

UWA SHRIMP LOG SHEET

Date 28/11/06 **UWA mount no(s)** 06-64 **Mineral(s)** ZR **Whose sample?** McN **Operator(s)** McN + JAMES

Notes: Masses in **bold** = peak centred; others = offset from lower mass centred peak (see offsets below).

| | | | | | | | | | |
|---------------------|------------|-----|-------|------------|-------|-----|------------|------------|------------|
| Zircon/Badd. | 196 | 204 | 204.1 | 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 |
| Centring (secs) | 3 | - | - | 3 | - | - | 3 | 3 | 2 |

| | | | | | | | | | |
|----------------------------|------------|-----|-------|------------|-------|-----|------------|------------|------------|
| Titanite/Perovskite | 200 | 204 | 204.1 | 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 |
| Centring (secs) | 3 | - | - | 4 | - | - | 4 | 3 | 3 |

| | | | | | | | | | | | |
|-----------------------|------------|------------|-----|-------|------------|-------|------------|------------|------------|------------|------------|
| Monazite (SHB) | 202 | 203 | 204 | 204.1 | 206 | 207 | 208 | 232 | 254 | 264 | 270 |
| Count time (secs) | 2 | 2 | 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 |
| Centring (secs) | 1 | 2 | - | - | 4 | - | 2 | 2 | 2 | 2 | 2 |
| Cup in/out (SHA) out | | | | | | | | in | out | in | |

| | | | | | | | | | | |
|-----------------------|------------|-------|-----|-------|------------|-------|-----|------------|------------|------------|
| Xenotime (SHB) | 194 | (196) | 204 | 204.1 | 206 | 207 | 208 | 238 | 248 | 254 |
| Count time (secs) | 2 | (5) | 10 | 10 | 10/20 | 30/10 | 5 | 5 | 5 | 2 |
| Delay time (secs) | 8 | (2) | 3 | 1 | 4 | 2 | 1 | 3 | 2 | 2 |
| Centring (secs) | 1 | - | - | - | 4 | - | - | 4 | 3 | 2 |

MASS OFFSETS (record setup offsets for session, and **check them after each analysis**).

Note: Setup offsets are different for SHRIMP A and B: i.e. 206-207 = 1.001 for A and 1.005 for B.

| | | | | | | |
|--------------------------|-----------|-----------|-----------|----------|---------|----------|
| Zircon/Badd. | 196-204 | 204-204.1 | 204-206 | 206-207 | 206-208 | |
| Expected offsets: | 8.170 | 0.045 | ~2.001/9 | 1.001/5 | 2.001/9 | |
| Setup offsets: | 8.163 | 0.045 | ~2.010 | 1.004 | 2.007 | |
| Titanite/Perovsk. | 200-204 | 204-204.1 | 204-206 | 206-207 | 206-208 | |
| Expected offsets: | 4.136 | 0.045 | ~2.001/9 | 1.001/5 | 2.001/9 | |
| Setup offsets: | | | | | | |
| Monazite (SHB) | 202-203 | 203-204 | 204-204.1 | 204-206 | 206-207 | 206-208 |
| Expected offsets: | ~1.000 | 1.110 | 0.045 | ~2.001/9 | 1.001/5 | ~2.001/9 |
| Setup offsets: | | | | | | |
| Xenotime (SHB) | (194-196) | 194-204 | 204-204.1 | 204-206 | 206-207 | 206-208 |
| Expected offsets: | 1.998 | 10.143 | 0.045 | ~2.001/9 | 1.001/5 | 2.001/9 |
| Setup offsets: | | | | | | |

Deadtime 24 ns **Kohler aperture** 100 **Retard**volts **Resoln** 558.2

Primary on Steel: O⁻ bits & nA O₂⁻ bits & nA

Primary O₂⁻ on: epoxy = 2.1 nA; standard = 2.9 nA; **PESABM** on std = 53 pA

Raster: Time (mins): 2.0 Aperture: 120 **No. of scans:** 6

Useful information

CZ3 = 564 Ma & 551 ppm U
 Temora 2 = 417 Ma & ~130 ppm U
 Khan = 518 Ma & 700 ppm U
 SDA : 7/6 age = 3578 +/- 4 Ma
 BR266 : 559 Ma & 903 ppm U

MONAZITE

French = 514 Ma & 1000 ppm U
 PD95 7/6 age = 1698(?) Ma
 Z2908 7/6 age = 1795(?) Ma
 QMa = 505(?) Ma

XENOTIME

MG1 = 490(?) Ma
 BS1 = 507(?) Ma
 Xeno1 = 994 Ma & 7/6 age = 997 Ma

*Rate meter = 300kHz scale
 33% scale = 900ppm U*

Note: Bold = constant for stds & unknowns.....check after each analysis; also check offsets.

| Sample/ Std ID | Time on printout | UO/U 254/238 | 196 (zr) Kcps | 206 cps | U ppm | f ₂₀₆ % | Sensit. | Age+/-1σ (Ma) | | Offsets OK? |
|-------------------|---------------------|--------------------------|---|------------|--------------------|-----------------------|------------------------|-------------------------------|---------|---------------------------|
| | | | | | | | | 206/238 | 207/206 | |
| Alternative | | UO2/UO 270/254 | 194 (xt) 200 (mt) 203 (mz) | 206 cps | 254 270 Kcps | 204 cps | 196/194 264 Kcps | 206/238 206/254 206/270 | 207/206 | Check after each!!! |

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| | | | | | | | | | | |
|---------|-------|--------|------|-----------------|-------|--------|------|-----------------------------------|-----------|---|
| BR.1-1 | 19:30 | 5.17 | 17 | 2500 | 903 | - | 16.3 | 559±4 | 576±19 | ✓ |
| BR.2-1 | 19:50 | 5.28 | 16 | 2400 | 917 | - | 15.7 | 542±3 | 552±16 | ✓ |
| SDA.1-1 | 20:08 | 5.14 | 17 | 6100 | 319 | 56 | 16.3 | 3146±21 | 3502±6 | ✓ |
| A.1-1 | 20:29 | 5.044 | 32 | 1816 | 29.0 | 0.51 | 15.5 | 1148 ^{±25} _{±9} | 1028±208 | ✓ |
| A.2-1 | 20:49 | 5.047 | 31.7 | 4407 | 76.4 | 0.06 | 14.7 | 1130±20 | 1204±67 | ✓ |
| A.2-2 | 21:07 | 5.097 | 30.8 | 7514 | 133.3 | 0.06 | 15.6 | 1124±11.5 | 1216±82 | ✓ |
| A.8-1 | 21:27 | 5.43 | 30.3 | 5352 | 85.3 | 0.31 | 16.7 | 1193±14.8 | 1088±60.5 | ✓ |
| BR.2-1 | 21:48 | 5.195 | 24.5 | 2200 | 899.9 | 0.055 | 14.8 | 549±3 | 530±22 | ✓ |
| A.4-1 | 22:20 | 5.55 | 17 | 690 | 104.2 | 0.096 | 18.4 | 1179±20.6 | 1155±51 | ✓ |
| A.4-2 | 22:37 | 5.326 | 15 | 360 | 65.9 | 0.09 | 14.1 | 1172±21 | 1182±69 | ✓ |
| A.5-1 | 22:57 | 5.356 | 17 | 310 | 48.9 | 0.054 | 15.8 | 1196±19.2 | 1240±81 | ✓ |
| BR.2-2 | 23:17 | 5.2147 | 14 | 2100 | 918.2 | 0.081 | 14.2 | 539±4.2 | 512±22.5 | ✓ |
| A.6-1 | 23:35 | 5.414 | 15 | 730 | 130.8 | 0.038 | 15.4 | 1153±∞ | 1207±NoV | ✓ |
| A.7-1 | 23:54 | 5.4841 | 16 | 280 | 45.2 | -0.1 | 15.9 | 1205±24 | 1242±126 | ✓ |
| A.8-1 | 00:13 | 5.3736 | 15 | 790 | 139.3 | -0.1 | 15.7 | 1150±16 | 1173±45 | ✓ |
| BR.3-1 | 00:42 | 5.4891 | 17 | 2700 | 916.4 | 0.022 | 16.6 | 558±3.6 | 565±22 | ✓ |
| A.9-1 | 1:00 | 5.3002 | 16 | 740 | 113.1 | 0.49 | 15.9 | 1194±14.6 | 1319±109 | ✓ |
| A.10-1 | 1:20 | 5.3176 | 16 | 660 | 110.3 | 0.02 | 16.1 | 1162±∞ | 1213±NoV | ✓ |
| A.10-2 | 1:38 | 5.3201 | 16 | 310 | 54.4 | 0.622 | 15.4 | 1165±20 | 1307±65 | ✓ |
| BR.3-2 | 1:57 | 5.1949 | 15 | 2200 | 902.9 | -0.013 | 13.9 | 538±3.8 | 577±23 | ✓ |
| A.11-1 | 2:15 | 5.235 | 16 | 99 | 16.2 | -0.7 | 15.6 | 1204±36 | 1305±163 | ✓ |

