**SHRIMP data acquisition logsheet** **SHRIMP A or B** **Mineral = TNT**

| Date | Sample/Mount(s) | Sample owner | SH operator | Night-runner(s) |
|---|---|---|---|---|
| 10/11/10 | 09-22<br>10-22 | McN | McN/IF | Serena |

Deadtime....2.5.....ns Kohler aperture.....100..... Retard.....0.....volts Resoln.....5100.....

Primary on steel: $O^-$ ..... Bits/nA $O_2^-$ ..... Bits/nA

Primary $O_2^-$ on: epoxy .....nA standard .....nA PostESA BM on std .....

Raster: Time (mins) .....2..... Aperture .....120..... No. of scans .....7.....

| **Zircon/Badd.** | 196 | 204 | Bk | 206 | 207 | 208 | 238 | 248 | 254 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Count time (secs) | 2 | 10 | 10 | 10/20 | 30/10 | 10 | 5 | 5 | 2 | | |
| Delay time (secs) | 8 | 3 | 1 | 4 | 2 | 1 | 3 | 2 | 2 | | |
| Peak centring time (secs) | 3 | - | - | 3 | - | - | 3 | 3 | 2 | | |
| | | | | | | | | | | | |
| **Titanite/Perovskite** | 200 | 204 | Bk | 206 | 207 | 208 | 248 | 254 | 270 | | |
| Count time (secs) | 2 | 10 | 10 | 10/20 | 30/10 | 10 | 53 | 54 | 75 | | |
| Delay time (secs) | 8 | 3 | 12 | 4 | 2 | 12 | 4 | 2 | 3 | | |
| Peak centring time (secs) | 3 | - | - | 45 | - | - | 23 | 3 | 3 | | |
| | | | | | | | | | | | |
| **Rutile** | 192 | 204 | Bk | 206 | 207 | 208 | 248 | 254 | 270 | | |
| Count time (secs) | 2 | 10 | 10 | 10/20 | 30/10 | 10 | 5 | 5 | 7 | | |
| Delay time (secs) | 8 | 3 | 1 | 4 | 2 | 1 | 4 | 2 | 3 | | |
| Peak centring time (secs) | 3 | - | - | 4 | - | - | 2 | 3 | 3 | | |
| | | | | | | | | | | | |
| **Monazite** | 202 | 203 | 204 | Bk | 206 | 207 | 208 | 232 | 254 | 264 | 270 |
| Count time (secs) | 2 | 10 | 10 | 10 | 10/20 | 30/10 | 5 | 5 | 2 | 2 | 2 |
| Delay time (secs) | 8 | 1 | 1 | 1 | 4 | 2 | 2 | 4 | 3 | 3 | 2 |
| Peak centring time (secs) | 1 | 2 | - | - | 4 | - | 2 | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | |
| **Xenotime** | 194 | 204 | Bk | 206 | 207 | 208 | 238 | 248 | 254 | | |
| Count time (secs) | 2 | 10 | 10 | 10/20 | 30/10 | 5 | 5 | 5 | 2 | | |
| Delay time (secs) | 8 | 3 | 1 | 4 | 2 | 1 | 3 | 2 | 2 | | |
| Peak centring time (secs) | 1 | - | - | 3 | - | - | 4 | 3 | 2 | | |

| **Offsets** | | | | | | |
|---|---|---|---|---|---|---|
| **Zircon/Badd.** | 196-204 | 204-Bk | 204-206 | 206-207 | 206-208 | |
| Expected offset | 8.170 | 0.045 | 2.001/9 | 1.001/5 | 2.001/9 | |
| Setup offsets | | | | | | |
| | | | | | | |
| **Titanite/Perovskite** | 200-204 | 204-Bk | 204-206 | 206-207 | 206-208 | |
| Expected offset | 4.136 | 0.045 | 2.001/9 | 1.001/5 | 2.001/9 | |
| Setup offsets | 4.137 | 0.045 | 2.007 | 1.003 | 2.006 | |
| | | | | | | |
| **Rutile** | 192-204 | 204-Bk | 204-206 | 206-207 | 206-208 | |
| Expected offset | 12.100 | 0.045 | 2.001/9 | 1.001/5 | 2.001/9 | |
| Setup offsets | | | | | | |
| | | | | | | |
| **Monazite** | 202-203 | 203-204 | 204-Bk | 204-206 | 206-207 | 206-208 |
| Expected offset | 1.000 | 1.110 | 0.045 | 2.001/9 | 1.001/5 | 2.001/9 |
| Setup offsets | | | | | | |
| | | | | | | |
| **Xenotime** | 194-204 | 204-Bk | 204-206 | 206-207 | 206-208 | |
| Expected offset | 10.143 | 0.045 | 2.001/9 | 1.001/5 | 2.001/9 | |
| Setup offsets | | | | | | |

10/11/10 09-22

Date ..... Mount ..... Page no. 1

| Filename | Time | UO/U | ~~196~~ 200 | 206 | f206 | U | Sensit- | Age/Ma | Age/Ma | Check |
|---|---|---|---|---|---|---|---|---|---|---|
| | | ~~254/238~~ | Kcps | -cps- | (%) | ppm | ivity | 206/238 | 207/206 | offsets |
| *Alternatives* | | UO2/UO | *Reference* | | | 254/270 | ThO | *Pb/U ratio* | 207/206 | |
| | | 270/254 | *Kcps* | | | *Kcps* | Kcps | | | |
| Kh. 1-1 | 10:06 | 0.85 | 1.7 | 3.6 | 0.4 | 22 | 20. | cal | 691 | ✓ |
| Orb. 1-1 | 10:32 | 0.87 | 1.7 | 4.3 | 1.0 | 4.3 | 24 | 2725 | 2798 | ✓ |
| Kh 2-1 | 10:55 | 0.85 | 1.7 | 3.5 | 0.4 | 22. | 20. | 513 | 700 | ✓ |
| 0922. 1-1 | 11:21 | 0.82 | 1.6 | 2.3 | 0.9 | 2.5 | 0.6 | 2460 | 2600 | ✓ |
| ~~0922.2-0~~ | | | changed | output format | | | | | | |
| 5 sc. hi 204 0922.2-1 | | ~~(254/238 / 249/238~~ | "196" | | | "254" | "238" | | | |
| ↓ | 11:39 | 0.87 | 1.5 | 8.1 | 9.2 | 5.6 | 4.9 | — | 2486?? | — |
| 5 sc. hi 204 0922.2-2 | 11:57 | 0.82 | 1.5 | 3.1 | 1.9 | 3.3 | 0.2 | | 2473 | ✓ |
| Orb. 1-2 | 12:19 | 0.87 | 1.5 | 4.2 | .90 | 4.2 | 23 | — | 2692±10 | ✓ |
| 0922.3-1 | 12:45 | 0.89 | 1.8 | 1.5 | 2.4 | 1.6 | 4.0 | — | 2459±28 | ✓ |
| 0922.3-2 | 13:06 | 0.85 | 1.8 | 1.6 | 2.5 | 1.7 | 4.6 | — | 2451±31 | ✓ |
| Kh. 3-1 | 13:29 | 0.84 | 1.5 | 3.3 | 0.52 | 21 | 20 | — | 479±34 | ✓ |
| Kh. 4-1 | 13:52 | 0.84 | 1.6 | 3.4 | 0.62 | 21 | 20 | — | 438±39 | ✓ |
| 1022D. 1-1 | 14:18 | 0.85 | 1.9 | 4.6 | 0.37 | 9.3 | 13 | — | 1516±16 | ✓ |
| " .2-1 | 14:39 | 0.86 | 1.8 | 5.8 | 0.29 | 12 | 7.8 | — | 1516±12 | ✓ |
| " .2-2 | 15:01 | 0.87 | 1.8 | 6.5 | 0.28 | 14 | 8.8 | — | 1502±11 | ✓ |
| " .3-1 | — | aborted → high 4/6 | | | | | | | | |
| " .4-1 | 15:28 | 0.85 | 1.8 | 2.3 | 0.60 | 4.8 | 5.4 | — | 1512±23 | ✓ |
| XX .5-1 | 15:51 | 0.82 | 1.8 | 0.9 | 1.3 | 1.9 | 2.0 | — | 1554±71 | ✓ |
| .6-1 | — aborted → high 4/6 | | | | | | | | | |
| .7-1 | 16:17 | 0.85 | 1.8 | 3.1 | 0.58 | 6.4 | 4.1 | — | 1499±21 | ✓ |
| .8-1 | -aborted → high 4/6 | | | | | | | | | |
| .9-1 | 16:45 | 0.92 | 1.9 | 5.6 | 0.41 | 12 | 19 | — | 1525±14 | ✓ |
| .2-3 | 17:07 | 0.86 | 1.9 | 6.3 | 0.25 | 13 | 8.1 | — | 1516±10 | ✓ |
| .9-2 | 17:28 | 0.88 | 1.9 | 4.0 | 0.6 | 8.1 | 28 | — | 1568±20 | ✓ |
| Kh. 5-1 | 17:53 | 0.84 | 1.6 | 3.4 | 0.5 | 22 | 20 | — | 496±36 | ✓ |
| Orb. 2-1 | 18:15 | 0.90 | 1.8 | 4.7 | 0.87 | 4.9 | 23 | | 2686±11 | ✓ |
| 0922.4-1 | 18:39 | 0.8 | 1.9 | 2.3 | 1.04 | 2.5 | 6.5 | | 2530±15 | ✓ |
| 4-2 | 19:01 | 0.83 | 1.7 | 2.8 | 0.9 | 3.0 | 10 | | 2537±13 | ✓ |
| 5-1 | 19:23 | 0.84 | 1.7 | 3.1 | 0.70 | 3.3 | 37 | | 2555±12 | ✓ |
| 6-1 | 19:50 | 0.88 | 1.8 | 2.0 | 0.85 | 2.2 | 7.5 | | 2552±16 | ✓ |
| 7-1 | 20:12 | 0.82 | 1.6 | 2.1 | 0.76 | 2.3 | 0.08 | | 2524±14 | ✓ |
| Kh. 6-1 | 20:34 | 0.91 | 1.7 | 3.3 | 0.81 | 21 | 18 | | 409±41 | ✓ |

**Offsets:** ~~196~~ 200-204 = 4.137 204-Bkg = .045 204-206 = ~2.007 206-207 = 1.003 207-208 = 1.003

Date 10/11/10 Mount 09-22 Page no. 2

mislabeled as Kh.6-1 ∴ * Argh! Labled as 8-1 ∴

| | | 9/8 | 1 | 4 | 2/4 | 9 | 7 | x | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Filename** | **Time** | **UO/U** | **196** | **206** | **f206** | **U** | **Sensit-** | **Age/Ma** | **Age/Ma** | **Check** |
| | | **254/238** | **Kcps** | **-cps-** | **(%)** | **ppm** | **ivity** | **206/238** | **207/206** | **offsets** |
| *Alternatives* | | *UO2/UO* | *Reference* | | | *254/270* | | *Pb/U ratio* | *207/206* | |
| | | *270/254* | *Kcps* | | | *Kcps* | | | | |
| 0922.8-1 | 20:58 | 0.82 | 1.5 | 2.1 | 0.76 | 2.4 | 0.2 | — | 2487±15 | ✓ |
| 9-1 | 21:21 | 0.82 | 1.6 | 2.1 | 1.04 | 2.3 | 0.2 | | 2498±16 | ✓ |
| 10-1 | 21:41 | 0.78 | 1.3 | 3.1 | 0.74 | 3.6 | 0.2 | | 2462±18 | ✓ |
| 11-1 | 22:08 | 0.86 | 1.6 | 3.3 | 0.57 | 3.7 | 5.4 | | 2623±8 | ✓ |
| 12-1 | 22:36 | 0.79 | 1.5 | 3.5 | 0.42 | 3.9 | 0.2 | | 2511±11 | ✓ |
| Kh.7-1 | 22:59 | 0.86 | 1.6 | 3.1 | 0.77 | 20 | 24 | | 467±65 | ✓ |
| 0922.13-1 | 23:28 | 1.00 | 1.7 | 4.5 | 0.84 | 49 | 5.6 | | 2520±35 | ✓ |
| 14-1 | 23:49 | 0.85 | 1.7 | 3.3 | 0.66 | 3.6 | 3.8 | | 2838±12 | ✓ |
| 15-1 | 00:10 | 0.85 | 1.8 | 2.3 | 1.30 | 2.4 | 2.8 | | 2510±17 | ✓ |
| 16-1 | 00:37 | 0.88 | 1.7 | 5.3 | 0.44 | 5.9 | 5.1 | | 2557±7 | ✓ |
| 17-1 | 01:14 | 0.82 | 1.5 | 2.6 | 0.84 | 2.9 | 0.16 | | 2486±21 | ✓ |
| Kh.8-1 | 01:36 | 0.89 | 1.6 | 3.4 | 1.17 | 17 | 15 | | 417±52 | ✓ |
| 0922.18-1 | 02:03 | 0.92 | 1.8 | 4.9 | 0.81 | 5.1 | 4.8 | | 2550±9 | ✓ |
| 19-1 | 02:24 | 0.85 | 1.7 | 2.7 | 1.18 | 2.9 | 0.09 | | 2497±14 | ✓ |
| 20-1 | 02:50 | 0.90 | 1.8 | 1.8 | 1.00 | 1.8 | 5.1 | | 2579±20 | ✓ |
| 21-1 | 03:24 | 0.93 | 1.8 | 5.0 | 0.44 | 5.4 | 4.8 | | 2582±9 | ✓ |
| 22-1 | 03:55 | 0.91 | 1.9 | 2.9 | 0.86 | 3.1 | 10 | | 2537±18 | ✓ |
| Kh.1-2 | 04:18 | 0.84 | 1.6 | 3.4 | 0.52 | 22 | 20 | | 493±42 | ✓ |
| Grb.3-1 | 04:40 | 0.86 | 1.6 | 4.5 | 0.77 | 4.6 | 23 | | 2688±9 | ✓ |
| 0922.23-1 | 05:09 | 0.85 | 1.8 | 2.2 | 0.90 | 2.4 | 9.1 | | 2557±19 | ✓ |
| 24-1 | 05:30 | 0.86 | 1.7 | 6.0 | 0.4 | 6.4 | 5.1 | | 2553±8 | ✓ |
| 25-1 | 05:51 | 0.89 | 1.8 | 1.6 | 1.18 | 1.7 | 4.4 | | 2512±20 | ✓ |
| 26-1 | 06:19 | 0.87 | 1.7 | 3.9 | 0.46 | 4.2 | 3.8 | | 2554±10 | ✓ |
| 27-1 | 06:41 | 0.86 | 1.7 | 6.1 | 0.45 | 6.6 | 5.6 | | 2552±11 | ✓ |
| Kh.2-2 | 07:04 | 0.84 | 1.5 | 3.3 | 0.39 | 21 | 20 | | 497±29 | ✓ |
| 0922.28-1 | 07:29 | 0.87 | 1.7 | 1.9 | 1.0 | 2.1 | 5.9 | | 2558±19 | ✓ |
| 29-1 | 07:50 | 0.85 | 1.6 | 3.6 | 0.72 | 4.0 | 4.4 | | 2552±13 | ✓ |
| 30-1 | 08:11 | 0.89 | 1.7 | 2.2 | 1.00 | 2.4 | 6.1 | | 2536±18 | ✓ |
| Kh.7-2 | | | | | | | | | | |

**Offsets:** ~~196~~ 200-204 = 4.137 204-Bkg = ..... 204-206 = ..... 206-207 = ..... 207-208 = .....