**Table 4**

Trace elements and rare earth elements (REE) concentrations (in ppm) of claystones of the Missole I area

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Type | Claystones | | | | | | | |
| Facies | Fm2 | Fm1 | | | | | | |
| Samples | MA2 | MA3 MA4 MA5 MA6 MA1 PAAS Chondrite | | | | | | |
|  |  |  | |  | | |  |  |
|  |  |  | |  | | |  |  |
| Color | Grey | Brown | | Yellow-red | | |  |  |
| Depth (m) | 1.2 | 0.6 | 0.6 | 2.2 | 1 | 0.8 |  |  |
| Ba | 333 | 397 | 178 | 148 | 84.3 | 89.4 | 650 |  |
| Rb | 41.6 | 32.7 | 13.7 | 26.4 | 5.5 | 9.8 | 160 |  |
| Sr | 60.2 | 72.8 | 35 | 51 | 32.3 | 41.8 | 200 |  |
| Cs | 2.67 | 1.21 | 0.68 | 2.36 | 0.52 | 1.1 | 15 |  |
| Nb | 63.1 | 109 | 80.3 | 62.1 | 95.6 | 77.8 | 19 |  |
| Ta | 3 | 5.8 | 3.9 | 3.4 | 5.2 | 4.6 | 0.026 |  |
| Th | 18.45 | 28.8 | 22 | 19.75 | 29.2 | 24.2 | 14.6 |  |
| Zr | 837 | 1430 | 1440 | 694 | 1640 | 1270 | 210 |  |
| Hf | 22.2 | 37.1 | 37.4 | 17.9 | 43 | 32.5 | 5 |  |
| Y | 64.2 | 113.5 | 28.5 | 45.2 | 26.4 | 24.7 | 27 |  |
| V | 193 | 235 | 431 | 146 | 334 | 206 | 150 |  |
| W | 2 | 2 | 1 | 2 | 2 | 2 | 2.7 |  |
| Ga | 25.6 | 30.4 | 23.1 | 29.4 | 27.8 | 28 | 20 |  |
| U | 4.35 | 4.52 | 5.55 | 4.52 | 5.16 | 3.39 | 3.1 |  |
| Cr | 230 | 250 | 340 | 270 | 410 | 910 | 110 |  |
| La | 139.5 | 95.7 | 38.5 | 99.5 | 47.1 | 45.3 | 38 | 0.367 |
| Ce | 352 | 226 | 84.2 | 255 | 88 | 86.1 | 80 | 0.957 |
| Pr | 39.7 | 26 | 9.42 | 29.5 | 9.38 | 8.29 | 8.9 | 0.137 |
| Nd | 163 | 100.5 | 36.6 | 114 | 31.4 | 27.5 | 34 | 0.711 |
| Sm | 30.5 | 19.9 | 6.7 | 22.2 | 6.1 | 5.36 | 5.6 | 0.231 |
| Eu | 4.97 | 3.36 | 1.13 | 3.51 | 1.05 | 0.91 | 1.1 | 0.087 |
| Gd | 22 | 18 | 5.87 | 15 | 4.74 | 4.26 | 4.7 | 0.306 |
| Tb | 3.18 | 2.99 | 0.91 | 2.24 | 0.81 | 0.67 | 0.8 | 0.058 |
| Dy | 16.15 | 18.4 | 5.99 | 11.35 | 4.86 | 4.73 | 4.4 | 0.381 |
| Ho | 2.78 | 3.82 | 1.19 | 1.84 | 1.11 | 0.93 | 1 | 0.0851 |
| Er | 7.59 | 12.35 | 4.37 | 5.39 | 3.46 | 3.59 | 2.9 | 0.249 |
| Tm | 1.02 | 1.78 | 0.68 | 0.74 | 0.64 | 0.53 | 0.4 | 0.0356 |
| Yb | 6.8 | 11.3 | 5.12 | 4.41 | 4.61 | 4.03 | 2.8 | 0.248 |
| Lu | 0.88 | 1.65 | 0.72 | 0.71 | 0.73 | 0.61 | 0.43 | 0.0381 |
| REE | 790.07 | 541.75 | 201.4 | 565.39 | 203.99 | 192.81 | 185.03 | 3.8908 |
| LREE | 694.2 | 448.2 | 168.72 | 498 | 175.88 | 167.19 | 160.9 | 2.172 |
| MREE | 76.8 | 62.65 | 20.6 | 54.3 | 17.56 | 15.93 | 16.6 | 1.063 |
| HREE | 19.07 | 30.9 | 12.08 | 13.09 | 10.55 | 9.69 | 7.53 | 0.6558 |
| LREE/HREE | 36.40 | 14.50 | 13.97 | 38.04 | 16.67 | 17.25 | 21.37 | 3.31 |
| (La/Yb)N | 13.86 | 5.72 | 5.08 | 15.25 | 6.90 | 7.60 |  |  |
| (Ce/Ce\*) | 1.15 | 1.11 | 1.06 | 1.17 | 1.02 | 1.07 |  |  |
| (Eu/Eu\*) | 0.58 | 0.53 | 0.55 | 0.57 | 0.57 | 0.57 |  |  |
| Th/U | 4.24 | 6.37 | 3.96 | 4.37 | 5.66 | 7.14 |  |  |
| U/Th | 0.24 | 0.16 | 0.25 | 0.23 | 0.18 | 0.14 |  |  |
| V/Cr | 0.84 | 0.94 | 1.27 | 0.54 | 0.81 | 0.23 |  |  |
| Th/Cr | 0.08 | 0.12 | 0.06 | 0.07 | 0.07 | 0.03 |  |  |

Normalized rare earth elements to PAAS and chondrites after Taylor and McLennan (1985)