|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sam # | Depth | Age (BP) | SiO2 | Al2O3 | CaO | K2O | Na2O | Fe2O3 | MgO | MnO | TiO2 | P2O5 |
|  |  |  | mass% | mass% | mass% | mass% | mass% | mass% | mass% | mass% | mass% | mass% |
| 57 | 22 | 418 | 78.793 | 10.804 | 1.323 | 1.854 | 1.333 | 8.135 | 0.281 | 0.104 | 0.845 | 0.097 |
| 56 | 24.5 | 1023 | 75.568 | 11.519 | 0.903 | 2.175 | 1.238 | 8.658 | 0.378 | 0.171 | 0.889 | 0.112 |
| 55 | 27 | 1607 | 71.902 | 13.173 | 0.613 | 2.257 | 1.205 | 8.365 | 0.656 | 0.112 | 0.955 | 0.095 |
| 54 | 29.5 | 2168 | 75.762 | 12.851 | 0.476 | 2.314 | 1.238 | 8.157 | 0.486 | 0.064 | 0.939 | 0.094 |
| 53 | 32 | 2709 | 76.836 | 13.196 | 0.446 | 2.473 | 1.257 | 6.948 | 0.503 | 0.038 | 0.944 | 0.084 |
| 52 | 34.5 | 3229 | 75.646 | 12.448 | 0.468 | 2.284 | 1.234 | 8.389 | 0.453 | 0.063 | 0.913 | 0.103 |
| 51 | 37 | 3728 | 69.938 | 13.513 | 0.593 | 2.38 | 1.277 | 9.415 | 0.762 | 0.126 | 0.918 | 0.12 |
| 50 | 39.5 | 4208 | 73.623 | 13.235 | 0.505 | 2.372 | 1.216 | 8.161 | 0.617 | 0.101 | 0.919 | 0.113 |
| 49 | 42 | 4669 | 71.398 | 13.411 | 0.492 | 2.407 | 1.223 | 8.419 | 0.662 | 0.147 | 0.926 | 0.133 |
| 48 | 44.5 | 5112 | 72.966 | 13.166 | 0.494 | 2.401 | 1.224 | 8.641 | 0.623 | 0.104 | 0.929 | 0.123 |
| 47 | 47 | 5536 | 73.575 | 13.24 | 0.517 | 2.454 | 1.247 | 7.944 | 0.641 | 0.069 | 0.906 | 0.133 |
| 46 | 49.5 | 5943 | 72.048 | 13.553 | 0.397 | 2.56 | 1.214 | 7.672 | 0.67 | 0.088 | 0.887 | 0.164 |
| 45 | 52 | 6333 | 73.943 | 12.965 | 0.375 | 2.514 | 1.241 | 7.719 | 0.531 | 0.101 | 0.883 | 0.154 |
| 44 | 54.5 | 6707 | 75.354 | 12.977 | 0.319 | 2.531 | 1.235 | 7.703 | 0.486 | 0.087 | 0.853 | 0.146 |
| 43 | 57 | 7065 | 77.654 | 12.266 | 0.328 | 2.39 | 1.243 | 8.022 | 0.346 | 0.099 | 0.873 | 0.149 |
| 42 | 59.5 | 7407 | 75.063 | 13.13 | 0.334 | 2.552 | 1.262 | 7.968 | 0.512 | 0.104 | 0.938 | 0.163 |
| 41 | 62 | 7735 | 73.665 | 13.866 | 0.29 | 2.707 | 1.15 | 7.016 | 0.632 | 0.079 | 0.909 | 0.151 |
| 40 | 64.5 | 8049 | 76.328 | 12.582 | 0.317 | 2.526 | 1.238 | 8.528 | 0.425 | 0.087 | 0.953 | 0.127 |
| 39 | 67 | 8349 | 76.639 | 14.05 | 0.344 | 2.753 | 1.24 | 6.692 | 0.602 | 0.063 | 0.975 | 0.132 |
| 38 | 69.5 | 8635 | 72.973 | 14.218 | 0.39 | 2.752 | 1.19 | 7.17 | 0.749 | 0.074 | 0.963 | 0.154 |
| 37 | 72 | 8910 | 72.225 | 13.259 | 0.422 | 2.618 | 1.23 | 8.924 | 0.643 | 0.08 | 0.958 | 0.175 |
| 36 | 74.5 | 9172 | 70.486 | 14.846 | 0.373 | 2.898 | 1.139 | 6.962 | 0.908 | 0.068 | 0.961 | 0.154 |
| 35 | 77 | 9422 | 74.87 | 13.764 | 0.489 | 2.69 | 1.209 | 6.945 | 0.659 | 0.07 | 0.948 | 0.17 |
| 34 | 79.5 | 9662 | 75.193 | 13.03 | 0.416 | 2.623 | 1.195 | 7.987 | 0.522 | 0.06 | 0.916 | 0.164 |
| 33 | 82 | 9891 | 74.628 | 13.067 | 0.347 | 2.646 | 1.193 | 7.946 | 0.512 | 0.074 | 0.907 | 0.166 |
| 32 | 84.5 | 10110 | 76.465 | 12.68 | 0.368 | 2.569 | 1.16 | 7.764 | 0.428 | 0.092 | 0.91 | 0.148 |
| 31 | 87 | 10319 | 79.29 | 13.044 | 0.302 | 2.605 | 1.025 | 6.059 | 0.403 | 0.077 | 0.931 | 0.144 |
| 30 | 89.5 | 10520 | 75.774 | 13.204 | 0.362 | 2.666 | 1.179 | 7.911 | 0.518 | 0.08 | 0.963 | 0.168 |
| 29 | 92 | 10712 | 74.837 | 12.616 | 0.427 | 2.514 | 1.223 | 8.694 | 0.464 | 0.102 | 0.915 | 0.174 |
| 28 | 94.5 | 10897 | 75.581 | 13.4 | 0.427 | 2.667 | 1.243 | 7.367 | 0.561 | 0.092 | 0.927 | 0.163 |
| 27 | 97 | 11074 | 75.426 | 12.677 | 0.47 | 2.507 | 1.205 | 7.957 | 0.47 | 0.168 | 0.928 | 0.172 |
| 26 | 99.5 | 11245 | 74.078 | 14.055 | 0.429 | 2.736 | 1.163 | 6.989 | 0.686 | 0.083 | 0.982 | 0.191 |
| 25 | 102 | 11410 | 73.903 | 13.241 | 0.394 | 2.633 | 1.171 | 8.526 | 0.573 | 0.074 | 0.98 | 0.189 |
| 24 | 104.5 | 11568 | 76.132 | 13.089 | 0.403 | 2.569 | 1.191 | 7.617 | 0.491 | 0.076 | 0.965 | 0.171 |
| 23 | 107 | 11722 | 73 | 12.654 | 0.365 | 2.551 | 1.149 | 9.563 | 0.517 | 0.122 | 0.959 | 0.171 |
| 22 | 109.5 | 11871 | 74.02 | 13.081 | 0.418 | 2.625 | 1.189 | 8.828 | 0.555 | 0.092 | 0.959 | 0.172 |
| 21 | 112 | 12016 | 73.178 | 12.915 | 0.399 | 2.589 | 1.172 | 9.118 | 0.559 | 0.09 | 0.966 | 0.175 |
| 20 | 114.5 | 12158 | 72.678 | 12.798 | 0.441 | 2.59 | 1.178 | 9.423 | 0.568 | 0.081 | 0.969 | 0.187 |
| 19 | 117 | 12296 | 72.44 | 13.365 | 0.618 | 2.719 | 1.275 | 8.642 | 0.734 | 0.073 | 0.959 | 0.163 |
| 18 | 119.5 | 12433 | 72.773 | 14.916 | 0.603 | 3.022 | 1.286 | 6.515 | 0.987 | 0.069 | 0.961 | 0.154 |
| 17 | 122 | 12567 | 75.269 | 13.774 | 0.546 | 2.838 | 1.267 | 6.868 | 0.681 | 0.074 | 0.917 | 0.138 |
| 16 | 124.5 | 12700 | 73.095 | 13.329 | 0.557 | 2.745 | 1.266 | 8.382 | 0.675 | 0.11 | 0.962 | 0.166 |
| 15 | 127 | 12832 | 73.975 | 13.121 | 0.57 | 2.724 | 1.269 | 8.304 | 0.611 | 0.106 | 0.956 | 0.17 |
| 14 | 129.5 | 12964 | 74.848 | 12.927 | 0.534 | 2.732 | 1.285 | 8.171 | 0.553 | 0.115 | 0.958 | 0.157 |
| 13 | 132 | 13096 | 73.625 | 13.511 | 0.604 | 2.786 | 1.295 | 8.086 | 0.694 | 0.087 | 0.957 | 0.165 |
| 12 | 134.5 | 13228 | 72.238 | 13.73 | 0.625 | 2.858 | 1.298 | 8.326 | 0.776 | 0.108 | 0.957 | 0.176 |
| 11 | 137 | 13362 | 71.592 | 13.817 | 0.624 | 2.909 | 1.296 | 8.51 | 0.807 | 0.1 | 0.965 | 0.192 |
| 10 | 139.5 | 13498 | 70.696 | 12.529 | 1.063 | 2.415 | 1.467 | 8.162 | 0.756 | 0.125 | 0.894 | 0.141 |
| 9 | 142 | 13541 | 71.578 | 14.117 | 0.752 | 2.872 | 1.387 | 8.189 | 0.9 | 0.106 | 0.957 | 0.142 |
| 8 | 144.5 | 13627 | 71.754 | 13.713 | 0.832 | 2.773 | 1.408 | 8.726 | 0.844 | 0.111 | 0.942 | 0.141 |
| 7 | 147 | 13714 | 70.873 | 13.421 | 1.071 | 2.674 | 1.474 | 8.508 | 0.879 | 0.119 | 0.938 | 0.136 |
| 6 | 149.5 | 13800 | 72.189 | 13.461 | 1.543 | 2.479 | 1.653 | 8.218 | 0.937 | 0.115 | 0.92 | 0.147 |
| 5 | 152 | 13887 | 71.433 | 13.335 | 1.743 | 2.426 | 1.834 | 8.274 | 0.988 | 0.17 | 0.936 | 0.137 |
| 4 | 154.5 | 13974 | 74.352 | 12.53 | 2.751 | 1.949 | 2.001 | 7.186 | 0.865 | 0.129 | 0.866 | 0.172 |
| 3 | 157 | 14060 | 77.257 | 12.076 | 3.041 | 1.716 | 2.065 | 6.66 | 0.719 | 0.121 | 0.863 | 0.19 |
| 2 | 159.5 | 14147 | 76.973 | 11.909 | 3.108 | 1.717 | 2.166 | 6.852 | 0.704 | 0.134 | 0.881 | 0.182 |
| 1 | 162 | 14233 | 75.442 | 12.355 | 2.579 | 1.885 | 2.055 | 7.554 | 0.855 | 0.136 | 0.866 | 0.17 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sam # | As | Ba | Co | Cr | Cu | Mo | Nb | Ni | Pb | Rb | Sc | Sr |
|  | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| 57 | 16 | 727 | 16 | 172 | 59 | 2.544 | 13 | 61 | 19 | 72 | 18 | 116 |
| 56 | 10 | 737 | 13 | 282 | 45 | 6.208 | 15 | 65 | 13 | 88 | 17 | 97 |
| 55 | 13 | 734 | 18 | 211 | 35 | 4.367 | 16 | 37 | 21 | 92 | 18 | 94 |
| 54 | 12 | 710 | 12 | 228 | 34 | 5.179 | 17 | 42 | 17 | 100 | 18 | 88 |
| 53 | 12 | 722 | 4 | 189 | 31 | 5.326 | 17 | 41 | 15 | 111 | 16 | 93 |
| 52 | 14 | 681 | 8 | 203 | 31 | 4.138 | 16 | 41 | 22 | 95 | 17 | 85 |
| 51 | 13 | 736 | 18 | 172 | 45 | 2.669 | 15 | 35 | 21 | 95 | 17 | 106 |
| 50 | 12 | 706 | 18 | 166 | 46 | 3.793 | 16 | 41 | 18 | 97 | 17 | 90 |
| 49 | 12 | 709 | 22 | 162 | 59 | 4.206 | 15 | 39 | 16 | 98 | 16 | 90 |
| 48 | 13 | 724 | 14 | 178 | 43 | 3.99 | 16 | 44 | 17 | 96 | 17 | 89 |
| 47 | 13 | 714 | 14 | 150 | 33 | 3.146 | 15 | 41 | 15 | 94 | 17 | 92 |
| 46 | 15 | 688 | 14 | 131 | 33 | 2.487 | 16 | 37 | 23 | 99 | 17 | 89 |
| 45 | 15 | 687 | 17 | 154 | 33 | 3.455 | 16 | 41 | 23 | 99 | 16 | 87 |
| 44 | 11 | 658 | 16 | 131 | 29 | 2.276 | 17 | 39 | 14 | 100 | 17 | 81 |
| 43 | 12 | 638 | 15 | 209 | 49 | 4.349 | 15 | 49 | 16 | 96 | 18 | 80 |
| 42 | 12 | 708 | 14 | 161 | 54 | 2.502 | 17 | 45 | 17 | 101 | 17 | 83 |
| 41 | 12 | 695 | 11 | 116 | 43 | 2.317 | 16 | 39 | 18 | 105 | 17 | 82 |
| 40 | 13 | 700 | 13 | 316 | 54 | 6.818 | 16 | 69 | 22 | 99 | 17 | 78 |
| 39 | 11 | 733 | 10 | 160 | 37 | 3.813 | 18 | 40 | 20 | 111 | 17 | 90 |
| 38 | 12 | 757 | 12 | 134 | 49 | 2.626 | 17 | 44 | 17 | 109 | 17 | 91 |
| 37 | 18 | 749 | 9 | 192 | 39 | 5.322 | 17 | 49 | 29 | 103 | 17 | 85 |
| 36 | 13 | 774 | 11 | 110 | 30 | 2.777 | 18 | 41 | 18 | 115 | 17 | 90 |
| 35 | 17 | 742 | 11 | 142 | 40 | 3.464 | 18 | 59 | 28 | 107 | 17 | 96 |
| 34 | 11 | 664 | 11 | 132 | 20 | 2.874 | 16 | 41 | 19 | 100 | 17 | 85 |
| 33 | 13 | 659 | 14 | 140 | 29 | 3.181 | 17 | 40 | 19 | 102 | 17 | 81 |
| 32 | 11 | 704 | 18 | 137 | 41 | 2.66 | 16 | 41 | 18 | 101 | 16 | 83 |
| 31 | 9 | 645 | 17 | 117 | 32 | 2.11 | 18 | 42 | 19 | 107 | 17 | 81 |
| 30 | 12 | 686 | 13 | 167 | 49 | 3.771 | 17 | 48 | 23 | 105 | 18 | 83 |
| 29 | 12 | 690 | 14 | 171 | 60 | 3.596 | 16 | 54 | 22 | 98 | 17 | 85 |
| 28 | 13 | 745 | 13 | 133 | 42 | 2.827 | 17 | 51 | 19 | 105 | 17 | 91 |
| 27 | 12 | 712 | 14 | 168 | 58 | 4.542 | 16 | 68 | 17 | 99 | 18 | 87 |
| 26 | 13 | 711 | 11 | 122 | 33 | 3.109 | 19 | 49 | 21 | 107 | 17 | 88 |
| 25 | 13 | 720 | 13 | 157 | 28 | 3.015 | 18 | 41 | 21 | 100 | 17 | 81 |
| 24 | 12 | 680 | 11 | 144 | 23 | 3.072 | 18 | 43 | 18 | 100 | 17 | 85 |
| 23 | 15 | 687 | 16 | 169 | 33 | 3.855 | 16 | 44 | 21 | 95 | 17 | 78 |
| 22 | 13 | 711 | 12 | 200 | 33 | 3.858 | 17 | 47 | 21 | 101 | 16 | 83 |
| 21 | 12 | 709 | 8 | 181 | 25 | 4.245 | 17 | 46 | 18 | 98 | 17 | 81 |
| 20 | 14 | 698 | 13 | 188 | 27 | 4.444 | 17 | 48 | 20 | 97 | 17 | 82 |
| 19 | 14 | 834 | 15 | 171 | 45 | 4.144 | 16 | 52 | 18 | 103 | 18 | 102 |
| 18 | 12 | 874 | 15 | 132 | 43 | 2.249 | 18 | 56 | 15 | 119 | 17 | 113 |
| 17 | 12 | 812 | 12 | 146 | 46 | 2.475 | 17 | 54 | 18 | 110 | 17 | 106 |
| 16 | 13 | 779 | 14 | 165 | 50 | 4.026 | 16 | 57 | 22 | 102 | 17 | 98 |
| 15 | 13 | 775 | 12 | 192 | 51 | 4.715 | 16 | 61 | 20 | 102 | 17 | 97 |
| 14 | 13 | 787 | 14 | 205 | 50 | 5.297 | 16 | 59 | 19 | 102 | 17 | 96 |
| 13 | 12 | 811 | 13 | 146 | 48 | 2.413 | 16 | 56 | 20 | 102 | 17 | 103 |
| 12 | 13 | 817 | 15 | 164 | 52 | 3.346 | 16 | 63 | 18 | 105 | 18 | 104 |
| 11 | 15 | 831 | 17 | 176 | 58 | 2.896 | 17 | 74 | 21 | 107 | 19 | 105 |
| 10 | 14 | 822 | 20 | 193 | 57 | 4.286 | 14 | 84 | 16 | 91 | 19 | 132 |
| 9 | 15 | 826 | 17 | 166 | 57 | 3.473 | 15 | 74 | 16 | 107 | 18 | 118 |
| 8 | 15 | 863 | 13 | 178 | 62 | 3.52 | 16 | 76 | 18 | 102 | 18 | 118 |
| 7 | 15 | 885 | 16 | 237 | 65 | 4.895 | 14 | 77 | 18 | 100 | 18 | 135 |
| 6 | 15 | 909 | 12 | 199 | 54 | 3.919 | 16 | 67 | 14 | 91 | 18 | 163 |
| 5 | 14 | 924 | 17 | 258 | 58 | 4.722 | 15 | 75 | 14 | 87 | 18 | 175 |
| 4 | 13 | 911 | 13 | 179 | 44 | 2.576 | 13 | 60 | 12 | 68 | 17 | 228 |
| 3 | 14 | 937 | 15 | 147 | 42 | 1.656 | 13 | 65 | 12 | 59 | 17 | 238 |
| 2 | 19 | 925 | 12 | 181 | 45 | 3.213 | 13 | 70 | 14 | 60 | 18 | 233 |
| 1 | 19 | 930 | 20 | 207 | 73 | 3.489 | 13 | 81 | 16 | 66 | 18 | 204 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sam # | Th | U | V | Y | Zn | Zr |
|  | ppm | ppm | ppm | ppm | ppm | ppm |
| 57 | 11 | 2.779 | 107.904 | 34 | 81 | 239 |
| 56 | 16 | 4.509 | 101.399 | 41 | 99 | 318 |
| 55 | 17 | 2.771 | 117.529 | 44 | 42 | 325 |
| 54 | 15 | 3.213 | 106.438 | 43 | 46 | 337 |
| 53 | 18 | 3.55 | 109.685 | 45 | 47 | 353 |
| 52 | 15 | 2.237 | 100.234 | 43 | 46 | 327 |
| 51 | 17 | 3.404 | 111.314 | 40 | 62 | 298 |
| 50 | 18 | 3.062 | 105.519 | 42 | 65 | 317 |
| 49 | 20 | 4.016 | 108.131 | 45 | 54 | 328 |
| 48 | 16 | 3.076 | 110.849 | 42 | 62 | 322 |
| 47 | 17 | 3.34 | 105.051 | 42 | 68 | 320 |
| 46 | 16 | 3.363 | 99.098 | 47 | 63 | 342 |
| 45 | 21 | 2.95 | 96.038 | 49 | 63 | 343 |
| 44 | 19 | 2.503 | 92.747 | 46 | 73 | 347 |
| 43 | 20 | 3.264 | 92.193 | 50 | 71 | 357 |
| 42 | 22 | 2.209 | 100.812 | 55 | 74 | 369 |
| 41 | 19 | 3.457 | 98.124 | 52 | 72 | 370 |
| 40 | 20 | 2.23 | 98.741 | 52 | 64 | 362 |
| 39 | 20 | 3.032 | 101.397 | 56 | 60 | 410 |
| 38 | 19 | 2.747 | 106.961 | 54 | 60 | 387 |
| 37 | 18 | 2.958 | 114.357 | 51 | 76 | 366 |
| 36 | 20 | 2.14 | 109.241 | 51 | 64 | 379 |
| 35 | 19 | 3.086 | 115.929 | 47 | 97 | 358 |
| 34 | 20 | 2.516 | 100.952 | 47 | 108 | 351 |
| 33 | 19 | 3.541 | 97.254 | 50 | 103 | 369 |
| 32 | 17 | 3.436 | 93.55 | 48 | 92 | 360 |
| 31 | 17 | 3.243 | 92.9 | 53 | 77 | 404 |
| 30 | 17 | 3.741 | 100.722 | 53 | 91 | 377 |
| 29 | 20 | 2.223 | 97.196 | 54 | 78 | 364 |
| 28 | 15 | 2.141 | 99.658 | 50 | 78 | 377 |
| 27 | 21 | 3.424 | 97.588 | 53 | 68 | 383 |
| 26 | 21 | 3.53 | 104.76 | 57 | 69 | 413 |
| 25 | 19 | 4.227 | 103.183 | 54 | 61 | 387 |
| 24 | 19 | 2.196 | 94.976 | 56 | 58 | 412 |
| 23 | 19 | 3.782 | 99.475 | 51 | 71 | 362 |
| 22 | 18 | 2.68 | 101.728 | 48 | 76 | 350 |
| 21 | 20 | 2.708 | 98.312 | 52 | 73 | 380 |
| 20 | 18 | 4.434 | 99.027 | 50 | 95 | 367 |
| 19 | 18 | 2.095 | 114.474 | 43 | 115 | 328 |
| 18 | 19 | 3.585 | 120.568 | 46 | 100 | 341 |
| 17 | 20 | 2.353 | 111.839 | 41 | 90 | 316 |
| 16 | 17 | 2.927 | 113.965 | 50 | 87 | 352 |
| 15 | 21 | 3.984 | 109.069 | 50 | 87 | 349 |
| 14 | 18 | 4.101 | 106.082 | 50 | 89 | 362 |
| 13 | 17 | 3.266 | 111.519 | 49 | 89 | 350 |
| 12 | 18 | 3.823 | 113.669 | 46 | 92 | 334 |
| 11 | 18 | 2.551 | 112.922 | 46 | 103 | 332 |
| 10 | 16 | 3.109 | 116.243 | 42 | 93 | 303 |
| 9 | 16 | 3.078 | 116.294 | 44 | 97 | 322 |
| 8 | 17 | 1.425 | 120.139 | 42 | 99 | 305 |
| 7 | 14 | 1.96 | 120.034 | 39 | 93 | 284 |
| 6 | 14 | 3.226 | 123.443 | 41 | 92 | 294 |
| 5 | 14 | 3.44 | 128.607 | 39 | 87 | 275 |
| 4 | 12 | 2.647 | 127.634 | 39 | 80 | 279 |
| 3 | 9 | 3.459 | 130.527 | 38 | 92 | 271 |
| 2 | 7 | 0.257 | 128.023 | 43 | 92 | 307 |
| 1 | 9 | 3.533 | 139.442 | 38 | 89 | 269 |