vein	6946	Fspar	65.54	0.00	21.70	0.21	0.04	0.00	1.84	9.62	0.03
MA21-089	Type 2B vein	6947	Fspar	62.15	0.05	21.26	0.03	0.00	0.00	3.15	8.39	0.05
MA21-089	Type 2B vein	6948	Fspar	61.93	0.01	21.49	0.03	0.00	0.00	3.28	8.64	0.08
MA21-089	Type 2B vein	6949	Fspar	59.60	0.00	23.33	0.00	0.01	0.02	5.31	7.25	0.15
MA21-089	Type 2B vein	6950	Fspar	62.21	0.04	21.64	0.04	0.00	0.03	3.32	8.42	0.05
MA21-089	Type 2B vein	6951	Fspar	59.45	0.01	23.44	0.03	0.04	0.00	5.36	7.45	0.13
MA21-089	Type 2B vein	6952	Fspar	62.38	0.00	21.37	0.19	0.07	0.00	3.24	8.69	0.05
MA21-089	Type 2B vein	6953	Fspar	61.45	0.03	22.21	0.12	0.05	0.00	3.47	8.53	0.02
MA21-089	Type 2B vein	6955	Fspar	62.40	0.10	21.62	0.08	0.05	0.04	3.00	8.73	0.07
MA21-089	Type 2B vein	6956	Fspar	61.35	0.00	22.39	0.14	0.00	0.03	3.73	8.24	0.10
MA21-089	Type 2B vein	6958	Fspar	62.05	0.00	21.98	0.13	0.01	0.01	3.48	8.44	0.03
MA21-089	Type 2B vein	6959	Fspar	61.99	0.14	21.67	0.26	0.00	0.01	2.97	8.65	0.11
MA21-089	Type 2B vein	6960	Fspar	63.44	0.04	20.89	0.05	0.00	0.00	2.34	9.16	0.12
MA21-089	Type 2B vein	6961	Fspar	63.81	0.03	20.72	0.11	0.01	0.01	2.12	9.15	0.05
MA21-089	Type 2B vein	6962	Fspar	63.63	0.04	20.94	0.08	0.06	0.01	2.40	8.97	0.00
MA21-089	Type 2B vein	6963	Fspar	59.65	0.00	23.49	0.00	0.00	0.01	5.37	7.63	0.15
MA21-089	Type 2B vein	6964	Fspar	63.03	0.00	21.61	0.00	0.00	0.01	3.13	8.60	0.04
MA21-089	Type 2B vein	6965	Fspar	59.79	0.00	23.56	0.10	0.18	0.01	5.17	7.32	0.11
MA21-089	Type 2B vein	6966	Fspar	62.71	0.00	21.56	0.04	0.00	0.02	3.04	8.84	0.06
MA21-089	Type 2B vein	6967	Fspar	60.00	0.00	23.48	0.29	0.08	0.00	5.46	7.56	0.06
MA21-089	Type 2B vein	6968	Fspar	60.03	0.00	23.79	0.02	0.09	0.02	5.52	7.50	0.12
MA21-089	Type 2B vein	6322	Fspar	65.58	0.02	19.14	0.03	0.00	0.05	0.40	10.06	0.01
MA21-089	Type 2B vein	6323	Fspar	65.63	0.03	20.14	0.13	0.05	0.03	0.49	10.15	0.00
MA21-089	Type 2B vein	6324	Fspar	65.83	0.00	20.07	0.04	0.01	0.02	0.59	10.14	0.09
MA21-089	Type 2B vein	6325	Fspar	65.76	0.00	19.88	0.02	0.00	0.02	0.79	10.15	0.01
MA21-089	Type 2B vein	6326	Fspar	66.18	0.00	19.79	0.00	0.11	0.03	0.33	10.33	0.00
MA21-089	Type 2B vein	6327	Fspar	66.04	0.00	19.96	0.01	0.00	0.00	0.63	10.28	0.04
MA21-089	Type 2B vein	6328	Fspar	65.93	0.00	20.16	0.05	0.00	0.03	0.67	10.10	0.04
MA21-089	Type 2B vein	6329	Fspar	66.32	0.00	19.95	0.12	0.00	0.00	0.42	10.37	0.00
MA21-089	Type 2B vein	6330	Fspar	66.88	0.00	19.62	0.00	0.00	0.03	0.34	10.23	0.05

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA21-089	Type 2B vein	6331	Fspar	66.20	0.00	19.86	0.04	0.00	0.00	0.68	10.05	0.02
MA21-089	Type 2B vein	6332	Fspar	66.50	0.01	19.99	0.00	0.00	0.04	0.35	10.15	0.03
MA21-089	Type 2B vein	6333	Fspar	66.43	0.03	20.00	0.03	0.00	0.03	0.50	10.28	0.00
MA21-089	Type 2B vein	6334	Fspar	66.37	0.00	20.04	0.07	0.00	0.00	0.55	10.24	0.01
MA21-089	Type 2B vein	6335	Fspar	66.19	0.00	20.01	0.01	0.00	0.06	0.81	10.14	0.03
MA21-089	Type 2B vein	6336	Fspar	66.20	0.10	20.21	0.14	0.03	0.01	0.89	9.90	0.00
MA21-089	Type 2B vein	6337	Fspar	65.35	0.00	19.59	0.14	0.00	0.00	0.49	10.08	0.00
MA21-089	Type 2B vein	6338	Fspar	65.35	0.06	19.79	0.04	0.00	0.00	1.00	9.68	0.02
MA21-089	Type 2B vein	6339	Fspar	65.88	0.00	19.48	0.01	0.00	0.00	0.50	10.17	0.00
MA21-089	Type 2B vein	6340	Fspar	65.52	0.03	19.78	0.08	0.00	0.03	0.86	9.91	0.00
MA21-089	Type 2B vein	6341	Fspar	64.66	0.00	20.61	0.00	0.00	0.02	1.60	9.52	0.00
MA21-089	Type 2B vein	6342	Fspar	65.39	0.00	20.13	0.11	0.07	0.01	0.75	9.94	0.00
MA21-089	Type 2B vein	6343	Fspar	65.72	0.00	19.74	0.11	0.02	0.02	0.81	10.00	0.00
MA21-089	Type 2B vein	6344	Fspar	65.11	0.03	20.00	0.08	0.00	0.04	1.11	9.92	0.07
MA21-089	Type 2B vein	6345	Fspar	65.78	0.15	19.79	0.31	0.00	0.03	0.68	10.06	0.00
MA21-089	Type 2B vein	6346	Fspar	65.51	0.03	20.35	0.07	0.00	0.03	0.80	9.94	0.00
MA21-089	Type 2B vein	6347	Fspar	65.90	0.00	19.79	0.13	0.00	0.04	0.70	9.94	0.07
MA21-089	Type 2B vein	6348	Fspar	65.96	0.00	19.85	0.03	0.17	0.02	0.44	10.05	0.05
MA21-089	Type 2B vein	6349	Fspar	66.06	0.02	19.76	0.19	0.00	0.01	0.58	10.12	0.02
MA21-089	Type 2B vein	6350	Fspar	66.28	0.01	19.82	0.14	0.00	0.00	0.65	9.92	0.00
MA21-089	Type 2B vein	6351	Fspar	65.66	0.01	20.38	0.28	0.00	0.00	1.15	9.76	0.07
MA21-089	Type 2B vein	6352	Fspar	65.67	0.00	20.43	0.05	0.00	0.03	0.90	10.01	0.08
MA21-089	Type 2B vein	6353	Fspar	65.83	0.00	20.27	0.25	0.00	0.04	0.97	10.06	0.02
MA21-089	Type 2B vein	6354	Fspar	66.90	0.00	20.01	0.06	0.00	0.04	0.50	10.09	0.00
MA21-089	Type 2B vein	6355	Fspar	66.19	0.04	20.15	0.04	0.00	0.03	0.83	10.16	0.09
MA-EP-S04	Type 2B vein	6442	Wmica	44.06	0.02	36.64	0.50	0.00	0.00	0.14	5.70	1.84
MA-EP-S04	Type 2B vein	6443	Wmica	46.06	0.01	36.25	0.21	0.00	0.01	0.08	6.72	0.92
MA-EP-S04	Type 2B vein	6444	Fspar	61.20	0.01	20.18	0.32	0.00	0.01	0.83	9.08	0.21
MA-EP-S04	Type 2B vein	6445	Fspar	62.57	0.00	19.95	0.03	0.00	0.03	0.93	9.43	0.16
MA-EP-S04	Type 2B vein	6446	Fspar	63.02	0.00	19.40	0.44	0.03	0.05	0.46	9.73	0.18
MA-EP-S04	Type 2B vein	6447	Fspar	62.28	0.05	20.40	0.03	0.00	0.02	1.37	9.29	0.13
MA-EP-S04	Type 2B vein	6448	Fspar	63.44	0.00	19.30	0.10	0.04	0.00	0.57	9.93	0.12
MA-EP-S04	Type 2B vein	6449	Fspar	61.73	0.02	21.79	0.18	0.00	0.01	0.51	9.32	0.33
MA-EP-S04	Type 2B vein	6450	Fspar	63.83	0.00	19.45	0.00	0.00	0.01	0.37	9.77	0.22

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EP-S04	Type 2B vein	6451	Fspar	63.25	0.00	19.82	0.04	0.10	0.01	1.08	9.50	0.08
MA-EP-S04	Type 2B vein	6452	Fspar	63.92	0.04	19.38	0.15	0.06	0.00	0.31	9.89	0.10
MA-EP-S04	Type 2B vein	6453	Fspar	63.25	0.00	19.59	0.06	0.00	0.04	0.46	9.88	0.17
MA-EP-S04	Type 2B vein	6454	Fspar	63.56	0.00	19.73	0.11	0.05	0.01	0.49	10.06	0.08
MA-EP-S04	Type 2B vein	6455	Fspar	63.02	0.02	19.97	0.10	0.00	0.01	1.14	9.61	0.16
MA-EP-S04	Type 2B vein	6456	Fspar	63.96	0.00	19.67	0.00	0.06	0.00	0.48	9.79	0.17
MA-EP-S04	Type 2B vein	6457	Fspar	63.04	0.13	20.14	0.00	0.00	0.00	0.69	9.69	0.15
MA-EP-S04	Type 2B vein	6458	Fspar	64.17	0.00	19.16	0.09	0.00	0.00	0.20	10.04	0.19
MA-EP-S04	Type 2B vein	6459	Fspar	62.99	0.03	20.28	0.12	0.00	0.00	1.23	9.28	0.17
MA-EP-S04	Type 2B vein	6460	Fspar	63.19	0.01	20.24	0.00	0.04	0.01	1.37	9.36	0.17
MA-EP-S04	Type 2B vein	6461	Fspar	64.35	0.00	19.50	0.00	0.00	0.01	0.38	9.90	0.16
MA-EP-S04	Type 2B vein	6462	Fspar	64.15	0.00	19.87	0.22	0.00	0.00	0.15	10.14	0.15
MA-EP-S04	Type 2B vein	6463	Fspar	63.82	0.00	19.81	0.00	0.10	0.01	0.28	10.01	0.17
MA-EP-S04	Type 2B vein	6464	Fspar	64.54	0.00	19.38	0.16	0.00	0.00	0.27	9.97	0.09
MA-EP-S04	Type 2B vein	6465	Fspar	63.35	0.02	19.91	0.02	0.06	0.00	0.94	9.74	0.10
MA-EP-S04	Type 2B vein	6466	Fspar	64.11	0.02	19.98	0.06	0.08	0.04	0.44	9.85	0.26
MA-EP-S04	Type 2B vein	6467	Fspar	64.03	0.00	19.74	0.06	0.00	0.00	0.47	9.88	0.17
MA-EP-S04	Type 2B vein	6468	Fspar	63.55	0.00	19.97	0.12	0.09	0.02	0.89	9.84	0.13
MA-EP-S04	Type 2B vein	6469	Fspar	64.15	0.00	19.85	0.15	0.05	0.00	0.79	9.73	0.19
MA-EP-S04	Type 2B vein	6470	Fspar	64.57	0.03	19.96	0.02	0.09	0.01	0.42	9.87	0.22
MA-EP-S04	Type 2B vein	6471	Wmica	43.07	0.03	34.59	0.40	0.00	0.06	0.16	5.29	2.14
MA-EP-S04	Type 2B vein	6472	Wmica	43.57	0.00	34.28	0.43	0.00	0.00	0.19	5.66	2.00
MA-EP-S04	Type 2B vein	6473	Wmica	43.32	0.07	36.68	0.40	0.00	0.05	0.18	5.85	1.05
MA-EP-S04	Type 2B vein	6474	Wmica	43.31	0.00	36.58	0.43	0.00	0.05	0.18	5.11	2.79
MA-EP-S04	Type 2B vein	6475	Wmica	43.55	0.08	37.05	0.41	0.00	0.00	0.26	6.15	1.13
MA-EP-S04	Type 2B vein	6476	Wmica	43.71	0.06	36.89	0.29	0.00	0.00	0.19	5.86	1.46
MA-EP-S04	Type 2B vein	6477	Wmica	43.97	0.06	36.93	0.36	0.03	0.03	0.26	6.21	0.99
MA-EP-S04	Type 2B vein	6478	Wmica	44.07	0.04	37.04	0.31	0.00	0.03	0.22	5.76	1.29
MA-EP-S04	Type 2B vein	6479	Wmica	43.83	0.07	37.36	0.39	0.00	0.01	0.16	6.49	0.75
MA-EP-S04	Type 2B vein	6480	Wmica	43.53	0.13	36.50	0.44	0.00	0.02	0.20	5.33	2.77
MA-EP-S04	Type 2B vein	6481	Wmica	45.70	0.12	35.89	0.42	0.01	0.01	0.19	6.00	0.73
MA-EP-S04	Type 2B vein	6482	Wmica	43.92	0.01	37.45	0.51	0.00	0.00	0.02	6.06	1.08
MA-EP-S04	Type 2B vein	6483	Wmica	43.87	0.03	37.28	0.57	0.00	0.03	0.18	5.99	1.36
MA-EP-S04	Type 2B vein	6484	Wmica	43.11	0.27	33.16	1.68	0.00	0.50	0.00	1.32	9.36

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EP-S04	Type 2B vein	6485	Wmica	43.84	0.12	36.89	0.44	0.00	0.04	0.17	5.47	2.42
MA-EP-S04	Type 2B vein	6486	Wmica	44.88	0.01	36.97	0.38	0.10	0.01	0.11	6.30	0.82
MA-EP-S04	Type 2B vein	6487	Wmica	44.12	0.17	37.39	0.47	0.00	0.02	0.17	5.82	1.41
MA-EP-S04	Type 2B vein	6488	Wmica	44.28	0.00	37.54	0.34	0.11	0.00	0.18	5.84	1.62
MA-EP-S04	Type 2B vein	6489	Wmica	45.59	0.06	35.94	0.39	0.03	0.00	0.24	6.04	1.88
MA-EP-S04	Type 2B vein	6490	Wmica	43.57	0.14	34.07	1.55	0.00	0.65	0.00	1.41	9.23
MA-EP-S04	Type 2B vein	6491	Wmica	45.25	0.02	36.97	0.24	0.01	0.01	0.16	6.13	1.30
MA-EP-S04	Type 2B vein	6492	Wmica	43.65	0.09	35.82	1.05	0.00	0.05	0.06	3.69	5.95
MA-EP-S04	Type 2B vein	6493	Wmica	43.11	0.20	34.63	1.22	0.17	0.52	0.00	1.69	9.13
MA-EP-S04	Type 2B vein	6494	Wmica	43.04	0.24	34.62	1.57	0.14	0.45	0.00	1.65	9.04
MA-EP-S04	Type 2B vein	6495	Wmica	43.16	0.24	34.15	1.68	0.17	0.42	0.00	1.42	9.16
MA-EP-S04	Type 2B vein	6496	Wmica	43.34	0.18	34.70	1.38	0.02	0.62	0.00	1.38	9.34
MA-EP-S04	Type 2B vein	6497	Wmica	43.48	0.21	34.23	1.53	0.00	0.57	0.00	1.50	9.50
MA-EP-S04	Type 2B vein	6498	Wmica	43.64	0.21	34.14	1.43	0.00	0.58	0.00	1.58	9.37
MA-EP-S04	Type 2B vein	6499	Wmica	43.87	0.20	34.43	1.59	0.01	0.54	0.00	1.44	9.15
MA-EP-S04	Type 2B vein	6500	Wmica	43.81	0.25	34.55	1.40	0.00	0.65	0.00	1.62	9.00
MA-EP-S04	Type 2B vein	6501	Wmica	43.71	0.05	34.36	1.34	0.04	0.54	0.00	1.42	9.48
MA-EP-S04	Type 2B vein	6502	Wmica	43.71	0.34	34.00	1.45	0.00	0.70	0.00	1.46	9.30
MA-EP-S04	Type 2B vein	6503	Fspar	59.44	0.01	21.45	0.01	0.09	0.00	0.51	8.95	0.53
MA-EP-S04	Type 2B vein	6504	Wmica	43.82	0.22	34.54	1.27	0.00	0.65	0.00	1.79	9.06
MA-EP-S04	Type 2B vein	6505	Wmica	43.56	0.31	34.19	1.86	0.04	0.54	0.00	1.33	9.50
MA-EP-S04	Type 2B vein	6506	Wmica	43.57	0.23	34.63	1.63	0.00	0.66	0.00	1.41	9.27
MA-EP-S04	Type 2B vein	6507	Wmica	43.55	0.13	34.49	1.51	0.00	0.61	0.00	1.46	9.28
MA-EP-S04	Type 2B vein	6508	Wmica	43.78	0.24	34.50	1.54	0.07	0.41	0.00	1.39	9.42
MA-EP-S04	Type 2B vein	6509	Wmica	43.74	0.27	34.66	1.39	0.15	0.65	0.00	1.38	9.47
MA-EP-S04	Type 2B vein	6510	Wmica	43.50	0.22	34.67	1.59	0.21	0.65	0.00	1.52	9.33
MA-EP-S04	Type 2B vein	6511	Wmica	43.64	0.25	34.69	1.69	0.07	0.58	0.00	1.51	9.00
MA-EP-S04	Type 2B vein	6512	Wmica	43.88	0.14	34.70	1.66	0.09	0.68	0.00	1.55	9.26
MA-EP-S04	Type 2B vein	6513	Wmica	43.97	0.18	34.64	1.35	0.07	0.76	0.00	1.61	8.96
MA-EP-S04	Type 2B vein	6514	Wmica	43.62	0.14	34.68	1.53	0.10	0.68	0.05	1.67	9.29
MA-EP-S04	Type 2B vein	6515	Fspar	63.15	0.00	19.34	0.02	0.07	0.01	0.23	10.01	0.10
MA-EP-S04	Type 2B vein	6516	Fspar	61.89	0.02	20.50	0.12	0.00	0.00	1.63	9.24	0.24
MA-EP-S04	Type 2B vein	6517	Fspar	63.49	0.13	19.98	0.01	0.00	0.00	0.73	9.47	0.14
MA-EP-S04	Type 2B vein	6518	Fspar	63.36	0.11	19.69	0.14	0.05	0.00	0.47	9.74	0.22

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EP-S04	Type 2B vein	6519	Fspar	64.45	0.01	19.69	0.04	0.05	0.00	0.28	9.95	0.31
MA-EP-S08A	HS/SZ	6520	Wmica	42.58	0.14	34.76	1.00	0.00	0.62	0.00	1.56	9.37
MA-EP-S08A	HS/SZ	6521	Wmica	42.45	0.30	34.41	1.20	0.08	0.72	0.00	1.63	9.45
MA-EP-S08A	HS/SZ	6522	Wmica	42.80	0.31	34.62	0.91	0.00	0.72	0.00	1.56	9.53
MA-EP-S08A	HS/SZ	6523	Wmica	43.01	0.23	34.90	0.87	0.00	0.77	0.00	1.48	9.48
MA-EP-S08A	HS/SZ	6524	Wmica	43.09	0.14	35.21	1.04	0.03	0.62	0.00	1.55	9.44
MA-EP-S08A	HS/SZ	6525	Wmica	42.82	0.17	35.14	0.96	0.00	0.72	0.00	1.54	9.70
MA-EP-S08A	HS/SZ	6526	Wmica	43.41	0.15	34.51	1.07	0.00	0.81	0.00	1.40	9.90
MA-EP-S08A	HS/SZ	6527	Wmica	43.04	0.24	34.99	1.08	0.07	0.77	0.00	1.45	9.84
MA-EP-S08A	HS/SZ	6528	Wmica	43.12	0.21	35.35	0.68	0.00	0.79	0.00	1.61	9.54
MA-EP-S08A	HS/SZ	6529	Wmica	43.18	0.19	34.74	1.15	0.02	0.72	0.00	1.60	9.52
MA-EP-S08A	HS/SZ	6530	Wmica	42.95	0.12	35.43	1.02	0.00	0.73	0.00	1.65	9.69
MA-EP-S08A	HS/SZ	6531	Wmica	43.24	0.11	35.14	1.09	0.00	0.66	0.00	1.56	9.70
MA-EP-S08A	HS/SZ	6532	Wmica	43.46	0.02	34.73	1.05	0.00	0.98	0.00	1.48	9.88
MA-EP-S08A	HS/SZ	6533	Wmica	43.10	0.12	35.31	1.01	0.00	0.80	0.00	1.62	9.67
MA-EP-S08A	HS/SZ	6534	Wmica	43.21	0.18	35.51	1.20	0.00	0.73	0.00	1.48	9.71
MA-EP-S08A	HS/SZ	6535	Wmica	43.25	0.14	35.39	1.21	0.02	0.73	0.00	1.68	9.75
MA-EP-S08A	HS/SZ	6536	Wmica	43.52	0.16	35.54	0.71	0.07	0.76	0.00	1.67	9.63
MA-EP-S08A	HS/SZ	6537	Wmica	43.46	0.12	34.99	1.21	0.08	0.71	0.00	1.43	9.96
MA-EP-S08A	HS/SZ	6538	Wmica	43.83	0.13	35.58	0.86	0.00	0.77	0.00	2.01	9.10
MA-EP-S08A	HS/SZ	6539	Wmica	43.52	0.34	35.42	0.95	0.03	0.82	0.00	1.53	9.77
MA-EP-S08A	HS/SZ	6540	Wmica	43.90	0.17	34.69	0.97	0.00	0.62	0.00	1.16	9.89
MA-EP-S08A	HS/SZ	6541	Wmica	43.61	0.30	35.03	0.76	0.00	0.67	0.00	1.60	9.51
MA-EP-S08A	HS/SZ	6542	Wmica	44.55	0.29	34.18	1.08	0.00	0.70	0.00	1.36	9.86
MA-EP-S08A	HS/SZ	6543	Wmica	44.07	0.15	35.06	0.84	0.00	0.65	0.00	1.45	9.87
MA-EP-S08A	HS/SZ	6544	Wmica	44.00	0.09	35.43	0.75	0.01	0.60	0.00	1.49	9.85
MA-EP-S08A	HS/SZ	6545	Wmica	44.78	0.40	33.36	1.09	0.00	0.99	0.00	1.14	10.37
MA-EP-S08A	HS/SZ	6546	Wmica	44.18	0.17	35.06	0.98	0.00	0.71	0.00	1.42	9.81
MA-EP-S08A	HS/SZ	6547	Wmica	44.08	0.06	35.26	0.90	0.00	0.81	0.00	1.36	9.97
MA-EP-S08A	HS/SZ	6548	Wmica	44.84	0.03	33.73	0.92	0.00	1.14	0.00	1.17	10.29
MA-EP-S08A	HS/SZ	6549	Wmica	43.94	0.15	35.77	0.85	0.00	0.71	0.00	1.78	9.06
MA-EP-S08A	HS/SZ	6550	Wmica	43.91	0.15	35.45	0.86	0.00	0.78	0.00	1.51	10.00
MA-EP-S08A	HS/SZ	6551	Wmica	44.35	0.27	35.03	0.80	0.05	0.66	0.00	1.44	9.90
MA-EP-S08A	HS/SZ	6552	Wmica	44.91	0.13	34.79	1.01	0.00	0.81	0.00	1.33	9.90

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EP-S08A	HS/SZ	6553	Wmica	44.08	0.11	35.19	0.85	0.00	0.73	0.00	1.40	10.02
MA-EP-S08A	HS/SZ	6554	Wmica	44.44	0.20	35.18	1.10	0.18	0.55	0.00	1.58	9.40
MA-EP-S08A	HS/SZ	6555	Wmica	43.81	0.21	35.49	0.86	0.00	0.69	0.00	1.58	9.91
MA-EP-S08A	HS/SZ	6556	Wmica	44.34	0.28	35.36	0.82	0.01	0.67	0.00	1.34	10.19
MA-EP-S08A	HS/SZ	6557	Wmica	44.57	0.16	35.69	0.79	0.00	0.72	0.00	1.75	9.29
MA-EP-S08A	HS/SZ	6558	Wmica	45.52	0.22	33.71	0.97	0.00	1.37	0.00	1.21	10.21
MA-EP-S08A	HS/SZ	6559	Wmica	45.21	0.09	34.79	0.91	0.00	0.77	0.00	1.54	9.66
MA-EP-S08A	HS/SZ	6560	Wmica	44.34	0.13	35.23	0.97	0.16	0.88	0.00	1.40	9.73
MA-EP-S08A	HS/SZ	6561	Wmica	44.34	0.13	35.47	0.99	0.00	0.70	0.00	1.57	9.89
MA-EP-S08A	HS/SZ	6562	Wmica	44.53	0.06	35.34	0.80	0.00	0.87	0.00	1.53	9.90
MA-EP-S08A	HS/SZ	6563	Wmica	44.68	0.12	35.22	0.75	0.10	0.88	0.00	1.46	9.93
MA-EP-S08A	HS/SZ	6564	Wmica	44.15	0.22	35.37	0.95	0.00	0.71	0.00	1.60	9.77
MA-EP-S08A	HS/SZ	6565	Wmica	44.39	0.14	35.70	0.85	0.00	0.81	0.00	1.70	9.65
MA-EP-S08A	HS/SZ	6566	Wmica	45.34	0.22	34.04	0.97	0.02	1.23	0.00	1.27	10.13
MA-EP-S08A	HS/SZ	6567	Wmica	44.68	0.16	35.28	0.82	0.08	1.08	0.00	1.32	10.16
MA-EP-S08A	HS/SZ	6568	Wmica	45.53	0.06	34.72	1.04	0.06	0.99	0.00	1.49	9.82
MA-EP-S08A	HS/SZ	6569	Wmica	44.95	0.13	35.52	0.70	0.19	0.98	0.00	1.51	9.97
MA-EP-S08A	HS/SZ	6570	Chl	24.79	0.10	22.17	22.73	0.20	14.34	0.07	0.41	0.05
MA-EP-S08A	HS/SZ	6571	Chl	25.01	0.07	22.02	22.64	0.37	14.68	0.08	0.38	0.11
MA-EP-S08A	HS/SZ	6572	Chl	24.70	0.01	22.25	23.17	0.05	14.54	0.06	0.39	0.03
MA-EP-S08A	HS/SZ	6573	Chl	24.91	0.08	22.13	23.33	0.00	14.24	0.09	0.40	0.15
MA-EP-S08A	HS/SZ	6574	Chl	25.08	0.04	22.01	23.27	0.12	14.71	0.00	0.39	0.12
MA-EP-S08A	HS/SZ	6575	Chl	25.31	0.05	22.30	22.77	0.15	15.07	0.06	0.38	0.05
MA-EP-S08A	HS/SZ	6576	Chl	25.04	0.09	22.48	23.02	0.11	14.73	0.09	0.42	0.09
MA-EP-S08A	HS/SZ	6577	Chl	25.03	0.11	22.28	23.28	0.03	15.12	0.06	0.37	0.04
MA-EP-S08A	HS/SZ	6578	Chl	25.40	0.01	22.19	23.24	0.00	15.10	0.09	0.55	0.06
MA-EP-S08A	HS/SZ	6579	Wmica	43.87	0.13	35.23	1.33	0.00	0.54	0.00	1.51	9.37
MA-EP-S08A	HS/SZ	6580	Wmica	44.16	0.14	34.90	1.04	0.03	0.77	0.00	1.52	9.51
MA-EP-S08A	HS/SZ	6581	Wmica	44.18	0.03	35.28	0.86	0.00	0.65	0.00	1.54	9.83
MA-EP-S08A	HS/SZ	6582	Wmica	44.28	0.14	35.62	0.92	0.03	0.77	0.00	1.69	9.54
MA-EP-S08A	HS/SZ	6583	Wmica	44.63	0.25	34.41	1.30	0.00	0.83	0.00	1.46	9.79
MA-EP-S08A	HS/SZ	6584	Wmica	44.02	0.10	35.18	1.11	0.02	0.80	0.00	1.60	9.82
MA-EP-S08A	HS/SZ	6585	Wmica	44.62	0.13	35.19	1.07	0.00	0.78	0.00	1.57	9.93
MA-EP-S08A	HS/SZ	6586	Wmica	44.89	0.26	34.52	1.33	0.00	0.84	0.00	1.35	9.94

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EP-S08A	HS/SZ	6587	Wmica	44.35	0.24	35.29	1.03	0.00	0.76	0.00	1.55	9.95
MA-EP-S08A	HS/SZ	6588	Wmica	44.66	0.08	35.45	0.88	0.00	0.85	0.00	1.62	9.71
MA-EP-S08A	HS/SZ	6589	Wmica	44.38	0.10	35.52	1.03	0.00	0.79	0.00	1.58	9.84
MA-EP-S08A	HS/SZ	6590	Wmica	44.36	0.24	35.38	1.29	0.00	0.85	0.00	1.57	9.89
MA-EP-S08A	HS/SZ	6591	Wmica	44.56	0.21	34.81	1.25	0.04	0.82	0.00	1.41	10.17
MA-EP-S08A	HS/SZ	6592	Wmica	44.41	0.24	35.90	1.00	0.00	0.78	0.00	1.70	9.86
MA-EP-S08A	HS/SZ	6593	Wmica	44.79	0.21	35.25	1.58	0.00	0.77	0.00	1.57	10.02
MA-EP-S08A	HS/SZ	6594	Wmica	45.17	0.12	35.87	1.20	0.00	0.78	0.00	1.59	9.77
MA-EP-S08A	HS/SZ	6595	Chl	24.01	0.01	22.09	23.00	0.12	13.93	0.04	0.37	0.00
MA-EP-S08A	HS/SZ	6596	Chl	24.52	0.05	22.28	22.29	0.06	14.03	0.11	0.48	0.12
MA-EP-S08A	HS/SZ	6597	Chl	24.76	0.13	21.73	22.47	0.06	14.43	0.03	0.44	0.13
MA-EP-S08A	HS/SZ	6598	Chl	24.32	0.06	22.19	22.92	0.01	14.26	0.01	0.38	0.09
MA-EP-S08A	HS/SZ	6599	Chl	24.65	0.05	22.24	22.72	0.27	14.12	0.01	0.36	0.10
MA-EP-S08A	HS/SZ	6600	Chl	25.11	0.06	22.67	21.67	0.02	13.84	0.09	0.64	0.12
MA-EP-S08A	HS/SZ	6601	Chl	24.35	0.06	22.15	23.21	0.10	14.44	0.02	0.34	0.09
MA-EP-S08A	HS/SZ	6602	Chl	24.77	0.03	22.35	22.69	0.10	14.60	0.11	0.50	0.02
MA-EP-S08A	HS/SZ	6603	Chl	24.92	0.05	22.25	22.95	0.20	14.63	0.08	0.41	0.08
MA-EP-S08A	HS/SZ	6604	Chl	24.38	0.04	22.22	23.29	0.21	14.56	0.06	0.49	0.03
MA-EP-S08A	HS/SZ	6605	Chl	24.50	0.08	22.42	23.37	0.20	14.30	0.04	0.56	0.13
MA-EP-S08A	HS/SZ	6606	Wmica	43.00	0.24	34.23	1.04	0.00	0.62	0.00	1.53	9.41
MA-EP-S08A	HS/SZ	6607	Wmica	42.91	0.20	34.65	1.29	0.07	0.77	0.00	1.68	9.01
MA-EP-S08A	HS/SZ	6608	Wmica	43.08	0.13	34.26	1.18	0.08	0.73	0.00	1.51	9.65
MA-EP-S08A	HS/SZ	6609	Wmica	43.12	0.26	34.10	1.21	0.00	0.81	0.00	1.59	9.42
MA-EP-S08A	HS/SZ	6610	Wmica	42.77	0.21	34.47	1.31	0.00	0.76	0.00	1.66	9.37
MA-EP-S08A	HS/SZ	6611	Wmica	43.55	0.21	34.10	1.16	0.05	0.74	0.00	1.42	9.72
MA-EP-S08A	HS/SZ	6612	Wmica	44.05	0.28	34.06	1.26	0.17	0.89	0.00	1.51	9.63
MA-EP-S08A	HS/SZ	6626	Wmica	42.44	0.31	32.92	1.15	0.02	0.79	0.00	1.51	9.39
MA-EP-S08A	HS/SZ	6627	Wmica	42.86	0.16	33.47	1.05	0.00	0.79	0.01	1.53	9.30
MA-EP-S08A	HS/SZ	6628	Wmica	42.41	0.22	33.70	1.09	0.00	0.79	0.11	1.70	9.34
MA-EP-S08A	HS/SZ	6629	Wmica	42.82	0.37	32.82	1.42	0.00	0.88	0.00	1.59	9.34
MA-EP-S08A	HS/SZ	6630	Wmica	43.25	0.14	34.08	0.85	0.00	0.73	0.08	1.59	9.15
MA-EP-S08A	HS/SZ	6631	Wmica	42.88	0.26	34.05	1.06	0.00	0.69	0.06	1.61	9.48
MA-EP-S08A	HS/SZ	6632	Wmica	43.10	0.20	34.25	0.83	0.00	0.65	0.00	1.68	9.49
MA-EP-S08A	HS/SZ	6633	Wmica	43.59	0.07	33.67	1.07	0.00	0.87	0.06	1.47	9.43

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EP-S08A	HS/SZ	6634	Wmica	43.36	0.15	34.42	1.08	0.00	0.60	0.00	1.63	9.21
MA-EP-S08A	HS/SZ	6635	Wmica	43.59	0.26	33.62	1.13	0.03	0.84	0.00	1.46	9.81
MA-EP-S08A	HS/SZ	6636	Wmica	43.61	0.26	34.30	0.89	0.02	0.69	0.00	1.48	9.81
MA-EP-S08A	HS/SZ	6637	Wmica	43.49	0.20	34.23	1.30	0.00	0.92	0.03	1.67	9.38
MA-EP-S08A	HS/SZ	6638	Wmica	43.51	0.13	34.43	1.06	0.00	0.70	0.00	1.50	9.45
MA-EP-S08A	HS/SZ	6639	Wmica	44.08	0.08	35.14	0.77	0.00	0.70	0.01	1.57	9.54
MA-EP-S08A	HS/SZ	6640	Chl	24.87	0.01	22.77	22.43	0.15	15.00	0.00	0.39	0.05
MA-EP-S08A	HS/SZ	6641	Chl	24.77	0.03	22.24	23.06	0.00	15.02	0.10	0.43	0.09
MA-EP-S08A	HS/SZ	6642	Chl	24.74	0.02	22.55	22.84	0.09	15.06	0.00	0.34	0.07
MA-EP-S08A	HS/SZ	6643	Chl	25.11	0.04	22.86	23.05	0.04	14.82	0.00	0.31	0.04
MA-EP-S08A	HS/SZ	6644	Chl	25.03	0.00	22.79	22.91	0.20	14.99	0.00	0.37	0.12
MA-EP-S08A	HS/SZ	6645	Chl	24.88	0.00	23.07	22.60	0.09	15.18	0.09	0.41	0.11
MA-EP-S08A	HS/SZ	6646	Chl	25.05	0.07	22.91	22.95	0.14	15.13	0.00	0.31	0.06
MA-EP-S08A	HS/SZ	6647	Chl	25.17	0.01	22.62	23.26	0.00	15.05	0.06	0.35	0.10
MA-EP-S08A	HS/SZ	6648	Chl	25.30	0.02	22.70	23.45	0.06	14.89	0.03	0.46	0.06
MA-EP-S08A	HS/SZ	6649	Chl	25.39	0.00	22.64	23.15	0.00	15.28	0.06	0.38	0.05
MA-EP-S08A	HS/SZ	6650	Wmica	44.06	0.19	35.62	0.99	0.01	0.74	0.00	1.38	9.88
MA-EP-S08A	HS/SZ	6651	Wmica	44.59	0.08	35.14	1.14	0.00	0.81	0.00	1.32	9.88
MA-EP-S08A	HS/SZ	6652	Wmica	43.69	0.28	35.16	1.07	0.02	0.78	0.00	1.66	9.86
MA-EP-S08A	HS/SZ	6653	Wmica	44.33	0.18	35.65	0.96	0.03	0.72	0.00	1.59	9.70
MA-EP-S08A	HS/SZ	6654	Wmica	44.62	0.12	35.23	1.16	0.01	0.72	0.00	1.49	9.81
MA-EP-S08A	HS/SZ	6655	Wmica	44.87	0.14	35.37	0.78	0.00	0.85	0.00	1.46	9.90
MA-EP-S08A	HS/SZ	6656	Wmica	44.63	0.17	35.88	0.85	0.01	0.77	0.00	1.68	9.43
MA-EP-S08A	HS/SZ	6657	Wmica	45.06	0.17	34.87	1.19	0.11	0.89	0.00	1.39	9.82
MA-EP-S08A	HS/SZ	6658	Wmica	45.16	0.00	35.52	1.07	0.00	0.89	0.00	1.53	10.08
MA-EP-S08A	HS/SZ	6659	Wmica	44.77	0.23	35.81	1.25	0.05	0.85	0.08	1.70	9.97
MA-EP-S08A	HS/SZ	6660	Chl	24.11	0.00	22.80	23.43	0.23	14.42	0.07	0.40	0.15
MA-EP-S08A	HS/SZ	6661	Chl	24.19	0.02	22.88	23.24	0.12	14.66	0.05	0.32	0.16
MA-EP-S08A	HS/SZ	6662	Chl	24.36	0.02	22.60	23.24	0.31	14.81	0.02	0.32	0.09
MA-EP-S08A	HS/SZ	6663	Chl	24.45	0.00	22.88	23.13	0.00	14.67	0.00	0.43	0.09
MA-EP-S08A	HS/SZ	6664	Chl	24.56	0.01	22.84	23.19	0.07	14.82	0.04	0.40	0.08
MA-EP-S08A	HS/SZ	6665	Chl	24.29	0.09	22.78	23.24	0.15	14.78	0.04	0.37	0.15
MA-EP-S08A	HS/SZ	6666	Chl	24.49	0.07	22.90	24.02	0.01	14.75	0.00	0.37	0.11
MA-EP-S08A	HS/SZ	6667	Chl	24.48	0.07	23.15	23.30	0.02	14.93	0.03	0.40	0.24

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-EP-S08A	HS/SZ	6668	Wmica	43.68	0.10	34.89	1.18	0.00	0.78	0.00	1.33	9.67
MA-EP-S08A	HS/SZ	6669	Wmica	43.20	0.12	34.99	1.61	0.00	0.71	0.02	1.42	9.76
MA-EP-S08A	HS/SZ	6670	Wmica	43.51	0.12	35.35	1.39	0.07	0.83	0.00	1.44	9.61
MA-EP-S08A	HS/SZ	6671	Wmica	43.92	0.10	34.96	1.24	0.00	0.95	0.00	1.51	9.78
MA-EP-S08A	HS/SZ	6672	Wmica	43.74	0.10	35.22	1.28	0.00	0.83	0.00	1.53	9.73
MA-EP-S08A	HS/SZ	6673	Wmica	44.22	0.05	34.95	1.31	0.09	0.94	0.00	1.36	9.82
MA-EP-S08A	HS/SZ	6674	Chl	24.56	0.00	21.67	21.84	0.00	15.54	0.06	0.04	0.10
MA-EP-S08A	HS/SZ	6675	Chl	24.25	0.00	21.90	22.97	0.18	15.10	0.00	0.00	0.03
MA-EP-S08A	HS/SZ	6676	Chl	24.50	0.03	21.95	22.41	0.21	15.23	0.00	0.32	0.02
MA-EP-S08A	HS/SZ	6677	Chl	24.64	0.04	22.37	22.40	0.00	15.32	0.01	0.29	0.04
MA-EP-S08A	HS/SZ	6678	Chl	24.27	0.06	21.89	22.66	0.34	15.53	0.00	0.16	0.05
MA-EP-S08A	HS/SZ	6679	Chl	24.88	0.00	22.23	22.22	0.16	15.72	0.06	0.35	0.06
MA-EP-S08A	HS/SZ	6680	Chl	24.63	0.01	22.63	21.93	0.08	15.52	0.02	0.35	0.10
MA-EP-S08A	HS/SZ	6681	Chl	24.65	0.08	22.43	22.79	0.04	15.71	0.03	0.33	0.08
MA-EP-S08A	HS/SZ	6682	Chl	24.74	0.04	22.25	22.49	0.22	15.59	0.02	0.50	0.02
MA-EP-S08A	HS/SZ	6683	Chl	25.08	0.02	22.10	22.87	0.23	15.33	0.00	0.34	0.02
MA-EP-S08A	HS/SZ	6684	Chl	24.69	0.10	22.35	22.53	0.01	15.71	0.03	0.33	0.05
MA-EP-S08A	HS/SZ	6685	Chl	24.58	0.03	22.18	22.92	0.39	15.48	0.02	0.42	0.07
MA-EP-S08A	HS/SZ	6686	Chl	24.67	0.13	22.50	22.64	0.19	15.87	0.04	0.31	0.08
MA-EP-S08A	HS/SZ	6687	Chl	25.02	0.07	22.20	22.64	0.11	15.99	0.02	0.31	0.06
MA-EP-S08A	HS/SZ	6688	Chl	25.07	0.04	22.62	22.98	0.33	15.27	0.01	0.38	0.01
MA-X-S02C	Wk Type 1B	6839	Chl	24.63	0.03	21.58	24.86	0.05	12.70	0.13	0.55	0.10
MA-X-S02C	Wk Type 1B	6840	Chl	24.25	0.12	21.45	24.86	0.00	12.93	0.07	0.49	0.25
MA-X-S02C	Wk Type 1B	6841	Chl	24.07	0.01	21.96	24.71	0.12	13.03	0.00	0.58	0.19
MA-X-S02C	Wk Type 1B	6842	Chl	24.06	0.07	21.50	25.56	0.25	12.74	0.09	0.63	0.18
MA-X-S02C	Wk Type 1B	6843	Chl	24.38	0.07	21.57	25.60	0.28	12.83	0.02	0.49	0.16
MA-X-S02C	Wk Type 1B	6844	Chl	24.26	0.06	21.62	25.45	0.35	12.91	0.07	0.47	0.15
MA-X-S02C	Wk Type 1B	6845	Chl	24.39	0.10	21.64	25.78	0.20	12.87	0.08	0.45	0.16
MA-X-S02C	Wk Type 1B	6846	Chl	24.86	0.06	21.69	25.09	0.19	12.96	0.07	0.54	0.11
MA-X-S02C	Wk Type 1B	6847	Chl	24.69	0.08	21.76	25.51	0.08	13.06	0.10	0.53	0.15
MA-X-S02C	Wk Type 1B	6848	Chl	24.53	0.03	21.82	25.60	0.20	13.17	0.07	0.59	0.14
MA-X-S02C	Wk Type 1B	6849	Wmica	42.30	0.46	32.35	2.17	0.00	1.00	0.00	0.60	11.01
MA-X-S02C	Wk Type 1B	6850	Wmica	42.48	0.47	32.62	2.26	0.00	1.22	0.00	0.69	11.10
MA-X-S02C	Wk Type 1B	6851	Wmica	43.11	0.28	32.50	2.28	0.07	1.14	0.00	0.70	11.00

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-X-S02C	Wk Type 1B	6852	Wmica	43.13	0.29	32.56	2.36	0.00	0.97	0.00	0.83	10.70
MA-X-S02C	Wk Type 1B	6853	Wmica	43.14	0.34	32.50	2.34	0.00	1.07	0.00	0.59	11.25
MA-X-S02C	Wk Type 1B	6854	Wmica	42.98	0.44	32.28	2.21	0.00	1.13	0.00	0.55	11.40
MA-X-S02C	Wk Type 1B	6855	Wmica	43.02	0.23	32.10	2.30	0.03	1.23	0.00	0.60	11.18
MA-X-S02C	Wk Type 1B	6856	Wmica	42.98	0.38	32.48	2.65	0.00	1.04	0.00	0.79	10.87
MA-X-S02C	Wk Type 1B	6857	Wmica	43.06	0.27	32.44	2.32	0.22	1.13	0.00	0.62	11.16
MA-X-S02C	Wk Type 1B	6858	Wmica	43.13	0.40	32.79	2.37	0.00	1.08	0.00	0.84	10.86
MA-X-S02C	Wk Type 1B	6859	Fspar	63.54	0.00	19.25	0.04	0.02	0.03	0.45	10.55	0.09
MA-X-S02C	Wk Type 1B	6860	Fspar	62.80	0.00	20.04	0.09	0.04	0.00	1.02	10.41	0.07
MA-X-S02C	Wk Type 1B	6861	Fspar	64.03	0.08	19.33	0.13	0.09	0.03	0.26	10.64	0.10
MA-X-S02C	Wk Type 1B	6862	Fspar	64.49	0.03	19.21	0.16	0.00	0.00	0.30	10.45	0.08
MA-X-S02C	Wk Type 1B	6863	Fspar	63.82	0.04	19.81	0.05	0.05	0.01	0.71	10.55	0.06
MA-X-S02C	Wk Type 1B	6864	Chl	25.29	0.04	21.12	24.01	0.22	12.52	0.12	0.77	0.00
MA-X-S02C	Wk Type 1B	6865	Chl	25.19	0.12	20.46	24.13	0.18	13.09	0.05	0.81	0.06
MA-X-S02C	Wk Type 1B	6866	Chl	25.44	0.00	20.30	24.18	0.25	13.32	0.10	0.85	0.05
MA-X-S02C	Wk Type 1B	6867	Chl	24.62	0.00	21.22	24.43	0.18	13.34	0.05	0.78	0.06
MA-X-S02C	Wk Type 1B	6868	Chl	25.24	0.00	21.04	24.42	0.22	12.92	0.13	0.71	0.11
MA-X-S02C	Wk Type 1B	6869	Chl	25.71	0.09	20.63	24.04	0.19	13.15	0.13	0.77	0.07
MA-X-S02C	Wk Type 1B	6870	Chl	24.41	0.03	21.10	25.32	0.30	12.70	0.07	0.78	0.00
MA-X-S02C	Wk Type 1B	6871	Chl	25.84	0.04	20.82	23.74	0.15	13.32	0.05	0.81	0.08
MA-X-S02C	Wk Type 1B	6872	Chl	25.77	0.05	20.80	23.94	0.21	13.23	0.05	0.77	0.06
MA-X-S02C	Wk Type 1B	6873	Chl	24.86	0.00	20.81	24.73	0.42	12.84	0.13	0.75	0.10
MA-X-S02C	Wk Type 1B	6874	Chl	25.43	0.07	20.79	24.04	0.26	13.27	0.09	0.77	0.06
MA-X-S02C	Wk Type 1B	6875	Chl	25.83	0.03	20.72	23.96	0.28	13.19	0.12	0.68	0.05
MA-X-S02C	Wk Type 1B	6876	Chl	25.72	0.06	20.15	24.30	0.35	13.46	0.13	0.80	0.12
MA-X-S02C	Wk Type 1B	6877	Chl	25.97	0.04	20.56	24.29	0.21	13.03	0.12	0.82	0.16
MA-X-S02C	Wk Type 1B	6878	Chl	24.65	0.01	21.62	24.71	0.16	13.04	0.12	0.68	0.04
MA-X-S02C	Wk Type 1B	6879	Chl	26.22	0.01	20.17	24.37	0.24	13.57	0.20	0.79	0.10
MA-X-S02C	Wk Type 1B	6880	Chl	25.55	0.05	21.15	24.52	0.32	12.79	0.17	0.94	0.10
MA-X-S02C	Wk Type 1B	6881	Chl	24.53	0.04	21.42	24.82	0.22	13.14	0.06	0.67	0.08
MA-X-S02C	Wk Type 1B	6882	Chl	24.66	0.05	21.76	25.36	0.27	13.09	0.10	0.78	0.04
MA-X-S02C	Wk Type 1B	6883	Chl	24.63	0.05	21.67	25.21	0.11	12.75	0.19	0.92	0.10
MA-X-S02C	Wk Type 1B	6884	Chl	25.37	0.03	21.34	25.33	0.18	13.39	0.14	0.76	0.22
MA-X-S02C	Wk Type 1B	6885	Chl	25.35	0.02	22.22	25.46	0.24	13.21	0.17	0.82	0.01

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-X-S02C	Wk Type 1B	6886	Chl	26.23	0.00	20.84	25.23	0.26	14.47	0.10	0.70	0.11
MA-X-S02C	Wk Type 1B	6887	Chl	26.01	0.09	21.05	25.54	0.06	13.95	0.13	0.70	0.05
MA-X-S02C	Wk Type 1B	6888	Chl	25.66	0.07	21.62	25.39	0.28	13.45	0.17	0.90	0.05
MA-X-S02C	Wk Type 1B	6889	Chl	25.90	0.04	21.36	24.92	0.38	14.09	0.10	0.73	0.08
MA-X-S02C	Wk Type 1B	6890	Chl	25.60	0.10	22.11	25.62	0.25	13.05	0.10	0.80	0.13
MA-X-S02C	Wk Type 1B	6891	Chl	25.54	0.03	22.05	25.50	0.16	14.13	0.09	0.74	0.08
MA-X-S02C	Wk Type 1B	6892	Wmica	44.68	0.58	32.36	2.45	0.00	1.25	0.00	0.73	11.22
MA-X-S02C	Wk Type 1B	6893	Wmica	44.03	0.43	33.30	2.78	0.00	1.03	0.00	0.70	11.29
MA-X-S02C	Wk Type 1B	6894	Wmica	44.32	0.37	33.45	2.54	0.02	1.05	0.00	0.85	11.12
MA-X-S02C	Wk Type 1B	6895	Wmica	44.12	0.34	33.15	2.47	0.00	1.14	0.00	0.71	11.41
MA-X-S02C	Wk Type 1B	6896	Wmica	44.54	0.26	32.96	2.51	0.08	1.09	0.00	0.71	11.37
MA-X-S02C	Wk Type 1B	6897	Wmica	44.35	0.36	33.00	2.43	0.00	1.29	0.00	0.59	11.46
MA-X-S02C	Wk Type 1B	6898	Wmica	44.20	0.46	33.25	2.45	0.00	1.23	0.00	0.93	11.30
MA-X-S02C	Wk Type 1B	6899	Wmica	44.31	0.26	33.85	2.71	0.00	1.00	0.00	0.99	11.01
MA-X-S02C	Wk Type 1B	6900	Wmica	44.48	0.16	33.71	2.49	0.03	1.05	0.00	1.00	11.01
MA-X-S02C	Wk Type 1B	6901	Wmica	44.73	0.32	33.20	2.46	0.00	1.11	0.00	0.82	11.34
MA-X-S02C	Wk Type 1B	6902	Wmica	44.62	0.45	33.38	2.67	0.07	1.08	0.00	0.72	11.41
MA-X-S02C	Wk Type 1B	6903	Wmica	44.21	0.19	33.60	2.60	0.01	1.09	0.00	0.86	11.26
MA-X-S02C	Wk Type 1B	6904	Wmica	44.47	0.32	33.71	2.49	0.03	1.33	0.00	0.78	11.53
MA-X-S02C	Wk Type 1B	6905	Wmica	44.40	0.39	33.73	2.79	0.12	1.10	0.00	0.84	11.44
MA-X-S02C	Wk Type 1B	6906	Wmica	44.33	0.33	33.61	2.57	0.06	1.16	0.00	0.95	11.02
MA-X-S02C	Wk Type 1B	6907	Wmica	44.71	0.43	33.45	2.66	0.00	1.22	0.00	0.83	11.40
MA-X-S02C	Wk Type 1B	6908	Wmica	44.84	0.32	33.38	2.70	0.11	1.15	0.00	0.83	11.33
MA-X-S02C	Wk Type 1B	6909	Wmica	44.46	0.32	34.04	2.69	0.25	1.08	0.00	1.07	11.27
MA-X-S02C	Wk Type 1B	6910	Wmica	44.78	0.28	34.12	2.81	0.00	1.07	0.00	0.85	11.33
MA-X-S02C	Wk Type 1B	6911	Wmica	45.03	0.43	33.17	2.50	0.00	1.64	0.00	0.95	11.30
MA-X-S02C	Wk Type 1B	6912	Fspar	65.11	0.07	19.61	0.24	0.00	0.01	0.37	10.68	0.01
MA-X-S02C	Wk Type 1B	6913	Fspar	61.91	0.03	20.12	2.48	0.00	1.23	0.37	10.04	0.05
MA-X-S02C	Wk Type 1B	6914	Fspar	64.62	0.05	20.14	0.29	0.00	0.00	0.80	10.65	0.02
MA-X-S02C	Wk Type 1B	6915	Fspar	64.80	0.06	19.75	0.27	0.00	0.01	0.41	10.88	0.00
MA-X-S02C	Wk Type 1B	6916	Fspar	64.76	0.07	19.90	0.20	0.12	0.03	0.56	10.78	0.01
MA-X-S02C	Wk Type 1B	6917	Fspar	65.05	0.05	19.88	0.33	0.06	0.00	0.57	10.78	0.00
MA-X-S02C	Wk Type 1B	6918	Fspar	65.46	0.00	19.91	0.16	0.00	0.02	0.56	10.59	0.00
MA-X-S02C	Wk Type 1B	6919	Fspar	64.54	0.02	20.39	0.27	0.00	0.00	1.14	10.47	0.07

Sample	Alteration	ID	Analyte Mineral	SiO2 %	TiO2 %	Al2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %
MA-X-S02C	Wk Type 1B	6920	Fspar	65.06	0.00	20.15	0.29	0.09	0.01	0.63	10.79	0.05
MA-X-S02C	Wk Type 1B	6921	Fspar	65.27	0.03	20.15	0.10	0.00	0.00	0.66	10.82	0.03
MA-X-S02C	Wk Type 1B	6922	Fspar	65.19	0.05	20.01	0.08	0.00	0.01	0.73	10.79	0.01
MA-X-S02C	Wk Type 1B	6923	Fspar	64.69	0.01	20.30	0.44	0.00	0.01	0.81	10.73	0.11
MA-X-S02C	Wk Type 1B	6924	Fspar	65.40	0.11	19.85	0.32	0.00	0.03	0.57	10.82	0.11
MA-X-S02C	Wk Type 1B	6925	Chl	24.04	0.09	21.30	25.28	0.37	13.00	0.03	0.61	0.00
MA-X-S02C	Wk Type 1B	6926	Chl	24.84	0.04	21.05	24.66	0.36	12.97	0.12	0.76	0.03
MA-X-S02C	Wk Type 1B	6927	Chl	24.60	0.05	20.89	24.87	0.21	13.54	0.06	0.49	0.04
MA-X-S02C	Wk Type 1B	6928	Chl	24.56	0.07	20.97	25.51	0.21	13.17	0.08	0.62	0.04
MA-X-S02C	Wk Type 1B	6929	Chl	24.61	0.05	20.77	25.39	0.10	13.13	0.07	0.62	0.08
MA-X-S02C	Wk Type 1B	6930	Chl	24.64	0.02	21.22	25.36	0.12	13.43	0.06	0.78	0.03
MA-X-S02C	Wk Type 1B	6931	Chl	24.68	0.00	21.82	25.93	0.32	12.95	0.14	0.69	0.00
MA-X-S02C	Wk Type 1B	6932	Chl	24.46	0.01	21.73	26.07	0.19	12.85	0.04	0.55	0.04
MA-X-S02C	Wk Type 1B	6933	Chl	24.18	0.09	22.00	26.48	0.47	12.79	0.10	0.68	0.01
MA-X-S02C	Wk Type 1B	6934	Chl	25.42	0.06	21.57	25.77	0.24	14.00	0.06	0.61	0.01
MA-X-S02C	Wk Type 1B	6935	Fspar	63.81	0.04	19.11	0.23	0.05	0.03	0.35	10.61	0.12
MA-X-S02C	Wk Type 1B	6936	Fspar	63.81	0.00	19.27	0.33	0.03	0.01	0.27	10.65	0.01
MA-X-S02C	Wk Type 1B	6937	Fspar	63.87	0.00	19.29	0.26	0.00	0.02	0.30	10.69	0.07
MA-X-S02C	Wk Type 1B	6938	Fspar	64.50	0.05	19.29	0.26	0.03	0.00	0.30	10.67	0.06
MA-X-S02C	Wk Type 1B	6939	Fspar	64.56	0.03	19.49	0.22	0.00	0.02	0.27	10.65	0.10
MA-X-S02C	Wk Type 1B	6940	Fspar	64.51	0.02	19.33	0.51	0.03	0.03	0.27	10.75	0.06
MA-X-S02C	Wk Type 1B	6941	Fspar	64.13	0.01	20.13	0.39	0.07	0.05	1.02	10.41	0.00

Abbreviations: Wk = Weak, Int = Intense, Fspar = Feldspar, Wmica = White mica, Chl = Chlorite

		Analyte	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Sum
Check ID	Standard	Sample analysis ID	%	%	%	%	%	%	%	%	%	%	%
56	Kakanui hornblende	EPN-S03A 4012	41.14	1.88	7.42	7.70	18.45	1.82	7.20	3.12	0.00	8.37	97.10
56	Kakanui hornblende	EPN-S03A 4011	41.38	1.80	7.61	7.74	18.36	1.73	7.28	3.25	0.13	8.65	97.93
55	Kakanui hornblende	CP-S10 4002	41.49	1.81	7.54	7.77	18.49	1.79	7.21	3.23	0.13	8.63	98.10
55	Kakanui hornblende	CP-S10 4001	41.53	1.86	7.53	7.78	18.55	1.75	7.33	3.21	0.11	8.38	98.05
54	Kakanui hornblende	CP-S18 3996	41.47	1.76	7.37	7.73	18.72	1.77	7.27	3.17	0.03	8.39	97.70
54	Kakanui hornblende	CP-S18 3995	41.66	1.86	7.47	7.75	18.65	1.74	7.37	3.14	0.27	8.60	98.52
53	Kakanui hornblende	EPN-S03A 3988	41.80	1.85	7.54	7.85	18.64	1.76	7.38	3.31	0.00	8.59	98.71
53	Kakanui hornblende	EPN-S03A 3987	41.65	1.94	7.55	7.82	18.60	1.79	7.28	3.09	0.14	8.67	98.53
52	Kakanui hornblende	EPN-S04 3979	41.73	1.78	7.53	7.79	18.77	1.84	7.33	3.18	0.00	8.42	98.37
52	Kakanui hornblende	EPN-S04 3978	41.92	1.84	7.55	7.83	18.81	1.87	7.47	3.28	0.02	8.23	98.81
51	Kakanui hornblende	EPN-S04 3973	41.67	1.88	7.64	7.79	18.65	1.81	7.43	3.20	0.00	8.15	98.22
51	Kakanui hornblende	EPN-S04 3972	41.82	1.78	7.80	7.73	18.73	1.81	7.43	3.27	0.00	8.08	98.47
50	Kakanui hornblende	MA21-083 3964	40.49	1.81	7.45	7.68	18.04	1.66	7.08	3.08	0.03	8.14	95.47
50	Kakanui hornblende	MA21-083 3963	40.74	1.93	7.37	7.67	18.22	1.74	7.17	3.08	0.15	8.08	96.15
40	Kakanui hornblende	MA12-385B 3689	41.79	2.12	7.78	7.93	19.03	1.82	7.15	2.30	0.09	8.15	98.17
40	Kakanui hornblende	MA12-385B 3688	41.61	2.00	7.68	7.94	19.01	1.87	7.05	2.35	0.18	8.10	97.78
39	Kakanui hornblende	MA15-463 3685	42.15	2.16	7.65	8.11	19.25	1.84	7.07	2.35	0.07	8.24	98.89
39	Kakanui hornblende	MA15-463 3684	41.61	2.11	7.59	8.01	19.06	1.89	7.12	2.29	0.00	7.84	97.52
38	Kakanui hornblende	MA20-044 3680	41.60	2.14	7.65	7.95	18.98	1.91	7.17	2.21	0.17	7.83	97.62
38	Kakanui hornblende	MA20-044 3679	41.37	2.09	7.59	7.82	18.97	1.84	7.17	2.28	0.15	7.81	97.10
37	Kakanui hornblende	MA-EP-S04 3674	42.06	2.19	7.76	7.97	19.19	1.88	7.25	2.35	0.08	7.92	98.67
37	Kakanui hornblende	MA-EP-S04 3673	41.64	1.97	7.59	7.96	18.98	1.86	7.18	2.33	0.07	8.48	98.06
36	Kakanui hornblende	MA-WP-S02 3668	42.02	2.14	7.69	8.10	19.12	1.86	7.01	2.34	0.15	8.36	98.80
36	Kakanui hornblende	MA-WP-S02 3667	41.65	2.06	7.62	8.05	18.93	1.87	7.15	2.30	0.11	8.20	97.96
35	Kakanui hornblende	MA20-040 3661	41.56	2.07	7.76	7.91	19.09	1.81	6.86	2.22	0.00	7.96	97.24
35	Kakanui hornblende	MA20-040 3660	41.69	2.10	7.71	7.85	19.06	1.85	7.28	2.33	0.12	8.07	98.06
34	Kakanui hornblende	MA21-075C-2 3654	41.81	2.09	7.80	7.94	19.16	1.84	6.99	2.26	0.05	8.08	98.02
34	Kakanui hornblende	MA21-075C-2 3653	42.08	2.17	7.90	7.96	19.20	1.96	6.95	2.29	0.27	8.16	98.92
33	Kakanui hornblende	MA15-463 3648	41.29	2.39	7.37	7.97	18.96	1.98	6.93	2.09	0.05	7.91	96.96
33	Kakanui hornblende	MA15-463 3647	41.51	2.36	7.42	8.07	18.97	1.87	6.92	2.22	0.09	8.01	97.42
32	Kakanui hornblende	MA19-004 3643	42.35	2.26	7.80	8.10	19.31	1.89	7.10	2.24	0.11	8.43	99.58
32	Kakanui hornblende	MA19-004 3642	42.23	2.15	7.84	8.05	19.32	1.86	7.07	2.29	0.05	8.19	99.06
31	Kakanui hornblende	MA-WP-S06A 3639	41.92	2.13	7.77	8.06	19.01	1.82	7.11	2.36	0.06	8.29	98.53

		Analyte	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Sum
Check ID	Standard	Sample analysis ID	%	%	%	%	%	%	%	%	%	%	%
31	Kakanui hornblende	MA-WP-S06A 3638	42.10	2.16	7.79	8.01	19.23	1.89	7.22	2.30	0.08	7.99	98.77
30	Kakanui hornblende	MA20-050B 3630	42.79	2.25	7.93	8.15	19.50	1.89	7.30	2.26	0.18	8.34	100.59
30	Kakanui hornblende	MA20-050B 3629	42.48	2.03	7.82	8.18	19.37	1.90	7.38	2.31	0.10	8.32	99.89
29	Kakanui hornblende	MA21-089 3622	41.25	2.07	7.55	7.85	18.90	1.93	7.02	2.27	0.09	7.94	96.86
29	Kakanui hornblende	MA21-089 3621	41.42	2.18	7.68	7.86	18.95	1.82	7.01	2.19	0.01	8.16	97.25
28	Kakanui hornblende	MA20-041A-C 3616	41.52	2.29	7.34	7.84	18.57	1.80	6.63	2.33	0.24	10.78	99.34
28	Kakanui hornblende	MA20-041A-C 3615	41.29	2.35	7.28	7.88	18.27	1.71	6.93	2.40	0.08	10.84	99.03
27	Kakanui hornblende	MA20-041A-A 3609	41.29	2.42	6.93	8.00	18.97	1.96	6.69	2.09	0.08	8.90	97.34
27	Kakanui hornblende	MA20-041A-A 3608	41.03	2.38	6.82	7.89	18.96	2.01	6.67	2.19	0.05	8.78	96.78
26	Kakanui hornblende	MA21-076A 3597	41.84	2.11	7.74	8.00	19.02	1.87	7.15	2.30	0.08	8.28	98.39
26	Kakanui hornblende	MA21-076A 3596	41.56	1.88	7.60	8.01	18.88	1.84	7.29	2.29	0.07	8.41	97.82
25	Kakanui hornblende	MA21-078 3603	42.24	2.19	7.89	8.10	19.26	1.78	7.08	2.29	0.04	8.10	98.97
25	Kakanui hornblende	MA21-078 3602	42.33	2.24	7.94	8.10	19.21	1.97	7.07	2.24	0.06	8.36	99.52
24	Kakanui hornblende	MA21-078 3733	40.95	1.91	7.51	7.83	18.49	1.99	7.40	2.30	0.09	8.33	96.81
24	Kakanui hornblende	MA21-078 3732	41.13	1.93	7.54	7.85	18.59	1.89	7.34	2.34	0.02	8.53	97.14
23	Kakanui hornblende	MA20-050A 3728	41.32	1.84	8.00	7.61	18.56	1.83	7.74	2.42	0.00	8.42	97.75
23	Kakanui hornblende	MA20-050A 3727	41.30	1.88	8.05	7.51	18.67	1.82	7.64	2.47	0.00	8.11	97.46
22	Kakanui hornblende	MA11-072 3722	41.67	1.96	7.56	8.04	18.77	1.98	7.36	2.47	0.05	8.64	98.49
22	Kakanui hornblende	MA11-072 3721	41.38	1.95	7.61	7.87	18.62	1.91	7.20	2.40	0.16	8.94	98.06
21	Kakanui hornblende	MA21-071A-2 3716	40.96	1.83	7.61	7.84	18.55	1.83	7.30	2.29	0.12	8.19	96.52
21	Kakanui hornblende	MA21-071A-2 3715	40.88	1.92	7.56	7.76	18.46	1.86	7.29	2.45	0.01	8.26	96.45
20	Kakanui hornblende	MA21-071A-1 3706	40.96	1.80	7.60	7.72	18.44	1.96	7.27	2.51	0.22	8.40	96.89
20	Kakanui hornblende	MA21-071A-1 3705	41.03	1.83	7.59	7.90	18.51	2.03	7.27	2.39	0.03	8.26	96.83
19	Kakanui hornblende	MA20-041A-B 3697	41.28	1.92	7.72	7.96	18.44	1.93	7.28	2.38	0.15	8.78	97.82
19	Kakanui hornblende	MA20-041A-B 3696	41.08	1.86	7.67	7.78	18.55	1.82	7.38	2.37	0.02	8.42	96.96
18	Kakanui hornblende	MA-EP-S08A 3691	41.15	1.74	7.68	7.87	18.65	1.87	7.31	2.31	0.09	8.28	96.96
18	Kakanui hornblende	MA-EP-S08A 3690	41.47	1.79	7.69	7.97	18.67	1.97	7.32	2.44	0.11	8.51	97.94
17	Kakanui hornblende	MA21-076C 3682	41.00	1.97	7.44	7.93	18.34	1.99	7.38	2.46	0.18	8.48	97.17
17	Kakanui hornblende	MA21-076C 3681	41.10	1.92	7.53	7.83	18.60	1.84	7.29	2.34	0.18	8.41	97.06
16	Kakanui hornblende	MA21-076C 3677	41.35	1.90	7.59	7.86	18.64	1.94	7.52	2.42	0.00	8.56	97.78
16	Kakanui hornblende	MA21-076C 3676	41.67	1.88	7.69	7.97	18.84	2.03	7.42	2.38	0.08	8.41	98.38
15	Kakanui hornblende	MA11-068 3672	41.47	1.90	7.56	8.01	18.75	1.97	7.41	2.31	0.00	8.50	97.88
15	Kakanui hornblende	MA11-068 3671	41.89	1.90	7.82	8.06	18.74	1.97	7.51	2.31	0.20	8.94	99.33

		Analyte	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Sum
Check ID	Standard	Sample analysis ID	%	%	%	%	%	%	%	%	%	%	%
14	Kakanui hornblende	MA21-080W1 3662		41.28	1.91	7.53	7.88	18.60	1.98	7.52	2.32	0.12	8.62	97.76
14	Kakanui hornblende	MA21-080W1 3661		41.39	1.94	7.51	7.85	18.67	2.04	7.28	2.38	0.18	8.89	98.13
12	Kakanui hornblende	MA21-080W1B 3652		41.19	1.94	7.47	7.90	18.53	2.04	7.30	2.36	0.32	8.56	97.62
12	Kakanui hornblende	MA21-080W1B 3651		41.23	2.04	7.30	7.95	18.64	1.88	7.22	2.29	0.12	8.94	97.63
11	Kakanui hornblende	MA21-080W1B 3647		41.00	1.83	7.61	7.94	18.50	1.90	7.27	2.24	0.03	8.44	96.76
11	Kakanui hornblende	MA21-080W1B 3646		41.19	1.87	7.59	7.83	18.49	2.02	7.56	2.47	0.01	8.49	97.52
10	Kakanui hornblende	MA21-080W1B 3643		41.64	1.96	7.73	8.00	18.72	2.04	7.22	2.43	0.30	8.44	98.46
10	Kakanui hornblende	MA21-080W1B 3642		42.05	1.92	7.72	8.09	18.83	2.11	7.64	2.41	0.17	8.73	99.67
9	Kakanui hornblende	MA21-080W1B 3638		41.23	1.79	7.72	7.81	18.52	1.94	7.46	2.43	0.18	8.46	97.53
9	Kakanui hornblende	MA21-080W1B 3637		41.01	1.90	7.54	7.80	18.60	1.91	7.21	2.29	0.11	8.45	96.83
8	Kakanui hornblende	MA21-080W1B 3624		41.23	2.15	7.93	7.83	18.39	1.88	7.27	2.36	0.22	8.29	97.55
8	Kakanui hornblende	MA21-080W1B 3623		41.21	2.10	7.84	7.93	18.42	1.95	7.20	2.32	0.21	8.37	97.56
7	Kakanui hornblende	MA21-085 3617		40.95	2.02	7.68	7.78	18.39	1.96	7.35	2.31	0.00	8.49	96.92
7	Kakanui hornblende	MA21-085 3616		41.41	2.20	7.87	8.04	18.41	2.03	7.33	2.27	0.05	8.43	98.04
6	Kakanui hornblende	MA21-085		41.79	2.17	7.88	7.95	18.71	2.01	7.14	2.36	0.13	8.61	98.75
5	Kakanui hornblende	MA21-076B		40.46	2.09	7.74	7.75	18.06	1.85	7.09	2.36	0.05	8.22	95.66
4	Kakanui hornblende	MA21-071D 3596		41.95	2.16	7.82	8.07	18.85	2.01	7.35	2.40	0.04	8.45	99.11
4	Kakanui hornblende	MA21-071D 3595		42.14	2.20	7.90	8.03	18.92	1.92	7.45	2.42	0.06	8.56	99.61
3	Kakanui hornblende	MA21-071D		41.43	2.23	7.95	8.04	18.79	2.09	7.34	1.80	0.00	7.61	97.29
2	Kakanui hornblende	MA21-063 3586		42.27	2.28	7.84	8.08	18.90	2.01	7.40	2.51	0.03	8.77	100.09
2	Kakanui hornblende	MA21-063 3585		42.02	2.22	7.91	8.02	18.73	2.05	7.36	2.48	0.21	8.53	99.55
1	Kakanui hornblende	Start		41.05	1.87	7.46	7.77	18.68	2.04	7.30	2.41	0.00	8.18	96.77
1	Kakanui hornblende	Start		41.18	1.88	7.64	7.83	18.68	2.08	7.14	2.42	0.05	8.16	97.07
Ref	Kakanui hornblende	NMNH 143965 reference		45.47	1.93	7.72	7.89	18.87	1.70	7.36	2.83	0.07	6.18	100.02
		Mean		41.52	2.01	7.64	7.91	18.76	1.90	7.24	2.46	0.09	8.41	97.94
		Stdev		0.44	0.17	0.20	0.13	0.30	0.09	0.20	0.33	0.08	0.45	0.99
		%RSD		**1.07**	**8.45**	**2.65**	**1.65**	**1.59**	**4.99**	**2.75**	**13.32**	**82.75**	**5.40**	**1.01**
		%RD		**-8.70**	**4.46**	**-1.04**	**0.25**	**-0.60**	**11.54**	**-1.67**	**-12.92**	**34.79**	**36.13**	**-2.08**

Abbreviations: Stdev = Standard deviation, %RSD = Relative standard deviation, %RD = relative difference

		Analyte	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Sum
Check ID	Standard	Sample analysis ID	%	%	%	%	%	%	%	%	%	%	%
56	Pyrope	EPN-S03A 4009		44.30	0.01	11.11	12.51	19.17	0.03	3.69	0.23	0.32	7.97	99.35
56	Pyrope	EPN-S03A 4008		44.39	0.02	11.07	12.44	19.21	0.00	3.73	0.32	0.35	8.17	99.70
55	Pyrope	CP-S10 4000		45.09	0.02	11.32	12.70	19.41	0.00	3.85	0.30	0.26	8.41	101.36
55	Pyrope	CP-S10 3999		44.79	0.02	11.26	12.60	19.35	0.02	3.71	0.24	0.25	8.38	100.63
54	Pyrope	CP-S18 3994		44.39	0.02	11.13	12.54	19.20	0.00	3.68	0.26	0.14	8.18	99.54
54	Pyrope	CP-S18 3993		44.45	0.03	11.21	12.61	19.03	0.03	3.84	0.28	0.20	8.28	99.96
53	Pyrope	EPN-S03A 3986		44.44	0.03	11.16	12.56	19.12	0.00	3.68	0.19	0.32	8.51	100.01
53	Pyrope	EPN-S03A 3985		44.39	0.02	11.18	12.50	19.12	0.00	3.91	0.22	0.19	8.23	99.77
52	Pyrope	EPN-S04 3977		45.02	0.00	11.21	12.73	19.40	0.06	3.70	0.27	0.47	8.42	101.27
52	Pyrope	EPN-S04 3976		44.93	0.04	11.25	12.70	19.36	0.00	3.79	0.30	0.33	8.22	100.92
51	Pyrope	EPN-S04 3971		44.94	0.02	11.30	12.61	19.42	0.02	3.62	0.27	0.43	8.37	101.00
51	Pyrope	EPN-S04 3970		44.98	0.00	11.19	12.55	19.57	0.00	3.77	0.31	0.21	8.30	100.89
50	Pyrope	MA21-083 3962		44.56	0.02	11.26	12.57	19.19	0.02	3.66	0.28	0.24	8.26	100.07
50	Pyrope	MA21-083 3961		44.44	0.00	11.17	12.59	19.15	0.00	3.71	0.20	0.33	8.26	99.83
40	Pyrope	MA12-385B 3687		44.51	0.02	10.92	12.55	19.45	0.05	3.50	0.23	0.33	8.03	99.58
40	Pyrope	MA12-385B 3686		44.29	0.03	10.92	12.46	19.34	0.00	3.51	0.19	0.30	8.01	99.05
39	Pyrope	MA15-463 3683		44.55	0.02	10.96	12.62	19.35	0.06	3.65	0.21	0.28	8.14	99.85
39	Pyrope	MA15-463 3682		44.80	0.05	11.03	12.65	19.51	0.04	3.46	0.18	0.32	8.16	100.21
38	Pyrope	MA20-044 3677		44.17	0.00	10.92	12.43	19.20	0.01	3.40	0.22	0.51	8.15	99.00
38	Pyrope	MA20-044 3676		44.04	0.00	10.86	12.41	19.15	0.08	3.51	0.26	0.27	8.10	98.70
37	Pyrope	MA-EP-S04 3671		44.71	0.03	11.05	12.70	19.44	0.07	3.64	0.16	0.23	8.16	100.20
37	Pyrope	MA-EP-S04 3670		44.54	0.00	10.98	12.51	19.48	0.02	3.59	0.22	0.24	8.00	99.58
36	Pyrope	MA-WP-S02 3666		44.34	0.00	10.85	12.62	19.37	0.08	3.57	0.03	0.46	7.98	99.30
36	Pyrope	MA-WP-S02 3665		44.53	0.00	10.93	12.63	19.47	0.00	3.60	0.05	0.25	8.15	99.60
35	Pyrope	MA20-040 3659		44.55	0.01	11.06	12.60	19.43	0.02	3.44	0.15	0.30	8.02	99.58
35	Pyrope	MA20-040 3658		44.47	0.00	10.90	12.58	19.57	0.09	3.47	0.19	0.34	7.57	99.21
34	Pyrope	MA21-075C-2 3652		44.75	0.00	10.96	12.68	19.56	0.02	3.59	0.15	0.21	7.95	99.90
34	Pyrope	MA21-075C-2 3651		44.68	0.00	11.00	12.59	19.57	0.00	3.55	0.21	0.44	7.87	99.90
33	Pyrope	MA15-463 3646		44.49	0.03	10.91	12.63	19.41	0.00	3.56	0.20	0.35	7.59	99.17
33	Pyrope	MA15-463 3645		44.13	0.00	10.92	12.53	19.22	0.03	3.44	0.20	0.39	7.87	98.73
32	Pyrope	MA19-004 3641		44.39	0.01	11.11	12.48	19.40	0.05	3.48	0.22	0.28	7.73	99.15
32	Pyrope	MA19-004 3640		44.68	0.00	10.95	12.50	19.53	0.02	3.52	0.20	0.35	8.30	100.05
31	Pyrope	MA-WP-S06A 3637		44.34	0.03	10.73	12.56	19.38	0.01	3.52	0.21	0.22	8.25	99.25
31	Pyrope	MA-WP-S06A 3636		43.97	0.00	10.73	12.34	19.10	0.08	3.61	0.26	0.36	8.23	98.67

		Analyte	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Sum
Check ID	Standard	Sample analysis ID	%	%	%	%	%	%	%	%	%	%	%
30	Pyrope	MA20-050B 3628	44.77	0.01	11.08	12.60	19.41	0.08	3.63	0.19	0.28	8.22	100.28
30	Pyrope	MA20-050B 3627	44.90	0.02	11.04	12.57	19.62	0.03	3.67	0.21	0.31	8.17	100.55
29	Pyrope	MA21-089 3620	44.55	0.00	10.97	12.66	19.45	0.00	3.50	0.16	0.46	7.78	99.52
29	Pyrope	MA21-089 3619	44.37	0.04	10.86	12.49	19.41	0.06	3.53	0.22	0.34	7.82	99.13
28	Pyrope	MA20-041A-C 3613	44.82	0.02	10.91	12.66	19.54	0.05	3.57	0.24	0.39	8.11	100.29
28	Pyrope	MA20-041A-C 3612	44.34	0.00	10.83	12.50	19.44	0.02	3.51	0.15	0.30	8.02	99.12
27	Pyrope	MA20-041A-A 3606	44.13	0.00	10.77	12.57	19.23	0.08	3.56	0.17	0.34	7.92	98.77
27	Pyrope	MA20-041A-A 3605	44.51	0.00	10.87	12.62	19.46	0.02	3.47	0.25	0.32	7.86	99.38
26	Pyrope	MA21-076A 3595	44.86	0.01	11.05	12.68	19.56	0.00	3.65	0.13	0.33	8.24	100.52
26	Pyrope	MA21-076A 3594	44.20	0.00	10.99	12.53	19.29	0.08	3.53	0.00	0.19	8.00	98.81
25	Pyrope	MA21-078 3601	44.58	0.00	11.00	12.61	19.46	0.02	3.54	0.21	0.31	7.80	99.53
25	Pyrope	MA21-078 3600	44.80	0.00	11.10	12.73	19.51	0.02	3.52	0.20	0.30	7.94	100.12
24	Pyrope	MA21-078 3731	44.59	0.03	11.30	12.70	19.17	0.00	3.63	0.19	0.40	8.08	100.10
24	Pyrope	MA21-078 3730	44.37	0.00	11.13	12.65	19.07	0.02	3.68	0.08	0.38	8.49	99.85
23	Pyrope	MA20-050A 3726	44.38	0.01	11.24	12.54	19.05	0.05	3.59	0.26	0.41	8.33	99.85
23	Pyrope	MA20-050A 3725	44.06	0.00	11.09	12.46	18.93	0.02	3.61	0.28	0.31	8.35	99.10
22	Pyrope	MA11-072 3720	44.62	0.00	11.19	12.64	19.21	0.06	3.74	0.20	0.31	8.34	100.33
22	Pyrope	MA11-072 3719	44.82	0.06	11.40	12.56	19.23	0.04	3.71	0.25	0.38	8.48	100.95
21	Pyrope	MA21-071A-2 3714	44.39	0.03	11.17	12.39	19.27	0.05	3.72	0.23	0.19	8.21	99.63
21	Pyrope	MA21-071A-2 3713	44.48	0.04	11.22	12.50	19.11	0.00	3.58	0.30	0.59	8.33	100.15
20	Pyrope	MA21-071A-1 3701	44.49	0.00	11.19	12.65	19.13	0.02	3.69	0.23	0.39	8.15	99.93
20	Pyrope	MA21-071A-1 3700	44.62	0.06	11.28	12.58	19.18	0.05	3.75	0.21	0.29	8.35	100.38
19	Pyrope	MA20-041A-B 3695	44.65	0.01	11.31	12.73	19.18	0.05	3.71	0.14	0.34	8.17	100.30
19	Pyrope	MA20-041A-B 3694	44.77	0.03	11.07	12.83	19.24	0.01	3.67	0.20	0.37	8.49	100.69
18	Pyrope	MA-EP-S08A 3689	44.48	0.01	11.21	12.64	19.07	0.02	3.61	0.24	0.19	8.61	100.08
18	Pyrope	MA-EP-S08A 3688	44.50	0.02	11.39	12.53	19.10	0.06	3.63	0.20	0.47	8.23	100.13
17	Pyrope	MA21-076C 3680	44.77	0.03	11.36	12.63	19.21	0.03	3.70	0.29	0.33	8.32	100.66
17	Pyrope	MA21-076C 3679	44.65	0.05	11.30	12.72	19.06	0.01	3.71	0.20	0.45	8.42	100.57
16	Pyrope	MA21-076C 3675	44.77	0.00	11.24	12.85	19.13	0.07	3.66	0.26	0.31	8.41	100.70
16	Pyrope	MA21-076C 3674	44.73	0.03	11.30	12.56	19.33	0.01	3.58	0.18	0.40	8.43	100.56
15	Pyrope	MA11-068 3670	44.52	0.05	11.13	12.57	19.19	0.00	3.71	0.18	0.41	8.40	100.17
15	Pyrope	MA11-068 3669	44.45	0.04	11.25	12.60	19.14	0.03	3.68	0.08	0.38	8.30	99.95
14	Pyrope	MA21-080W1 3660	44.91	0.02	11.30	12.72	19.32	0.05	3.66	0.26	0.28	8.40	100.94
14	Pyrope	MA21-080W1 3659	44.29	0.00	11.19	12.49	19.07	0.05	3.63	0.21	0.30	8.37	99.61

		Analyte	O	Na	Mg	Al	Si	K	Ca	Ti	Mn	Fe	Sum
Check ID	Standard	Sample analysis ID	%	%	%	%	%	%	%	%	%	%	%
13	Pyrope	MA12-385A 3656	44.74	0.02	11.27	12.54	19.31	0.02	3.71	0.26	0.30	8.43	100.60
13	Pyrope	MA12-385A 3655	44.58	0.05	11.27	12.68	19.06	0.13	3.73	0.16	0.36	8.48	100.49
12	Pyrope	MA21-080W1B 3650	44.47	0.00	11.12	12.70	19.04	0.00	3.66	0.28	0.40	8.37	100.05
12	Pyrope	MA21-080W1B 3649	44.19	0.00	11.12	12.58	18.96	0.08	3.59	0.27	0.27	8.31	99.37
11	Pyrope	MA21-080W1B 3645	44.71	0.00	11.26	12.67	19.17	0.00	3.65	0.28	0.43	8.45	100.62
11	Pyrope	MA21-080W1B 3644	44.31	0.00	11.22	12.47	19.14	0.03	3.56	0.23	0.24	8.25	99.47
10	Pyrope	MA21-080W1B 3641	44.04	0.00	11.00	12.36	19.06	0.07	3.68	0.19	0.32	8.30	99.04
10	Pyrope	MA21-080W1B 3640	44.35	0.00	11.12	12.53	19.11	0.01	3.61	0.21	0.33	8.49	99.76
9	Pyrope	MA21-080W1B 3630	44.42	0.00	11.18	12.77	18.95	0.00	3.77	0.17	0.38	8.31	99.96
9	Pyrope	MA21-080W1B 3629	44.08	0.00	11.11	12.40	18.92	0.00	3.89	0.19	0.39	8.32	99.30
8	Pyrope	MA21-080W1B 3622	44.08	0.02	11.10	12.48	18.73	0.07	3.75	0.21	0.46	8.60	99.50
8	Pyrope	MA21-080W1B 3621	44.25	0.03	11.20	12.64	18.87	0.07	3.68	0.16	0.23	8.28	99.41
7	Pyrope	MA21-085	44.25	0.04	11.33	12.42	18.92	0.00	3.78	0.20	0.31	8.31	99.55
6	Pyrope	MA21-085	44.25	0.02	11.22	12.57	18.95	0.00	3.77	0.19	0.26	8.17	99.40
5	Pyrope	MA21-076B	44.39	0.01	11.15	12.45	19.14	0.09	3.68	0.27	0.38	8.19	99.74
4	Pyrope	MA21-071D 3594	44.30	0.00	11.28	12.55	19.09	0.07	3.74	0.08	0.12	8.07	99.31
4	Pyrope	MA21-071D 3593	44.48	0.00	11.35	12.61	19.17	0.00	3.64	0.06	0.14	8.39	99.84
3	Pyrope	MA21-071D 3593	44.84	0.00	11.44	12.70	19.35	0.07	3.74	0.14	0.00	7.92	100.20
2	Pyrope	MA21-063	44.65	0.00	11.41	12.78	19.20	0.06	3.76	0.11	0.10	7.87	99.94
1	Pyrope	Start	44.59	0.05	11.11	12.55	19.43	0.05	3.56	0.23	0.20	8.10	99.87
1	Pyrope	Start	44.62	0.02	11.07	12.72	19.42	0.03	3.43	0.23	0.28	7.93	99.76
Ref	Pyrope	NMNH 143968 ref	44.70		11.16	12.56	19.38		3.69	0.28	0.22	8.30	100.30
		Mean	44.51	0.02	11.12	12.59	19.25	0.03	3.64	0.21	0.32	8.19	99.87
		Stdev	0.25	0.02	0.16	0.10	0.19	0.03	0.11	0.06	0.10	0.22	0.61
		%RSD	**0.56**	**110.16**	**1.47**	**0.82**	**1.00**	**91.42**	**2.89**	**30.29**	**30.08**	**2.68**	**0.61**
		%RD	**-0.42**		**-0.40**	**0.22**	**-0.66**		**-1.58**	**-26.85**	**45.73**	**-1.29**	**-0.42**

Abbreviations: Stdev = Standard deviation, %RSD = Relative standard deviation, %RD = relative difference

Appendix D – Structural field measurements

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
B01	689042	5351139	SQ	WLS	125	69		
B02A	689040	5351138	SQ	WLS	110	68		
B02B	689039	5351139	S_2	WLS	249	70		
B03	689009	5351144	SQ	MI	195	70		
B04A	688997	5351138	S_2	MI	251	66		
B04B	688997	5351138	L_4	WLS			10	70
B05	689004	5351148	SQ	WLS	95	86		
B06A	688998	5351146	SZ	WLS	260	61		
B06B	688998	5351146	SQ+QTC/QC SZ	WLS	250	74		
B07A	689005	5351148	SQ+QTC/QC SZ	WLS	260	54		
B07B	689005	5351148	SQ+QTC/QC SZ	WLS	220	55		
B08	689007	5351150	SZ	QFP	244	60		
B09	689001	5351147	Contact	WLS-QFP	262	52		
B10	689000	5351149	SQ SZ	WLS	261	61		
B11	688999	5351150	S_2	WLS	264	72		
B12	688998	5351152	Narrow shear	WLS	246	67		
B13A	689011	5351156	SQ	WLS	289	90		
B13B	689011	5351156	SQ	WLS	355	57		
B14	689012	5351166	Narrow shear	WLS	58	77		
B15	689001	5351159	SQ	WLS	215	84		
B16	688996	5351155	S_2	WLS	264	74		
B17A	688993	5351157	QTC	WLS	359	64		
B17B	688993	5351157	S_2	WLS	240	84		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP001	688957	5351316	S_2	UMI	262	60		
CP002	688959	5351319	SQ	WLS-UMI	130	81		
CP003	688954	5351327	Contact	WLS-MI	254	63		
CP004	688926	5351314	SQ+QTC/QC SZ	WLS-MI	255	41		
CP005a	689007	5351246	Contact	WLS-Tbx	253	63		
CP005b	689005	5351247	S_4	UMI-Tbx	295	5		
CP005c	689005	5351247	S_4	UMI-Tbx	284	3		
CP006	689072	5351296	QTC	WLS	352	50		
CP007	689097	5351312	Contact	WLS-Db	165	85		
CP008	689074	5351269	SQ+QTC/QC SZ	WLS	255	41		
CP009	689061	5351314	SQ	WLS	355	50		
CP010	689005	5351245	Contact	WLS-Tbx	252	64		
CP011	688902	5351216	QTC	WLS	355	25		
CP012	688896	5351216	QTC	WLS	345	35		
CP013	688904	5351224	SQ+QTC/QC SZ	WLS	265	85		
CP020	688904	5351298	S_2	MI	265	75		
CP021	688912	5351298	S_2	MI	275	74		
CP022	688916	5351304	S_2	MI	253	69		
CP023	688885	5351289	SQ SZ	WLS	241	85		
CP024	688868	5351252	S_2	WLS	260	82		
CP025	688869	5351274	SQ	WLS	244	81		
CP026	688918	5351286	Tbx	WLS	122	81		
CP027	688918	5351289	S_2	MI	274	75		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP028	688943	5351308	Fracture	WLS-MI	45	59		
CP029	688941	5351310	SQ	MI	129	75		
CP030	688932	5351309	S_2	MI	250	77		
CP031	688925	5351315	S_2	MI	249	65		
CP032	688947	5351316	SQ	MI	149	74		
CP033A	688974	5351268	SQ	MI	335	84		
CP033B	688972	5351270	S_2	MI	276	70		
CP035	689022	5351268	QTC	WLS	0	70		
CP036	689005	5351247	S_2	MI	267	64		
CP037A	689003	5351245	Lm S_2	WLS			25	49
CP037B	689003	5351245	S_2	WLS	250	49		
CP060	688910	5351297	QTC	MI	130	65		
CP061	689094	5351311	S_3	WLS	236	51		
CP062A	689093	5351310	SQ SZ	WLS	274	71		
CP062B	689094	5351313	SQ	WLS	254	84		
CP062C	689092	5351310	S_2	WLS	240	74		
CP062D	689095	5351312	S_3	WLS	231	64		
CP062E	689091	5351311	SQ	WLS	260	71		
CP063.5	689094	5351311	SQ	WLS	266	65		
CP063A	689060	5351302	S_2	WLS	245	40		
CP063B	689061	5351302	S_3	WLS	230	62		
CP064	689065	5351311	S_2	WLS	241	88		
CP064.5	689082	5351298	S_2	WLS	240	82		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP065	689072	5351310	S_2	WLS	250	64		
CP065.5	689069	5351302	S_2/Fracture	WLS	250	49		
CP067	688983	5351276	S_2/Fracture	WLS	254	35		
CP068	689017	5351290	S_2/Fracture	WLS	244	50		
CP069A	689042	5351253	S_2/Fracture	WLS	281	28		
CP069B	689043	5351251	S_2/Fracture	WLS	70	52		
CP070A	689043	5351249	S_2/Fracture	WLS	242	35		
CP070B	689041	5351250	S_2/Fracture	WLS	240	79		
CP071A	689050	5351253	S_2/Fracture	WLS	275	27		
CP071B	689050	5351254	S_2/Fracture	WLS	51	40		
CP071C	689049	5351254	S_2/Fracture	WLS	245	55		
CP072	689046	5351253	S_2/Fracture	WLS	53	82		
CP073	689008	5351248	S_2	MI	270	82		
CP074	689008	5351246	S_2	WLS	246	54		
CP075A	689004	5351242	S_2	MI	95	54		
CP075B	689004	5351242	S_2	WLS	256	55		
CP075C	689004	5351242	Contact	WLS-MI	95	54		
CP076	689005	5351239	S_2/Fracture	WLS	94	47		
CP077A	688997	5351241	S_2/Fracture	WLS	40	35		
CP077B	688997	5351241	Lm S_2	WLS			20	78
CP078	688974	5351230	S_2/Fracture	WLS	242	25		
CP079A	688963	5351236	S_2/Fracture	WLS	241	35		
CP079B	688964	5351236	S_2/Fracture	WLS	85	57		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP079C	688963	5351236	Lm S_2	WLS			28	318
CP079D	688964	5351236	Lm S_2	WLS			59	182
CP081	688959	5351234	S_2	WLS	244	50		
CP082	688957	5351236	SQ+QTC/QC SZ	WLS	241	51		
CP083A	688952	5351233	S_2	WLS	275	45		
CP083B	688952	5351233	Lm S_2	WLS			40	25
CP084A	688953	5351231	S_2/Fracture	WLS	56	34		
CP084B	688953	5351231	Lm S_2	WLS			34	160
CP085A	688949	5351234	S_2	WLS	260	55		
CP085B	688949	5351234	Lm S_2	WLS			40	355
CP085C	688950	5351234	SQ+QTC/QC SZ	WLS	255	66		
CP086	688949	5351231	S_2	WLS	240	40		
CP087A	688936	5351232	S_2	WLS	263	35		
CP087B	688937	5351231	S_2/Fracture	WLS	75	38		
CP087C	688937	5351231	Lm S_2	WLS			30	185
CP088	688967	5351219	SQ+QTC/QC SZ	WLS	185	83		
CP089A	689010	5351229	QC	WLS	0	25		
CP089B	689010	5351228	QC	WLS	185	18		
CP089C	689010	5351226	QC	WLS	175	12		
CP090	688990	5351231	QTC	WLS	192	82		
CP091	688995	5351236	S_2	WLS	252	70		
CP092	688981	5351223	QTC	WLS	180	82		
CP093A	688953	5351194	QC	WLS	265	54		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP093B	688957	5351195	SQ	WLS	263	68		
CP094A	688977	5351210	SQ SZ	WLS	246	35		
CP094B	688977	5351210	Lm vein	SQ SZ			33	320
CP095	688980	5351211	S_3	QFP	260	58		
CP096A	688978	5351207	S_2	QFP	260	60		
CP096B	688978	5351207	S_3	QFP	265	77		
CP097A	688979	5351208	Contact	WLS-QFP	269	70		
CP097B	688979	5351208	Lm contact	WLS-QFP			64	49
CP098A	688978	5351205	Contact	WLS-QFP	256	70		
CP098B	688977	5351205	S_2	QFP	286	89		
CP099A	688985	5351200	S_2	WLS	250	75		
CP099B	688986	5351200	SQ	WLS	266	67		
CP099C	688986	5351200	S_3	WLS	247	45		
CP100	688981	5351200	SQ	WLS	254	70		
CP101	688981	5351203	SQ	WLS	65	73		
CP102A	688982	5351205	S_2	WLS	259	79		
CP102B	688982	5351205	QC	WLS	305	33		
CP103	688976	5351203	SQ	WLS	254	74		
CP104	688974	5351202	S_2	WLS	259	79		
CP105A	688979	5351206	Contact	WLS-QFP	261	69		
CP105B	688978	5351205	S_2	QFP	260	75		
CP106	688977	5351205	S_2	QFP	266	71		
CP107A	688982	5351208	Contact	WLS-QFP	265	70		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP107B	688982	5351208	S_2	QFP	261	65		
CP108	688976	5351210	SQ	WLS	250	65		
CP109	688979	5351211	QTC	WLS	194	85		
CP110	688970	5351209	QC	WLS	220	32		
CP111	688997	5351221	QTC	WLS	346	73		
CP112	688991	5351222	QTC	WLS	185	89		
CP113	688979	5351223	SQ	WLS	85	65		
CP114A	688932	5351212	QTC	WLS	63	25		
CP114B	688932	5351212	Lm vein	QTC			17	205
CP115	688935	5351214	QTC	WLS	286	22		
CP116A	688934	5351213	S_2/Fracture	WLS	260	37		
CP116B	688934	5351213	Lm S_2	WLS			48	328
CP117A	688895	5351188	S_2	QFP	265	48		
CP117B	688895	5351189	Contact	WLS-QFP	275	58		
CP118	688911	5351199	QTC	WLS	190	49		
CP119	688896	5351223	SQ+QTC/QC SZ	WLS	251	82		
CP120	688901	5351225	SQ+QTC/QC SZ	WLS	265	86		
CP121	688908	5351220	QTC	WLS	170	80		
CP122	688907	5351225	SQ+QTC/QC SZ	WLS	264	75		
CP123	688887	5351216	QTC	WLS	184	86		
CP124A	688889	5351215	S_2	WLS	245	39		
CP124B	688889	5351215	Lm S_2	WLS			39	3
CP125	688882	5351138	S_2	WLS	249	56		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP126A	688864	5351123	SQ	WLS	260	65		
CP126B	688866	5351124	S_2	WLS	265	73		
CP127	688880	5351152	S_2	WLS	246	60		
CP128	688857	5351131	S_2	WLS	254	45		
CP129	688845	5351120	SQ	WLS	240	63		
CP130A	688833	5351112	S_2	WLS	271	79		
CP130B	688831	5351112	S_2	WLS	264	72		
CP130C	688833	5351112	Lm S_2	WLS			5	90
CP131A	688833	5351115	S_2/Fracture	WLS	75	80		
CP131B	688833	5351115	Lm S_2	WLS			1	261
CP133	688815	5351104	SQ+QTC/QC SZ	WLS	85	52		
CP134A	688857	5351119	SZ	WLS	269	55		
CP134B	688849	5351117	SZ	WLS	252	60		
CP134C	688857	5351119	L_4	WLS			2	270
CP134D	688849	5351117	L_4	WLS			10	250
CP135	688835	5351111	QC	WLS	80	32		
CP136	688836	5351110	SQ+QTC/QC SZ	WLS	269	60		
CP137A	688807	5351100	SQ	WLS	243	85		
CP137B	688808	5351101	QTC	WLS	215	60		
CP138	688809	5351101	S_2	WLS	245	64		
CP139A	688818	5351105	S_2	WLS	255	53		
CP139B	688818	5351105	Lm S_2	WLS			43	273
CP140A	688909	5351134	S_2	WLS	265	89		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
CP140B	688909	5351134	L_4	WLS			10	261
CP140C	688909	5351134	Lm S_2	WLS			78	75
CP141A	688912	5351126	S_2	WLS	254	65		
CP141B	688912	5351126	L_4	WLS			6	266
CP141C	688912	5351126	Lm S_2	WLS			64	300
CP142	688917	5351123	S_2	WLS	266	55		
CP143	688874	5351062	SQ	WLS	75	83		
CP144	688877	5351064	S_2	WLS	248	70		
CP145	688880	5351061	S_2	WLS	83	77		
CP146	688879	5351061	S_2	WLS	69	77		
CP147A	688878	5351063	SQ	WLS	256	83		
CP147B	688878	5351063	S_2	WLS	263	74		
CP148	688999	5351117	S_3	WLS	210	43		
CP149A	689002	5351118	S_2	WLS	243	65		
CP149B	689001	5351117	SQ+QTC/QC SZ	WLS	245	58		
CP200	688914	5351297	Contact	WLS-UMI	324	79		0
EP01	689256	5351461	QTC	WLS	10	85		
EP02	689258	5351462	QTC	WLS	6			
EP03	689257	5351462	SQ SZ	WLS	256	65		
EP04	689251	5351457	QTC	WLS	4			
EP05	689250	5351457	QTC	WLS	240			
EP06	689260	5351463	QTC	WLS	9			
EP07	689431	5351516	QTC	WLS	15	69		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EP08	689408	5351510	SZ	WLS	244	75		
EP09A	689309	5351426	SZ	WLS	266	65		
EP09B	689309	5351426	L_4	WLS			6	273
EP10	689287	5351430	S_2	WLS	260	76		
EP11	689277	5351429	S_2	WLS	256	74		
EP12	689321	5351443	SQ+QTC/QC SZ	WLS	5			
EP16	689341	5351443	SQ+QTC/QC SZ	WLS	249	73		
EP17A	689531	5351554	Lm vein	WLS			66	65
EP17B	689531	5351554	SQ	WLS	245	85		
EP17C	689531	5351554	S_2	WLS	257	75		
EP17D	689531	5351554	SQ	WLS	281	77		
EP17E	689531	5351554	SQ	WLS	34	76		
EP17F	689531	5351553	SQ	WLS	250	75		
EP17G	689532	5351554	SQ	WLS	198	84		
EP17H	689531	5351554	SQ	WLS	49	85		
EP17I	689531	5351554	SQ	WLS	125	70		
EP17J	689531	5351553	SQ	WLS	191	70		
EP18A	689532	5351549	SQ	WLS	285	67		
EP18B	689531	5351549	SQ SZ	WLS	225	65		
EP18C	689532	5351549	S_2	WLS	244	65		
EP19	689524	5351543	SQ SZ	WLS	249	70		
EP20	689512	5351541	SQ	WLS	350	55		
EP21	689521	5351552	QTC	WLS	10	30		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EP22	689524	5351554	SQ	WLS	275	79		
EP23	689304	5351460	QTC	WLS	15	75		
EP24	689309	5351461	Tbx	WLS	273	84		
EP25a	689305	5351459	SQ SZ	WLS	87	65		
EP25b	689305	5351459	F_2Fh	WLS			11	95
EP25b	689305	5351459	F_2FA	WLS	89	31		
EP26	689310	5351426	SZ	MI	268	55		
EP27	689275	5351428	SZ	WLS	243	62		
EP28	689516	5351549	SQ	WLS	5	64		
EP29A	689533	5351550	S_2	WLS	235	74		
EP29B	689533	5351550	S_2	WLS	260	71		
EP29C	689533	5351550	S_2	WLS	241	71		
EP29D	689532	5351550	S_2	WLS	236	70		
EP29E	689533	5351550	SQ	WLS	260	39		
EP29F	689533	5351550	SQ	WLS	251	46		
EP29G	689532	5351549	SQ SZ	WLS	212	63		
EP29H	689532	5351550	SQ	WLS	305	64		
EP30A	689533	5351551	S_2	WLS	240	52		
EP30B	689533	5351550	SQ	WLS	238	55		
EP31	689525	5351544	SQ	WLS	0	66		
EP32	689362	5351477	SZ	WLS	264	85		
EP33	689336	5351470	Contact	WLS-MI	280	70		
EP34	689322	5351469	S_2	MI	260	65		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EP35	689341	5351469	Contact	WLS-MI	285	74		
EP36A	689332	5351469	SQ+QTC/QC SZ	WLS-MI	260	76		
EP36B	689333	5351469	Lm vein	MI			4	85
EP37	689335	5351442	S_2	WLS	275	82		
EP38	689349	5351451	QTC	WLS	174	86		
EP39A	689410	5351512	S_2	QFP	256	61		
EP39B	689410	5351513	Contact	WLS-QFP	255	59		
EP39C	689411	5351513	Lm contact	WLS-QFP			42	342
EP39D	689411	5351513	Lm S_2	QFP			46	326
EP39E	689411	5351513	Lm S_2	QFP			54	304
EPN01	689489	5351632	S_2	FV	255	71		
EPN02	689493	5351632	S_2	FV	251	67		
EPN03	689484	5351622	S_2	FV	262	53		
EPN04	689489	5351623	S_2	FV	250	63		
EPN05A	689516	5351616	S_2	MV	261	72		
EPN05B	689514	5351616	SQ	MV	272	58		
EPN05C	689515	5351616	F_2FA	SQ	262	62		
EPN06A	689511	5351615	F_2FA	SQ	256	51		
EPN06B	689511	5351615	S_2	MV	255	50		
EPN06C	689512	5351616	SQ	MV	272	54		
EPN07A	689505	5351611	SQ	MV	264	57		
EPN07B	689504	5351610	S_2	MV	256	68		
EPN07C	689506	5351611	F_2FA	SQ	257	59		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EPN08A	689492	5351603	S_2	BIF	250	52		
EPN08B	689493	5351603	F_2FA	BIF	254	61		
EPN09A	689487	5351601	S_2	BIF	241	56		
EPN09B	689486	5351600	F_2FA	BIF	240	52		
EPN10A	689484	5351599	F_2Fh	BIF			40	265
EPN10B	689484	5351598	Contact	Db-BIF	187	80		
EPN10C	689484	5351599	S_2	BIF	180	72		
EPN10D	689484	5351599	F_2FA	BIF	270	54		
EPN10E	689485	5351599	S_2	BIF	240	56		
EPN10F	689485	5351599	F_2FA	BIF	250	50		
EPN12	689480	5351497	SQ	WLS	155	73		
EPN13A	689475	5351492	Contact	WLS-MI	257	80		
EPN13B	689476	5351492	S_2	WLS	254	73		
EPN14	689474	5351498	Contact	WLS-MI	261	63		
EPN15A	689472	5351503	SQ	WLS	105	76		
EPN15B	689472	5351503	S_2	WLS	228	78		
EPN16A	689478	5351507	SQ	WLS	285	83		
EPN16B	689477	5351507	S_2	WLS	208	79		
EPN17A	689507	5351561	S_2	WLS	263	78		
EPN17B	689506	5351561	SQ+QTC/QC SZ	WLS	255	59		
EPN18A	689508	5351562	S_2	WLS	255	75		
EPN18B	689508	5351562	SQ+QTC/QC SZ	WLS	254	76		
EPN18C	689509	5351563	S_2	WLS	264	77		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EPN19A	689510	5351563	SQ+QTC/QC SZ	WLS	265	64		
EPN19B	689510	5351564	S_2	WLS	261	83		
EPN20A	689511	5351564	S_2	WLS	98	88		
EPN20B	689511	5351564	L_4	WLS			10	265
EPN20C	689511	5351564	S_2	WLS	266	87		
EPN20D	689511	5351564	SQ+QTC/QC SZ	WLS	91	83		
EPN21A	689515	5351566	F_3FA	WLS	234	38		
EPN21B	689515	5351566	L_4	WLS			15	278
EPN21C	689515	5351566	F_3FA	WLS	232	38		
EPN21D	689515	5351566	S_2	WLS	104	83		
EPN21E	689515	5351566	L_4	WLS			6	276
EPN21F	689515	5351566	QC	WLS	235	37		
EPN21G	689515	5351567	QC	WLS	233	40		
EPN21H	689516	5351567	L_4	WLS			22	276
EPN21I	689515	5351567	QC	WLS	212	22		
EPN22A	689516	5351567	S_2	WLS	310	90		
EPN22B	689516	5351567	SQ+QTC/QC SZ	WLS	235	63		
EPN23A	689516	5351568	SQ+QTC/QC SZ	WLS	290	81		
EPN23B	689516	5351567	SQ+QTC/QC SZ	WLS	285	82		
EPN23C	689517	5351568	L_4	WLS			20	241
EPN23D	689518	5351568	SQ+QTC/QC SZ	WLS	241	70		
EPN23E	689517	5351569	S_2	MV	250	89		
EPN24A	689519	5351570	S_2	WLS	258	60		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EPN24B	689519	5351569	SQ+QTC/QC SZ	WLS	246	70		
EPN25A	689521	5351570	SQ SZ	WLS	250	59		
EPN25B	689521	5351571	SQ SZ	WLS	230	67		
EPN25C	689521	5351571	S_2	WLS	259	70		
EPN25D	689521	5351571	L_4	WLS			14	264
EPN25E	689522	5351571	F_3FA	WLS	230	52		
EPN26	689525	5351574	S_2	WLS	252	70		
EPN27	689525	5351576	S_2	WLS	275	78		
EPN28	689528	5351576	S_2	WLS	267	73		
EPN29A	689513	5351560	Narrow shear	WLS	107	80		
EPN29B	689513	5351560	SQ	WLS	29	80		
EPN29C	689511	5351559	Contact	WLS-QFP	244	89		
EPN29D	689514	5351560	SQ	WLS	310	88		
EPN29E	689517	5351561	SQ+QTC/QC SZ	WLS	249	79		
EPN30A	689497	5351546	SQ	WLS	362	66		
EPN30B	689497	5351545	SQ	WLS	85	84		
EPN30C	689498	5351542	SQ	WLS	86	82		
EPN30D	689498	5351542	Fracture	WLS	105	41		
EPN30E	689498	5351543	SQ	WLS	255	80		
EPN30F	689499	5351541	SQ	WLS	301	80		
EPN31	689505	5351540	QTC	WLS	350	86		
EPN32A	689496	5351569	S_2	WLS	210	70		
EPN32B	689495	5351569	L_4	WLS			10	226

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EPN32C	689496	5351568	S_2	WLS	221	71		
EPN33A	689495	5351564	S_2	WLS	269	73		
EPN33B	689495	5351564	Contact	WLS-QFP	265	64		
EPN33C	689495	5351564	S_2	WLS	266	60		
EPN33D	689495	5351564	F_3FA	WLS	198	38		
EPN33E	689495	5351565	F_4FA	WLS	188	34		
EPN33F	689496	5351564	S_2	WLS	270	50		
EPN33G	689495	5351564	S_2	WLS	57	90		
EPN34A	689495	5351567	F_4Fh	WLS			14	280
EPN34B	689496	5351567	F_4FA	WLS	300	14		
EPN34C	689496	5351567	S_2	WLS	265	80		
EPN34D	689496	5351566	S_2	WLS	64	88		
EPN34E	689496	5351566	SQ	WLS	252	70		
EPN34F	689496	5351566	F_2FA	WLS	259	70		
EPN35A	689496	5351581	S_2	WLS	251	57		
EPN35B	689497	5351581	SQ+QTC/QC SZ	WLS	266	73		
EPN36	689498	5351580	S_2	WLS	253	64		
EPN37	689508	5351583	S_2	WLS	254	64		
EPN38	689520	5351584	S_2	MV	63	89		
EPN39	689525	5351589	S_2	MV	255	72		
EPN40	689495	5351567	S_4	WLS	250	10		
EPN41	689495	5351567	S_4	WLS	210	8		
EPN42	689495	5351567	S_4	WLS	226	4		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
EPN43	689495	5351567	S_4	WLS	218	6		
EPN44	689495	5351567	S_4	WLS	230	12		
EPN45	689495	5351567	S_4	WLS	190	8		
EPO01A	689421	5351504	SQ	WLS	236	65		
EPO01B	689421	5351504	SZ	WLS	268	79		
EPO02A	689440	5351517	SQ	WLS	86	79		
EPO02B	689440	5351517	SQ SZ	WLS	281	81		
EPO03	689430	5351517	Contact	WLS-QFP	273	68		
N02	688625	5351848	S_2	FIV	235	80		
N03	688628	5351856	S_2	FIV	241	73		
N04A	688602	5351854	S_2	FIV	241	85		
N04B	688606	5351857	SQ	FIV	135	65		
N05	688595	5351882	S_2	FIV	242	60		
N06	688573	5351870	S_2	FIV	237	60		
N07A	688559	5351863	S_2	FIV	237	63		
N07B	688559	5351863	L_4	FIV			6	234
N08	688609	5351894	S_2	MI	243	58		
N09	688645	5351927	S_2	MI	238	61		
N10	688634	5351914	S_2	MI	230	60		
N11	688649	5351916	S_2	FIV	253	62		
N12	688638	5351902	S_2	FIV	230	63		
N13	688629	5351895	S_2	FIV	249	59		
N14	688708	5351891	S_2	FIV	255	76		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
N15	688615	5351825	S_2	MI	257	77		
N16A	688583	5351942	Contact	QFP-MI	245	72		
N16B	688583	5351945	S_2	QFP	225	71		
N17A	688589	5351957	S_2	MI	235	71		
N17B	688589	5351954	S_2	MI	228	75		
N17C	688589	5351954	L_4	MI			12	222
N18A	688588	5351966	S_2	MI	229	65		
N18B	688588	5351962	Contact	QFP-MI	193	85		
N18C	688590	5351968	S_2	QFP	225	57		
N18D	688591	5351966	S_2	MI	206	71		
N19	688582	5351949	S_2	MI	224	69		
N20	688595	5351969	S_2	MI	240	79		
N21	688628	5351987	S_2	MI	256	60		
N22	688616	5351984	S_2	MI	251	66		
N23	688608	5351979	S_2	MI	242	60		
N24A	688605	5351977	S_2	MI	225	84		
N24B	688603	5351975	S_2	MI	234	72		
N25	688598	5351973	S_2	MI	221	88		
N27	688569	5351936	S_2	MI	255	55		
N28	688577	5351943	S_2	MI	235	66		
N29	688549	5351982	S_2	MI	230	85		
N30	688538	5351991	S_2	MI	229	79		
N31	688564	5351972	SQ+QTC/QC SZ	MI	220	59		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
N32A	688602	5352028	S_2	MI	210	83		
N32B	688602	5352028	L_4	MI			5	210
N33A	688581	5352029	S_2	MI	216	70		
N33B	688581	5352029	L_4	MI			3	219
N34	688650	5352039	S_2	MI	228	74		
N35	688687	5352044	S_2	MI	231	69		
N36	688691	5352049	S_2	MI	249	69		
NEP01a	689399	5351685	S_2	FIV	253	85		
NEP01b	689399	5351685	F_4Fh	FIV			14	261
NEP02	689398	5351681	S_2	FIV	260	80		
NEP04a	689393	5351659	S_2	FIV	245	75		
NEP04b	689394	5351660	S_3	FIV	244	35		
NEP06a	689370	5351674	S_2	FIV	251	77		
NEP06b	689370	5351673	SQ	FIV	352	90		
NEP07	689392	5351695	SQ	FIV	349	90		
NEP09	689426	5351705	S_2	QFP	263	85		
NEP10	689403	5351696	S_2	QFP	260	90		
NEP13	689368	5351697	Contact	QFP-MI	259	90		
NEP14	689394	5351660	S_2	QFP	261	77		
NEP19a	689393	5351660	QTC	FIV	266	86		
NEP19b	689393	5351660	S_3	FIV	228	33		
NEP19c	689393	5351660	L_4	FIV			12	258
NEP20a	689401	5351695	S_2	FIV	264	82		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
NEP20b	689401	5351695	S_3	FIV	254	74		
NEP20c	689395	5351694	QC	QFP	126	76		
NEP20d	689394	5351693	SQ	FIV	3	77		
NEP21a	689380	5351687	S_2	FIV	258	82		
NEP21b	689380	5351687	L_4	FIV			10	242
NEP22a	689364	5351683	S_2	FIV	258	82		
NEP22b	689364	5351683	L_4	FIV			8	267
NEP23a	689356	5351664	S_2	FIV	256	80		
NEP23b	689356	5351664	L_4	FIV			16	258
NEP24a	689356	5351645	Contact	QFP-MI	266	76		
NEP24b	689356	5351645	S_3	MI	243	53		
NEP25	689359	5351645	S_3	MI	249	52		
NEP26	689361	5351646	F_3FA	FIV	233	54		
NEP27	689363	5351646	QTC	QFP-FIV-MI	336	81		
NEP31A	689345	5351639	S_2	FIV	250	75		
NEP31B	689345	5351639	L_4	FIV			13	250
NEP32A	689332	5351623	S_2	FIV	254	74		
NEP32B	689332	5351623	L_4	FIV			12	255
NEP33A	689329	5351636	S_2	FIV	246	72		
NEP33B	689324	5351634	S_2	MI	262	68		
NEP33C	689327	5351635	Contact	MI-FIV	266	76		
NEP33D	689324	5351634	L_4	MI			6	266
NEP34	689395	5351693	S_2	FIV	261	64		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
NEP35A	689272	5351590	S_2	FIV	261	70		
NEP35B	689272	5351590	L_4	FIV			9	260
NEP36A	689275	5351586	S_2	FIV	259	74		
NEP36B	689275	5351586	L_4	FIV			12	260
NEP36C	689272	5351585	S_3	FIV	265	45		
NEP36D	689272	5351585	S_2	FIV	249	75		
NEP36E	689275	5351586	S_3	FIV	235	59		
NEP37	689426	5351704	S_2	QFP	262	87		
NEP38	689424	5351700	S_2	FIV	240	75		
NEP39	689430	5351698	S_2	FIV	250	86		
NEP3a	689398	5351674	S_2	FIV	260	76		
NEP3b	689399	5351674	F_4Fh	FIV			16	251
NEP40	689408	5351718	S_2	FIV	255	80		
NEP41	689400	5351719	S_2	MI	255	84		
NEP42	689414	5351725	S_2	FIV	245	80		
NEPX01a	689356	5351645	Contact	QFP-FIV	257	74		
NEPX01b	689356	5351645	L_4	QFP			11	268
NEPX01c	689356	5351645	S_2	FIV	255	75		
NEPX02	689357	5351645	S_3	MI	234	48		
NEPX03	689355	5351644	S_3	MI	218	62		
NEPX04	689354	5351644	QTC	QFP	232	72		
NEPX05	689355	5351644	QTC	QFP	242	72		
NEPX06	689356	5351644	QTC	QFP	348	58		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
NEPX07A	689359	5351644	S_2	FIV	250	74		
NEPX09	689360	5351646	S_2	FIV	251	76		
NEPX10	689363	5351648	S_2	FIV	253	74		
NEPX11	689362	5351646	S_2	FIV	260	72		
NEPX12	689358	5351645	S_2	FIV	242	69		
NEPX13	689363	5351648	QTC	FIV	340	88		
NEPX14	689363	5351646	QTC	FIV	22	88		
NEPX15	689360	5351646	QTC	QFP	358	86		
NEPX16	689356	5351643	S_2	FIV	254	83		
NEPX17	689355	5351643	Contact	QFP-FIV	254	83		
NEPX18	689358	5351645	QTC	QFP	14	82		
NEPX19a	689359	5351645	F_3Fh	FIV			39	222
NEPX19b	689359	5351645	F_3FA	FIV	220	45		
NEPX7B	689359	5351644	S_2	FIV	250	76		
NW10A	688741	5351490	S_2	FIV	248	60		
NW10B	688741	5351490	L_4	FIV			10	248
NW11A	688741	5351491	S_2	FIV	251	61		
NW11B	688742	5351491	L_4	FIV			0	251
NW12A	688738	5351490	S_2	FIV	252	74		
NW12B	688740	5351490	L_4	FIV			12	251
NW13A	688734	5351488	S_3	FIV	224	53		
NW13B	688734	5351488	L_4	FIV			15	225
NW13C	688735	5351488	SQ SZ	FIV	224	79		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
NW13C'	688735	5351489	F_2Fh	SQ			0	237
NW13D	688734	5351488	SQ SZ	FIV	224	49		
NW13E	688734	5351488	L_4	FIV			15	224
NW14A	688735	5351490	S_2	FIV	244	85		
NW14B	688735	5351490	L_4	FIV			14	224
NW15A	688734	5351489	S_3	FIV	236	50		
NW15B	688734	5351489	L_4	FIV			12	235
NW16A	688742	5351520	S_2	FIV	251	77		
NW16B	688742	5351520	L_4	FIV			19	250
NW17A	688747	5351515	S_3	FIV	210	33		
NW17B	688747	5351515	S_2	FIV	255	80		
NW17C	688747	5351515	L_4	FIV			23	254
NW18A	688754	5351522	S_2	FIV	244	80		
NW18B	688753	5351522	L_4	FIV			5	245
NW19A	688755	5351532	S_2	FIV	252	76		
NW19B	688754	5351531	L_4	FIV			6	252
NW20A	688767	5351542	S_2	FIV	259	85		
NW20B	688768	5351542	L_4	FIV			11	259
NW21A	688772	5351543	QTC	FIV	20	63		
NW21B	688772	5351543	S_2	FIV	233	83		
NW21C	688772	5351543	S_2	FIV	254	73		
NW22	688781	5351548	S_3	FIV	240	61		
NW23	688816	5351558	S_2	MI	250	84		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
SM01	689050	5351041	S_2	MV	260	76		
SM02	689052	5351043	QC	MV	185	35		
SM03	689054	5351044	S_2	MV	279	80		
SM04	689054	5351046	QC	MV	194	64		
SM05	689053	5351043	QC	MV	270	83		
SM06	689063	5351049	Fracture	MV	282	79		
SM07A	689068	5351055	S_2	MV	251	85		
SM07B	689068	5351055	L_4	MV			6	254
SM07C	689068	5351055	S_2	MV	241	84		
SM07D	689068	5351055	L_4	MV			10	242
SM08A	689071	5351057	S_2	MV	253	82		
SM08B	689071	5351058	Fracture	MV	86	76		
SM09A	689081	5351065	S_2	MV	235	86		
SM09B	689081	5351065	L_4	MV			6	234
SM10A	689068	5351060	S_2	MV	245	61		
SM10B	689068	5351060	S_2	MV	262	84		
SM11	689072	5351062	S_2	MV	249	84		
SM12	689074	5351063	Fracture	MV	96	68		
SM13A	689077	5351063	QC	MV	345	46		
SM13B	689078	5351062	QC	MV	275	84		
SM14A	689055	5351048	S_2	MV	250	65		
SM14B	689055	5351048	L_4	MV			6	251
SM14C	689055	5351049	S_2	MV	253	81		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
SM14D	689055	5351049	L_4	MV			10	250
WP-BIF01	688674	5351254	S_2	MV	240	52		
WP-BIF02A	688696	5351267	S_3	BIF	220	48		
WP-BIF02B	688696	5351267	F_3FA	BIF	220	48		
WP-BIF02C	688696	5351267	F_3Fh	BIF			36	220
WP-BIF03A	688696	5351267	F_3FA	BIF	230	34		
WP-BIF03B	688696	5351267	F_3Fh	BIF			45	238
WP-BIF04	688696	5351267	F_3FA	BIF	226	42		
WP-BIF05A	688696	5351268	F_4FA	BIF	290	20		
WP-BIF05B	688696	5351268	F_4Fh	BIF			20	234
WP-BIF06	688697	5351268	F_3FA	BIF	222	40		
WP-BIF07A	688697	5351267	F_3FA	BIF	215	38		
WP-BIF07B	688697	5351268	F_3Fh	BIF			31	229
WP-BIF08	688700	5351266	S_2	MV	254	62		
WP-BIF09	688701	5351267	S_2	MV	245	60		
WP-BIF10A	688701	5351268	F_2FA	MV	250	60		
WP-BIF10B	688701	5351268	F_2Fh	MV			12	244
WP-BIF11	688701	5351268	F_2Fh	MV			10	240
WP-BIF12	688701	5351268	F_2FA	MV	250	69		
WP-BIF13	688701	5351269	F_2FA	MV	251	61		
WP-BIF14	688701	5351269	F_3FA	MV-BIF	220	30		
WP-BIF15A	688701	5351269	S_2	MV	245	69		
WP-BIF15B	688701	5351269	S_2	MV	243	70		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
WP-BIF16	688701	5351269	Contact	MV-BIF	244	78		
WP-BIF17A	688701	5351269	F_4FA	BIF	240	28		
WP-BIF17B	688701	5351269	F_4Fh	BIF			18	247
WP-BIF18	688703	5351270	F_2FA	BIF	253	50		
WP-BIF19A	688702	5351271	F_2Fh	BIF			31	280
WP-BIF19B	688702	5351271	F_3FA	BIF	206	50		
WP-BIF19C	688702	5351271	F_3FA	BIF	205	56		
WP-BIF19D	688702	5351271	S_2	BIF	254	50		
WP-BIF20	688702	5351271	S_2	BIF	246	58		
WP-BIF21	688701	5351269	Contact	MV-BIF	238	64		
WP-BIF22	688712	5351278	S_2	BIF	270	60		
WP-BIF23	688722	5351284	S_2	BIF	240	56		
WP-BIF24A	688736	5351317	S_2	FIV	265	81		
WP-BIF24B	688736	5351317	S_2	FIV	270	76		
WP-BIF25A	688706	5351286	S_2	BIF	272	76		
WP-BIF25B	688706	5351285	S_2	BIF	265	68		
WP-BIF26A	688699	5351277	F_2FA	BIF	282	87		
WP-BIF26B	688699	5351277	F_2Fh	BIF			5	272
WP-BIF26C	688699	5351277	F_2Fh	BIF			11	275
WP-BIF26D	688699	5351277	F_2FA	BIF	276	88		
WP-BIF26E	688699	5351278	S_2	BIF	255	72		
WP-BIF26F	688699	5351278	S_2	BIF	125	82		
WP-BIF26G	688700	5351277	S_2	BIF	269	74		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
WP-BIF26H	688677	5351264	S_2	BIF	228	90		
WP-BIF27A	688677	5351264	S_2	MV	265	70		
WP-BIF27B	688705	5351325	F_2FA	MV	245	58		
WP-BIF28	688710	5351338	Contact	MV-FIV	254	81		
WP-BIF29	688699	5351277	S_2	FIV	260	72		
WP-BIF30	688728	5351321	S_2	FIV	258	72		
WP-BIF31A	688736	5351318	F_3Fh	SQ			32	269
WP-BIF31B	688736	5351318	F_3FA	SQ	230	42		
WP-BIF31C	688736	5351318	F_3FA	SQ	225	42		
WP-BIF31D	688736	5351318	F_3Fh	QFP-FIV			21	272
WP-BIF31E	688736	5351318	Contact	QFP-FIV	95	68		
WP-BIF31F	688736	5351318	SQ	FIV	95	68		
WP-BIF32A	688735	5351317	S_2	FIV	269	73		
WP-BIF32B	688735	5351317	F_3FA	FIV	210	38		
WP-BIF32C	688735	5351317	S_3	FIV	215	38		
WP-BIF33	688737	5351318	S_3	FIV	208	39		
WP-BIF34	688738	5351321	S_2	FIV	256	72		
WP-BIF35A	688734	5351302	S_2	FIV	255	81		
WP-BIF35B	688735	5351303	S_2	FIV	262	72		
WP-BIF35C	688736	5351303	S_3	FIV	212	41		
WP-BIF36A	688758	5351316	S_2	FIV	252	72		
WP-BIF36B	688759	5351316	S_3	FIV	228	43		
WP-BIF37	688761	5351319	S_3	FIV	214	41		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
WP-BIF38A	688762	5351320	S_3	FIV	235	31		
WP-BIF38B	688762	5351320	S_2	FIV	250	76		
WP-BIF39A	688761	5351320	Contact	QFP-FIV	255	59		
WP-BIF39B	688761	5351320	Lm contact	QFP-FIV			20	266
WP-BIF40	688762	5351326	S_2	FIV	246	58		
WP-FD01A	688658	5351189	Contact	QFP-MV	245	58		
WP-FD01B	688658	5351191	Contact	QFP-MV	245	57		
WP-FD01C	688657	5351189	S_2	MV	245	60		
WP-FD01D	688657	5351189	QC	MV	245	60		
WP-FD01E	688657	5351190	S_2	MV	246	50		
WP-FD01F	688658	5351190	S_2	QFP	260	64		
WP-FD01G	688658	5351190	S_3	QFP	230	52		
WP-FD01H	688658	5351190	F_4Fh	QFP			12	245
WP-FD01I	688657	5351190	F_4Fh	QFP			1	253
WP-FD02A	688660	5351193	Contact	QFP-MV	241	61		
WP-FD02B	688660	5351193	Contact	QFP-MV	254	63		
WP-FD03A	688660	5351192	F_3FA	MV	216	48		
WP-FD03B	688661	5351192	F_3FA	MV	220	44		
WP-FD03C	688661	5351192	F_2FA	MV	264	54		
WP-FD03D	688663	5351194	F_3FA	MV	211	39		
WP-FD03E	688663	5351194	F_3FA	MV	222	46		
WP-FD04	688662	5351192	Contact	QFP-MV	249	62		
WP-FD05A	688666	5351195	Contact	QFP-MV	251	61		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
WP-FD05B	688666	5351195	F_3FA	MV	213	48		
WP-FD06A	688667	5351197	QC	MV	19	70		
WP-FD06B	688668	5351198	QC	MV	14	88		
WP-FD06C	688667	5351197	F_3FA	MV	204	40		
WP-FD06D	688669	5351199	QC	MV	15	66		
WP-FD07A	688670	5351200	F_3FA	MV	205	42		
WP-FD07B	688670	5351199	S_2	QFP	236	70		
WP-FD08A	688667	5351198	F_2FA	QFP -MV	253	70		
WP-FD08B	688667	5351198	F_2FA	QFP -MV	246	60		
WP-FD08C	688669	5351200	F_3FA	QFP	225	49		
WP-FD08D	688669	5351200	S_2	QFP -MV	239	60		
WP-FD09A	688673	5351206	F_2FA	SQ	240	59		
WP-FD09B	688673	5351207	F_3FA	SQ	205	39		
WP-FD09C	688673	5351207	S_2	QFP	239	61		
WP-FD09D	688672	5351207	S_2	QFP	226	53		
WP-FD09E	688672	5351207	F_2FA	QFP	240	57		
WP-FD09F	688673	5351207	F_2FA	QFP	244	60		
WP-FD09G	688673	5351207	F_2Fh	QFP			17	49
WP-FD09H	688673	5351207	S_2	QFP	229	72		
WP-FD09I	688673	5351207	F_2FA	QFP	240	59		
WP-FD09J	688674	5351208	S_2	QFP	247	62		
WP-FD10	688667	5351196	S_2	MV	244	68		
WP-FD11	688668	5351198	S_2	MV	241	61		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
WP-FD12	688669	5351199	S_2	MV	242	60		
WP-FD13	688673	5351206	SQ+QTC/QC SZ	MV	234	60		
WP-FD14A	688677	5351213	S_2	QFP	246	61		
WP-FD14B	688676	5351213	S_2	MV	235	67		
WP-MV01A	688659	5351230	QC	MV	230	88		
WP-MV01B	688659	5351230	QC	MV	224	76		
WP-MV01C	688660	5351230	QC	MV	41	78		
WP-MV02	688662	5351230	QC	MV	179	70		
WP-MV03A	688667	5351232	QC	MV	252	88		
WP-MV03B	688667	5351232	QC	MV	255	89		
WP-MV03C	688667	5351231	QC	MV	270	81		
WP-MV03D	688667	5351232	QC	MV	270	21		
WP-MV03E	688667	5351232	Lm vein	QTC			39	280
WP-MV03F	688668	5351231	S_2	MV	242	89		
WP-MV03G	688669	5351231	QC	MV	271	27		
WP-MV04A	688670	5351231	S_3	MV	205	40		
WP-MV04B	688671	5351231	QC	MV	240	51		
WP-MV04C	688671	5351231	Lm vein	QTC			14	250
WP-MV04D	688671	5351231	Lm vein	QTC			16	239
WP-MV05A	688675	5351232	QC	MV	246	81		
WP-MV05B	688675	5351231	S_2	MV	246	81		
WP-MV06	688679	5351220	S_2	MV	241	68		
WP-WLS01	688724	5351182	QC	WLS	156	80		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
WP-WLS02	688724	5351183	QC	WLS	165	64		
WP-WLS03	688724	5351183	QC	WLS	324	76		
WP-WLS04	688724	5351182	QC	WLS	148	89		
WP-WLS05	688724	5351183	QC	WLS	164	80		
WP-WLS06	688724	5351182	QC	WLS	0	88		
WP-WLS07	688724	5351182	QTC	WLS	210	80		
WP-WLS08	688724	5351182	QC	WLS	335	78		
WP-WLS09	688723	5351182	QC	WLS	325	80		
WP-WLS20	688722	5351182	S_2	WLS	250	70		
WP-WLS21	688722	5351182	QC	WLS	190	82		
WP-WLS22	688719	5351179	SQ	WLS	255	68		
WP-WLS23	688720	5351179	QC	WLS	90	28		
WP-WLS24	688720	5351179	S_2	WLS	250	70		
WP-WLS25A	688715	5351180	QC	WLS	177	88		
WP-WLS25B	688714	5351180	QC	WLS	125	60		
WP-WLS26A	688714	5351179	SQ	WLS	262	80		
WP-WLS26B	688715	5351179	S_2	WLS	262	80		
WP-WLS27	688711	5351178	QTC	WLS	305	70		
WP-WLS28A	688711	5351178	Lm S_2	WLS			50	320
WP-WLS28B	688711	5351178	Lm S_2	WLS			50	330
WP-WLS28C	688710	5351178	Lm S_2	WLS			41	315
WP-WLS29	688712	5351178	QC	WLS	71	4		
WP-WLS30	688710	5351177	QC	WLS	70	10		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
WP-WLS31	688711	5351178	QC	WLS	50	12		
WP-WLS32A	688711	5351178	QC	WLS	238	40		
WP-WLS32B	688711	5351178	QC	WLS	240	40		
WP-WLS33	688709	5351176	QTC	WLS	304	82		
WP-WLS34A	688707	5351175	S_2	QFP	250	71		
WP-WLS34B	688707	5351175	Contact	WLS-QFP	271	85		
WP-WLS34C	688707	5351175	S_2	WLS	245	60		
WP-WLS35	688703	5351176	SQ	WLS	245	59		
WP-WLS36	688703	5351175	SQ	WLS	260	80		
X01	689093	5351172	QC	WLS	10	80		
X02	689095	5351166	SZ	WLS-SQ	271	80		
X03	689096	5351170	QTC	WLS-Qtv	50	90		
X04	689069	5351143	S_2	WLS	249	70		
X05	689069	5351143	F_4Fh	MI			6	244
X06	689070	5351143	F_4Fh	MI			6	253
X07	689071	5351144	S_3	MI	245	55		
X08	689071	5351144	SZ	WLS	250	74		
X09	689073	5351145	S_3	MI	245	63		
X10	689075	5351144	SZ	WLS	270	72		
X11	689075	5351144	L_4	WLS			1	270
X12	689075	5351142	QC	QC	85	20		
X13	689076	5351146	Contact	WLS-QFP	255	55		
X14	689076	5351146	S_2	QFP	260	64		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
X15	689082	5351144	SZ	WLS	261	74		
X16	689081	5351147	Contact	QFP-MI	259	74		
X17	689081	5351147	Contact	WLS-QFP	253	71		
X18	689081	5351149	SQ SZ	WLS	253	61		
X19	689089	5351148	SQ	WLS	245	63		
X20	689092	5351153	SZ	WLS	261	70		
X21	689094	5351153	SZ	WLS	258	64		
X22	689094	5351153	L_4	WLS			3	255
X23	689094	5351151	Contact	WLS-MI	269	74		
X24	689094	5351152	S_3	MI	259	57		
X25	689095	5351153	S_3	MI	215	42		
X26	689094	5351152	S_3	MI	228	36		
X27	689094	5351153	Contact	WLS-QFP	257	70		
X28	689094	5351153	S_2	QFP	254	74		
X29	689094	5351152	F_4Fh	MI			7	75
X30	689095	5351153	F_4Fh	QFP			5	69
X31	689094	5351170	SQ	WLS	316	52		
X32	689095	5351173	SQ	WLS	317	57		
X33	689104	5351171	SQ	WLS	65	63		
X34	689073	5351141	Narrow shear	WLS	225	37		
X35	689074	5351142	Narrow shear	WLS	230	20		
X36	689073	5351142	QC	WLS	73	73		
X37	689073	5351142	Narrow shear	WLS	70	62		

Station ID	Easting	Northing	Structure type	Rock type or host	Strike	Dip	Plunge	Trend
X38	689071	5351143	QC	WLS	70	70		
X39	689072	5351143	QC	WLS	240	30		
X40	689069	5351143	Lm S_2	MI			85	45

Coordinates in UTM zone 16. Strike/dip using right hand rule convention.

Structure abbreviations: SQ = Sugary quartz vein, QC = Quartz-carbonate vein, QTC = Quartz-tourmaline-carbonate vein, Lm = Mineral lineation, Lm S_2 = Mineral lineation along S_2, Lm contact = Mineral lineation along unit contact, SZ = Shear zone, Tbx = Tourmaline breccia, S_2 = S_2 cleavage, F_2FA = F_2 fold axial plane, F_2Fh = F_2 fold hinge/axis, S_3 = S_3 cleavage, F_3FA = F_3 fold axial plane, F_3Fh = F_3 fold hinge/axis, S_4 = S_4 cleavage, F_4FA = F_4 fold axial plane, F_4Fh = F_4 fold hinge/axis, L_4 = crenulation/crinkle lineation.

Unit abbreviations: WLS = Webb Lake Stock tonalite, QFP = Quartz-feldspar porphyry dike, MV = Mafic volcanics, FIV = Felsic volcanics, MI = Gabbroic dike. UMI = Ultramafic dike, Db = Diabase dike, Tbx = tourmaline breccia