**Table S4. Field and lab measurements for 10Be samples from boulders at Matthews Ranch (mr) and Badger Canyon (BC).**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | Latitude (dec°) | Longitude (dec°) | Altitude (m asl) | 10Be Concentration (at/g) | 1 sigma (at/g) | Shielding Correction | Density (g/cc) | Thickness (cm) | Erosion rate (cm/yr) |
| mr1 | 34.25415 | -117.438 | 996 | 59027.69449 | 4452.766 | 0.915171 | 2.7 | 5 | 0 |
| mr2 | 34.25428 | -117.441 | 972 | 314303.6185 | 12184.06 | 0.915171 | 2.7 | 5 | 0 |
| mr3 | 34.25405 | -117.441 | 969 | 452106.1621 | 29514.35 | 0.915171 | 2.7 | 5 | 0 |
| mr4 | 34.25432 | -117.441 | 970 | 331207.4753 | 10194.48 | 0.916725 | 2.7 | 5 | 0 |
| mr5 | 34.25448 | -117.441 | 976 | 236105.5343 | 27301.28 | 0.916725 | 2.7 | 5 | 0 |
| mr6 | 34.25437 | -117.441 | 975 | 292488.0035 | 11841.62 | 0.875995 | 2.7 | 5 | 0 |
| BC1 | 34.19363 | -117.32 | 536 | 175839.6648 | 7205.279 | 1 | 2.7 | 3 | 0 |
| BC2 | 34.19338 | -117.319 | 530 | 152227.6412 | 5263.29 | 1 | 2.7 | 2 | 0 |
| BC3 | 34.19306 | -117.32 | 526 | 159188.3582 | 4198.149 | 1 | 2.7 | 3 | 0 |
| BC5 | 34.1928 | -117.319 | 531 | 82386.00294 | 3500.782 | 1 | 2.7 | 2.5 | 0 |
| BC6 | 34.19303 | -117.319 | 533 | 114179.4337 | 3609.685 | 1 | 2.7 | 2.5 | 0 |
| BC7 | 34.19299 | -117.319 | 527 | 57412.17882 | 2505.053 | 1 | 2.7 | 3 | 0 |
| BC8 | 34.19293 | -117.318 | 541 | 231503.6512 | 5749.648 | 1 | 2.7 | 2 | 0 |
| BC9 | 34.19134 | -117.316 | 541 | 89229.5756 | 4748.034 | 1 | 2.7 | 3.5 | 0 |
| BC10-top | 34.19145 | -117.315 | 541 | 103511.1242 | 3097.835 | 1 | 2.7 | 1 | 0 |