**Supplemental Table 2**. Electron microprobe analyses of clays in sample CC080724-01A from Lower Cave.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | Analysis Number | K2O | CaO | MgO | Na2O | Fe2O3 | Al2O3 | SiO2 | SrO | Total |
| Nucleus clay | 1-5 | 1.40 | 0.95 | 18.92 | 0.07 | 3.21 | 9.24 | 53.84 | 0.31 | 87.92 |
| Nucleus clay | 1-6 | 1.32 | 0.78 | 20.40 | 0.06 | 2.74 | 7.42 | 51.58 | 0.27 | 84.56 |
| Nucleus clay | 1-9 | 1.47 | 0.71 | 18.52 | 0.02 | 3.01 | 7.26 | 51.88 | 0.27 | 83.15 |
| Cortex layer  | 3-1 | 0.10 | 11.47 | 24.47 | 0.04 | 0.00 | 0.02 | 47.80 | 0.37 | 84.27 |
| Cortex layer  | 3-2 | 0.10 | 13.16 | 22.53 | 0.06 | 0.00 | 0.03 | 43.32 | 0.30 | 79.48 |
| Cortex layer  | 3-3 | 0.13 | 8.19 | 21.97 | 0.04 | 0.00 | 0.01 | 43.56 | 0.33 | 74.24 |
| Cortex layer  | 3-4 | 0.06 | 31.87 | 15.36 | 0.05 | 0.00 | 0.04 | 28.16 | 0.31 | 75.84 |
| Cortex layer  | 3-5 | 0.08 | 20.20 | 19.91 | 0.04 | 0.01 | 0.01 | 36.11 | 0.30 | 76.66 |
| Cotex clay | 4-2 | 0.16 | 2.60 | 16.60 | 0.05 | 0.01 | 0.06 | 31.97 | 0.33 | 51.77 |
| Cotex clay | 4-3 | 0.17 | 1.01 | 24.76 | 0.02 | 0.00 | 0.00 | 48.78 | 0.24 | 74.98 |
| Cotex clay | 4-4 | 0.07 | 23.41 | 16.19 | 0.09 | 0.10 | 0.14 | 30.03 | 0.27 | 70.31 |
| Cotex clay | 4-5 | 0.08 | 14.53 | 21.28 | 0.03 | 0.01 | 0.01 | 34.22 | 0.21 | 70.38 |
| Cotex clay | 4-6 | 0.09 | 6.71 | 27.72 | 0.04 | 0.00 | 0.06 | 47.49 | 0.23 | 82.35 |
| Cotex clay | 5-1 | 0.12 | 11.83 | 19.33 | 0.03 | 0.11 | 0.16 | 37.52 | 0.24 | 69.34 |
| Cotex clay | 5-2 | 0.10 | 10.01 | 24.96 | 0.02 | 0.18 | 0.24 | 38.32 | 0.43 | 74.25 |
| Cotex clay | 5-6 | 0.10 | 10.11 | 21.99 | 0.10 | 0.21 | 0.25 | 43.74 | 0.28 | 76.78 |
| Cotex clay | 5-7 | 0.42 | 20.29 | 17.20 | 0.08 | 1.78 | 2.10 | 36.06 | 0.09 | 78.02 |