The Role of Continental Crust in the Formation of Uraninite-Based Ore Deposits
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Supplementary Materials
Figure S1. Secondary Pb-Pb isochrons determined using SM- and LA-MC-ICP-MS for uraninites from this study. (A–Q) All ellipsoids represent 2σ error. Black=pristine and altered, Red=pristine, Green=altered, Orange and Purple=interpretive isochron.
Figure S2. Rb-Sr isochrons obtained by SM-MC-ICP-MS. (A–H) All ellipses are at the 2σ level for uncertainty.
Figure S3. $\delta^{238}$U (left) and $\delta^{234}$U (right) values. See Table A1 for uraninite values and sources.
Table S1.Compiled list of uraninites from several previous studies.

| Sample | Location | Sub type | $^{238}\text{U}/^{235}\text{U}$ | $\delta^{234}\text{U}$ | $\delta^{234}\text{U}$ | Reference |
|--------|----------|----------|-------------------------------|----------------|----------------|-----------|
| **Intrusive** | | | | | | |
| 1 | M26947 | Ingersoll Mine, Pennington Co. | Anatectic (pegmatitic) | 137.86 | 0.09 | −10.0 | [9] |
| 2 | M19033 | Wood Lode, Central City, CO | Anatectic (pegmatitic) | 137.82 | −0.21 | 2.0 | [9] |
| 3 | M19032 | German Mine, Gilpin Co., CO | Anatectic (pegmatitic) | 137.86 | 0.04 | 0.0 | [9] |
| 4 | M11336 | Black Hawk, Gilpin Co, CO | Anatectic (pegmatitic) | 137.85 | −0.01 | 4.0 | [9] |
| 5 | M21708 | Penland, NC | Anatectic (pegmatitic) | 137.84 | −0.10 | −4.0 | [9] |
| 6 | M19255 | Grafton Centre, NH | Anatectic (pegmatitic) | 137.85 | 0.02 | 1.0 | [9] |
| 7 | 344 | Ruggles Mine, NH (peg) | Anatectic (pegmatitic) | 137.70 | −1.12 | −11.7 | This study |
| 8 | 334 | Mitchell Co., NC (peg) | Anatectic (pegmatitic) | 137.61 | −1.76 | −10.3 | This study |
| 9 | 333P | Yancy County, North Carolina | Anatectic (pegmatitic) | 137.78 | −0.49 | −3.0 | [59] |
| 10 | 338B | Yancy County, North Carolina | Anatectic (pegmatitic) | 137.74 | −0.77 | −7.6 | [59] |
| 11 | 340.1B | Bancroft, Ontario, Canada | Anatectic (pegmatitic) | 137.76 | −0.64 | −6.6 | [59] |
| 12 | 340.1P | Bancroft, Ontario, Canada | Anatectic (pegmatitic) | 137.79 | −0.44 | −5.0 | [59] |
| 13 | 348.1B | Saskatchewan, Canada | Anatectic (pegmatitic) | 137.83 | −0.16 | −42.6 | [59] |
| 14 | 375P | Cardiff Township, Ontario, Canada | Anatectic (pegmatitic) | 137.84 | −0.05 | −13.2 | [59] |
| **Granite Related** | | | | | | |
| 15 | A33 | Everest area, Southern Tibet | Endogranitic | 137.78 | −0.47 | | [61] |
| 16 | 2-5 | Urtuy massif, Eastern Transbaikalia, Russian Federation | Endogranitic | 137.76 | −0.68 | | [62] |
| 17 | 2-5 | Urtuy massif, Eastern Transbaikalia, Russian Federation | Endogranitic | 137.75 | −0.69 | | [62] |
| 18 | 2-5 | Urtuy massif, Eastern Transbaikalia, Russian Federation | Endogranitic | 137.77 | −0.60 | | [62] |
| 19 | 2012 | Khadatkanda, Transbaikalia, Russia | Endogranitic | 137.78 | −0.52 | | [62] |
| 20 | 2012 | Khadatkanda, Transbaikalia, Russia | Endogranitic | 137.76 | −0.52 | | [62] |
| 21 | 2012 | Khadatkanda, Transbaikalia, Russia | Endogranitic | 137.76 | −0.65 | | [62] |
| 22 | 564P | Jachymov, Czech Republic | Endogranitic | 137.78 | −0.49 | −41.9 | [59] |
| 23 | Midnite Mine | Midnite Mine, USA | Endogranitic | 137.80 | −0.27 | | [25] |
| 24 | M9450 | St. Stephan’s, England | Perigranitic | 137.89 | 0.29 | 2.0 | [9] |
| 25 | M6939 | St. Just Wheal Owles, England | Perigranitic | 137.92 | 0.48 | 1.0 | [9] |
| 26 | M16900 | St. Just Wheal Owles, England | Perigranitic | 137.92 | 0.54 | 2.0 | [9] |
| 27 | M33227 | St. Just Wheal Edward Mine, England | Perigranitic | 137.87 | 0.14 | 9.0 | [9] |
| 28 | M16899 | St. Just, England | Perigranitic | 137.93 | 0.59 | −1.0 | [9] |
| 29 | M13323 | Cornwall, England | Perigranitic | 137.93 | 0.57 | 0.0 | [9] |
| 30 | M15328 | Pribram, Czech Republic | Perigranitic | 137.95 | 0.70 | 2.0 | [9] |
| 31 | M19330 | Jachymov, Czech Republic | Perigranitic | 137.90 | 0.36 | 3.0 | [9] |
| 32 | M14887 | Jachymov, Czech Republic | Perigranitic | 137.92 | 0.51 | 1.0 | [9] |
| 33 | M9176B | Jachymov, Czech Republic | Perigranitic | 137.92 | 0.54 | 2.0 | [9] |
| 34 | M12106 | Jachymov, Czech Republic | Perigranitic | 137.90 | 0.38 | 3.0 | [9] |
| 35 | M9176A | Jachymov, Czech Republic | Perigranitic | 137.89 | 0.32 | 1.0 | [9] |
| **Polymetallic Iron Oxide Breccia Complex** | | | | | | |
| 36 | Mount Painter | Mount Painter | | 137.77 | −0.51 | | [25] |
| 37 | OD1 | Olympic Damn, Australia | | 137.82 | −0.22 | | [20] |
| 38 | OD4 | Olympic Damn, Australia | | 137.79 | −0.46 | | [20] |
| 39 | OD6 | Olympic Damn, Australia | | 137.79 | −0.41 | | [20] |
| 40 | OD10 | Olympic Damn, Australia | | 137.79 | −0.40 | | [20] |
| 41 | OD11 | Olympic Damn, Australia | | 137.81 | −0.28 | | [20] |
| 42 | OD14 | Olympic Damn, Australia | | 137.77 | −0.57 | | [20] |
| 43 | OD15 | Olympic Damn, Australia | | 137.81 | −0.27 | | [20] |
| Sample | Location                  | Sub type            | $^{238}\text{U}/^{235}\text{U}$ | $\delta^{238}\text{U}$ | $\delta^{234}\text{U}$ | Reference |
|--------|---------------------------|---------------------|-------------------------------|-----------------|-----------------|-----------|
| 44     | OD16                      | Olympic Dam, Australia | 137.79                       | −0.43           |                   | [20]      |
| 45     | OD17                      | Olympic Dam, Australia | 137.75                       | −0.69           |                   | [20]      |
| 46     | OD29                      | Olympic Dam, Australia | 137.78                       | −0.52           |                   | [20]      |
| 47     | OD34                      | Olympic Dam, Australia | 137.79                       | −0.45           |                   | [20]      |
| 48     | OD36                      | Olympic Dam, Australia | 137.79                       | −0.41           |                   | [20]      |
| 49     | OD38                      | Olympic Dam, Australia | 137.80                       | −0.33           |                   | [20]      |
| 50     | OD39                      | Olympic Dam, Australia | 137.79                       | −0.42           |                   | [20]      |
| 51     | OD42                      | Olympic Dam, Australia | 137.81                       | −0.26           |                   | [20]      |
| 52     | M32072                    | Bolivia             | Structure Bound               | 137.91          | 0.44             | 2.0       | [9]      |
| 53     | White King Mine           | White King Mine     | Structure Bound               | 137.74          | −0.68            |           | [25]     |
| 54     | 33B                       | Cage District, Canadian Shield, Canada | Skarn | 137.76           | −0.63           |           | [62]     |
| 55     | 33B                       | Cage District, Canadian Shield, Canada | Skarn | 137.75           | −0.69           |           | [62]     |
| 56     | 07-1A                     | Cage District, Canadian Shield, Canada | Skarn | 137.78           | −0.48           |           | [62]     |
| 57     | 07-1A                     | Cage District, Canadian Shield, Canada | Skarn | 137.77           | −0.61           |           | [62]     |
| 58     | M22307                    | Ace Mine, Beaverlodge area, Canada | Monometallic Vein | 137.92          | 0.50             | 1.0       | [9]      |
| 59     | 5788 Fay deposit          | Fay deposit, Beaverlodge area, Canada | Monometallic Vein | 137.92          | 0.48             | 2.0       | [9]      |
| 60     | 6126 Nesbine Labine       | Nesbine Labine, Beaverlodge area, Canada | Monometallic Vein | 137.90          | 0.36             | −15.0     | [9]      |
| 61     | 6120 Ace deposit          | Ace deposit, Beaverlodge area, Canada | Monometallic Vein | 137.89          | 0.33             | 0.0       | [9]      |
| 62     | VR Fay mine               | Fay mine, 24 level, Beaverlodge area, Canada | Monometallic Vein | 137.88          | 0.19             | −9.0      | [9]      |
| 63     | Eagle Ace Pitch 8208      | Eagle Ace deposit, Beaverlodge area, Canada | Monometallic Vein | 137.90          | 0.38             | −6.0      | [9]      |
| 64     | 522                       | Biliken Lode, Jefferson Co., CO (metasedimentary) | Monometallic Vein | 137.89          | 0.28             | −39.1     | This study |
| 65     | 637                       | Jefferson Co. CO (metasedimentary) | Monometallic Vein | 137.85          | −0.03            | −8.6      | This study |
| 66     | 348.1P                    | Saskatchewan, Canada | Monometallic Vein | 137.78          | −0.51            | −7.6      | [59]     |
| 67     | M19342                    | Great Bear, Canada  | Polymetallic Vein | 137.90          | 0.40             | 1.0       | [9]      |
| 68     | M20949                    | Great Bear, Canada  | Polymetallic Vein | 137.95          | 0.75             | 3.0       | [9]      |
| 69     | Bear Mine S121F           | Great Bear, Canada  | Polymetallic Vein | 137.89          | 0.30             | 2.0       | [9]      |
| 70     | 626                       | Great Bear, Canada  | Polymetallic Vein | 137.56          | −2.08            | −26.6     | This study |
| 71     | 423P                      | Great Bear Lake, Canada | Polymetallic Vein | 137.89          | 0.32             | −6.5      | [59]     |
| 72     | M16456                    | Echo Bay, Canada    | Polymetallic Vein | 137.91          | 0.46             | −2.0      | [9]      |
| 73     | M16988                    | Echo Bay, Canada    | Polymetallic Vein | 137.95          | 0.75             | 4.0       | [9]      |
| 74     | M21080                    | Eldorado Mine, Canada | Polymetallic Vein | 137.91          | 0.42             | 3.0       | [9]      |
| 75     | Nk-1                      | Nkana deposit, Zambia | Polymetallic Vein | 137.77          | −0.57            |           | [62]     |
| 76     | Nk-2                      | Nkana deposit, Zambia | Polymetallic Vein | 137.81          | −0.32            |           | [62]     |
| 77     | 2236                      | Shinkolobwe         | Polymetallic Vein | 137.76          | −0.67            |           | [62]     |
| 78     | 2236                      | Shinkolobwe         | Polymetallic Vein | 137.75          | −0.73            |           | [62]     |
| 79     | 2633                      | Shinkolobwe         | Polymetallic Vein | 137.76          | −0.65            |           | [62]     |
| 80     | 2633                      | Shinkolobwe         | Polymetallic Vein | 137.76          | −0.65            |           | [62]     |
| Sample | Location                | Sub type                  | $^{238}\text{U}/^{235}\text{U}$ | $\delta^{238}\text{U}$ | $\delta^{234}\text{U}$ | Reference |
|--------|-------------------------|---------------------------|---------------------------------|-------------------------|-------------------------|-----------|
| 81     | 2633                    | Shinkolobwe               | Polymetallic Vein              | 137.75                  | −0.73                   | [62]      |
| 82     | 2633                    | Shinkolobwe               | Polymetallic Vein              | 137.75                  | −0.69                   | [62]      |
| 83     | M13075                  | Shinkolobwe               | Polymetallic Vein              | 137.84                  | −0.05                   | 0.0       | [9]       |
| 84     | 662P                    | Shinkolobwe, DR Congo     | Polymetallic Vein              | 137.71                  | −1.03                   | −11.1     | [59]      |
| 85     | 437                     | Shinkolobwe               | Polymetallic Vein              | 137.82                  | −0.22                   | 1.7       | This study |
| 86     | 809BP                   | Marshall Pass, CO         | Polymetallic Vein              | 137.81                  | −0.31                   | −27.2     | [59]      |
| 87     | 530                     | Marshall Pass, CO         | Polymetallic Vein              | 137.85                  | 0.00                    | −46.6     | This study |
| 88     | 531                     | Marshall Pass, CO         | Polymetallic Vein              | 137.79                  | −0.43                   | −43.0     | This study |
| 89     | 623                     | Marshall Pass, CO         | Polymetallic Vein              | 137.69                  | −1.19                   | −64.7     | This study |
| 90     | 624                     | Near Sargents, CO         | Polymetallic Vein              | 137.70                  | −1.11                   | −49.5     | This study |
| 91     | 516P                    | Northern Territory, Australia | Polymetallic Vein              | 137.82                  | −0.22                   | −7.1      | [59]      |

**Proterozoic Unconformity**

| Sample | Location                | Sub type                  | $^{238}\text{U}/^{235}\text{U}$ | $\delta^{238}\text{U}$ | $\delta^{234}\text{U}$ | Reference |
|--------|-------------------------|---------------------------|---------------------------------|-------------------------|-------------------------|-----------|
| 92     | 604B                    | Northern Territory, Australia | Basement-Hosted                | 137.89                  | 0.27                    | 3.8       | [59]      |
| 93     | MRD101-72.6             | King River, Australia     | Basement-Hosted                | 137.91                  | 0.43                    | 1.0       | [9]       |
| 94     | NA4-40.5                | Nabarlek, Australia       | Basement-Hosted                | 137.88                  | 0.19                    | −5.0      | [9]       |
| 95     | NA88-29.0               | Nabarlek, Australia       | Basement-Hosted                | 137.92                  | 0.52                    | −15.0     | [9]       |
| 96     | NA1-40.5                | Nabarlek, Australia       | Basement-Hosted                | 137.90                  | 0.34                    | 1.0       | [9]       |
| 97     | NA-39-13.8              | Nabarlek, Australia       | Basement-Hosted                | 137.90                  | 0.36                    | −91.0     | [9]       |
| 98     | JU-26-34                | Jabiluka, Australia       | Basement-Hosted                | 137.89                  | 0.26                    | −1.0      | [9]       |
| 99     | 0186V-475.0             | Jabiluka, Australia       | Basement-Hosted                | 137.88                  | 0.22                    | 2.0       | [9]       |
| 100    | 99J7                    | Jabiluka, Australia       | Basement-Hosted                | 137.89                  | 0.31                    | 3.0       | [9]       |
| Sample   | Location                      | Sub type               | $^{238}\text{U}/^{235}\text{U}$ | $\delta^{238}\text{U}$ | $\delta^{235}\text{U}$ | Reference |
|----------|-------------------------------|------------------------|----------------------------------|--------------------------|--------------------------|-----------|
| 101      | R129V-207.9                   | Jabiluka, Australia    | Basement-Hosted                  | 137.88                   | 0.20                     | 3.0       | [9]       |
| 102      | N147V-404.5                   | Jabiluka, Australia    | Basement-Hosted                  | 137.90                   | 0.33                     | 3.0       | [9]       |
| 103      | JU-38-41.3                    | Jabiluka, Australia    | Basement-Hosted                  | 137.89                   | 0.32                     | 3.0       | [9]       |
| 104      | JU-37-59                      | Jabiluka, Australia    | Basement-Hosted                  | 137.89                   | 0.32                     | 3.0       | [9]       |
| 105      | S3-115-916                    | Jabiluka, Australia    | Basement-Hosted                  | 137.90                   | 0.38                     | 5.0       | [9]       |
| 106      | V39-226.6m                    | Jabiluka, Australia    | Basement-Hosted                  | 137.92                   | 0.54                     | -27.0     | [9]       |
| 107      | S186V-224.3                   | Jabiluka, Australia    | Basement-Hosted                  | 137.88                   | 0.20                     | -2.0      | [9]       |
| 108      | QUNK-32.3m                    | Jabiluka, Australia    | Basement-Hosted                  | 137.84                   | -0.04                    | -4.0      | [9]       |
| 109      | QUNK-34.1m                    | Jabiluka, Australia    | Basement-Hosted                  | 137.87                   | 0.18                     | -1.0      | [9]       |
| 110      | U135V-179.3                   | Jabiluka, Australia    | Basement-Hosted                  | 137.86                   | 0.07                     | 2.0       | [9]       |
| 111      | V39-235.6                     | Jabiluka, Australia    | Basement-Hosted                  | 137.91                   | 0.46                     | -39.0     | [9]       |
| 112      | CX56-3-680.5                  | Millenium, Athabascan Basin | Basement-Hosted               | 137.87                   | 0.12                     | 8.0       | [9]       |
| 113      | CX56-3-712                    | Millenium, Athabascan Basin | Basement-Hosted               | 137.85                   | 0.01                     | 34.0      | [9]       |
| 114      | CX48-1-689                    | Millenium, Athabascan Basin | Basement-Hosted               | 137.89                   | 0.27                     | 2.0       | [9]       |
| 115      | CX48-1-695                    | Millenium, Athabascan Basin | Basement-Hosted               | 137.87                   | 0.13                     | 13.0      | [9]       |
| 116      | CX48-791                      | Millenium, Athabascan Basin | Basement-Hosted               | 137.91                   | 0.42                     | -51.0     | [9]       |
| 117      | SW10-366.5                    | Southwest, Athabascan Basin | Basement-Hosted               | 137.90                   | 0.36                     | -193.0    | [9]       |
| 118      | DF22-902                      | Dawn Lake, Athabascan Basin | Basement-Hosted               | 137.90                   | 0.36                     | -31.0     | [9]       |
| 120      | 7-191-71ft                    | Rabbit Lake, Athabascan Basin | Basement-Hosted               | 137.86                   | 0.11                     | -203.0    | [9]       |
| 121      | 511B                          | Rabbit Lake, Saskatchewan, Canada | Basement-Hosted               | 137.79                   | -0.46                    | -11.6     | [59]      |
| 122      | Sue-C-551-96.5                | SUE, Athabascan Basin  | Basement-Hosted                  | 137.89                   | 0.32                     | 2.0       | [9]       |
| 123      | Sue-C-528-95.5                | SUE, Athabascan Basin  | Basement-Hosted                  | 137.88                   | 0.22                     | 0.0       | [9]       |
| 124      | Sue-C-528-129.5               | SUE, Athabascan Basin  | Basement-Hosted                  | 137.88                   | 0.20                     | 1.0       | [9]       |
| 125      | Sue-C-528130                  | SUE, Athabascan Basin  | Basement-Hosted                  | 137.90                   | 0.34                     | 1.0       | [9]       |
| 126      | Sue-E-417113.3                | SUE-E, Athabascan Basin | Basement-Hosted                  | 137.91                   | 0.47                     | 3.0       | [9]       |
| 127      | EPE63-076.6                   | Eagle Point Extension, Athabascan Basin | Basement-Hosted             | 137.92                   | 0.48                     | 2.0       | [9]       |
| 128      | EPE80-319.5                   | Eagle Point Extension, Athabascan Basin | Basement-Hosted             | 137.95                   | 0.75                     | -217.0    | [9]       |
| 129      | EPE44-236                     | Eagle Point Extension, Athabascan Basin | Basement-Hosted             | 137.91                   | 0.47                     | -19.0     | [9]       |
| 130      | EPE44-251                     | Eagle Point Extension, Athabascan Basin | Basement-Hosted             | 137.92                   | 0.51                     | 41.0      | [9]       |
| 131      | EPE44-317                     | Eagle Point Extension, Athabascan Basin | Basement-Hosted             | 137.92                   | 0.54                     | 19.0      | [9]       |
| 132      | EPE59-137.4                   | Eagle Point Extension, Athabascan Basin | Basement-Hosted             | 137.96                   | 0.81                     | 281.0     | [9]       |
| 133      | H-799-57                      | Eagle Point, Athabascan Basin | Basement-Hosted             | 137.89                   | 0.28                     | 0.0       | [9]       |
| 134      | EP-2                          | Eagle Point, Athabascan Basin | Basement-Hosted             | 137.95                   | 0.70                     | 1.0       | [9]       |
| 135      | EP222-215.5                   | Eagle Point, Athabascan Basin | Basement-Hosted             | 137.91                   | 0.41                     | 3.0       | [9]       |
| 136      | VR29-W2-806 U1                | Centennial (massive), Athabascan Basin | Basement-Hosted             | 137.91                   | 0.42                     | -1.0      | [9]       |
| 137      | VR29-W2-806 U2                | Centennial (colloform), Athabascan Basin | Basement-Hosted             | 138.05                   | 1.43                     | 14.0      | [9]       |
| 138      | 8658/8                        | Shea Creek, Athabasca, Canada | Unconformity-Contact     | 137.80                   | -0.37                    | [62]      |
| 139      | 8658/8                        | Shea Creek, Athabasca, Canada | Unconformity-Contact     | 137.79                   | -0.41                    | [62]      |
| 140      | 9081/9                        | Shea Creek, Athabasca, Canada | Unconformity-Contact     | 137.80                   | -0.35                    | [62]      |
| 141      | 9081/9                        | Shea Creek, Athabasca, Canada | Unconformity-Contact     | 137.79                   | -0.46                    | [62]      |
Table S1. Cont.

| Sample | Location | Sub type | 238U/235U | δ238U | δ234U | Reference |
|--------|----------|----------|-----------|-------|-------|-----------|
| 142    | 9081/9  | Shea Creek, Athabasca, Canada | Unconformity-Contact | 137.79 | −0.43 | [62]      |
| 143    | McRiv387715 | McArthur, Athabasca Basin | Unconformity-Contact | 137.87 | 0.17 | −6.0 | [9] |
| 144    | McRiv353-50.2 | McArthur, Athabasca Basin | Unconformity-Contact | 137.90 | 0.36 | 0.0 | [9] |
| 145    | McRiv236-515 | McArthur, Athabasca Basin | Unconformity-Contact | 137.87 | 0.12 | 0.0 | [9] |
| 146    | McRiv208-533 | McArthur, Athabasca Basin | Unconformity-Contact | 137.88 | 0.24 | −7.0 | [9] |
| 147    | 9079/22 | McArthur, Athabasca, Canada | Unconformity-Contact | 137.79 | −0.44 | [62]      |
| 148    | 9079/22 | McArthur, Athabasca, Canada | Unconformity-Contact | 137.81 | −0.32 | [62]      |
| 149    | 9079/22 | McArthur, Athabasca, Canada | Unconformity-Contact | 137.79 | −0.41 | [62]      |
| 150    | 9079/22 | McArthur, Athabasca, Canada | Unconformity-Contact | 137.80 | −0.36 | [62]      |
| 151    | 9079/22 | McArthur, Athabasca, Canada | Unconformity-Contact | 137.79 | −0.41 | [62]      |

Quartz Pebble Conglomerate

| Sample | Location | Sub type | 238U/235U | δ238U | δ234U | Reference |
|--------|----------|----------|-----------|-------|-------|-----------|
| 152    | M9996    | Lanark County, Canada | Tabular | 137.88 | 0.20 | −4.0 | [9] |

Collapsed Breccia Pipe

| Sample | Location | Sub type | 238U/235U | δ238U | δ234U | Reference |
|--------|----------|----------|-----------|-------|-------|-----------|
| 153    | Faith Mountain | Rollfront | 137.80 | −0.30 | [25] | [9] |
| 154    | 1304B    | Orphan Lode, AZ | Tabular | 137.74 | −0.81 | −23.8 | This study |

Sandstone

| Sample | Location | Sub type | 238U/235U | δ238U | δ234U | Reference |
|--------|----------|----------|-----------|-------|-------|-----------|
| 155    | Jackpile Mine | Tabular | 137.89 | 0.39 | [25] | [9] |
| 156    | Mi Vida Mine | Tabular | 137.90 | 0.42 | [25] | [9] |
| 157    | 353B     | Happy Jack, Utah | Tabular | 137.90 | 0.36 | 4.0 | [59] |
| 158    | 353P     | Happy Jack, Utah | Tabular | 137.89 | 0.31 | 6.0 | [59] |
| 159    | 625      | SE Utah, Monument Valley | Tabular | 137.98 | 0.95 | −53.8 | This study |
| 160    | 815B     | Moonlight Mine | Rollfront | 137.85 | −0.03 | −15.2 | This study |
| 161    | 1856-Continental | Rollfront | 137.89 | 0.28 | −12.1 | [64] |
| 162    | M28469   | Ike Mine, Utah | Rollfront | 137.92 | 0.51 | 1.0 | [9] |
| 163    | M21404   | Saxung, Schmiedelberg, Germany | Tabular | 137.90 | 0.35 | 4.0 | [9] |
| 164    | Finland 324-42.5 | Rollfront | 137.81 | −0.31 | 1.0 | [9] |
| 165    | Finland AE762.5-63 | Rollfront | 137.88 | 0.25 | −15.0 | [9] |
| 166    | 1237B    | Cane Spring Canyon, Utah | Rollfront | 137.74 | −0.81 | −42.3 | [9] |
| 167    | 1237BP   | Cane Spring Canyon, Utah | Rollfront | 137.67 | −1.30 | −20.8 | [9] |
| 168    | 1262B    | Adair Mine, Utah | Rollfront | 137.83 | −0.15 | −4.8 | [9] |
| 169    | 1303B    | Big Indian Wash, Utah | Rollfront | 137.82 | 0.09 | −8.7 | [9] |
| 170    | 1303P    | Big Indian Wash, Utah | Rollfront | 137.87 | 0.18 | −7.8 | [9] |
| 171    | 1232B    | Big Indian Wash, Utah | Rollfront | 137.66 | −1.20 | 1.8 | [9] |
| 172    | OTS 07-04-174.5 | Mafic Dykes/ Sills in Proterozoic Sandstone | 137.89 | 0.28 | −2.0 | [9] |
| 173    | 76-Palette | Palette, S. Alligator River Valley, Australia | Mafic Dykes/ Sills in Proterozoic Sandstone | 137.88 | 0.19 | −5.0 | [9] |
| 174    | MT-6-10-313.6 | Mafic Dykes/ Sills in Proterozoic Sandstone | 137.88 | 0.22 | 1.0 | [9] |
| 175    | MT-06-010-313.1 a | Mafic Dykes/ Sills in Proterozoic Sandstone | 137.90 | 0.33 | 1.0 | [9] |
| 176    | MT-06-010-313.1 b | Mafic Dykes/ Sills in Proterozoic Sandstone | 137.88 | 0.20 | −7.0 | [9] |
| 177    | MT-06-010-314.1 | Mafic Dykes/ Sills in Proterozoic Sandstone | 137.86 | 0.07 | −4.0 | [9] |

Unknown

| Sample | Location | Sub type | 238U/235U | δ238U | δ234U | Reference |
|--------|----------|----------|-----------|-------|-------|-----------|
| HU-1   | Harwell Uraninite | Mafic Dykes/ Sills in Proterozoic Sandstone | 137.77 | −0.60 | [50] | [9] |

1 First column (1–177) corresponds to X-axis position for Figure S3.