Supplementary Material

Cryptic Tapping of Two Magmas During a Glaciovolcanic Eruption: Cracked Mountain Tuya, Canada

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**Appendix A: Additional Geochemical Data**

**A.1: Geochemical Compositions for Cracked Mountain Samples [Table A1]**

Table A1 shows additional whole-rock, major, and trace elemental geochemical data from Cracked Mountain volcano not included in Tables 1 and 2 but are incorporated into figures and analyses throughout the paper. A1 contains data analysed at Peter Hooper Lab, Washington State University, USA.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table A1.** Whole rock major (wt. %) and rare earth (ppm) element compositions of Cracked Mountain samples analysed by X-ray fluorescence (Peter Hooper Lab, Washington State University) and ICP-MS, respectively. Analytical precision (2s) reported in brackets. Volumetric FeO by ALS Canada Ltd., North Vancouver, BC. | | | | | | |
| Sample | AW-15-168 | AW-15-175a | AW-15-175b | AW-15-178 | AW-15-181 | AW-15-182 |
| UTM East | 460545 | 460857 | 460857 | 460807 | 460472 | 460461 |
| UTM North | 5599555 | 5599930 | 5599930 | 5599494 | 5599672 | 5599598 |
| Phenocrysts | Pl>Ol>Cpx | Pl>Ol | Pl>Ol | Pl>Ol | Pl>Ol | Pl>Ol |
| SiO2 (0.30) | 50.22 | 49.59 | 49.87 | 48.91 | 48.90 | 49.98 |
| TiO2 (0.04) | 1.50 | 1.50 | 1.54 | 1.40 | 1.55 | 1.59 |
| Al2O3 (0.12) | 15.42 | 15.04 | 15.19 | 15.02 | 15.07 | 15.36 |
| Fe2O32 | 2.16 | - | - | 2.31 | - | - |
| FeO¹ (0.02) | 8.64 | 11.13 | 11.18 | 8.08 | 11.44 | 11.09 |
| MnO (0.02) | 0.15 | 0.16 | 0.16 | 0.15 | 0.17 | 0.15 |
| MgO (0.14) | 8.05 | 9.00 | 8.64 | 9.72 | 8.72 | 7.76 |
| CaO (0.30) | 8.94 | 8.51 | 8.75 | 8.56 | 8.88 | 9.03 |
| Na2O (0.06) | 3.19 | 3.17 | 3.11 | 3.05 | 3.14 | 3.24 |
| K2O (0.04) | 0.75 | 0.45 | 0.64 | 0.38 | 0.48 | 0.50 |
| P2O5 (0.02) | 0.23 | 0.24 | 0.24 | 0.23 | 0.31 | 0.25 |
| Totals | 99.04 | 98.78 | 99.33 | 98.72 | 98.66 | 98.95 |
| LOI | 0.36 | 0.33 | 0.31 | 0.77 | 0.69 | 0.65 |
| Mg#3 | 62.42 | 66.35 | 65.58 | 68.20 | 65.29 | 63.33 |
| \*FeO(T) | 10.59 | 11.13 | 11.18 | 11.29 | 11.44 | 11.09 |
|  |  |  |  |  |  |  |
| La (2.28) | 8.66 | 8.72 | 8.97 | 8.48 | 10.22 | 9.74 |
| Ce (5.72) | 19.52 | 20.09 | 20.80 | 19.29 | 23.2 | 21.33 |
| Pr (0.72) | 2.88 | 2.87 | 2.94 | 2.74 | 3.29 | 3.14 |
| Nd (3.43) | 13.36 | 13.51 | 13.69 | 12.71 | 14.99 | 14.65 |
| Sm (0.46) | 3.83 | 3.88 | 3.94 | 3.67 | 4.06 | 4.15 |
| Eu (0.24) | 1.43 | 1.43 | 1.47 | 1.41 | 1.52 | 1.52 |
| Gd (0.90) | 4.3 | 4.2 | 4.31 | 3.95 | 4.48 | 4.52 |
| Tb (0.10) | 0.67 | 0.67 | 0.67 | 0.62 | 0.7 | 0.72 |
| Dy (0.58) | 3.86 | 3.83 | 3.95 | 3.64 | 4.15 | 4.18 |
| Y (4.02) | 18.14 | 17.76 | 18.21 | 16.94 | 19.88 | 19.8 |
| Ho (0.14) | 0.72 | 0.73 | 0.76 | 0.69 | 0.79 | 0.79 |
| Er (0.40) | 1.84 | 1.79 | 1.84 | 1.72 | 2.01 | 1.98 |
| Tm (0.06) | 0.25 | 0.24 | 0.25 | 0.23 | 0.27 | 0.26 |
| Yb (0.40) | 1.4 | 1.39 | 1.44 | 1.35 | 1.57 | 1.55 |
| Lu (0.04) | 0.21 | 0.21 | 0.22 | 0.2 | 0.23 | 0.23 |
|  |  |  |  |  |  |  |
| Rb (0.2) | 6.5 | 5.1 | 6.0 | 4.2 | 5.5 | 5.7 |
| Ba (60) | 148 | 144 | 142 | 133 | 152 | 144 |
| Sr (84) | 461 | 446 | 460 | 463 | 475 | 470 |
| Y (4.0) | 18.1 | 17.8 | 18.2 | 16.9 | 19.9 | 19.8 |
| Zr (26) | 87 | 89 | 90 | 84 | 97 | 94 |
| Hf (0.6) | 2.4 | 2.3 | 2.4 | 2.3 | 2.5 | 2.5 |
| Nb (3.8) | 7.5 | 7.8 | 8.1 | 7.6 | 9.1 | 8.3 |
| Th (0.2) | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | 0.7 |
| U (0.2) | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 |
| Ni (53.0) | 151.9 | 191.1 | 173.7 | 239.0 | 191.3 | 156.1 |
| Cu (7.0) | 42.3 | 44.6 | 42.8 | 54.7 | 46.0 | 48.7 |
| Zn (8.4) | 107.3 | 112.3 | 111.5 | 110.7 | 110.4 | 109.6 |
| V (51) | 178 | 172 | 177 | 165 | 179 | 189 |
| Pb (0.2) | 1.3 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 |
| 1Fe2O3 calculated for samples with known FeO, where Fe2O3 = (FeO(T) - FeO)/0.8998) | | | | | | |
| 2FeO determined separately through ferric titration for select samples | | | | | | |
| 3Mg# computed as MgO/(MgO+FeO (mol. %). CM samples not measured with ferric titration use the mean value of  Fe 2+/ Ʃ Fe =0.7228 (N=7) for CM basalts | | | | | | |

**Appendix B: Electron-Microprobe Analyses for Cracked Mountain Samples**

**Table B1: Olivine Analyses; Table B2 Plagioclase Analyses; Table B3 Clinopyroxene Analyses**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table B1**: Electron Microprobe (EMP) major element analyses (wt. %) of CM olivine phenocryst Cores (PC), phenocryst rims (PR), and groundmass phases (GM). Analyses conducted at University of British Columbia, Vancouver, Canada. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olivine Analyses | | | | |  | | |  | | | |  | | |  | | |  | | | |  | | |  | | | |  | | |  | | |  | | |  | | |  | |  | |  | | |  |
| Total number of olivine analyses: 137 | | | | | | | | | | | |  | | |  | | |  | | | |  | | |  | | | |  | | |  | | |  | | |  | | |  | |  | |  | | |  |
| Label1 | LOD2 | | | | SD3 | | | M-045A-C4-1 | | | | M-045A-C4-2 | | | M-045A-C4-3 | | | M-045A-C4-4 | | | | M-045A-C4-5 | | | M-045A-C4-8 | | | | M-045A-C4-9 | | | M-045A-C4-12 | | | M-045A-C4-13 | | | M-045A-C4-14 | | | M-045A-C4-15 | | A-168-C5-1 | | A-168-C5-2 | | | A-168-C5-3 |
| Phenocrysts | | | | |  | | | OPA | | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | OPA | | | OPA |
| Rock Type |  | | | |  | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | Dyke | | Dyke | | | Dyke |
| Mineral Type | | | | |  | | | PC | | | | PC | | | PC | | | PC | | | | PC | | | PC | | | | PC | | | PC | | | PC | | | PC | | | PC | | PC | | PC | | | PC |
| SiO2 | 0.06 | | | | 0.19 | | | 38.55 | | | | 38.53 | | | 38.45 | | | 38.74 | | | | 38.86 | | | 38.86 | | | | 38.94 | | | 38.58 | | | 38.91 | | | 38.83 | | | 38.65 | | 38.55 | | 38.58 | | | 38.91 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.00 | | | | 0.00 | | | 0.01 | | | 0.05 | | | | 0.05 | | | 0.07 | | | | 0.02 | | | 0.04 | | | 0.01 | | | 0.05 | | | 0.02 | | 0.01 | | 0.00 | | | 0.03 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.05 | | | | 0.05 | | | 0.04 | | | 0.05 | | | | 0.00 | | | 0.00 | | | | 0.00 | | | 0.06 | | | 0.02 | | | 0.01 | | | 0.05 | | 0.02 | | 0.04 | | | 0.03 |
| FeO | 0.09 | | | | 0.38 | | | 20.25 | | | | 19.92 | | | 19.94 | | | 19.24 | | | | 19.75 | | | 20.22 | | | | 20.38 | | | 20.55 | | | 20.12 | | | 20.17 | | | 20.28 | | 19.94 | | 20.23 | | | 21.07 |
| MgO | 0.06 | | | | 0.27 | | | 40.75 | | | | 41.27 | | | 40.17 | | | 41.16 | | | | 41.16 | | | 40.49 | | | | 40.97 | | | 40.38 | | | 40.45 | | | 40.33 | | | 40.43 | | 40.24 | | 40.32 | | | 39.93 |
| MnO | 0.09 | | | | 0.05 | | | 0.25 | | | | 0.27 | | | 0.28 | | | 0.24 | | | | 0.31 | | | 0.31 | | | | 0.24 | | | 0.25 | | | 0.24 | | | 0.27 | | | 0.35 | | 0.29 | | 0.26 | | | 0.28 |
| NiO | 0.11 | | | | 0.06 | | | 0.15 | | | | 0.14 | | | 0.15 | | | 0.25 | | | | 0.17 | | | 0.18 | | | | 0.20 | | | 0.18 | | | 0.13 | | | 0.08 | | | 0.10 | | 0.13 | | 0.16 | | | 0.17 |
| CaO | 0.04 | | | | 0.02 | | | 0.23 | | | | 0.23 | | | 0.23 | | | 0.23 | | | | 0.23 | | | 0.23 | | | | 0.23 | | | 0.23 | | | 0.23 | | | 0.23 | | | 0.23 | | 0.23 | | 0.23 | | | 0.23 |
| Total |  | | | |  | | | 100.24 | | | | 100.41 | | | 99.28 | | | 99.97 | | | | 100.54 | | | 100.37 | | | | 100.98 | | | 100.26 | | | 100.11 | | | 99.98 | | | 100.11 | | 99.41 | | 99.83 | | | 100.66 |
| Fo% |  | | | |  | | | 78.20 | | | | 78.69 | | | 78.22 | | | 79.23 | | | | 78.79 | | | 78.12 | | | | 78.18 | | | 77.80 | | | 78.18 | | | 78.09 | | | 78.04 | | 78.25 | | 78.04 | | | 77.16 |
| Label1 | LOD2 | | | | SD3 | | | A-168-C5-4 | | | | A-168-C5-5 | | | A-168-C5-6 | | | A-168-C5-7 | | | | A-168-C5-8 | | | A-168-C5-9 | | | | A-168-C5-10 | | | A-168-C5-11 | | | A-168-C6-1 | | | A-168-C6-2 | | | A-168-C6-6 | | A-168-C6-7 | | A-168-C6-8 | | | A-168-C6-9 |
| Phenocrysts | | | | |  | | | OPA | | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | OPA | | | OPA |
| Rock Type |  | | | |  | | | Dyke | | | | Dyke | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | Dyke | | | Dyke |
| Mineral Type | | | | |  | | | PC | | | | PC | | | PC | | | PC | | | | PC | | | PC | | | | PC | | | PC | | | PC | | | PC | | | PC | | PC | | PC | | | PC |
| SiO2 | 0.06 | | | | 0.19 | | | 38.61 | | | | 38.64 | | | 38.98 | | | 38.48 | | | | 38.97 | | | 39.11 | | | | 39.33 | | | 39.18 | | | 39.00 | | | 39.41 | | | 39.09 | | 39.42 | | 39.19 | | | 39.33 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.00 | | | | 0.02 | | | 0.02 | | | 0.03 | | | | 0.03 | | | 0.03 | | | | 0.01 | | | 0.02 | | | 0.00 | | | 0.03 | | | 0.00 | | 0.00 | | 0.02 | | | 0.00 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.02 | | | | 0.01 | | | 0.06 | | | 0.01 | | | | 0.00 | | | 0.01 | | | | 0.02 | | | 0.07 | | | 0.05 | | | 0.09 | | | 0.01 | | 0.06 | | 0.03 | | | 0.00 |
| FeO | 0.09 | | | | 0.38 | | | 21.62 | | | | 20.33 | | | 20.30 | | | 20.46 | | | | 20.36 | | | 20.09 | | | | 20.43 | | | 20.15 | | | 20.64 | | | 19.22 | | | 19.03 | | 18.59 | | 19.52 | | | 19.74 |
| MgO | 0.06 | | | | 0.27 | | | 39.88 | | | | 40.56 | | | 40.39 | | | 39.71 | | | | 40.48 | | | 40.48 | | | | 40.52 | | | 40.24 | | | 40.74 | | | 41.60 | | | 41.69 | | 42.42 | | 41.44 | | | 41.17 |
| MnO | 0.09 | | | | 0.05 | | | 0.33 | | | | 0.27 | | | 0.30 | | | 0.29 | | | | 0.28 | | | 0.31 | | | | 0.21 | | | 0.29 | | | 0.29 | | | 0.30 | | | 0.25 | | 0.23 | | 0.27 | | | 0.28 |
| NiO | 0.11 | | | | 0.06 | | | 0.13 | | | | 0.17 | | | 0.16 | | | 0.14 | | | | 0.21 | | | 0.18 | | | | 0.16 | | | 0.12 | | | 0.11 | | | 0.24 | | | 0.27 | | 0.21 | | 0.20 | | | 0.20 |
| CaO | 0.04 | | | | 0.02 | | | 0.23 | | | | 0.23 | | | 0.23 | | | 0.23 | | | | 0.23 | | | 0.23 | | | | 0.23 | | | 0.23 | | | 0.23 | | | 0.23 | | | 0.23 | | 0.23 | | 0.23 | | | 0.23 |
| Total |  | | | |  | | | 100.83 | | | | 100.24 | | | 100.44 | | | 99.35 | | | | 100.56 | | | 100.45 | | | | 100.90 | | | 100.30 | | | 101.07 | | | 101.12 | | | 100.58 | | 101.15 | | 100.91 | | | 100.96 |
| Fo% |  | | | |  | | | 76.68 | | | | 78.06 | | | 78.01 | | | 77.57 | | | | 77.99 | | | 78.22 | | | | 77.96 | | | 78.07 | | | 77.87 | | | 79.42 | | | 79.61 | | 80.27 | | 79.10 | | | 78.80 |
| Label1 | LOD2 | | | | SD3 | | | A-168-C6-10 | | | | M-045A-C4-6 | | | M-045A-C4-7 | | | M-045A-C4-10 | | | | M-045A-C4-11 | | | A-168-C6-3 | | | | A-168-C6-4 | | | A-168-C6-5 | | | A-168-C6-11 | | | A-168-C6-12 | | | A-168-C6-13 | | A-168-C6-14 | | A-168-C6-15 | | | M-045A-D1-1 |
| Phenocrysts | | | | |  | | | OPA | | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | OPA | | | OPA |
| Rock Type |  | | | |  | | | Dyke | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Dyke | | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | Dyke | | | Pillow Lava |
| Mineral Type | | | | |  | | | PC | | | | PR | | | PR | | | PR | | | | PR | | | PR | | | | PR | | | PR | | | PR | | | PR | | | PR | | PR | | PR | | | GM |
| SiO2 | 0.06 | | | | 0.19 | | | 38.96 | | | | 38.87 | | | 38.50 | | | 38.52 | | | | 38.76 | | | 39.06 | | | | 39.08 | | | 38.93 | | | 39.06 | | | 39.21 | | | 39.04 | | 39.22 | | 38.96 | | | 38.77 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.01 | | | | 0.01 | | | 0.00 | | | 0.00 | | | | 0.02 | | | 0.03 | | | | 0.04 | | | 0.03 | | | 0.02 | | | 0.00 | | | 0.01 | | 0.03 | | 0.01 | | | 0.05 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.02 | | | | 0.01 | | | 0.02 | | | 0.00 | | | | 0.01 | | | 0.02 | | | | 0.04 | | | 0.00 | | | 0.08 | | | 0.00 | | | 0.00 | | 0.09 | | 0.05 | | | 0.40 |
| FeO | 0.09 | | | | 0.38 | | | 19.91 | | | | 20.41 | | | 20.21 | | | 20.62 | | | | 20.28 | | | 20.41 | | | | 20.53 | | | 20.65 | | | 21.16 | | | 20.89 | | | 20.56 | | 20.27 | | 20.23 | | | 20.08 |
| MgO | 0.06 | | | | 0.27 | | | 40.79 | | | | 40.38 | | | 39.51 | | | 39.86 | | | | 40.67 | | | 40.61 | | | | 41.08 | | | 40.47 | | | 40.91 | | | 40.21 | | | 40.61 | | 39.51 | | 40.31 | | | 39.10 |
| MnO | 0.09 | | | | 0.05 | | | 0.34 | | | | 0.17 | | | 0.31 | | | 0.25 | | | | 0.24 | | | 0.29 | | | | 0.26 | | | 0.32 | | | 0.40 | | | 0.29 | | | 0.26 | | 0.22 | | 0.31 | | | 0.25 |
| NiO | 0.11 | | | | 0.06 | | | 0.11 | | | | 0.09 | | | 0.16 | | | 0.13 | | | | 0.13 | | | 0.16 | | | | 0.20 | | | 0.14 | | | 0.19 | | | 0.15 | | | 0.20 | | 0.10 | | 0.18 | | | 0.12 |
| CaO | 0.04 | | | | 0.02 | | | 0.23 | | | | 0.23 | | | 0.23 | | | 0.23 | | | | 0.23 | | | 0.23 | | | | 0.23 | | | 0.23 | | | 0.23 | | | 0.23 | | | 0.23 | | 0.23 | | 0.23 | | | 0.28 |
| Total |  | | | |  | | | 100.38 | | | | 100.17 | | | 98.94 | | | 99.61 | | | | 100.36 | | | 100.81 | | | | 101.45 | | | 100.78 | | | 102.06 | | | 100.99 | | | 100.92 | | 99.68 | | 100.28 | | | 99.06 |
| Fo% |  | | | |  | | | 78.50 | | | | 77.91 | | | 77.70 | | | 77.51 | | | | 78.14 | | | 78.01 | | | | 78.10 | | | 77.74 | | | 77.51 | | | 77.44 | | | 77.88 | | 77.65 | | 78.03 | | | 77.63 |
| Label1 | LOD2 | | | | SD3 | | | M-045A-D1-2 | | | | M-045A-D1-3 | | | M-045A-D1-4 | | | M-045A-D1-5 | | | | M-045A-D1-6 | | | M-045A-D2-6 | | | | M-045A-D2-7 | | | M-045A-D2-8 | | | M-045A-D2-9 | | | M-045A-D2-10 | | | M-045A-D2-11 | | M-045A-D2-12 | | M-045A-D2-13 | | | M-045A-D3-6 |
| Phenocrysts | | | | |  | | | OPA | | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | OPA | | | OPA |
| Rock Type |  | | | |  | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | Pillow Lava | | | Pillow Lava |
| Mineral Type | | | | |  | | | GM | | | | GM | | | GM | | | GM | | | | GM | | | GM | | | | GM | | | GM | | | GM | | | GM | | | GM | | GM | | GM | | | GM |
| SiO2 | 0.06 | | | | 0.19 | | | 38.45 | | | | 38.31 | | | 38.21 | | | 38.92 | | | | 38.40 | | | 38.19 | | | | 38.02 | | | 38.36 | | | 38.16 | | | 38.08 | | | 38.62 | | 38.61 | | 38.66 | | | 38.51 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.02 | | | | 0.02 | | | 0.04 | | | 0.02 | | | | 0.01 | | | 0.04 | | | | 0.03 | | | 0.01 | | | 0.03 | | | 0.03 | | | 0.06 | | 0.00 | | 0.00 | | | 0.00 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.13 | | | | 0.00 | | | 0.00 | | | 0.01 | | | | 0.11 | | | 0.04 | | | | 0.00 | | | 0.00 | | | 0.06 | | | 0.00 | | | 0.02 | | 0.00 | | 0.02 | | | 0.03 |
| FeO | 0.09 | | | | 0.38 | | | 20.14 | | | | 20.32 | | | 20.73 | | | 20.57 | | | | 20.38 | | | 20.35 | | | | 20.92 | | | 20.80 | | | 20.51 | | | 20.74 | | | 20.62 | | 20.67 | | 20.67 | | | 20.88 |
| MgO | 0.06 | | | | 0.27 | | | 39.70 | | | | 39.96 | | | 39.91 | | | 40.85 | | | | 39.87 | | | 39.82 | | | | 39.37 | | | 40.31 | | | 39.67 | | | 39.57 | | | 40.38 | | 40.40 | | 39.93 | | | 40.31 |
| MnO | 0.09 | | | | 0.05 | | | 0.25 | | | | 0.29 | | | 0.30 | | | 0.29 | | | | 0.30 | | | 0.31 | | | | 0.29 | | | 0.34 | | | 0.27 | | | 0.36 | | | 0.18 | | 0.30 | | 0.26 | | | 0.23 |
| NiO | 0.11 | | | | 0.06 | | | 0.16 | | | | 0.09 | | | 0.17 | | | 0.18 | | | | 0.14 | | | 0.17 | | | | 0.17 | | | 0.14 | | | 0.17 | | | 0.11 | | | 0.14 | | 0.15 | | 0.15 | | | 0.20 |
| CaO | 0.04 | | | | 0.02 | | | 0.28 | | | | 0.30 | | | 0.27 | | | 0.24 | | | | 0.25 | | | 0.27 | | | | 0.28 | | | 0.25 | | | 0.29 | | | 0.27 | | | 0.23 | | 0.23 | | 0.25 | | | 0.29 |
| Total |  | | | |  | | | 99.13 | | | | 99.29 | | | 99.62 | | | 101.08 | | | | 99.46 | | | 99.20 | | | | 99.09 | | | 100.21 | | | 99.16 | | | 99.15 | | | 100.25 | | 100.36 | | 99.94 | | | 100.45 |
| Fo% |  | | | |  | | | 77.84 | | | | 77.81 | | | 77.44 | | | 77.97 | | | | 77.71 | | | 77.72 | | | | 77.04 | | | 77.55 | | | 77.51 | | | 77.28 | | | 77.73 | | 77.70 | | 77.50 | | | 77.48 |
| Label1 | LOD2 | | | | SD3 | | | M-045A-D3-7 | | | | M-045A-D3-8 | | | M-045A-D3-9 | | | M-045A-D3-10 | | | | M-045A-D3-11 | | | A-168-D1-1 | | | | A-168-D1-2 | | | A-168-D1-3 | | | A-168-D3-1 | | | A-168-D3-2 | | | A-168-D3-3 | | A-168-D2-1 | | A-168-D2-2 | | | A-168-D2-3 |
| Phenocrysts | | | | |  | | | OPA | | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | OPA | | | OPA |
| Rock Type |  | | | |  | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Dyke | | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | Dyke | | | Dyke |
| Mineral Type | | | | |  | | | GM | | | | GM | | | GM | | | GM | | | | GM | | | GM | | | | GM | | | GM | | | GM | | | GM | | | GM | | GM | | GM | | | GM |
| SiO2 | 0.06 | | | | 0.19 | | | 38.44 | | | | 38.74 | | | 38.42 | | | 38.19 | | | | 38.56 | | | 37.94 | | | | 37.95 | | | 37.49 | | | 38.02 | | | 38.28 | | | 38.70 | | 38.03 | | 38.15 | | | 38.08 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.06 | | | | 0.01 | | | 0.00 | | | 0.05 | | | | 0.04 | | | 0.04 | | | | 0.00 | | | 0.01 | | | 0.02 | | | 0.02 | | | 0.02 | | 0.02 | | 0.00 | | | 0.02 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.06 | | | | 0.02 | | | 0.01 | | | 0.08 | | | | 0.02 | | | 0.03 | | | | 0.03 | | | 0.05 | | | 0.00 | | | 0.01 | | | 0.02 | | 0.00 | | 0.04 | | | 0.05 |
| FeO | 0.09 | | | | 0.38 | | | 20.64 | | | | 20.71 | | | 20.66 | | | 20.21 | | | | 20.43 | | | 21.02 | | | | 21.22 | | | 20.72 | | | 20.95 | | | 20.89 | | | 20.78 | | 20.69 | | 20.55 | | | 20.28 |
| MgO | 0.06 | | | | 0.27 | | | 39.92 | | | | 40.42 | | | 39.85 | | | 40.10 | | | | 40.30 | | | 39.79 | | | | 39.71 | | | 39.37 | | | 39.95 | | | 40.05 | | | 40.30 | | 40.15 | | 40.34 | | | 40.04 |
| MnO | 0.09 | | | | 0.05 | | | 0.28 | | | | 0.29 | | | 0.28 | | | 0.26 | | | | 0.29 | | | 0.32 | | | | 0.30 | | | 0.28 | | | 0.30 | | | 0.23 | | | 0.32 | | 0.31 | | 0.27 | | | 0.32 |
| NiO | 0.11 | | | | 0.06 | | | 0.16 | | | | 0.18 | | | 0.17 | | | 0.15 | | | | 0.17 | | | 0.15 | | | | 0.09 | | | 0.15 | | | 0.15 | | | 0.19 | | | 0.11 | | 0.11 | | 0.12 | | | 0.11 |
| CaO | 0.04 | | | | 0.02 | | | 0.27 | | | | 0.27 | | | 0.22 | | | 0.26 | | | | 0.28 | | | 0.23 | | | | 0.23 | | | 0.24 | | | 0.27 | | | 0.27 | | | 0.25 | | 0.22 | | 0.22 | | | 0.22 |
| Total |  | | | |  | | | 99.82 | | | | 100.64 | | | 99.61 | | | 99.30 | | | | 100.08 | | | 99.54 | | | | 99.53 | | | 98.32 | | | 99.65 | | | 99.95 | | | 100.51 | | 99.53 | | 99.68 | | | 99.13 |
| Fo% |  | | | |  | | | 77.52 | | | | 77.68 | | | 77.47 | | | 77.96 | | | | 77.86 | | | 77.14 | | | | 76.94 | | | 77.20 | | | 77.27 | | | 77.37 | | | 77.56 | | 77.57 | | 77.77 | | | 77.87 |
| Label1 | LOD2 | | | | SD3 | | | A-168-D2-4 | | | | A-168-D2-5 | | | A-178-C1-1 | | | A-178-C1-2 | | | | A-178-C1-3 | | | A-178-C1-4 | | | | A-178-C1-5 | | | A-178-C1-6 | | | A-178-C1-7 | | | A-178-C1-8 | | | A-178-C1-9 | | A-178-C2-7 | | A-178-C2-8 | | | A-178-C2-9 |
| Phenocrysts | | | | |  | | | OPA | | | | OPA | | | OP | | | OP | | | | OP | | | OP | | | | OP | | | OP | | | OP | | | OP | | | OP | | OP | | OP | | | OP |
| Rock Type |  | | | |  | | | Dyke | | | | Dyke | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | Pillow Lava | | | Pillow Lava |
| Mineral Type | | | | |  | | | GM | | | | GM | | | PC | | | PC | | | | PC | | | PC | | | | PC | | | PC | | | PC | | | PC | | | PC | | PC | | PC | | | PC |
| SiO2 | 0.06 | | | | 0.19 | | | 38.24 | | | | 38.31 | | | 39.04 | | | 38.70 | | | | 38.58 | | | 38.62 | | | | 38.90 | | | 38.98 | | | 38.84 | | | 39.10 | | | 38.84 | | 39.00 | | 38.97 | | | 38.85 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.02 | | | | 0.02 | | | 0.00 | | | 0.03 | | | | 0.03 | | | 0.03 | | | | 0.00 | | | 0.02 | | | 0.00 | | | 0.00 | | | 0.02 | | 0.02 | | 0.00 | | | 0.01 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.00 | | | | 0.02 | | | 0.00 | | | 0.02 | | | | 0.02 | | | 0.01 | | | | 0.04 | | | 0.01 | | | 0.03 | | | 0.02 | | | 0.00 | | 0.03 | | 0.01 | | | 0.01 |
| FeO | 0.09 | | | | 0.38 | | | 20.97 | | | | 20.78 | | | 19.44 | | | 19.90 | | | | 19.78 | | | 19.84 | | | | 19.83 | | | 19.93 | | | 19.84 | | | 19.96 | | | 19.37 | | 18.44 | | 18.47 | | | 20.01 |
| MgO | 0.06 | | | | 0.27 | | | 39.90 | | | | 39.94 | | | 40.80 | | | 41.34 | | | | 41.07 | | | 41.22 | | | | 40.94 | | | 41.06 | | | 41.19 | | | 40.98 | | | 41.22 | | 42.13 | | 41.87 | | | 40.96 |
| MnO | 0.09 | | | | 0.05 | | | 0.24 | | | | 0.27 | | | 0.27 | | | 0.32 | | | | 0.26 | | | 0.25 | | | | 0.25 | | | 0.30 | | | 0.25 | | | 0.26 | | | 0.25 | | 0.26 | | 0.25 | | | 0.30 |
| NiO | 0.11 | | | | 0.06 | | | 0.15 | | | | 0.12 | | | 0.17 | | | 0.14 | | | | 0.18 | | | 0.15 | | | | 0.18 | | | 0.18 | | | 0.15 | | | 0.18 | | | 0.12 | | 0.26 | | 0.24 | | | 0.11 |
| CaO | 0.04 | | | | 0.02 | | | 0.28 | | | | 0.26 | | | 0.26 | | | 0.25 | | | | 0.21 | | | 0.24 | | | | 0.26 | | | 0.27 | | | 0.27 | | | 0.23 | | | 0.25 | | 0.21 | | 0.19 | | | 0.27 |
| Total |  | | | |  | | | 99.82 | | | | 99.71 | | | 99.99 | | | 100.69 | | | | 100.15 | | | 100.37 | | | | 100.39 | | | 100.76 | | | 100.58 | | | 100.73 | | | 100.07 | | 100.35 | | 100.00 | | | 100.53 |
| Fo% |  | | | |  | | | 77.23 | | | | 77.41 | | | 78.91 | | | 78.74 | | | | 78.73 | | | 78.74 | | | | 78.63 | | | 78.60 | | | 78.72 | | | 78.54 | | | 79.14 | | 80.29 | | 80.16 | | | 78.49 |
| Label1 | LOD2 | | | | SD3 | | | A-178-C2-10 | | | | A-182-C2-1 | | | A-182-C2-2 | | | A-182-C2-3 | | | | A-182-C2-4 | | | A-182-C2-5 | | | | A-182-C2-6 | | | A-182-C2-7 | | | A-182-C2-8 | | | A-182-C2-9 | | | A-182-C4-4 | | A-182-C4-5 | | A-182-C4-6 | | | A-182-C4-10 |
| Phenocrysts | | | | |  | | | OP | | | | OP | | | OP | | | OP | | | | OP | | | OP | | | | OP | | | OP | | | OP | | | OP | | | OP | | OP | | OP | | | OP |
| Rock Type |  | | | |  | | | Pillow Lava | | | | Dyke | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | Dyke | | | Dyke |
| Mineral Type | | | | |  | | | PC | | | | PC | | | PC | | | PC | | | | PC | | | PC | | | | PC | | | PC | | | PC | | | PC | | | PC | | PC | | PC | | | PC |
| SiO2 | 0.06 | | | | 0.19 | | | 38.40 | | | | 38.74 | | | 38.78 | | | 38.51 | | | | 38.51 | | | 38.75 | | | | 38.51 | | | 38.44 | | | 38.52 | | | 38.50 | | | 40.06 | | 39.35 | | 39.58 | | | 39.29 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.00 | | | | 0.02 | | | 0.00 | | | 0.00 | | | | 0.02 | | | 0.02 | | | | 0.00 | | | 0.00 | | | 0.02 | | | 0.00 | | | 0.00 | | 0.02 | | 0.01 | | | 0.04 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.02 | | | | 0.02 | | | 0.01 | | | 0.04 | | | | 0.04 | | | 0.00 | | | | 0.03 | | | 0.00 | | | 0.01 | | | 0.02 | | | 0.01 | | 0.01 | | 0.01 | | | 0.02 |
| FeO | 0.09 | | | | 0.38 | | | 19.74 | | | | 19.87 | | | 19.69 | | | 19.68 | | | | 19.92 | | | 19.83 | | | | 20.14 | | | 19.93 | | | 19.83 | | | 20.22 | | | 16.52 | | 16.10 | | 16.33 | | | 17.52 |
| MgO | 0.06 | | | | 0.27 | | | 40.95 | | | | 40.80 | | | 40.91 | | | 41.04 | | | | 41.04 | | | 41.08 | | | | 41.04 | | | 40.51 | | | 40.78 | | | 41.01 | | | 43.87 | | 44.48 | | 43.85 | | | 43.00 |
| MnO | 0.09 | | | | 0.05 | | | 0.25 | | | | 0.25 | | | 0.28 | | | 0.28 | | | | 0.30 | | | 0.28 | | | | 0.27 | | | 0.32 | | | 0.27 | | | 0.30 | | | 0.24 | | 0.17 | | 0.24 | | | 0.18 |
| NiO | 0.11 | | | | 0.06 | | | 0.19 | | | | 0.18 | | | 0.22 | | | 0.16 | | | | 0.17 | | | 0.13 | | | | 0.25 | | | 0.14 | | | 0.18 | | | 0.15 | | | 0.23 | | 0.32 | | 0.21 | | | 0.29 |
| CaO | 0.04 | | | | 0.02 | | | 0.25 | | | | 0.26 | | | 0.23 | | | 0.26 | | | | 0.25 | | | 0.28 | | | | 0.27 | | | 0.28 | | | 0.26 | | | 0.26 | | | 0.23 | | 0.22 | | 0.20 | | | 0.20 |
| Total |  | | | |  | | | 99.80 | | | | 100.13 | | | 100.13 | | | 99.97 | | | | 100.25 | | | 100.37 | | | | 100.52 | | | 99.62 | | | 99.86 | | | 100.47 | | | 101.16 | | 100.68 | | 100.44 | | | 100.55 |
| Fo% |  | | | |  | | | 78.72 | | | | 78.54 | | | 78.74 | | | 78.80 | | | | 78.60 | | | 78.69 | | | | 78.41 | | | 78.37 | | | 78.56 | | | 78.33 | | | 82.56 | | 83.12 | | 82.72 | | | 81.40 |
| Label1 | LOD2 | | | | SD3 | | | A-182-C4-11 | | | | A-178-C2-1 | | | A-178-C2-2 | | | A-178-C2-3 | | | | A-178-C2-4 | | | A-178-C2-5 | | | | A-178-C2-6 | | | A-182-C4-1 | | | A-182-C4-2 | | | A-182-C4-3 | | | A-182-C4-7 | | A-182-C4-8 | | A-182-C4-9 | | | A-182-D1-1 |
| Phenocrysts | | | | |  | | | OP | | | | OP | | | OP | | | OP | | | | OP | | | OP | | | | OP | | | OP | | | OP | | | OP | | | OP | | OP | | OP | | | OP |
| Rock Type |  | | | |  | | | Dyke | | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | Dyke | | | Dyke |
| Mineral Type | | | | |  | | | PC | | | | PR | | | PR | | | PR | | | | PR | | | PR | | | | PR | | | PR | | | PR | | | PR | | | PR | | PR | | PR | | | GM |
| SiO2 | 0.06 | | | | 0.19 | | | 39.45 | | | | 39.43 | | | 39.34 | | | 38.81 | | | | 39.26 | | | 39.07 | | | | 38.61 | | | 39.04 | | | 39.24 | | | 39.40 | | | 38.65 | | 38.53 | | 38.79 | | | 38.62 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.03 | | | | 0.01 | | | 0.04 | | | 0.00 | | | | 0.00 | | | 0.02 | | | | 0.05 | | | 0.01 | | | 0.03 | | | 0.00 | | | 0.03 | | 0.00 | | 0.03 | | | 0.00 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.03 | | | | 0.04 | | | 0.00 | | | 0.01 | | | | 0.00 | | | 0.00 | | | | 0.03 | | | 0.05 | | | 0.02 | | | 0.03 | | | 0.02 | | 0.05 | | 0.04 | | | 0.00 |
| FeO | 0.09 | | | | 0.38 | | | 16.21 | | | | 19.60 | | | 19.18 | | | 19.55 | | | | 19.32 | | | 19.55 | | | | 19.59 | | | 19.79 | | | 19.19 | | | 19.89 | | | 19.81 | | 19.98 | | 20.09 | | | 20.03 |
| MgO | 0.06 | | | | 0.27 | | | 44.39 | | | | 41.54 | | | 41.36 | | | 41.01 | | | | 41.22 | | | 41.26 | | | | 41.44 | | | 41.63 | | | 41.94 | | | 41.79 | | | 40.82 | | 40.48 | | 40.87 | | | 40.83 |
| MnO | 0.09 | | | | 0.05 | | | 0.19 | | | | 0.22 | | | 0.26 | | | 0.28 | | | | 0.31 | | | 0.24 | | | | 0.26 | | | 0.26 | | | 0.27 | | | 0.24 | | | 0.26 | | 0.23 | | 0.24 | | | 0.30 |
| NiO | 0.11 | | | | 0.06 | | | 0.23 | | | | 0.17 | | | 0.19 | | | 0.09 | | | | 0.17 | | | 0.24 | | | | 0.21 | | | 0.13 | | | 0.27 | | | 0.12 | | | 0.18 | | 0.18 | | 0.17 | | | 0.13 |
| CaO | 0.04 | | | | 0.02 | | | 0.23 | | | | 0.27 | | | 0.28 | | | 0.27 | | | | 0.24 | | | 0.27 | | | | 0.27 | | | 0.23 | | | 0.21 | | | 0.25 | | | 0.23 | | 0.28 | | 0.29 | | | 0.24 |
| Total |  | | | |  | | | 100.73 | | | | 101.30 | | | 100.66 | | | 100.02 | | | | 100.53 | | | 100.66 | | | | 100.46 | | | 101.14 | | | 101.17 | | | 101.72 | | | 100.00 | | 99.73 | | 100.53 | | | 100.15 |
| Fo% |  | | | |  | | | 83.00 | | | | 79.07 | | | 79.36 | | | 78.90 | | | | 79.18 | | | 79.00 | | | | 79.04 | | | 78.94 | | | 79.58 | | | 78.93 | | | 78.60 | | 78.32 | | 78.38 | | | 78.41 |
| Label1 | LOD2 | | | | SD3 | | | A-18-D1-2 | | | | A-182-D1-3 | | | A-182-D1-4 | | | A-182-D1-5 | | | | A-182-D1-6 | | | A-182-D1-7 | | | | A-182-D2-14 | | | A-182-D2-15 | | | A-182-D2-16 | | | A-182-D2-17 | | | A-178-D1-6 | | A-178-D1-7 | | A-178-D1-8 | | | A-178-D2-1 |
| Phenocrysts | | | | |  | | | OP | | | | OP | | | OP | | | OP | | | | OP | | | OP | | | | OP | | | OP | | | OP | | | OP | | | OP | | OP | | OP | | | OP |
| Rock Type |  | | | |  | | | Dyke | | | | Dyke | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Pillow Lava | | Pillow Lava | | Pillow Lava | | | Pillow Lava |
| Mineral Type | | | | |  | | | GM | | | | GM | | | GM | | | GM | | | | GM | | | GM | | | | GM | | | GM | | | GM | | | GM | | | GM | | GM | | GM | | | GM |
| SiO2 | 0.06 | | | | 0.19 | | | 38.23 | | | | 38.26 | | | 38.73 | | | 37.84 | | | | 38.18 | | | 37.60 | | | | 38.42 | | | 38.20 | | | 39.29 | | | 38.91 | | | 37.67 | | 37.77 | | 38.36 | | | 39.00 |
| TiO2 | 0.05 | | | | 0.01 | | | 0.01 | | | | 0.03 | | | 0.00 | | | 0.04 | | | | 0.02 | | | 0.04 | | | | 0.01 | | | 0.06 | | | 0.01 | | | 0.02 | | | 0.06 | | 0.02 | | 0.00 | | | 0.01 |
| Al2O3 | 0.05 | | | | 0.01 | | | 0.06 | | | | 0.06 | | | 0.00 | | | 0.03 | | | | 0.00 | | | 0.02 | | | | 0.04 | | | 0.02 | | | 0.02 | | | 0.04 | | | 0.03 | | 0.04 | | 0.00 | | | 0.05 |
| FeO | 0.09 | | | | 0.38 | | | 19.82 | | | | 19.89 | | | 19.78 | | | 19.66 | | | | 20.26 | | | 21.36 | | | | 20.17 | | | 20.57 | | | 19.96 | | | 20.11 | | | 22.28 | | 23.07 | | 22.65 | | | 20.20 |
| MgO | 0.06 | | | | 0.27 | | | 41.33 | | | | 40.45 | | | 40.82 | | | 40.21 | | | | 40.52 | | | 39.31 | | | | 40.25 | | | 39.94 | | | 40.94 | | | 40.92 | | | 38.06 | | 37.97 | | 38.31 | | | 41.20 |
| MnO | 0.09 | | | | 0.05 | | | 0.23 | | | | 0.22 | | | 0.27 | | | 0.29 | | | | 0.31 | | | 0.35 | | | | 0.31 | | | 0.27 | | | 0.27 | | | 0.28 | | | 0.26 | | 0.31 | | 0.36 | | | 0.29 |
| NiO | 0.11 | | | | 0.06 | | | 0.13 | | | | 0.13 | | | 0.13 | | | 0.15 | | | | 0.11 | | | 0.16 | | | | 0.16 | | | 0.13 | | | 0.17 | | | 0.13 | | | 0.16 | | 0.09 | | 0.15 | | | 0.17 |
| CaO | 0.04 | | | | 0.02 | | | 0.22 | | | | 0.25 | | | 0.27 | | | 0.25 | | | | 0.24 | | | 0.28 | | | | 0.28 | | | 0.26 | | | 0.26 | | | 0.29 | | | 0.34 | | 0.33 | | 0.32 | | | 0.24 |
| Total |  | | | |  | | | 100.04 | | | | 99.29 | | | 100.00 | | | 98.48 | | | | 99.65 | | | 99.13 | | | | 99.64 | | | 99.45 | | | 100.91 | | | 100.71 | | | 98.86 | | 99.60 | | 100.15 | | | 101.16 |
| Fo% |  | | | |  | | | 78.80 | | | | 78.38 | | | 78.62 | | | 78.47 | | | | 78.10 | | | 76.64 | | | | 78.06 | | | 77.59 | | | 78.52 | | | 78.39 | | | 75.28 | | 74.57 | | 75.10 | | | 78.43 |
| Label1 | | | LOD2 | | | SD3 | | | A-178-D2-2 | | A-178-D2-3 | | | A-178-D2-4 | | | A-178-D3-1 | | | A-178-D3-2 | | | A-178-D3-3 | | | A-178-D3-4 | | A-178-D3-5 | | | A-178-D3-6 | | | A-178-D3-7 | | A-178-D3-8 | | |
| Phenocrysts | | | | | |  | | | OP | | OP | | | OP | | | OP | | | OP | | | OP | | | OP | | OP | | | OP | | | OP | | OP | | |
| Rock Type | | |  | | |  | | | Pillow Lava | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | |
| Mineral Type | | | | | |  | | | GM | | GM | | | GM | | | GM | | | GM | | | GM | | | GM | | GM | | | GM | | | GM | | GM | | |
| SiO2 | | | 0.06 | | | 0.19 | | | 38.58 | | 38.40 | | | 38.53 | | | 38.54 | | | 37.92 | | | 37.46 | | | 38.37 | | 38.55 | | | 38.24 | | | 38.34 | | 37.92 | | |
| TiO2 | | | 0.05 | | | 0.01 | | | 0.04 | | 0.03 | | | 0.00 | | | 0.02 | | | 0.03 | | | 0.03 | | | 0.02 | | 0.02 | | | 0.04 | | | 0.07 | | 0.02 | | |
| Al2O3 | | | 0.05 | | | 0.01 | | | 0.05 | | 0.02 | | | 0.00 | | | 0.01 | | | 0.03 | | | 0.03 | | | 0.02 | | 0.04 | | | 0.02 | | | 0.05 | | 0.00 | | |
| FeO | | | 0.09 | | | 0.38 | | | 20.13 | | 19.85 | | | 20.47 | | | 22.20 | | | 24.03 | | | 24.57 | | | 19.96 | | 20.05 | | | 22.93 | | | 21.53 | | 22.51 | | |
| MgO | | | 0.06 | | | 0.27 | | | 40.69 | | 40.61 | | | 40.65 | | | 39.01 | | | 37.59 | | | 36.81 | | | 40.67 | | 41.21 | | | 38.46 | | | 39.14 | | 38.16 | | |
| MnO | | | 0.09 | | | 0.05 | | | 0.29 | | 0.23 | | | 0.25 | | | 0.34 | | | 0.35 | | | 0.37 | | | 0.30 | | 0.24 | | | 0.34 | | | 0.26 | | 0.30 | | |
| NiO | | | 0.11 | | | 0.06 | | | 0.16 | | 0.18 | | | 0.15 | | | 0.15 | | | 0.15 | | | 0.13 | | | 0.12 | | 0.17 | | | 0.12 | | | 0.14 | | 0.14 | | |
| CaO | | | 0.04 | | | 0.02 | | | 0.25 | | 0.28 | | | 0.25 | | | 0.26 | | | 0.28 | | | 0.26 | | | 0.26 | | 0.26 | | | 0.32 | | | 0.33 | | 0.32 | | |
| Total | | |  | | |  | | | 100.20 | | 99.60 | | | 100.30 | | | 100.52 | | | 100.37 | | | 99.66 | | | 99.72 | | 100.54 | | | 100.46 | | | 99.85 | | 99.38 | | |
| Fo% | | |  | | |  | | | 78.27 | | 78.48 | | | 77.98 | | | 75.80 | | | 73.61 | | | 72.75 | | | 78.41 | | 78.56 | | | 74.93 | | | 76.42 | | 75.14 | | |
| 1 Samples starting with 'M' retain full prefix of MH-20, labels starting with 'A' retain full prefix of AW-15. Sample label format: "sample # - grain # - analysis #" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 Limit of detection | | | | | | | | |  | |  | | |  | | |  | | |  | | |  | | |  | |  | | |  | | |  | |  | | |
| 3Analytical uncertainty given as 2σ | | | | | | | | | | |  | | |  | | |  | | |  | | |  | | |  | |  | | |  | | |  | |  | | |
|  | | | |
|  | | | |
| **Table B2**: Electron Microprobe (EMP) major element analyses (wt. %) of CM plagioclase phenocryst Cores (PC), phenocryst rims (PR), and groundmass phases (GM). Analyses conducted at University of British Columbia, Vancouver, Canada. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plagioclase Analyses | | | | | | |  | | |  | | |  | | |  | | |  | |  | | |  | | |  | | |  | | |  | | | |  | | |  | |  | |  | |  |
| Total number of plagioclase analyses: 132 | | | | | | | | | | | | |  | | |  | | |  | |  | | |  | | |  | | |  | | |  | | | |  | | |  | |  | |  | |  |
| Label1 | | LOD2 | | | | | SD3 | | | M-045A-C2-1 | | | M-045A-C2-2 | | | M-045A-C2-5 | | | M-045A-C2-6 | | M-045A-C2-7 | | | M-045A-C2-8 | | | M-045A-C2-9 | | | M-045A-C2-10 | | | M-045A-C3-4 | | | | M-045A-C3-5 | | | A-168-C3-1 | | M-045A-C3-1 | | A-168-C3-2 | | A-168-C3-4 |
| Phenocrysts | | | | | | |  | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | OPA | | OPA | | OPA |
| Rock Type | |  | | | | |  | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | Dyke | | Dyke |
| Mineral Type | | | | | | |  | | | PC | | | PC | | | PC | | | PC | | PC | | | PC | | | PC | | | PC | | | PC | | | | PC | | | PC | | PC | | PC | | PC |
| SiO2 | | 0.06 | | | | | 0.21 | | | 52.79 | | | 52.84 | | | 52.33 | | | 51.78 | | 51.89 | | | 53.17 | | | 52.91 | | | 52.36 | | | 52.85 | | | | 52.85 | | | 51.75 | | 54.66 | | 52.66 | | 51.28 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 29.66 | | | 29.27 | | | 28.73 | | | 28.68 | | 29.13 | | | 28.71 | | | 28.75 | | | 29.24 | | | 29.12 | | | | 28.87 | | | 28.77 | | 28.82 | | 28.76 | | 28.89 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.63 | | | 0.66 | | | 0.67 | | | 0.57 | | 0.59 | | | 0.56 | | | 0.59 | | | 0.65 | | | 0.62 | | | | 0.60 | | | 0.59 | | 0.52 | | 0.64 | | 0.65 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.15 | | | 0.19 | | | 0.08 | | | 0.14 | | 0.14 | | | 0.12 | | | 0.16 | | | 0.11 | | | 0.17 | | | | 0.12 | | | 0.12 | | 0.15 | | 0.13 | | 0.13 |
| CaO | | 0.04 | | | | | 0.13 | | | 12.92 | | | 12.58 | | | 12.18 | | | 12.25 | | 12.67 | | | 11.89 | | | 12.45 | | | 12.59 | | | 12.46 | | | | 12.44 | | | 12.22 | | 12.06 | | 12.17 | | 12.34 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.00 | | | 4.21 | | | 4.35 | | | 4.42 | | 4.07 | | | 4.47 | | | 4.18 | | | 4.19 | | | 4.32 | | | | 4.25 | | | 4.43 | | 4.49 | | 4.25 | | 4.18 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.12 | | | 0.13 | | | 0.13 | | | 0.11 | | 0.11 | | | 0.11 | | | 0.13 | | | 0.12 | | | 0.12 | | | | 0.10 | | | 0.11 | | 0.14 | | 0.12 | | 0.12 |
| Total | |  | | | | |  | | | 100.28 | | | 99.87 | | | 98.45 | | | 97.95 | | 98.59 | | | 99.02 | | | 99.17 | | | 99.26 | | | 99.65 | | | | 99.23 | | | 98.00 | | 100.83 | | 98.73 | | 97.60 |
| An% | |  | | | | |  | | | 63.65 | | | 61.85 | | | 60.29 | | | 60.12 | | 62.86 | | | 59.15 | | | 61.71 | | | 61.98 | | | 61.02 | | | | 61.46 | | | 59.98 | | 59.27 | | 60.87 | | 61.53 |
| Label1 | | LOD2 | | | | | SD3 | | | A-168-C3-6 | | | A-168-C3-7 | | | A-168-C4-2 | | | A-168-C4-3 | | A-168-C4-5 | | | M-045A-C2-4 | | | M-045A-C3-2 | | | M-045A-C3-6 | | | M-045A-C3-8 | | | | M-045A-C3-9 | | | M-045A-C3-10 | | M-045A-C3-11 | | M-045A-C3-12 | | A-168-C3-3 |
| Phenocrysts | | | | | | |  | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | OPA | | OPA | | OPA |
| Rock Type | |  | | | | |  | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Dyke |
| Mineral Type | | | | | | |  | | | PC | | | PC | | | PC | | | PC | | PC | | | PR | | | PR | | | PR | | | PR | | | | PR | | | PR | | PR | | PR | | PR |
| SiO2 | | 0.06 | | | | | 0.21 | | | 52.01 | | | 51.34 | | | 50.77 | | | 52.41 | | 52.34 | | | 53.33 | | | 53.84 | | | 53.73 | | | 54.42 | | | | 53.52 | | | 53.03 | | 53.81 | | 53.22 | | 52.51 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 28.61 | | | 28.79 | | | 28.94 | | | 29.33 | | 29.03 | | | 28.82 | | | 28.96 | | | 28.28 | | | 28.56 | | | | 28.70 | | | 28.90 | | 29.09 | | 28.99 | | 28.94 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.56 | | | 0.68 | | | 0.60 | | | 0.63 | | 0.60 | | | 0.59 | | | 0.68 | | | 0.67 | | | 0.59 | | | | 0.61 | | | 0.66 | | 0.67 | | 0.72 | | 0.74 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.13 | | | 0.12 | | | 0.12 | | | 0.12 | | 0.14 | | | 0.14 | | | 0.11 | | | 0.13 | | | 0.11 | | | | 0.14 | | | 0.16 | | 0.09 | | 0.14 | | 0.11 |
| CaO | | 0.04 | | | | | 0.13 | | | 12.16 | | | 12.83 | | | 12.62 | | | 12.71 | | 12.46 | | | 12.29 | | | 12.31 | | | 11.72 | | | 11.93 | | | | 11.99 | | | 12.27 | | 12.21 | | 12.23 | | 12.05 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.33 | | | 4.07 | | | 4.20 | | | 4.14 | | 4.14 | | | 4.37 | | | 4.37 | | | 4.56 | | | 4.47 | | | | 4.62 | | | 4.34 | | 4.46 | | 4.48 | | 4.46 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.15 | | | 0.10 | | | 0.12 | | | 0.11 | | 0.12 | | | 0.11 | | | 0.12 | | | 0.13 | | | 0.13 | | | | 0.11 | | | 0.13 | | 0.12 | | 0.15 | | 0.12 |
| Total | |  | | | | |  | | | 97.94 | | | 97.94 | | | 97.37 | | | 99.44 | | 98.85 | | | 99.65 | | | 100.37 | | | 99.20 | | | 100.21 | | | | 99.69 | | | 99.49 | | 100.44 | | 99.93 | | 98.94 |
| An% | |  | | | | |  | | | 60.31 | | | 63.15 | | | 61.99 | | | 62.53 | | 61.98 | | | 60.45 | | | 60.45 | | | 58.25 | | | 59.15 | | | | 58.53 | | | 60.48 | | 59.79 | | 59.61 | | 59.44 |
| Label1 | | LOD2 | | | | | SD3 | | | A-168-C4-4 | | | A-168-C4-6 | | | M-045A-D1-7 | | | M-045A-D1-8 | | M-045A-D1-9 | | | M-045A-D1-10 | | | M-045A-D1-11 | | | M-045A-D2-1 | | | M-045A-D2-2 | | | | M-045A-D2-3 | | | M-045A-D2-4 | | M-045A-D2-5 | | M-045A-D3-1 | | M-045A-D3-2 |
| Phenocrysts | | | | | | |  | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | OPA | | OPA | | OPA |
| Rock Type | |  | | | | |  | | | Dyke | | | Dyke | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava |
| Mineral Type | | | | | | |  | | | PR | | | PR | | | GM | | | GM | | GM | | | GM | | | GM | | | GM | | | GM | | | | GM | | | GM | | GM | | GM | | GM |
| SiO2 | | 0.06 | | | | | 0.21 | | | 53.27 | | | 51.69 | | | 53.45 | | | 54.04 | | 53.73 | | | 54.78 | | | 52.46 | | | 52.92 | | | 53.55 | | | | 52.99 | | | 52.42 | | 52.47 | | 52.56 | | 53.20 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 29.03 | | | 29.53 | | | 29.24 | | | 29.00 | | 28.94 | | | 28.25 | | | 29.04 | | | 29.65 | | | 28.66 | | | | 28.62 | | | 28.91 | | 28.84 | | 28.90 | | 28.99 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.61 | | | 0.64 | | | 0.82 | | | 0.83 | | 0.84 | | | 0.87 | | | 0.75 | | | 0.78 | | | 0.82 | | | | 0.80 | | | 0.75 | | 0.78 | | 0.84 | | 0.80 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.07 | | | 0.12 | | | 0.15 | | | 0.14 | | 0.17 | | | 0.15 | | | 0.11 | | | 0.12 | | | 0.15 | | | | 0.14 | | | 0.10 | | 0.12 | | 0.15 | | 0.12 |
| CaO | | 0.04 | | | | | 0.13 | | | 12.21 | | | 13.09 | | | 12.43 | | | 12.41 | | 12.17 | | | 11.60 | | | 12.50 | | | 12.74 | | | 12.26 | | | | 12.31 | | | 12.25 | | 12.37 | | 12.11 | | 12.32 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.53 | | | 3.85 | | | 4.41 | | | 4.57 | | 4.43 | | | 4.82 | | | 4.19 | | | 4.12 | | | 4.59 | | | | 4.31 | | | 4.42 | | 4.30 | | 4.42 | | 4.45 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.14 | | | 0.09 | | | 0.13 | | | 0.12 | | 0.14 | | | 0.17 | | | 0.21 | | | 0.09 | | | 0.14 | | | | 0.11 | | | 0.12 | | 0.14 | | 0.11 | | 0.13 |
| Total | |  | | | | |  | | | 99.87 | | | 99.01 | | | 100.63 | | | 101.10 | | 100.41 | | | 100.64 | | | 99.24 | | | 100.42 | | | 100.16 | | | | 99.27 | | | 98.98 | | 99.04 | | 99.09 | | 100.00 |
| An% | |  | | | | |  | | | 59.34 | | | 64.93 | | | 60.44 | | | 59.62 | | 59.80 | | | 56.53 | | | 61.51 | | | 62.80 | | | 59.15 | | | | 60.84 | | | 60.03 | | 60.86 | | 59.82 | | 60.03 |
| Label1 | | LOD2 | | | | | SD3 | | | M-045A-D3-3 | | | M-045A-D3-4 | | | M-045A-D3-5 | | | A-168-D4-1 | | A-168-D4-3 | | | A-168-D4-4 | | | A-168-D4-5 | | | A-168-D4-6 | | | A-168-D3-4 | | | | A-168-D3-5 | | | A-168-D3-6 | | A-168-D3-7 | | A-168-D2-6 | | A-168-D2-7 |
| Phenocrysts | | | | | | |  | | | OPA | | | OPA | | | OPA | | | OPA | | OPA | | | OPA | | | OPA | | | OPA | | | OPA | | | | OPA | | | OPA | | OPA | | OPA | | OPA |
| Rock Type | |  | | | | |  | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Dyke | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | Dyke | | Dyke | | Dyke |
| Mineral Type | | | | | | |  | | | GM | | | GM | | | GM | | | GM | | GM | | | GM | | | GM | | | GM | | | GM | | | | GM | | | GM | | GM | | GM | | GM |
| SiO2 | | 0.06 | | | | | 0.21 | | | 54.93 | | | 52.88 | | | 53.14 | | | 53.22 | | 53.50 | | | 54.68 | | | 53.78 | | | 54.84 | | | 56.35 | | | | 56.19 | | | 53.88 | | 54.34 | | 53.24 | | 53.62 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 27.57 | | | 29.06 | | | 28.84 | | | 28.18 | | 28.20 | | | 27.44 | | | 28.79 | | | 28.01 | | | 27.15 | | | | 26.95 | | | 28.54 | | 28.24 | | 29.22 | | 28.79 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 1.12 | | | 0.90 | | | 0.80 | | | 0.78 | | 0.75 | | | 0.79 | | | 0.91 | | | 0.94 | | | 1.02 | | | | 1.42 | | | 0.85 | | 0.98 | | 0.92 | | 0.72 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.20 | | | 0.13 | | | 0.10 | | | 0.15 | | 0.11 | | | 0.11 | | | 0.11 | | | 0.11 | | | 0.12 | | | | 0.08 | | | 0.14 | | 0.13 | | 0.16 | | 0.15 |
| CaO | | 0.04 | | | | | 0.13 | | | 10.69 | | | 12.48 | | | 12.37 | | | 11.75 | | 11.89 | | | 11.13 | | | 11.89 | | | 11.15 | | | 10.22 | | | | 9.94 | | | 11.97 | | 11.62 | | 12.46 | | 12.35 |
| Na2O | | 0.09 | | | | | 0.13 | | | 5.45 | | | 4.40 | | | 4.41 | | | 4.71 | | 4.33 | | | 5.41 | | | 4.71 | | | 5.15 | | | 5.82 | | | | 5.77 | | | 4.65 | | 4.77 | | 4.42 | | 4.44 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.17 | | | 0.10 | | | 0.14 | | | 0.13 | | 0.21 | | | 0.17 | | | 0.15 | | | 0.15 | | | 0.20 | | | | 0.21 | | | 0.15 | | 0.17 | | 0.13 | | 0.13 |
| Total | |  | | | | |  | | | 100.12 | | | 99.94 | | | 99.80 | | | 98.92 | | 99.00 | | | 99.73 | | | 100.35 | | | 100.36 | | | 100.87 | | | | 100.56 | | | 100.17 | | 100.24 | | 100.55 | | 100.18 |
| An% | |  | | | | |  | | | 51.52 | | | 60.71 | | | 60.32 | | | 57.51 | | 59.52 | | | 52.68 | | | 57.72 | | | 54.02 | | | 48.70 | | | | 48.18 | | | 58.20 | | 56.84 | | 60.45 | | 60.15 |
| Label1 | | LOD2 | | | | | SD3 | | | A-168-D2-8 | | | A-168-D2-9 | | | A-168-D2-10 | | | A-178-C3-2 | | A-178-C3-4 | | | A-178-C3-5 | | | A-178-C3-6 | | | A-178-C3-7 | | | A-178-C4-1 | | | | A-178-C4-2 | | | A-178-C4-3 | | A-178-C4-4 | | A-178-C4-5 | | A-178-C4-6 |
| Phenocrysts | | | | | | |  | | | OPA | | | OPA | | | OPA | | | OP | | OP | | | OP | | | OP | | | OP | | | OP | | | | OP | | | OP | | OP | | OP | | OP |
| Rock Type | |  | | | | |  | | | Dyke | | | Dyke | | | Dyke | | | Pillow Lava | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava |
| Mineral Type | | | | | | |  | | | GM | | | GM | | | GM | | | PC | | PC | | | PC | | | PC | | | PC | | | PC | | | | PC | | | PC | | PC | | PC | | PC |
| SiO2 | | 0.06 | | | | | 0.21 | | | 53.59 | | | 55.08 | | | 54.18 | | | 53.52 | | 52.78 | | | 51.80 | | | 52.63 | | | 52.92 | | | 53.20 | | | | 53.54 | | | 52.98 | | 52.07 | | 52.04 | | 53.20 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 28.65 | | | 28.32 | | | 28.73 | | | 29.46 | | 29.30 | | | 29.80 | | | 29.18 | | | 29.56 | | | 29.70 | | | | 29.24 | | | 29.52 | | 29.63 | | 29.81 | | 29.00 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.77 | | | 0.90 | | | 0.82 | | | 0.64 | | 0.58 | | | 0.63 | | | 0.53 | | | 0.62 | | | 0.62 | | | | 0.63 | | | 0.62 | | 0.60 | | 0.59 | | 0.68 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.10 | | | 0.14 | | | 0.16 | | | 0.10 | | 0.12 | | | 0.07 | | | 0.15 | | | 0.14 | | | 0.17 | | | | 0.13 | | | 0.16 | | 0.16 | | 0.13 | | 0.16 |
| CaO | | 0.04 | | | | | 0.13 | | | 11.80 | | | 11.57 | | | 11.96 | | | 12.73 | | 12.73 | | | 13.02 | | | 12.77 | | | 12.74 | | | 12.88 | | | | 12.42 | | | 12.76 | | 13.18 | | 12.93 | | 12.43 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.67 | | | 4.86 | | | 4.78 | | | 4.11 | | 4.09 | | | 3.87 | | | 4.23 | | | 4.24 | | | 4.23 | | | | 4.24 | | | 4.30 | | 3.93 | | 3.96 | | 4.37 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.14 | | | 0.16 | | | 0.17 | | | 0.12 | | 0.13 | | | 0.10 | | | 0.12 | | | 0.14 | | | 0.16 | | | | 0.12 | | | 0.13 | | 0.13 | | 0.11 | | 0.12 |
| Total | |  | | | | |  | | | 99.72 | | | 101.03 | | | 100.80 | | | 100.69 | | 99.73 | | | 99.30 | | | 99.61 | | | 100.36 | | | 100.95 | | | | 100.33 | | | 100.46 | | 99.69 | | 99.56 | | 99.96 |
| An% | |  | | | | |  | | | 57.83 | | | 56.26 | | | 57.50 | | | 62.68 | | 62.80 | | | 64.65 | | | 62.11 | | | 61.95 | | | 62.18 | | | | 61.38 | | | 61.66 | | 64.49 | | 63.94 | | 60.67 |
| Label1 | | LOD2 | | | | | SD3 | | | A-178-C4-7 | | | A-178-C4-8 | | | A-178-C4-9 | | | A-182-C1-1 | | A-182-C1-2 | | | A-182-C1-4 | | | A-182-C1-5 | | | A-182-C1-6 | | | A-182-C1-7 | | | | A-182-C1-10 | | | A-182-C3-7 | | A-182-C3-8 | | A-182-C3-9 | | A-178-C3-1 |
| Phenocrysts | | | | | | |  | | | OP | | | OP | | | OP | | | OP | | OP | | | OP | | | OP | | | OP | | | OP | | | | OP | | | OP | | OP | | OP | | OP |
| Rock Type | |  | | | | |  | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Dyke | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | Dyke | | Dyke | | Pillow Lava |
| Mineral Type | | | | | | |  | | | PC | | | PC | | | PC | | | PC | | PC | | | PC | | | PC | | | PC | | | PC | | | | PC | | | PC | | PC | | PC | | PR |
| SiO2 | | 0.06 | | | | | 0.21 | | | 52.51 | | | 52.02 | | | 53.32 | | | 52.79 | | 53.33 | | | 51.64 | | | 52.42 | | | 52.42 | | | 52.91 | | | | 53.22 | | | 52.81 | | 52.91 | | 53.65 | | 53.92 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 29.43 | | | 29.62 | | | 29.28 | | | 29.81 | | 29.37 | | | 29.59 | | | 28.36 | | | 29.26 | | | 29.54 | | | | 29.23 | | | 29.11 | | 29.76 | | 29.68 | | 29.24 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.65 | | | 0.60 | | | 0.67 | | | 0.73 | | 0.60 | | | 0.48 | | | 0.65 | | | 0.57 | | | 0.66 | | | | 0.57 | | | 0.66 | | 0.64 | | 0.59 | | 0.65 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.12 | | | 0.11 | | | 0.13 | | | 0.13 | | 0.12 | | | 0.11 | | | 0.16 | | | 0.15 | | | 0.16 | | | | 0.11 | | | 0.18 | | 0.11 | | 0.11 | | 0.13 |
| CaO | | 0.04 | | | | | 0.13 | | | 12.47 | | | 13.10 | | | 12.18 | | | 13.33 | | 12.52 | | | 13.11 | | | 12.10 | | | 12.37 | | | 12.52 | | | | 12.53 | | | 12.44 | | 12.84 | | 13.00 | | 12.43 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.26 | | | 3.90 | | | 4.40 | | | 3.94 | | 4.42 | | | 3.92 | | | 4.53 | | | 4.27 | | | 4.34 | | | | 4.36 | | | 4.22 | | 4.10 | | 4.14 | | 4.27 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.12 | | | 0.10 | | | 0.12 | | | 0.10 | | 0.15 | | | 0.12 | | | 0.13 | | | 0.13 | | | 0.11 | | | | 0.11 | | | 0.12 | | 0.12 | | 0.11 | | 0.13 |
| Total | |  | | | | |  | | | 99.57 | | | 99.45 | | | 100.11 | | | 100.83 | | 100.50 | | | 98.96 | | | 98.36 | | | 99.18 | | | 100.24 | | | | 100.13 | | | 99.55 | | 100.48 | | 101.26 | | 100.78 |
| An% | |  | | | | |  | | | 61.34 | | | 64.59 | | | 64.76 | | | 60.53 | | 64.45 | | | 59.14 | | | 61.10 | | | 61.07 | | | 60.95 | | | | 60.65 | | | 62.95 | | 63.06 | | 64.63 | | 61.21 |
| Label1 | | LOD2 | | | | | SD3 | | | A-178-C3-3 | | | A-178-C3-8 | | | A-178-C3-9 | | | A-178-C4-10 | | A-182-C1-3 | | | A-182-C1-8 | | | A-182-C1-9 | | | A-182-C3-1 | | | A-182-C3-3 | | | | A-182-C3-4 | | | A-182-C3-5 | | A-182-C3-6 | | A-182-C3-10 | | A-182-D2-1 |
| Phenocrysts | | | | | | |  | | | OP | | | OP | | | OP | | | OP | | OP | | | OP | | | OP | | | OP | | | OP | | | | OP | | | OP | | OP | | OP | | OP |
| Rock Type | |  | | | | |  | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | | Pillow Lava | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | Dyke | | Dyke | | Dyke |
| Mineral Type | | | | | | |  | | | PR | | | PR | | | PR | | | PR | | PR | | | PR | | | PR | | | PR | | | PR | | | | PR | | | PR | | PR | | PR | | GM |
| SiO2 | | 0.06 | | | | | 0.21 | | | 53.24 | | | 54.07 | | | 53.19 | | | 52.48 | | 52.44 | | | 52.41 | | | 53.51 | | | 52.83 | | | 52.57 | | | | 53.49 | | | 52.96 | | 53.62 | | 52.99 | | 53.05 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 29.15 | | | 29.56 | | | 29.77 | | | 29.60 | | 29.42 | | | 29.78 | | | 29.21 | | | 29.60 | | | 28.89 | | | | 29.85 | | | 29.42 | | 29.39 | | 29.46 | | 29.51 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.65 | | | 0.56 | | | 0.62 | | | 0.61 | | 0.67 | | | 0.66 | | | 0.62 | | | 0.60 | | | 0.58 | | | | 0.55 | | | 0.64 | | 0.82 | | 0.66 | | 0.67 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.14 | | | 0.12 | | | 0.15 | | | 0.11 | | 0.14 | | | 0.11 | | | 0.14 | | | 0.10 | | | 0.11 | | | | 0.11 | | | 0.15 | | 0.13 | | 0.14 | | 0.14 |
| CaO | | 0.04 | | | | | 0.13 | | | 12.34 | | | 12.89 | | | 13.23 | | | 12.78 | | 13.04 | | | 12.81 | | | 12.43 | | | 12.83 | | | 12.45 | | | | 13.04 | | | 12.65 | | 12.45 | | 12.65 | | 12.83 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.40 | | | 4.33 | | | 3.93 | | | 4.08 | | 4.12 | | | 3.94 | | | 4.25 | | | 4.12 | | | 4.27 | | | | 4.11 | | | 4.25 | | 4.42 | | 4.27 | | 4.08 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.12 | | | 0.12 | | | 0.11 | | | 0.10 | | 0.11 | | | 0.15 | | | 0.12 | | | 0.10 | | | 0.11 | | | | 0.11 | | | 0.10 | | 0.13 | | 0.11 | | 0.11 |
| Total | |  | | | | |  | | | 100.03 | | | 101.64 | | | 101.00 | | | 99.77 | | 99.96 | | | 99.86 | | | 100.28 | | | 100.19 | | | 98.98 | | | | 101.27 | | | 100.17 | | 100.95 | | 100.27 | | 100.39 |
| An% | |  | | | | |  | | | 60.37 | | | 61.81 | | | 60.04 | | | 62.99 | | 63.21 | | | 63.67 | | | 61.32 | | | 62.89 | | | 61.29 | | | | 63.24 | | | 61.84 | | 60.45 | | 61.71 | | 63.03 |
| Label1 | | LOD2 | | | | | SD3 | | | A-182-D2-2 | | | A-182-D2-3 | | | A-182-D2-4 | | | A-182-D2-5 | | A-182-D2-6 | | | A-182-D2-7 | | | A-182-D2-8 | | | A-182-D3-1 | | | A-182-D3-2 | | | | A-182-D3-3 | | | A-182-D3-4 | | A-182-D3-5 | | A-182-D3-6 | | A-182-D3-7 |
| Phenocrysts | | | | | | |  | | | OP | | | OP | | | OP | | | OP | | OP | | | OP | | | OP | | | OP | | | OP | | | | OP | | | OP | | OP | | OP | | OP |
| Rock Type | |  | | | | |  | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | | | Dyke | | | Dyke | | Dyke | | Dyke | | Dyke |
| Mineral Type | | | | | | |  | | | GM | | | GM | | | GM | | | GM | | GM | | | GM | | | GM | | | GM | | | GM | | | | GM | | | GM | | GM | | GM | | GM |
| SiO2 | | 0.06 | | | | | 0.21 | | | 53.29 | | | 53.51 | | | 52.84 | | | 54.10 | | 53.31 | | | 53.42 | | | 54.23 | | | 53.46 | | | 52.44 | | | | 53.85 | | | 52.70 | | 52.53 | | 54.14 | | 53.44 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 29.35 | | | 29.26 | | | 29.70 | | | 29.23 | | 29.33 | | | 29.52 | | | 29.24 | | | 27.99 | | | 28.10 | | | | 27.89 | | | 28.95 | | 28.92 | | 28.31 | | 28.73 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.63 | | | 0.68 | | | 0.66 | | | 0.62 | | 0.67 | | | 0.62 | | | 0.59 | | | 0.89 | | | 0.91 | | | | 0.79 | | | 0.91 | | 0.78 | | 0.80 | | 0.85 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.15 | | | 0.15 | | | 0.08 | | | 0.11 | | 0.11 | | | 0.12 | | | 0.14 | | | 0.13 | | | 0.13 | | | | 0.15 | | | 0.15 | | 0.15 | | 0.17 | | 0.18 |
| CaO | | 0.04 | | | | | 0.13 | | | 12.85 | | | 12.70 | | | 12.98 | | | 12.60 | | 12.83 | | | 13.18 | | | 12.10 | | | 11.32 | | | 11.63 | | | | 11.46 | | | 12.27 | | 12.15 | | 11.69 | | 12.19 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.31 | | | 4.36 | | | 4.15 | | | 4.27 | | 4.17 | | | 4.07 | | | 4.45 | | | 4.94 | | | 4.58 | | | | 4.90 | | | 4.45 | | 4.51 | | 4.82 | | 4.47 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.12 | | | 0.13 | | | 0.12 | | | 0.12 | | 0.13 | | | 0.14 | | | 0.13 | | | 0.16 | | | 0.14 | | | | 0.16 | | | 0.12 | | 0.14 | | 0.13 | | 0.11 |
| Total | |  | | | | |  | | | 100.69 | | | 100.79 | | | 100.53 | | | 101.06 | | 100.56 | | | 101.08 | | | 100.88 | | | 98.89 | | | 97.93 | | | | 99.21 | | | 99.55 | | 99.18 | | 100.05 | | 99.96 |
| An% | |  | | | | |  | | | 61.82 | | | 61.24 | | | 62.91 | | | 61.53 | | 62.49 | | | 63.64 | | | 59.58 | | | 55.34 | | | 57.89 | | | | 55.86 | | | 59.95 | | 59.35 | | 56.86 | | 59.72 |
| Label1 | | LOD2 | | | | | SD3 | | | A-182-D3-8 | | | A-182-D4-1 | | | A-182-D4-2 | | | A-182-D4-3 | | A-182-D4-4 | | | A-182-D4-5 | | | A-182-D4-6 | | | A-178-D1-1 | | | A-178-D1-2 | | | | A-178-D1-3 | | | A-178-D1-4 | | A-178-D1-5 | | A-178-D2-5 | | A-178-D2-6 |
| Phenocrysts | | | | | | |  | | | OP | | | OP | | | OP | | | OP | | OP | | | OP | | | OP | | | OP | | | OP | | | | OP | | | OP | | OP | | OP | | OP |
| Rock Type | |  | | | | |  | | | Dyke | | | Dyke | | | Dyke | | | Dyke | | Dyke | | | Dyke | | | Dyke | | | Pillow Lava | | | Pillow Lava | | | | Pillow Lava | | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava |
| Mineral Type | | | | | | |  | | | GM | | | GM | | | GM | | | GM | | GM | | | GM | | | GM | | | GM | | | GM | | | | GM | | | GM | | GM | | GM | | GM |
| SiO2 | | 0.06 | | | | | 0.21 | | | 53.46 | | | 52.36 | | | 52.55 | | | 52.44 | | 53.08 | | | 53.87 | | | 54.27 | | | 53.47 | | | 53.13 | | | | 52.12 | | | 52.94 | | 53.19 | | 53.91 | | 54.11 |
| Al2O3 | | 0.04 | | | | | 0.17 | | | 28.02 | | | 29.41 | | | 29.17 | | | 28.74 | | 28.26 | | | 28.79 | | | 28.25 | | | 29.33 | | | 29.08 | | | | 29.13 | | | 29.32 | | 29.12 | | 29.14 | | 28.99 |
| Fe2O3 | | 0.09 | | | | | 0.06 | | | 0.99 | | | 0.72 | | | 0.87 | | | 0.88 | | 0.92 | | | 0.80 | | | 0.81 | | | 0.67 | | | 0.66 | | | | 0.69 | | | 0.73 | | 0.73 | | 0.71 | | 0.92 |
| MgO | | 0.06 | | | | | 0.03 | | | 0.12 | | | 0.13 | | | 0.12 | | | 0.16 | | 0.17 | | | 0.13 | | | 0.15 | | | 0.07 | | | 0.13 | | | | 0.12 | | | 0.11 | | 0.14 | | 0.13 | | 0.13 |
| CaO | | 0.04 | | | | | 0.13 | | | 11.85 | | | 12.74 | | | 12.81 | | | 12.09 | | 11.84 | | | 11.83 | | | 11.50 | | | 12.54 | | | 12.52 | | | | 12.74 | | | 12.72 | | 12.42 | | 12.36 | | 12.21 |
| Na2O | | 0.09 | | | | | 0.13 | | | 4.73 | | | 4.22 | | | 4.13 | | | 4.50 | | 4.68 | | | 4.76 | | | 5.12 | | | 4.53 | | | 4.55 | | | | 4.05 | | | 4.28 | | 4.35 | | 4.29 | | 4.48 |
| K2O | | 0.04 | | | | | 0.02 | | | 0.13 | | | 0.11 | | | 0.11 | | | 0.15 | | 0.17 | | | 0.15 | | | 0.16 | | | 0.13 | | | 0.13 | | | | 0.10 | | | 0.12 | | 0.10 | | 0.10 | | 0.12 |
| Total | |  | | | | |  | | | 99.30 | | | 99.69 | | | 99.76 | | | 98.96 | | 99.12 | | | 100.33 | | | 100.25 | | | 100.75 | | | 100.21 | | | | 98.94 | | | 100.22 | | 100.05 | | 100.65 | | 100.96 |
| An% | |  | | | | |  | | | 57.63 | | | 62.14 | | | 62.78 | | | 59.21 | | 57.71 | | | 57.36 | | | 54.91 | | | 60.02 | | | 59.86 | | | | 63.11 | | | 61.75 | | 60.81 | | 61.05 | | 59.70 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Label1 | LOD2 | SD3 | A-178-D2-7 | A-178-D2-9 | A-178-D3-9 | A-178-D3-10 | A-178-D3-11 | A-178-D3-12 | |  |  |  |
| Phenocrysts | |  | OP | OP | OP | OP | OP | OP |  |  |  |  |
| Rock Type |  |  | Pillow Lava | Pillow Lava | Pillow Lava | Pillow Lava | Pillow Lava | Pillow Lava |  |  |  |  |
| Mineral Type | |  | GM | GM | GM | GM | GM | GM |  |  |  |  |
| SiO2 | 0.06 | 0.21 | 52.81 | 52.63 | 53.61 | 52.47 | 52.72 | 53.44 |  |  |  |  |
| Al2O3 | 0.04 | 0.17 | 28.74 | 29.49 | 28.96 | 29.33 | 29.49 | 29.35 |  |  |  |  |
| Fe2O3 | 0.09 | 0.06 | 0.90 | 0.70 | 0.83 | 0.74 | 0.64 | 0.63 |  |  |  |  |
| MgO | 0.06 | 0.03 | 0.21 | 0.09 | 0.11 | 0.10 | 0.15 | 0.13 |  |  |  |  |
| CaO | 0.04 | 0.13 | 12.36 | 12.88 | 12.40 | 12.64 | 13.05 | 12.83 |  |  |  |  |
| Na2O | 0.09 | 0.13 | 4.40 | 4.05 | 4.37 | 4.21 | 4.09 | 4.22 |  |  |  |  |
| K2O | 0.04 | 0.02 | 0.12 | 0.11 | 0.12 | 0.12 | 0.12 | 0.11 |  |  |  |  |
| Total |  |  | 99.54 | 99.96 | 100.40 | 99.60 | 100.27 | 100.71 |  |  |  |  |
| An% |  |  | 60.39 | 63.31 | 60.61 | 61.96 | 63.38 | 62.29 |  |  |  |  |
| 1 Samples starting with 'M' retain full prefix of MH-20, labels starting with 'A' retain full prefix of AW-15. Sample label format: "sample # - grain # - analysis #" | | | | | | | | | | | | |
| 2 Limit of detection | |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table B3:** Electron Microprobe (EMP) major element analyses (wt. %) of CM clinopyroxene phenocryst cores (PC), phenocryst rims (PR), and groundmass phases (GM). Analyses conducted at University of British Columbia, Vancouver, Canada. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clinopyroxene Analyses | | | | | | | | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| Total number of clinopyroxene analyses: 48 | | | | | | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| Label1 | | LOD2 | | SD3 | | M-045A-C1-1 | | M-045A-C1-2 | | M-045A-C1-3 | | M-045A-C1-4 | | M-045A-C1-6 | | M-045A-C1-8 | | M-045A-C1-9 | | M-045A-C1-10 | | A-168-C1-1 | | A-168-C1-2 | | A-168-C1-3 | | A-168-C1-4 | | A-168-C1-5 | | A-168-C1-6 | |
| Phenocrysts | | | |  | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | |
| Rock Type | |  | |  | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Pillow Lava | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | |
| Mineral Type | | | |  | | PR | | PR | | PC | | PR | | PC | | PC | | PR | | PC | | PR | | PR | | PC | | PC | | PC | | PC | |
| SiO2 | | 0.05 | | 0.20 | | 51.17 | | 50.74 | | 50.87 | | 50.76 | | 50.53 | | 50.67 | | 50.71 | | 50.70 | | 52.20 | | 51.90 | | 51.04 | | 50.79 | | 50.65 | | 50.75 | |
| TiO2 | | 0.05 | | 0.04 | | 0.78 | | 0.86 | | 0.92 | | 0.85 | | 1.07 | | 0.91 | | 1.00 | | 1.06 | | 0.57 | | 0.60 | | 0.84 | | 0.82 | | 0.84 | | 0.85 | |
| Al2O3 | | 0.05 | | 0.06 | | 3.45 | | 3.65 | | 3.52 | | 3.53 | | 3.63 | | 3.65 | | 3.49 | | 3.68 | | 2.62 | | 2.93 | | 4.33 | | 3.70 | | 3.87 | | 3.46 | |
| Cr2O3 | | 0.08 | | 0.06 | | 0.69 | | 0.80 | | 0.85 | | 0.75 | | 0.86 | | 0.58 | | 0.41 | | 0.62 | | 0.59 | | 0.83 | | 0.32 | | 0.72 | | 0.86 | | 0.89 | |
| FeO | | 0.09 | | 0.18 | | 8.75 | | 7.83 | | 7.68 | | 8.15 | | 8.44 | | 9.02 | | 8.76 | | 8.61 | | 7.64 | | 7.58 | | 8.28 | | 7.85 | | 8.16 | | 7.63 | |
| MgO | | 0.06 | | 0.18 | | 17.01 | | 16.18 | | 16.22 | | 16.30 | | 16.03 | | 16.80 | | 16.12 | | 15.99 | | 17.36 | | 16.98 | | 16.19 | | 16.30 | | 16.29 | | 16.06 | |
| MnO | | 0.09 | | 0.05 | | 0.23 | | 0.18 | | 0.16 | | 0.16 | | 0.19 | | 0.20 | | 0.20 | | 0.25 | | 0.18 | | 0.17 | | 0.14 | | 0.21 | | 0.22 | | 0.13 | |
| CaO | | 0.04 | | 0.16 | | 18.16 | | 19.49 | | 19.49 | | 19.10 | | 19.30 | | 18.10 | | 19.11 | | 19.17 | | 19.11 | | 19.25 | | 18.72 | | 19.31 | | 19.05 | | 19.99 | |
| Na2O | | 0.11 | | 0.07 | | 0.38 | | 0.40 | | 0.47 | | 0.34 | | 0.39 | | 0.40 | | 0.35 | | 0.40 | | 0.34 | | 0.40 | | 0.50 | | 0.41 | | 0.39 | | 0.42 | |
| Total | |  | |  | | 100.62 | | 100.14 | | 100.16 | | 99.94 | | 100.44 | | 100.32 | | 100.15 | | 100.47 | | 100.61 | | 100.63 | | 100.37 | | 100.10 | | 100.34 | | 100.17 | |
| Mg # | |  | |  | | 77.61 | | 78.64 | | 79.01 | | 78.08 | | 77.19 | | 76.86 | | 76.63 | | 76.79 | | 80.19 | | 79.98 | | 77.70 | | 78.73 | | 78.05 | | 78.96 | |
| Label1 | | LOD2 | | SD3 | | A-168-C1-7 | | A-168-C2-1 | | A-168-C2-2 | | A-168-C2-3 | | A-168-C2-4 | | A-168-C2-5 | | A-168-C2-6 | | A-168-C2-7 | | A-168-D1-6 | | A-168-D1-9 | | A-168-D1-10 | | A-168-D1-11 | | A-168-D1-13 | | A-168-D4-8 | |
| Phenocrysts | | | |  | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | |
| Rock Type | |  | |  | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | |
| Mineral Type | | | |  | | PR | | PR | | PC | | PC | | PR | | PC | | PC | | PC | | GM | | GM | | GM | | GM | | GM | | GM | |
| SiO2 | | 0.05 | | 0.20 | | 52.34 | | 52.10 | | 52.66 | | 50.71 | | 50.78 | | 50.80 | | 50.20 | | 50.84 | | 47.02 | | 48.07 | | 46.83 | | 47.99 | | 47.05 | | 46.58 | |
| TiO2 | | 0.05 | | 0.04 | | 0.59 | | 0.59 | | 0.56 | | 0.93 | | 0.82 | | 0.85 | | 0.79 | | 0.78 | | 2.15 | | 1.86 | | 2.40 | | 2.37 | | 2.57 | | 2.53 | |
| Al2O3 | | 0.05 | | 0.06 | | 2.05 | | 2.12 | | 2.15 | | 3.70 | | 3.61 | | 3.94 | | 3.68 | | 3.39 | | 4.11 | | 2.59 | | 3.97 | | 3.96 | | 4.42 | | 4.50 | |
| Cr2O3 | | 0.08 | | 0.06 | | 0.56 | | 0.57 | | 0.57 | | 0.96 | | 0.77 | | 0.68 | | 0.82 | | 0.76 | | 0.13 | | 0.01 | | 0.11 | | 0.14 | | 0.14 | | 0.17 | |
| FeO | | 0.09 | | 0.18 | | 7.96 | | 7.78 | | 8.08 | | 7.64 | | 8.40 | | 8.27 | | 7.62 | | 8.09 | | 11.47 | | 14.57 | | 11.59 | | 11.91 | | 11.42 | | 11.90 | |
| MgO | | 0.06 | | 0.18 | | 17.86 | | 17.76 | | 17.60 | | 16.03 | | 16.84 | | 16.73 | | 16.40 | | 17.40 | | 13.08 | | 12.26 | | 13.07 | | 13.38 | | 13.09 | | 12.97 | |
| MnO | | 0.09 | | 0.05 | | 0.19 | | 0.15 | | 0.20 | | 0.12 | | 0.22 | | 0.19 | | 0.14 | | 0.24 | | 0.20 | | 0.29 | | 0.19 | | 0.24 | | 0.21 | | 0.22 | |
| CaO | | 0.04 | | 0.16 | | 18.41 | | 18.98 | | 18.83 | | 20.09 | | 18.67 | | 18.96 | | 19.69 | | 18.98 | | 20.21 | | 19.65 | | 20.08 | | 19.97 | | 20.44 | | 20.13 | |
| Na2O | | 0.11 | | 0.07 | | 0.28 | | 0.36 | | 0.38 | | 0.32 | | 0.40 | | 0.45 | | 0.39 | | 0.40 | | 0.39 | | 0.40 | | 0.32 | | 0.43 | | 0.45 | | 0.39 | |
| Total | |  | |  | | 100.23 | | 100.42 | | 101.04 | | 100.51 | | 100.50 | | 100.86 | | 99.72 | | 100.89 | | 98.76 | | 99.70 | | 98.56 | | 100.39 | | 99.81 | | 99.39 | |
| Mg # | |  | |  | | 79.99 | | 80.28 | | 79.53 | | 78.89 | | 78.13 | | 78.28 | | 79.33 | | 79.32 | | 67.03 | | 60.01 | | 66.78 | | 66.69 | | 67.14 | | 66.03 | |
| Label1 | LOD2 | | SD3 | | A-168-D4-10 | | A-168-D4-11 | | A-168-D4-13 | | A-168-D3-8 | | A-168-D3-10 | | A-168-D2-11 | | A-168-D2-12 | | A-182-D1-9 | | A-182-D1-10 | | A-182-D1-11 | | A-182-D2-9 | | A-182-D2-10 | | A-168-D4-13 | | A-168-D3-8 | | A-168-D3-10 | |
| Phenocrysts | | |  | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OPA | | OP | | OP | | OP | | OP | | OP | | OPA | | OPA | | OPA | |
| Rock Type |  | |  | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | |
| Mineral Type | | |  | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | |
| SiO2 | 0.05 | | 0.20 | | 46.16 | | 47.91 | | 47.70 | | 48.80 | | 47.55 | | 47.85 | | 47.81 | | 46.90 | | 47.15 | | 47.72 | | 46.85 | | 47.44 | | 47.70 | | 48.80 | | 47.55 | |
| TiO2 | 0.05 | | 0.04 | | 2.61 | | 1.57 | | 1.78 | | 1.79 | | 1.94 | | 2.18 | | 2.30 | | 2.49 | | 2.11 | | 2.12 | | 2.95 | | 2.46 | | 1.78 | | 1.79 | | 1.94 | |
| Al2O3 | 0.05 | | 0.06 | | 4.12 | | 3.43 | | 3.33 | | 2.83 | | 3.72 | | 3.79 | | 3.28 | | 4.49 | | 4.06 | | 3.48 | | 4.50 | | 4.72 | | 3.33 | | 2.83 | | 3.72 | |
| Cr2O3 | 0.08 | | 0.06 | | 0.10 | | 0.01 | | 0.03 | | 0.01 | | 0.08 | | 0.01 | | 0.00 | | 0.16 | | 0.17 | | 0.04 | | 0.19 | | 0.07 | | 0.03 | | 0.01 | | 0.08 | |
| FeO | 0.09 | | 0.18 | | 12.21 | | 12.11 | | 11.89 | | 13.44 | | 11.74 | | 12.44 | | 14.14 | | 11.04 | | 10.82 | | 12.92 | | 11.76 | | 11.42 | | 11.89 | | 13.44 | | 11.74 | |
| MgO | 0.06 | | 0.18 | | 12.90 | | 13.44 | | 13.44 | | 13.27 | | 12.99 | | 12.98 | | 12.15 | | 12.80 | | 13.41 | | 12.93 | | 12.54 | | 12.60 | | 13.44 | | 13.27 | | 12.99 | |
| MnO | 0.09 | | 0.05 | | 0.18 | | 0.26 | | 0.20 | | 0.27 | | 0.24 | | 0.22 | | 0.33 | | 0.18 | | 0.17 | | 0.35 | | 0.19 | | 0.26 | | 0.20 | | 0.27 | | 0.24 | |
| CaO | 0.04 | | 0.16 | | 19.62 | | 19.26 | | 19.57 | | 19.46 | | 20.47 | | 20.05 | | 19.67 | | 20.93 | | 20.59 | | 19.51 | | 20.28 | | 20.66 | | 19.57 | | 19.46 | | 20.47 | |
| Na2O | 0.11 | | 0.07 | | 0.33 | | 0.34 | | 0.33 | | 0.50 | | 0.40 | | 0.43 | | 0.46 | | 0.38 | | 0.38 | | 0.38 | | 0.41 | | 0.47 | | 0.33 | | 0.50 | | 0.40 | |
| Total |  | |  | | 98.24 | | 98.34 | | 98.27 | | 100.39 | | 99.13 | | 99.96 | | 100.14 | | 99.36 | | 98.85 | | 99.45 | | 99.68 | | 100.08 | | 98.27 | | 100.39 | | 99.13 | |
| Mg # |  | |  | | 65.32 | | 66.42 | | 66.82 | | 63.77 | | 66.36 | | 65.04 | | 60.51 | | 67.40 | | 68.83 | | 64.08 | | 65.52 | | 66.29 | | 66.82 | | 63.77 | | 66.36 | |
| Label1 | LOD2 | | SD3 | | A-168-D2-11 | | A-168-D2-12 | | A-182-D1-9 | | A-182-D1-10 | | A-182-D1-11 | | A-182-D2-9 | | A-182-D2-10 | | A-182-D2-13 | | A-182-D3-10 | | A-182-D3-11 | | A-182-D3-12 | | A-182-D4-7 | | A-182-D4-8 | | A-182-D4-9 | | A-182-D4-10 | |
| Phenocrysts | | |  | | OPA | | OPA | | OP | | OP | | OP | | OP | | OP | | OP | | OP | | OP | | OP | | OP | | OP | | OP | | OP | |
| Rock Type |  | |  | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | | Dyke | |
| Mineral Type | | |  | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | | GM | |
| SiO2 | 0.05 | | 0.20 | | 47.85 | | 47.81 | | 46.90 | | 47.15 | | 47.72 | | 46.85 | | 47.44 | | 47.11 | | 47.71 | | 46.88 | | 48.03 | | 47.13 | | 48.85 | | 47.91 | | 46.90 | |
| TiO2 | 0.05 | | 0.04 | | 2.18 | | 2.30 | | 2.49 | | 2.11 | | 2.12 | | 2.95 | | 2.46 | | 2.66 | | 2.16 | | 2.41 | | 2.33 | | 2.14 | | 2.17 | | 2.26 | | 2.72 | |
| Al2O3 | 0.05 | | 0.06 | | 3.79 | | 3.28 | | 4.49 | | 4.06 | | 3.48 | | 4.50 | | 4.72 | | 4.22 | | 3.91 | | 4.64 | | 4.66 | | 4.15 | | 3.81 | | 3.96 | | 4.11 | |
| Cr2O3 | 0.08 | | 0.06 | | 0.01 | | 0.00 | | 0.16 | | 0.17 | | 0.04 | | 0.19 | | 0.07 | | 0.09 | | 0.12 | | 0.11 | | 0.09 | | 0.10 | | 0.02 | | 0.09 | | 0.07 | |
| FeO | 0.09 | | 0.18 | | 12.44 | | 14.14 | | 11.04 | | 10.82 | | 12.92 | | 11.76 | | 11.42 | | 12.23 | | 11.81 | | 10.84 | | 10.60 | | 11.66 | | 12.56 | | 12.87 | | 12.83 | |
| MgO | 0.06 | | 0.18 | | 12.98 | | 12.15 | | 12.80 | | 13.41 | | 12.93 | | 12.54 | | 12.60 | | 12.53 | | 12.92 | | 13.14 | | 13.15 | | 12.48 | | 12.63 | | 12.85 | | 12.56 | |
| MnO | 0.09 | | 0.05 | | 0.22 | | 0.33 | | 0.18 | | 0.17 | | 0.35 | | 0.19 | | 0.26 | | 0.23 | | 0.21 | | 0.18 | | 0.23 | | 0.25 | | 0.24 | | 0.26 | | 0.16 | |
| CaO | 0.04 | | 0.16 | | 20.05 | | 19.67 | | 20.93 | | 20.59 | | 19.51 | | 20.28 | | 20.66 | | 20.19 | | 21.02 | | 20.74 | | 20.73 | | 20.51 | | 20.28 | | 19.53 | | 19.87 | |
| Na2O | 0.11 | | 0.07 | | 0.43 | | 0.46 | | 0.38 | | 0.38 | | 0.38 | | 0.41 | | 0.47 | | 0.48 | | 0.34 | | 0.41 | | 0.41 | | 0.35 | | 0.38 | | 0.46 | | 0.38 | |
| Total |  | |  | | 99.96 | | 100.14 | | 99.36 | | 98.85 | | 99.45 | | 99.68 | | 100.08 | | 99.74 | | 100.20 | | 99.35 | | 100.24 | | 98.77 | | 100.94 | | 100.19 | | 99.59 | |
| Mg # |  | |  | | 65.04 | | 60.51 | | 67.40 | | 68.83 | | 64.08 | | 65.52 | | 66.29 | | 64.63 | | 66.11 | | 68.36 | | 68.86 | | 65.60 | | 64.19 | | 64.01 | | 63.58 | |
| 1 Samples starting with 'M' retain full prefix of MH-20, labels starting with 'A' retain full prefix of AW-15. Sample label format: "sample # - grain # - analysis #" | | | | | | | | | | | | | | | | | | | | | | | | |  | |  | |  | |  | |  | |
| 2 Limit of detection | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
| 3Analytical uncertainty given as 2σ | | | | | | | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |