Table S3. Major and trace elements of the basement granitoids in the Qiongdongnan Basin.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sample | Q1 | Q2 | Q5 | Q6 | Q9 | Q12 |
| Major elements (wt%) |
| SiO2 | 56.81 | 44.47 | 68.05 | 61.41 | 55.81 | 59.43 |
| Al2O3 | 11.35 | 12.24 | 12.17 | 14.64 | 16.07 | 14.17 |
| Fe2O3 | 1.63 | 7.02 | 2.97 | 3.66 | 6.33 | 4.53 |
| MgO | 0.421 | 4.28 | 1.28 | 0.722 | 2.27 | 1.27 |
| CaO | 11.7 | 9.16 | 2.45 | 1.76 | 3.53 | 4.38 |
| Na2O | 3.15 | 3.17 | 1.49 | 4.77 | 3.19 | 3.48 |
| K2O | 3.65 | 2.29 | 4.52 | 3.93 | 5.49 | 3.44 |
| MnO | 0.044 | 0.12 | 0.04 | 0.078 | 0.092 | 0.079 |
| TiO2 | 0.195 | 0.886 | 0.329 | 0.478 | 0.6 | 0.629 |
| P2O5 | 0.06 | 0.2 | 0.072 | 0.088 | 0.299 | 0.17 |
| FeO | 1.25 | 3.33 | 0.83 | 2.31 | 2.18 | 2.72 |
| LOI | 10.44 | 15.25 | 6.08 | 6.99 | 5.72 | 7.94 |
| Trace elements (ppm) |
| Li | 6.13 | 31.5 | 28.4 | 8.6 | 40.6 | 28.3 |
| Be | 1.99 | 1.39 | 1.82 | 1.69 | 2.36 | 3.99 |
| Sc | 2.8 | 19.1 | 4.34 | 6.26 | 10.1 | 10.9 |
| V | 14.3 | 100 | 35.3 | 48.5 | 109 | 71.8 |
| Cr | 327 | 214 | 162 | 115 | 63.8 | 252 |
| Co | 2.78 | 20 | 4.16 | 10.3 | 12.4 | 9.42 |
| Ni | 10.1 | 38.2 | 10.1 | 11.1 | 9.48 | 12.2 |
| Cu | 4.65 | 59.6 | 8.53 | 12.6 | 26 | 35 |
| Zn | 34.1 | 247 | 46.2 | 91.8 | 80.3 | 114 |
| Ga | 13 | 14.3 | 13.9 | 15.3 | 16.2 | 18 |
| Rb | 123 | 68.7 | 119 | 118 | 134 | 224 |
| Sr | 390 | 345 | 332 | 467 | 437 | 222 |
| Y | 11.1 | 20.8 | 19.4 | 13.6 | 19.4 | 25.4 |
| Mo | 11.8 | 16.8 | 7.08 | 2.93 | 16.9 | 7.75 |
| Cd | 0.094 | 0.516 | 0.202 | 0.099 | 0.282 | 0.27 |
| In | 0.02 | 0.091 | 0.029 | 0.022 | 0.047 | 0.099 |
| Sb | 0.142 | 1.6 | 0.899 | 1.56 | 0.81 | 0.379 |
| Cs | 1.65 | 2.06 | 4.31 | 2.27 | 5.5 | 6.56 |
| Ba | 528 | 11122 | 6163 | 21638 | 1339 | 1621 |
| La | 30.6 | 18.6 | 37.4 | 27.4 | 39.3 | 26.5 |
| Ce | 56.2 | 36.6 | 64.4 | 47.8 | 69.5 | 51.7 |
| Pr | 6.32 | 4.57 | 7.58 | 5.25 | 8.07 | 6.43 |
| Nd | 22.5 | 19.2 | 27.3 | 19.2 | 31.4 | 26.2 |
| Sm | 3.74 | 4.24 | 4.79 | 3.61 | 5.73 | 5.3 |
| Eu | 0.556 | 0.812 | 0.702 | 0.609 | 1.42 | 0.846 |
| Gd | 3.15 | 4.04 | 4.32 | 3.5 | 5.2 | 4.93 |
| Tb | 0.461 | 0.749 | 0.698 | 0.524 | 0.831 | 0.877 |
| Dy | 2.28 | 4.45 | 3.63 | 2.81 | 4.27 | 4.96 |
| Ho | 0.448 | 0.899 | 0.719 | 0.553 | 0.805 | 0.988 |
| Er | 1.32 | 2.58 | 2.15 | 1.52 | 2.34 | 2.84 |
| Tm | 0.224 | 0.439 | 0.37 | 0.259 | 0.394 | 0.495 |
| Yb | 1.58 | 2.54 | 2.34 | 1.64 | 2.59 | 2.93 |
| Lu | 0.192 | 0.304 | 0.273 | 0.202 | 0.307 | 0.353 |
| W | 2.25 | 7.13 | 1.51 | 0.675 | 2.8 | 3.92 |
| Re | <0.002 | 0.003 | <0.002 | <0.002 | <0.002 | <0.002 |
| Tl | 0.817 | 0.385 | 0.931 | 1.37 | 2.04 | 1.49 |
| Pb | 17.2 | 56.5 | 30.6 | 47 | 22.6 | 68.7 |
| Bi | 0.071 | 0.854 | 0.313 | 0.344 | 0.167 | 1.2 |
| Th | 12.5 | 4.89 | 12.6 | 11.9 | 17.8 | 13.4 |
| U | 1.96 | 2.14 | 4.26 | 1.95 | 4.21 | 3.89 |
| Nb | 13.2 | 8.54 | 12 | 5.52 | 14.5 | 11.3 |
| Ta | 1 | 0.587 | 0.858 | 0.56 | 0.874 | 1.25 |
| Zr | 30.4 | 59.1 | 49.1 | 9.03 | 12.6 | 96.8 |
| Hf | 1.14 | 1.76 | 1.97 | 0.531 | 0.707 | 3.27 |