

APPENDIX B
Water Quality Data

Table B1. Background groundwater quality data, 2008 to 2010

| Bore ID | Sampling Date | FIELD | | LAB DATA | | | MAJOR IONS (in mg/L) | | | | | | | METALS (in ug/L) | | | | | | | | | | |
|----------|---------------|-------|----------|----------|----------|----------|----------------------|-----|----|----|----|----|---|------------------|------|------|------|------|------|------|------|-----|------|----|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Fe_d | Cd_d | Cu_d | Co_d | Mn_d | Ni_d | Pb_d | U_d | Zn_d | |
| RN023140 | 16-Jul-08 | 7.3 | 504 | 7.3 | 438 | - | 286 | 2 | 3 | 30 | 46 | 3 | 1 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| RN023140 | 22-Oct-08 | 7.3 | 514 | 7.8 | 448 | - | 285 | 2 | 3 | 29 | 43 | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - |
| RN023140 | 4-Dec-08 | 8.6 | 527 | 8.0 | 442 | - | 241 | 1 | 3 | 28 | 43 | 3 | 1 | 3 | 200 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 1 | 1 |
| RN023140 | 8-Jan-09 | 9.6 | 499 | 7.9 | 448 | - | 245 | 1 | 3 | 27 | 43 | 3 | 1 | 0 | 20 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| RN023140 | 18-Mar-09 | 8.0 | 472 | 7.9 | 418 | - | 228 | 2 | 2 | 25 | 43 | 3 | 1 | 1 | 20 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 1 | 2 |
| RN023140 | 27-Apr-09 | 7.1 | 509 | 7.7 | 460 | - | 254 | 2 | 3 | 29 | 44 | 3 | 1 | 1 | 20 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| RN023140 | 16-Jul-09 | 8.0 | 512 | 8.1 | 466 | - | 216 | 3 | 3 | 26 | 39 | 3 | 3 | 5 | 20 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 5 | 2 |
| RN023140 | 1-Sep-09 | 7.8 | 518 | 7.7 | 447 | - | 236 | 4 | 4 | 28 | 45 | 3 | 3 | 6 | 20 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 14 | 3 |
| RN023140 | 13-Oct-09 | 7.2 | 533 | 7.0 | 439 | - | 228 | 2 | 3 | 28 | 44 | 3 | 2 | 10 | 20 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 5 | 1 |
| RN023140 | 18-Nov-09 | 7.2 | 460 | 7.7 | 419 | - | 240 | 2 | 3 | 29 | 42 | 2 | 1 | 5 | 20 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 |
| RN023140 | 5-Aug-10 | 7.1 | 496 | - | - | 259 | 315 | 2 | <5 | 29 | 45 | 3 | 1 | 3 | 200 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 12 |
| RN022085 | 11-Jun-08 | 7.5 | 366 | 7.4 | 297 | - | 176 | 2 | 2 | 23 | 27 | 2 | 1 | 5 | 20 | 0 | 0 | 2 | 139 | 1 | 1 | 1 | 4 | 3 |
| RN022085 | 22-Oct-08 | 7.4 | 381 | 7.8 | 390 | - | 235 | 1 | 2 | 35 | 31 | 2 | 1 | 2 | 20 | 0 | 0 | 0 | 199 | 0 | 0 | 0 | 1 | 2 |
| RN022085 | 4-Dec-08 | 8.0 | 530 | 7.9 | 432 | - | 243 | 2 | 2 | 39 | 34 | 2 | 1 | 6 | 200 | 0 | 0 | 1 | 679 | 1 | 0 | 0 | 8 | 3 |
| RN022085 | 20-Jan-09 | 7.2 | 520 | 7.5 | 437 | - | 240 | 0 | 2 | 40 | 36 | 2 | 0 | 3 | 20 | 0 | 0 | 1 | 637 | 0 | 0 | 0 | 5 | 1 |
| RN022085 | 18-Mar-09 | 7.3 | 484 | 7.3 | 407 | - | 224 | 0 | 2 | 36 | 34 | 2 | 0 | 2 | 20 | 0 | 1 | 1 | 306 | 0 | 0 | 0 | 2 | 2 |
| RN022085 | 23-Apr-09 | 7.0 | 519 | 7.4 | 436 | - | 233 | 1 | 2 | 35 | 34 | 2 | 1 | 2 | 20 | 0 | 1 | 1 | 415 | 0 | 0 | 0 | 2 | 2 |
| RN022085 | 19-May-09 | 7.0 | 368 | 7.2 | 491 | - | 230 | 5 | 4 | 32 | 30 | 3 | 3 | 16 | 60 | 0 | 15 | 13 | 365 | 9 | 2 | 2 | 4 | 17 |
| RN022085 | 16-Jul-09 | 7.1 | 417 | 7.2 | 366 | - | 195 | 1 | 2 | 26 | 25 | 2 | 1 | 2 | 20 | 0 | 0 | 7 | 280 | 4 | 0 | 0 | 1 | 4 |
| RN022085 | 1-Sep-09 | 7.3 | 384 | 7.2 | 334 | - | 191 | 0 | 2 | 28 | 27 | 2 | 1 | 3 | 20 | 0 | 1 | 3 | 267 | 2 | 0 | 0 | 1 | 2 |
| RN022085 | 13-Oct-09 | 7.2 | 423 | 6.9 | 346 | - | 177 | 1 | 2 | 26 | 26 | 2 | 2 | 3 | 60 | 0 | 1 | 3 | 329 | 2 | 0 | 0 | 1 | 6 |
| RN022085 | 18-Nov-09 | 7.1 | 382 | 7.6 | 352 | - | 189 | 1 | 2 | 27 | 25 | 2 | 2 | 1 | 20 | 0 | 1 | 3 | 349 | 2 | 0 | 0 | 1 | 3 |

Red numbers indicate that the concentration was below the indicated detection limit

Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B2. Groundwater quality data for bores near Brown's Oxide Mine and in the former tailings dam area, 2008 to 2010

| Bore Hole ID | Sampling Date | FIELD | | LAB DATA | | | MAJOR IONS (in mg/L) | | | | | | | METALS (in ug/L) | | | | | | | | | |
|---|---------------|-------|----------|----------|----------|----------|----------------------|------|----|------|------|-----|-----|------------------|------|------|------|------|------|------|------|-----|------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Fe_d | Cd_d | Cu_d | Co_d | Mn_d | Ni_d | Pb_d | U_d | Zn_d |
| In former tailings dam area | | | | | | | | | | | | | | | | | | | | | | | |
| RN023302 | 5-Aug-10 | 7.1 | 472 | - | - | 228.5 | 278.1 | 1.1 | <5 | 30.7 | 41.4 | 2.6 | 1.0 | 16 | 200 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 14 |
| RN023304 | 30-Oct-08 | - | - | 7.4 | 1453 | 70 | 85 | 591 | 5 | 138 | 111 | 4 | 2 | 20 | 200 | - | 0 | 0 | 12 | 0 | - | 2 | 1 |
| RN023304 | 8-Apr-09 | - | - | 7.3 | 1628 | - | - | 644 | - | 150 | 114 | - | - | 3 | 200 | - | 0 | 1 | 26 | 0 | - | 1 | 5 |
| RN023304 | 6-Aug-10 | 7.1 | 1612 | - | - | 202 | 246 | 667 | 5 | 165 | 124 | 4 | 2 | 6 | 200 | 0 | 0 | 0 | 7 | 1 | 0 | 1 | 14 |
| RN022547 | 6-Aug-10 | 7.1 | 387.7 | - | - | 162 | 197 | 0 | <5 | 17 | 35 | 2 | 1 | 2 | 400 | 0 | 0 | 0 | 446 | 0 | 0 | 0 | 18 |
| RN022548 | 6-Aug-10 | 7.4 | 520 | - | - | 224 | 273 | 1 | <5 | 20 | 44 | 2 | 1 | 2 | 1800 | 0 | 0 | 1 | 21 | 1 | 0 | 0 | 4 |
| West of Rum Jungle mine site (on Compass property) | | | | | | | | | | | | | | | | | | | | | | | |
| TPB1 | 16-Mar-10 | - | - | 6.8 | 408 | 45 | 55 | 149 | 2 | 21 | 35 | 4 | 1 | 1 | 20 | - | 48 | 6 | 15 | 51 | - | 0 | 32 |
| TPB2 | 16-Mar-10 | - | - | 3.9 | 2970 | 17 | 21 | 1880 | 56 | 157 | 384 | 34 | 8 | 1 | 200 | - | 0 | 1 | 757 | 1 | - | 0 | 6 |
| TPB3 | 16-Mar-10 | - | - | 7.1 | 107 | 42 | 51 | 10 | 2 | 4 | 9 | 2 | 2 | 2 | 3320 | - | 0 | 1 | 248 | 1 | - | 0 | 2 |
| RN023137 | 21-May-08 | 6.4 | 309 | 6.6 | 287 | - | 80 | 70 | 1 | 27 | 18 | 6 | 3 | 2 | 20 | 1 | 1 | 0 | 2 | 3 | 0 | 0 | 29 |
| RN023137 | 17-Jun-08 | 6.5 | 297 | 6.8 | 269 | - | 70 | 65 | 1 | 26 | 18 | 6 | 3 | 1 | 20 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 6 |
| RN023137 | 25-Jun-08 | 6.7 | 289 | 6.7 | 267 | - | 75 | 65 | 1 | 25 | 17 | 6 | 3 | 1 | 20 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| RN023137 | 28-Jul-08 | 6.7 | 290 | 6.8 | 272 | - | 72 | 63 | 1 | 24 | 17 | 6 | 3 | 14 | 20 | 1 | 1 | 0 | 3 | 3 | 0 | 0 | 11 |
| RN023137 | 29-Aug-08 | 6.9 | 301 | 6.9 | 259 | - | 75 | 56 | 1 | 25 | 17 | 6 | 3 | 1 | 20 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| RN023137 | 2-Oct-08 | 6.8 | 326 | 6.9 | 273 | - | 82 | 53 | 1 | 27 | 17 | 6 | 4 | 6 | 20 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 4 |
| RN023137 | 14-Oct-08 | 6.8 | 324 | 7.1 | 280 | - | 88 | 53 | 2 | 28 | 16 | 6 | 4 | 13 | 20 | 1 | 1 | 0 | 4 | 2 | 0 | 0 | 5 |
| RN023137 | 12-Nov-08 | 6.8 | 324 | 7.2 | 281 | - | 82 | 55 | 2 | 27 | 17 | 6 | 4 | 2 | 20 | 1 | 0 | 0 | 17 | 4 | 0 | 0 | 4 |
| RN023137 | 10-Dec-08 | 7.7 | 303 | 7.1 | 253 | - | 81 | 47 | 2 | 24 | 15 | 6 | 3 | 5 | 20 | 1 | 1 | 0 | 19 | 4 | 0 | 0 | 4 |
| RN023137 | 14-Jan-09 | 6.4 | 353 | 7.0 | 299 | - | 76 | 68 | 3 | 28 | 19 | 6 | 3 | 4 | 20 | 1 | 2 | 0 | 18 | 3 | 0 | 0 | 3 |
| RN023137 | 3-Mar-09 | 7.6 | 385 | 7.1 | 333 | - | 78 | 84 | 3 | 29 | 21 | 7 | 3 | 5 | 20 | 2 | 10 | 4 | 76 | 10 | 0 | 0 | 9 |
| RN023137 | 7-Apr-09 | 6.6 | 398 | 6.8 | 357 | - | 77 | 99 | 3 | 30 | 23 | 6 | 2 | 2 | 20 | 2 | 1 | 0 | 48 | 6 | 0 | 0 | 4 |
| RN023137 | 10-Jun-09 | 6.7 | 430 | 6.9 | 391 | - | 77 | 120 | 4 | 37 | 23 | 7 | 3 | 3 | 20 | 0 | 3 | 2 | 10 | 2 | 0 | 0 | 2 |
| RN023137 | 30-Jul-09 | 6.8 | 419 | 7.4 | 388 | - | 76 | 118 | 4 | 34 | 23 | 7 | 3 | 16 | 20 | 1 | 33 | 16 | 40 | 8 | 0 | 0 | 5 |
| RN023137 | 16-Sep-09 | 6.6 | 437 | 7.1 | 370 | - | 85 | 111 | 3 | 33 | 24 | 7 | 3 | 8 | 20 | 3 | 1 | 0 | 48 | 9 | 0 | 0 | 5 |
| RN023137 | 11-Nov-09 | 6.4 | 435 | 6.7 | 365 | - | 82 | 107 | 4 | 34 | 23 | 6 | 2 | 2 | 20 | 2 | 1 | 1 | 104 | 5 | 0 | 0 | 3 |
| RN023137 | 13-Jan-10 | 7.0 | 323 | 6.9 | 320 | - | 63 | 76 | 3 | 27 | 20 | 6 | 2 | 10 | 50 | 0 | 4 | 1 | 18 | 5 | 1 | 0 | 15 |

Red numbers indicate that the concentration was below the indicated detection limit
 Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B3a. Groundwater quality data for bores near White's Overburden Heap, 2008 to 2010

| Bore Hole ID | Sampling Date | FIELD | | LAB DATA | | | Major ions (in mg/L) | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | |
|--------------|---------------|-------|----------|----------|----------|----------|----------------------|-------|----|-----|------|----|---------------------------------|------|-------|------|------|------|------|------|------|-----|------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Fe_d | Cd_d | Cu_d | Co_d | Mn_d | Ni_d | Pb_d | U_d | Zn_d |
| RN022082S | 29-Oct-08 | - | - | 3.9 | 8300 | - | - | 6990 | 5 | 436 | 1470 | 1 | 3 | 5980 | 21000 | - | 1640 | 3930 | 8910 | 4680 | - | 318 | 8360 |
| RN022082S | 14-Apr-09 | - | - | 4.2 | 8410 | - | - | 6880 | - | 458 | 1340 | - | - | 5930 | 16400 | - | 1560 | 4220 | 9150 | 5160 | - | 270 | 9170 |
| RN022082D | 14-Apr-09 | - | - | 4.2 | 8720 | - | - | 7170 | - | 464 | 1410 | - | - | 5700 | 20000 | - | 69 | 4310 | 9490 | 5160 | - | 270 | 9080 |
| RN022082D | 29-Oct-08 | - | - | 3.8 | 8460 | - | - | 6900 | 5 | 443 | 1440 | 5 | 3 | 6350 | 16600 | - | 1970 | 3920 | 8970 | 4830 | - | 338 | 8750 |
| RN025172 | 11-Aug-10 | 6.4 | 4053 | - | - | 49 | 59 | 2960 | <5 | 288 | 552 | 4 | 5 | 15 | 1600 | 1 | 2 | 1040 | 1650 | 618 | 0 | 49 | 411 |
| RN030004 | 11-Aug-10 | 7.2 | 1760 | - | - | 186 | 226 | 1760 | <5 | 122 | 450 | 9 | 6 | 19 | 200 | 0 | 2 | 258 | 6390 | 110 | 0 | 97 | 48 |
| RN025173 | 27-Oct-08 | - | - | 6.2 | 4083 | 50 | 61 | 3370 | 5 | 38 | 887 | 10 | 1 | 18 | 200 | - | 8 | 28 | 4440 | 76 | - | 3 | 18 |
| RN025173 | 8-Apr-09 | - | - | 6.2 | 5580 | - | - | 3640 | - | 42 | 911 | - | - | 12 | 400 | - | 9 | 17 | 3440 | 114 | - | 7 | 15 |
| RN025173 | 11-Aug-10 | 6.1 | 4616 | - | - | 72 | 88 | 3800 | <5 | 45 | 962 | 11 | 1 | 232 | 200 | 0 | 40 | 16 | 4170 | 161 | 0 | 3 | 45 |
| RN022083 | 28-Oct-08 | - | - | 6.0 | 1091 | 10 | 12 | 10300 | 5 | 235 | 2500 | 64 | 8 | 8 | 200 | - | 2 | 12 | 2290 | 8 | - | 6 | 24 |
| RN022083 | 7-Apr-09 | - | - | 6.2 | 15160 | - | - | 13700 | - | 281 | 3100 | - | - | 9 | 600 | - | 73 | 30 | 3190 | 16 | - | 10 | 65 |
| RN022083 | 6-Nov-08 | 6.2 | 9301 | 6.3 | 8410 | - | 64 | 8390 | 5 | 186 | 2050 | 62 | 6 | 2 | 240 | 0 | 2 | 5 | 795 | 5 | 5 | 3 | 15 |
| RN022083 | 16-Jul-08 | 6.3 | 95 | 6.4 | 8040 | - | 65 | 8180 | 5 | 184 | 2050 | 57 | 5 | 1 | 260 | 0 | 1 | 7 | 1060 | 6 | 3 | 3 | 19 |
| RN022083 | 22-Oct-08 | 6.3 | 8436 | 6.8 | 7720 | - | 63 | 7110 | 2 | 158 | 1710 | 50 | 5 | 31 | 400 | 0 | 1 | 4 | 765 | 3 | 0 | 3 | 21 |
| RN022083 | 4-Dec-08 | 7.3 | 5843 | 7.1 | 7250 | - | 56 | 6810 | 4 | 154 | 1600 | 49 | 5 | 8 | 480 | 0 | 1 | 4 | 208 | 4 | 3 | 2 | 17 |
| RN022083 | 20-Jan-09 | 6.0 | 11850 | 6.4 | 7140 | - | 54 | 6230 | 2 | 139 | 1560 | 49 | 2 | 10 | 220 | 0 | 2 | 9 | 1900 | 9 | 1 | 6 | 31 |
| RN022083 | 18-Mar-09 | 6.2 | 8207 | 6.4 | 10700 | - | 66 | 12200 | 5 | 249 | 3070 | 68 | 6 | 6 | 400 | 0 | 6 | 7 | 1130 | 7 | 3 | 5 | 27 |
| RN022083 | 29-Apr-09 | 6.0 | 11630 | 6.5 | 10400 | - | 63 | 10100 | 5 | 236 | 2620 | 62 | 5 | 22 | 2000 | 2 | 4 | 13 | 1850 | 7 | 1 | 5 | 31 |
| RN022083 | 19-May-09 | 6.2 | 8750 | 6.5 | 6420 | - | 50 | 5660 | 3 | 111 | 1400 | 53 | 2 | 50 | 260 | 1 | 111 | 84 | 746 | 70 | 2 | 16 | 153 |
| RN022083 | 16-Jul-09 | 6.5 | 7117 | 6.7 | 6250 | - | 53 | 5240 | 3 | 96 | 1200 | 45 | 3 | 14 | 800 | 1 | 5 | 3 | 205 | 6 | 2 | 3 | 26 |
| RN022083 | 1-Sep-09 | 6.3 | 6870 | 6.3 | 5810 | - | 48 | 4950 | 2 | 103 | 1270 | 44 | 4 | 17 | 800 | 1 | 25 | 4 | 126 | 5 | 3 | 11 | 15 |
| RN022083 | 13-Oct-09 | 5.9 | 6850 | 6.1 | 5570 | - | 51 | 4790 | 3 | 96 | 1190 | 44 | 3 | 19 | 2000 | 2 | 15 | 3 | 126 | 5 | 1 | 14 | 14 |
| RN022083 | 18-Nov-09 | 5.8 | 5770 | 6.6 | 6690 | - | 48 | 6560 | 3 | 134 | 1510 | 47 | 5 | 11 | 200 | 0 | 16 | 2 | 95 | 5 | 1 | 7 | 18 |
| RN022083 | 21-Sep-10 | 6.1 | 13160 | - | - | 75 | 92 | 12400 | <5 | 263 | 3050 | 60 | 8 | 6 | 400 | 1 | 4 | 21 | 2720 | 12 | 0 | 7 | 25 |

Red numbers indicate that the concentration was below the indicated detection limit
 Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B3b. Groundwater quality data for bores near White's Overburden Heap, 2008 to 2010

| Bore Hole ID | Sampling Date | FIELD | | LAB DATA | | | Major ions (in mg/L) | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | |
|--------------|---------------|-------|----------|----------|----------|----------|----------------------|-------|----|-----|------|-----|---------------------------------|-------|-------|------|-------|-------|-------|-------|------|------|-------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Fe_d | Cd_d | Cu_d | Co_d | Mn_d | Ni_d | Pb_d | U_d | Zn_d |
| RN022084 | 28-Oct-08 | - | - | 3.9 | 10010 | - | - | 9880 | 5 | 200 | 2270 | 34 | 6 | 15700 | 3700 | - | 14400 | 10900 | 47700 | 9020 | - | 3910 | 19100 |
| RN022084 | 7-Apr-09 | - | - | 3.8 | 12170 | - | - | 10500 | - | 222 | 2300 | - | - | 18400 | 7800 | - | 15700 | 11600 | 48500 | 10500 | - | 4020 | 19900 |
| RN022084 | 11-Jun-08 | 4.3 | - | 4.1 | 10300 | - | 1 | 10900 | 8 | 287 | 2570 | 66 | 7 | 11200 | 3880 | 56 | 11500 | 9080 | 44 | 8200 | 23 | 3480 | 16500 |
| RN022084 | 16-Jul-08 | 4.3 | 11930 | 4.3 | 9840 | - | - | 10500 | 8 | 280 | 2510 | 65 | 6 | 11000 | 4840 | 58 | - | 9170 | 47 | 8370 | 25 | 3200 | 16000 |
| RN022084 | 22-Oct-08 | 4.5 | 12250 | 4.3 | 9680 | - | - | 9790 | 3 | 242 | 2250 | 55 | 6 | 14500 | 3540 | 63 | 13100 | 9950 | 44900 | 8920 | 28 | 3390 | 18200 |
| RN022084 | 4-Dec-08 | 5.1 | 11600 | 4.2 | 9610 | - | - | 9650 | 4 | 210 | 2140 | 33 | 6 | 14800 | 5640 | 67 | 13800 | 10500 | 44100 | 9440 | 32 | 3960 | 16600 |
| RN022084 | 8-Jan-09 | 6.8 | 11360 | 4.2 | 9910 | - | - | 9930 | 2 | 211 | 2450 | 35 | 6 | 15000 | 5860 | 67 | 13100 | 10000 | 42600 | 8880 | 1 | 3790 | 18200 |
| RN022084 | 18-Mar-09 | 4.3 | 11330 | 5.2 | 10200 | - | 1 | 11300 | 10 | 348 | 2640 | 103 | 5 | 6950 | 400 | 42 | 7830 | 6060 | 37400 | 5460 | 21 | 2210 | 10800 |
| RN022084 | 23-Apr-09 | 4.3 | 11880 | 4.1 | 10500 | - | - | 9570 | 6 | 255 | 2420 | 44 | 7 | 10300 | 2000 | 62 | 11700 | 9940 | 45700 | 8920 | 24 | 3330 | 16600 |
| RN022084 | 19-May-09 | 4.6 | 11550 | 4.6 | 10100 | - | 1 | 10400 | 3 | 242 | 2440 | 38 | 6 | 11900 | 21100 | 66 | 11100 | 10200 | 50800 | 9260 | 25 | 3300 | 17400 |
| RN022084 | 16-Jul-09 | 4.7 | 11840 | 4.7 | 10400 | - | 1 | 11100 | 6 | 254 | 2500 | 50 | 8 | 5080 | 14000 | 57 | 8330 | 8350 | 41000 | 7380 | 14 | 2250 | 14400 |
| RN022084 | 1-Sep-09 | 4.9 | 11740 | 4.8 | 10100 | - | 1 | 10200 | 6 | 269 | 2550 | 49 | 11 | 5170 | 17000 | 57 | 7730 | 9090 | 42300 | 7640 | 12 | 2090 | 14000 |
| RN022084 | 13-Oct-09 | 4.9 | 12150 | 4.9 | 9850 | - | 3 | 10100 | 8 | 254 | 2380 | 58 | 13 | 5640 | 16500 | 55 | 6090 | 9200 | 43000 | 8040 | 13 | 1710 | 14600 |
| RN022084 | 18-Nov-09 | 4.9 | 10570 | 4.9 | 9860 | - | 1 | 10600 | 9 | 300 | 2440 | 77 | 11 | 4980 | 17400 | 47 | 1290 | 7620 | 43200 | 6730 | 12 | 1510 | 12300 |
| RN022084 | 11-Aug-10 | 3.9 | 11020 | - | - | 0.5 | 1 | 9560 | <5 | 207 | 2330 | 30 | 6 | 14100 | 3200 | 67 | 12800 | 10600 | 43500 | 8860 | 35 | 3780 | 18600 |
| RN022037 | 8-Apr-09 | - | - | 6.1 | 7900 | - | - | 5670 | - | 84 | 1430 | - | - | 58 | 600 | - | 199 | 235 | 626 | 178 | - | 44 | 175 |
| RN022037 | 11-Aug-10 | 6.2 | 6520 | - | - | 123 | 150 | 5680 | <5 | 70 | 1450 | 19 | 3 | 38 | 200 | 1 | 183 | 129 | 419 | 82 | 1 | 47 | 150 |
| RN029997 | 12-Oct-10 | 5.2 | 10440 | - | - | - | - | 8880 | <5 | 197 | 2160 | 28 | 7 | 265 | 400 | 8 | 659 | 414 | 10900 | 795 | 5 | 268 | 980 |
| RN022039 | 21-Sep-10 | 5.1 | - | - | - | 14 | 18 | 4 | <5 | 3 | 4 | 1 | 0 | 9 | 200 | 0 | 5 | 1 | 47 | 1 | 0 | 0 | 25 |
| RN022081 | 22-Sep-10 | 7.0 | 1834 | - | - | - | - | 787 | 5 | 116 | 185 | 6 | 1 | 5 | 400 | 0 | - | 0 | 35 | 1 | 0 | 85 | 5 |
| RN022417 | 6-Apr-09 | - | - | 3.6 | 4825 | 185 | 226 | 3230 | - | 278 | 534 | - | - | 47300 | 1800 | - | 20100 | 4310 | 5510 | 4800 | - | 1420 | 6680 |
| RN023054 | 6-Apr-09 | - | - | 3.3 | 2760 | - | - | 1650 | - | 163 | 250 | - | - | 21000 | 400 | - | 17800 | 3340 | 10900 | 2920 | - | 590 | 3430 |
| RN023057 | 6-Apr-09 | - | - | 4.4 | 4702 | - | - | 3280 | - | 179 | 655 | - | - | 8070 | 40800 | - | 7150 | 6020 | 9200 | 7130 | - | 218 | 4640 |
| RN022411 | 6-Apr-09 | - | - | 3.6 | 5190 | 66 | 81 | 3430 | - | 119 | 729 | - | - | 20400 | 2800 | - | 4190 | 4750 | 13500 | 4151 | - | 1010 | 5250 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B4. Groundwater quality data for bores in Dyson's area, 2008 to 2010

| Bore Hole ID | Sampling Date | FIELD | | LAB DATA | | | Major ions (in mg/L) | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | |
|--------------|---------------|-------|----------|----------|----------|----------|----------------------|------|----|-----|-----|----|---------------------------------|--------|--------|------|------|------|-------|------|------|------|------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Fe_d | Cd_d | Cu_d | Co_d | Mn_d | Ni_d | Pb_d | U_d | Zn_d |
| RN023419 | 9-Apr-09 | - | - | 2.8 | 9860 | 2400 | 2928 | 8660 | - | 299 | 976 | - | - | 666000 | 29600 | - | 2610 | 2830 | 29700 | 7360 | - | 4540 | 815 |
| RN023413 | 7-Apr-09 | - | - | 3.1 | 5310 | 580 | 708 | 3780 | - | 199 | 564 | - | - | 123000 | 126000 | - | 182 | 667 | 12100 | 2040 | - | 340 | 320 |
| RN023790 | 28-Oct-08 | - | - | 7.0 | 875 | 15 | 18 | 276 | 5 | 74 | 70 | 4 | 1 | 6 | 60 | - | 1 | 1 | 12 | 7 | - | 3 | 1 |
| RN023790 | 9-Apr-09 | - | - | 7.1 | 1097 | - | - | 287 | - | 77 | 68 | - | - | 16 | 200 | - | 5 | 0 | 1 | 0 | - | 3 | 5 |
| RN023790 | 11-Jun-08 | 7.1 | 996 | 7.4 | 851 | - | 227 | 303 | 4 | 86 | 80 | 5 | 1 | 1 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| RN023790 | 16-Jul-08 | 7.3 | 960 | 7.3 | 817 | - | 229 | 287 | 4 | 84 | 79 | 4 | 1 | 1 | 20 | 0 | 0 | 1 | 1 | 1 | 0 | 3 | 1 |
| RN023790 | 22-Oct-08 | 7.2 | 983 | 7.7 | 831 | - | 231 | 272 | 3 | 77 | 71 | 4 | 1 | 31 | 20 | 0 | 2 | 11 | 386 | 9 | 1 | 107 | 57 |
| RN023790 | 4-Dec-08 | 8.2 | 1007 | 7.9 | 840 | - | 210 | 277 | 3 | 28 | 75 | 4 | 1 | 3 | 200 | 0 | 0 | 1 | 4 | 1 | 1 | 3 | 2 |
| RN023790 | 8-Jan-09 | 7.1 | 1001 | 7.9 | 871 | - | 211 | 283 | 3 | 79 | 76 | 4 | 1 | 1 | 20 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 1 |
| RN023790 | 17-Mar-09 | 7.0 | 940 | 7.3 | 824 | - | 196 | 296 | 3 | 79 | 72 | 4 | 1 | 2 | 20 | 0 | 1 | 0 | 1 | 1 | 0 | 3 | 1 |
| RN023790 | 27-Apr-09 | 7.0 | 995 | 7.3 | 870 | - | 210 | 294 | 3 | 78 | 73 | 4 | 1 | 1 | 20 | 0 | 1 | 0 | 2 | 0 | 0 | 3 | 1 |
| RN023790 | 19-May-09 | 7.2 | 985 | 7.8 | 916 | - | 234 | 283 | 5 | 64 | 71 | 4 | 9 | 24 | 200 | 0 | 7 | 13 | 134 | 10 | 5 | 16 | 15 |
| RN023790 | 16-Jul-09 | 7.4 | 982 | 7.5 | 893 | - | 212 | 280 | 3 | 74 | 68 | 4 | 1 | 3 | 200 | 0 | 1 | 1 | 13 | 0 | 1 | 17 | 2 |
| RN023790 | 1-Sep-09 | 7.3 | 981 | 7.3 | 845 | - | 213 | 280 | 3 | 82 | 78 | 4 | 1 | 5 | 200 | 0 | 1 | 0 | 2 | 0 | 0 | 18 | 1 |
| RN023790 | 13-Oct-09 | 7.0 | 1044 | 6.9 | 831 | - | 194 | 273 | 4 | 74 | 72 | 4 | 1 | 5 | 200 | 0 | 1 | 0 | 3 | 1 | 0 | 23 | 2 |
| RN023790 | 18-Nov-09 | 6.9 | 906 | 7.5 | 822 | - | 206 | 294 | 3 | 79 | 72 | 4 | 1 | 5 | 20 | 0 | 0 | 1 | 10 | 0 | 0 | 17 | 1 |
| RN023790 | 21-Sep-10 | 7.0 | 996 | - | - | 190 | 232 | 271 | <5 | 77 | 73 | 4 | 1 | 2 | 200 | 0 | 0 | - | 1 | 0 | 0 | 2 | 10 |
| RN023792 | 22-Sep-10 | 7.3 | 463.1 | - | - | 146 | 177 | 3 | <5 | 25 | 40 | 2 | | 2 | 200 | 0 | 0 | - | 158 | 0 | 0 | 2 | 5 |
| RN023793 | 22-Sep-10 | 5.9 | 1236 | - | - | 247 | 301 | 447 | 5 | 5 | 152 | 12 | 12 | 23 | 200 | 0 | 2 | 4 | 4 | 5 | 0 | 0 | 15 |
| RN023793 | 29-Oct-08 | - | - | 5.8 | 1158 | 50 | 61 | 440 | 5 | 5 | 144 | 11 | 15 | 22 | 580 | - | 2 | 7 | 8 | 11 | - | 1 | 3 |
| RN023793 | 7-Apr-09 | - | - | 5.9 | 1627 | - | - | 446 | - | 5 | 142 | - | - | 14 | 400 | - | 3 | 4 | 4 | 5 | - | 0 | 5 |
| RN022036 | 22-Sep-10 | 6.6 | 415.9 | - | - | 172 | 209 | 3 | <5 | 12 | 41 | 2 | | 2 | 200 | 0 | 1 | - | 7 | 1 | 0 | 1 | 40 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable
 Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B5. Groundwater quality data for bores near the White's and Intermediate Open Cuts, 2008 to 2010

| Bore Hole ID | Sampling Date | FIELD | | LAB DATA | | | Major ions (in mg/L) | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | |
|---|---------------|-------|----------|----------|----------|----------|----------------------|------|----|-----|-----|----|---------------------------------|------|------|------|------|------|-------|------|------|-----|------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Fe_d | Cd_d | Cu_d | Co_d | Mn_d | Ni_d | Pb_d | U_d | Zn_d |
| Groundwater near Whites Open Cut | | | | | | | | | | | | | | | | | | | | | | | |
| RN022544 | 29-Oct-08 | - | - | 7.0 | 4502 | - | - | 3170 | 20 | 384 | 626 | 24 | 4 | 17 | 680 | - | 1 | 31 | 8860 | 8 | - | 308 | 9 |
| RN022544 | 8-Apr-09 | - | - | 6.4 | 6240 | - | - | 4180 | - | 498 | 794 | - | - | 18 | 1200 | - | 1 | 644 | 11900 | 227 | - | 552 | 95 |
| RN022544 | 22-Sep-10 | 7.5 | 3624 | - | - | 309 | 375 | 3880 | 20 | 472 | 768 | 23 | 2 | 22 | 2000 | 0 | 1 | 145 | 10100 | 30 | 0 | 325 | 10 |
| RN022107 | 11-Jun-08 | 8.1 | 1862 | 7.6 | 1640 | - | 65 | 1010 | 18 | 95 | 206 | 28 | 4 | 1 | 200 | 0 | 1 | 0 | 2340 | 0 | 0 | 0 | 2 |
| RN022107 | 16-Jul-08 | 8.0 | 2170 | 7.7 | 1770 | - | 114 | 1080 | 17 | 122 | 223 | 22 | 4 | 1 | 200 | 0 | 4 | 154 | 6610 | 133 | 0 | 1 | 168 |
| RN022107 | 22-Oct-08 | 8.4 | 2033 | 8.0 | 1720 | - | 79 | 981 | 19 | 75 | 207 | 25 | 5 | 6 | 200 | 0 | 1 | 1 | 1390 | 1 | 0 | 0 | 2 |
| RN022107 | 12-Apr-08 | 9.0 | 2345 | 7.9 | 1990 | - | 71 | 1230 | 23 | 118 | 252 | 29 | 3 | 4 | 200 | 0 | 0 | 6 | 1220 | 8 | 0 | 0 | 3 |
| RN022107 | 20-Jan-09 | 7.7 | 2481 | 7.9 | 2170 | - | 115 | 1280 | 23 | 131 | 290 | 31 | 3 | 3 | 200 | 0 | 1 | 1 | 2130 | 1 | 0 | 2 | 3 |
| RN022107 | 18-Mar-09 | 7.5 | 2219 | 7.5 | 1940 | - | 99 | 1230 | 21 | 105 | 261 | 27 | 3 | 2 | 200 | 0 | 1 | 1 | 3080 | 1 | 0 | 0 | 6 |
| RN022107 | 23-Apr-09 | 6.7 | 2377 | 7.3 | 2110 | - | 165 | 1240 | 16 | 164 | 247 | 19 | 4 | 364 | 800 | 1 | 14 | 363 | 20000 | 292 | 2 | 11 | 320 |
| RN022107 | 19-May-09 | 7.2 | 2050 | 7.8 | 1840 | - | 92 | 1120 | 21 | 96 | 237 | 26 | 5 | 12 | 200 | 0 | 2 | 2 | 2500 | 1 | 1 | 2 | 8 |
| RN022107 | 16-Jul-09 | 7.4 | 1960 | 7.9 | 1780 | - | 60 | 997 | 19 | 75 | 204 | 22 | 4 | 1 | 200 | 0 | 0 | 3 | 1180 | 3 | 0 | 10 | 1 |
| RN022107 | 1-Sep-09 | 8.2 | 1921 | 7.8 | 1650 | - | 50 | 973 | 20 | 76 | 220 | 23 | 4 | 8 | 200 | 0 | 0 | 1 | 836 | 1 | 0 | 5 | 1 |
| RN022107 | 13-Oct-09 | 7.8 | 2007 | 6.8 | 1650 | - | 56 | 965 | 21 | 67 | 209 | 24 | 5 | 1 | 200 | 0 | 0 | 33 | 992 | 42 | 0 | 3 | 6 |
| RN022107 | 18-Nov-09 | 8.0 | 1743 | 7.5 | 1590 | - | 49 | 997 | 21 | 67 | 207 | 24 | 4 | 12 | 200 | 0 | 0 | 1 | 612 | 1 | 0 | 4 | 1 |
| RN022107 | 14-Jan-10 | 6.8 | 1871 | 7.2 | 1900 | - | 77 | 1000 | 21 | 108 | 214 | 24 | 4 | 10 | 50 | 0 | 1 | 2 | 2250 | 9 | 1 | 0 | 22 |
| RN022107 | 12-Aug-10 | 6.2 | 2480 | - | - | 108 | 132 | 1300 | 20 | 165 | 238 | 22 | 2 | 14 | 3800 | 1 | 1 | 991 | 28800 | 702 | 0 | 12 | 448 |
| Groundwater near Intermediate Open Cut | | | | | | | | | | | | | | | | | | | | | | | |
| RN022108 | 19-May-09 | 7.9 | 897 | 8.3 | 641 | - | 31 | 310 | 9 | 29 | 63 | 9 | 2 | 5 | 20 | 0 | 1 | 1 | 158 | 1 | 0 | 0 | 1 |
| RN022108 | 16-Jul-09 | 8.9 | 595 | 9.0 | 559 | - | 20 | 232 | 9 | 21 | 46 | 8 | 2 | 30 | 200 | 0 | 6 | 4 | 140 | 5 | 0 | 0 | 1 |
| RN022108 | 1-Sep-09 | 9.3 | 537 | 8.4 | 477 | - | 30 | 200 | 9 | 20 | 45 | 8 | 2 | 17 | 200 | 0 | 0 | 0 | 83 | 0 | 0 | 1 | 1 |
| RN022108 | 13-Oct-09 | 8.7 | 491 | 6.8 | 415 | - | 38 | 168 | 8 | 15 | 38 | 8 | 2 | 6 | 160 | 0 | 0 | 2 | 118 | 3 | 0 | 0 | 1 |
| RN022108 | 18-Nov-09 | 8.9 | 352 | 8.0 | 336 | - | 39 | 129 | 8 | 10 | 32 | 7 | 2 | 19 | 400 | 0 | 0 | 1 | 132 | 1 | 0 | 1 | 1 |
| RN022108 | 14-Jan-10 | 8.1 | 387 | 8.5 | 326 | - | 28 | 131 | 8 | 12 | 29 | 8 | 2 | 2 | 20 | 0 | 1 | 0 | 40 | 0 | 0 | 0 | 0 |
| RN022108 | 10-Aug-10 | 7.5 | 603 | - | - | 62 | 75 | 189 | <5 | 34 | 44 | 5 | 1 | 12 | 200 | 0 | 1 | 4 | 10 | 11 | 0 | 5 | 3 |
| RN022543 | 15-Apr-09 | - | - | 7.8 | 2643 | - | - | 1360 | - | 117 | 296 | - | - | 6 | 200 | - | 0 | 1 | 11 | 0 | - | 2 | 5 |
| RN022543 | 28-Oct-08 | - | - | 7.8 | 2199 | 40 | 49 | 1150 | 45 | 122 | 259 | 18 | 2 | 10 | 200 | - | 1 | 1 | 22 | 2 | - | 3 | 4 |
| RN022543 | 23-Sep-10 | 7.7 | 2574 | - | - | 109 | 132 | 1300 | 50 | 114 | 302 | 17 | 1 | 4 | 200 | 0 | - | 0 | 37 | 1 | 0 | 1 | - |
| RN023516 | 7-Apr-09 | - | - | 4.7 | 820 | 40 | 49 | 328 | - | 29 | 56 | - | - | 387 | 400 | - | 904 | 692 | 1520 | 634 | - | 6 | 865 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable
Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B6a. Surface water quality data collected from the East Finniss River and Old Tailings Creek, April 1994

| Station ID | Distance km | Sampling Date | LAB DATA | | Major ions (in mg/L_) | | | Metals concentrations (in mg/L) | | | | | |
|------------|-------------|---------------|----------|----------|-----------------------|----|----|---------------------------------|------|------|------|------|------|
| | | | pH | EC uS/cm | SO4 | Ca | Mg | Al_d | Fe_d | Cu_d | Mn_d | Ni_d | Zn_d |
| GS8150200 | 0.0 | 22-Apr-94 | 6.0 | 724 | 399 | 21 | 72 | - | 3.9 | 1.0 | 1.9 | 1.0 | 1.6 |
| SW26 | 0.3 | 22-Apr-94 | 4.0 | 719 | 408 | 22 | 73 | - | 3.0 | 1.1 | 1.8 | 0.9 | 1.5 |
| SW25 | 0.5 | 22-Apr-94 | 4.1 | 779 | 399 | 26 | 79 | - | 3.0 | 1.1 | 1.8 | 0.9 | 1.5 |
| SW24 | 0.7 | 22-Apr-94 | 4.7 | 850 | 485 | 36 | 88 | - | 2.6 | 1.0 | 1.7 | 0.9 | 1.4 |
| SW23 | 0.9 | 22-Apr-94 | 4.8 | 859 | 489 | 38 | 89 | - | 2.6 | 1.0 | 1.7 | 0.8 | 1.4 |
| SW22 | 1.1 | 22-Apr-94 | 4.8 | 857 | 473 | 39 | 90 | - | 2.2 | 1.0 | 1.6 | 0.8 | 1.4 |
| SW21 | - | 22-Apr-94 | 6.4 | 478 | 205 | 34 | 41 | - | 0.0 | 0.3 | 0.2 | 0.2 | 0.1 |
| SW20 | 1.3 | 22-Apr-94 | 4.7 | 859 | 469 | 40 | 87 | - | 1.9 | 0.9 | 1.6 | 0.8 | 1.4 |
| SW19 | 1.5 | 22-Apr-94 | 5.4 | 828 | 440 | 40 | 84 | - | 1.5 | 0.9 | 1.5 | 0.7 | 1.3 |
| SW18 | 1.7 | 22-Apr-94 | 5.9 | 751 | 383 | 35 | 78 | - | 0.8 | 0.7 | 1.3 | 0.6 | 1.1 |
| SW17 | 2.2 | 22-Apr-94 | 5.9 | 718 | 367 | 34 | 75 | - | 0.3 | 0.6 | 1.2 | 0.6 | 1.0 |
| SW16 | 2.2 | 22-Apr-94 | 5.7 | 711 | 335 | 32 | 73 | - | 0.4 | 0.6 | 1.2 | 0.6 | 1.0 |
| SW15 | 2.5 | 22-Apr-94 | 5.5 | 703 | 412 | 31 | 72 | - | 0.5 | 0.7 | 1.2 | 0.6 | 1.0 |
| SW14 | 2.7 | 22-Apr-94 | 5.5 | 696 | 392 | 30 | 71 | - | 0.2 | 0.7 | 1.1 | 0.6 | 1.0 |
| SW13 | 2.9 | 22-Apr-94 | 5.7 | 688 | 384 | 30 | 70 | - | 0.2 | 0.7 | 1.2 | 0.6 | 1.0 |
| SW12 | 3.3 | 22-Apr-94 | 5.8 | 682 | 368 | 30 | 69 | - | 0.1 | 0.7 | 1.1 | 0.5 | 0.9 |
| SW11 | 3.4 | 22-Apr-94 | 5.9 | 670 | 384 | 30 | 69 | - | 0.1 | 0.7 | 1.1 | 0.5 | 0.9 |
| SW10 | 4.0 | 22-Apr-94 | 5.9 | 662 | 392 | 30 | 66 | - | 0.1 | 0.6 | 1.1 | 0.5 | 0.9 |
| SW9 | 4.1 | 22-Apr-94 | 6.4 | 647 | 360 | 30 | 65 | - | 0.0 | 0.5 | 1.0 | 0.5 | 0.8 |
| SW8 | 4.3 | 22-Apr-94 | 6.3 | 640 | 352 | 30 | 65 | - | 0.0 | 0.5 | 1.0 | 0.5 | 0.7 |
| SW7 | 4.5 | 22-Apr-94 | 6.3 | 634 | 352 | 28 | 63 | - | 0.0 | 0.5 | 1.0 | 0.5 | 0.7 |
| SW6 | 4.6 | 22-Apr-94 | 6.3 | 630 | 348 | 28 | 63 | - | 0.0 | 0.5 | 1.0 | 0.5 | 0.8 |
| SW5 | 4.7 | 22-Apr-94 | 6.2 | 622 | 336 | 28 | 63 | - | 0.0 | 0.6 | 1.0 | 0.5 | 0.8 |
| SW4 | 4.9 | 22-Apr-94 | 6.2 | 600 | 332 | 26 | 61 | - | 0.1 | 0.6 | 0.9 | 0.5 | 0.8 |
| SW3 | 5.2 | 22-Apr-94 | 6.0 | 596 | 324 | 28 | 61 | - | 0.0 | 0.5 | 1.0 | 0.4 | 0.8 |
| SW2 | 5.5 | 22-Apr-94 | 6.4 | 592 | 321 | 27 | 61 | - | 0.0 | 0.5 | 1.0 | 0.4 | 0.7 |
| GS8150097 | 5.6 | 22-Apr-94 | 6.5 | 591 | 285 | 27 | 59 | - | 0.0 | 0.5 | 1.0 | 0.4 | 0.7 |

Table B6b. Surface water quality data collected from the East Finniss River and Old Tailings Creek, April 1995

| Station ID | Distance km | Sampling Date | LAB DATA | | Major ions (in mg/L_) | | | Metals concentrations (in mg/L) | | | | | |
|------------|-------------|---------------|----------|----------|-----------------------|-----|-----|---------------------------------|------|------|------|------|------|
| | | | pH | EC uS/cm | SO4 | Ca | Mg | Al_d | Fe_d | Cu_d | Mn_d | Ni_d | Zn_d |
| GS8150200 | 0.0 | 22-Apr-95 | 3.4 | 2070 | 922 | 78 | 239 | - | 19.3 | 3.4 | 7.2 | 6.9 | 7.8 |
| SW26 | 0.3 | 22-Apr-95 | 3.7 | 1705 | 832 | 68 | 188 | - | 3.1 | 3.1 | 5.5 | 2.8 | 5.2 |
| SW25 | 0.5 | 22-Apr-95 | 4.1 | 1788 | 924 | 83 | 205 | - | 1.8 | 3.0 | 5.2 | 2.6 | 4.8 |
| SW24 | 0.7 | 22-Apr-95 | 5.9 | 1820 | 944 | 115 | 202 | - | 0.2 | 1.9 | 3.5 | 1.8 | 3.2 |
| SW23 | 0.9 | 22-Apr-95 | 5.8 | 1725 | 913 | 105 | 192 | - | 0.2 | 1.8 | 3.4 | 1.7 | 3.1 |
| SW22 | 1.1 | 22-Apr-95 | 6.0 | 1559 | 802 | 94 | 177 | - | 0.2 | 1.5 | 3.2 | 1.4 | 2.5 |
| SW21 | - | 22-Apr-95 | 8.2 | 618 | 233 | 49 | 46 | - | 0.0 | 0.4 | 0.4 | 0.1 | 0.1 |
| SW20 | 1.3 | 22-Apr-95 | 5.9 | 1423 | 686 | 81 | 162 | - | 0.2 | 1.4 | 3.0 | 1.3 | 2.2 |
| SW19 | 1.5 | 22-Apr-95 | 5.8 | 1422 | 822 | 80 | 157 | - | 0.6 | 1.5 | 2.9 | 1.3 | 2.2 |
| SW18 | 1.7 | 22-Apr-95 | 5.5 | 1186 | 660 | 58 | 127 | - | 0.1 | 1.1 | 2.2 | 0.9 | 1.3 |
| SW17 | 2.2 | 22-Apr-95 | 6.1 | 1215 | 681 | 63 | 128 | - | 0.4 | 1.4 | 2.5 | 1.0 | 1.8 |
| SW16 | 2.2 | 22-Apr-95 | 6.1 | 1181 | 668 | 60 | 122 | - | 0.2 | 1.2 | 2.4 | 1.0 | 1.7 |
| SW15 | 2.5 | 22-Apr-95 | 6.0 | 1165 | 672 | 59 | 120 | - | 0.1 | 1.2 | 2.3 | 1.0 | 1.7 |
| SW14 | 2.7 | 22-Apr-95 | 5.8 | 1150 | 647 | 58 | 118 | - | 0.0 | 1.1 | 2.3 | 1.0 | 1.5 |
| SW13 | 2.9 | 22-Apr-95 | 6.1 | 1119 | 618 | 55 | 115 | - | 0.2 | 1.2 | 2.2 | 0.9 | 1.5 |
| SW12 | 3.3 | 22-Apr-95 | 6.0 | 1073 | 584 | 52 | 111 | - | 0.0 | 1.1 | 2.1 | 0.9 | 1.4 |
| SW11 | 3.4 | 22-Apr-95 | 6.2 | 964 | 504 | 43 | 94 | - | 0.1 | 1.2 | 1.9 | 0.8 | 1.3 |
| SW10 | 4.0 | 22-Apr-95 | 6.4 | 954 | 506 | 44 | 97 | - | 0.1 | 1.1 | 1.8 | 0.8 | 1.2 |
| SW9 | 4.1 | 22-Apr-95 | 6.6 | 925 | 482 | 43 | 91 | - | 0.1 | 1.1 | 1.8 | 0.7 | 1.2 |
| SW8 | 4.3 | 22-Apr-95 | 6.9 | 914 | 487 | 41 | 91 | - | 0.1 | 0.9 | 1.7 | 0.7 | 1.1 |
| SW7 | 4.5 | 22-Apr-95 | 6.8 | 907 | 478 | 42 | 91 | - | 0.1 | 0.9 | 1.6 | 0.7 | 1.2 |
| SW6 | 4.6 | 22-Apr-95 | 7.0 | 879 | 455 | 38 | 85 | - | 0.1 | 0.7 | 1.6 | 0.6 | 1.0 |
| SW5 | 4.7 | 22-Apr-95 | 6.8 | 865 | 450 | 38 | 85 | - | 0.1 | 0.7 | 1.5 | 0.7 | 1.0 |
| SW4 | 4.9 | 22-Apr-95 | 7.0 | 847 | 439 | 36 | 81 | - | 0.2 | 0.7 | 1.5 | 0.6 | 1.0 |
| SW3 | 5.2 | 22-Apr-95 | 6.9 | 822 | 427 | 35 | 79 | - | 0.3 | 0.6 | 1.5 | 0.6 | 0.9 |
| SW2 | 5.5 | 22-Apr-95 | 6.7 | 793 | 407 | 34 | 76 | - | 0.2 | 0.6 | 1.5 | 0.6 | 0.9 |
| GS8150097 | 5.6 | 22-Apr-95 | 6.8 | 786 | 401 | 34 | 74 | - | 0.2 | 0.6 | 1.5 | 0.6 | 0.9 |

Table B6c. Surface water quality data collected from the East Finniss River and Old Tailings Creek, June 1995

| Station ID | Distance km | Sampling Date | LAB DATA | | Major ions (in mg/L_) | | | Metals concentrations (in mg/L) | | | | | |
|------------|-------------|---------------|----------|----------|-----------------------|-----|-----|---------------------------------|------|------|------|------|------|
| | | | pH | EC uS/cm | SO4 | Ca | Mg | Al_d | Fe_d | Cu_d | Mn_d | Ni_d | Zn_d |
| GS8150200 | 0.0 | 15-Jun-95 | 3.1 | 4200 | 3330 | 135 | 585 | 64.0 | 15.3 | 14.4 | 23.0 | 17.1 | 25.0 |
| SW26 | 0.3 | 15-Jun-95 | 3.4 | 3830 | 3175 | 145 | 535 | 54.0 | 2.9 | 11.8 | 17.4 | 13.7 | 22.0 |
| SW25 | 0.5 | 15-Jun-95 | 4.3 | 3650 | 3000 | 205 | 505 | 38.0 | 1.0 | 8.8 | 13.2 | 9.8 | 15.9 |
| SW23 | 0.9 | 15-Jun-95 | 4.8 | 2910 | 2200 | 190 | 360 | 4.9 | 0.1 | 4.0 | 9.6 | 4.3 | 10.5 |
| SW22 | 1.1 | 15-Jun-95 | 5.4 | 2590 | 1950 | 164 | 436 | 1.3 | 0.2 | 3.7 | 10.5 | 3.4 | 9.5 |
| SW20 | 1.3 | 15-Jun-95 | 6.0 | 2440 | 1740 | 160 | 396 | 0.3 | 0.1 | 1.6 | 7.1 | 2.6 | 6.4 |
| SW18 | 1.7 | 15-Jun-95 | 6.1 | 2300 | 1602 | 148 | 328 | 0.3 | 0.0 | 0.8 | 4.5 | 2.0 | 3.7 |
| SW16 | 2.2 | 15-Jun-95 | 6.1 | 2021 | 1370 | 136 | 346 | 0.2 | 0.0 | 0.6 | 3.9 | 1.6 | 2.4 |
| SW14 | 2.7 | 15-Jun-95 | 6.1 | 1886 | 1262 | 118 | 214 | 0.2 | 0.0 | 0.5 | 3.5 | 1.4 | 1.9 |
| GS8150097 | 5.6 | 15-Jun-95 | 6.5 | 557 | 270 | 24 | 48 | 0.2 | 0.1 | 0.2 | 0.9 | 0.2 | 0.3 |

Table B7. Surface water quality data for unimpacted creeks, the upper East Finniss River, and the EFDC, 2008 to 2010

| ERISS site | Date | FIELD DATA | | LAB DATA | | | MAJOR IONS (in mg/L) | | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | | | | | | | | |
|---|-----------|------------|----------|----------|----------|----------|----------------------|------|------|------|------|-----|------|---------------------------------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-----|------|-------|-------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Al_t | Fe_d | Fe_t | Cd_d | Cd_t | Cu_d | Cu_t | Co_d | Co_t | Mn_d | Mn_t | Ni_d | Ni_t | U_d | U_t | Zn_d | Zn_t |
| <i>Unimpacted creeks entering the Rum Jungle site</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site 07 | 9-Jan-09 | - | - | 7.5 | 110 | - | 54 | 0 | - | 2 | 11 | 3 | 1 | 68 | 80 | 120 | 180 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 1 |
| Site 07 | 12-Mar-09 | 7.1 | 54 | 6.9 | 47 | - | 27 | 0 | - | 1 | 3 | 4 | 1 | 134 | 471 | 260 | 520 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 15 | 0 | 0 | 0 | 0 | 0 | 1 |
| Site 07 | 28-Apr-09 | 4.7 | 5 | 7.1 | 92 | - | 41 | 3 | - | 2 | 9 | 4 | 1 | 15 | 43 | 660 | 1200 | 0 | 0 | 2 | 3 | 0 | 1 | 1 | 45 | 1 | 1 | 0 | 0 | 0 | 1 |
| Site 07 | 27-May-09 | 7.3 | 325 | 7.7 | 272 | - | 106 | 21 | - | 12 | 20 | 8 | 6 | 5 | 56 | 320 | 1580 | 0 | 0 | 3 | 4 | 1 | 2 | 155 | 317 | 3 | 3 | 3 | 4 | 2 | 3 |
| Site 07 | 15-Apr-09 | - | - | 7.9 | 99 | 265 | - | 0 | - | 3 | 5 | 5 | 1 | 22 | - | 200 | - | - | - | 10 | - | 0 | - | 47 | - | 1 | - | 0 | - | 5 | - |
| Site 06 | 15-Apr-09 | - | - | 7.4 | 126 | 110 | - | 1 | - | 2 | 10 | 3 | 1 | 40 | - | 200 | - | - | - | 11 | - | 1 | - | 21 | - | 1 | - | 0 | - | 5 | - |
| <i>East Finniss River/Diversion Channel</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site 03 | 14-Apr-09 | - | - | 6.4 | 1261 | 180 | 220 | 512 | - | 33 | 108 | 5 | 1 | 37 | - | 200 | - | - | - | 227 | - | 398 | - | 1090 | - | 328 | - | 27 | - | 495 | - |
| GS8150211 | 3-Jun-08 | 5.0 | 2176 | 4.7 | 2320 | - | 1 | 1670 | - | 115 | 314 | 8 | 2 | 3650 | 8670 | 960 | 3240 | 17 | 20 | 5880 | 6840 | 7330 | 8300 | 12200 | 12600 | 5940 | 6730 | 111 | 152 | 10800 | 10900 |
| GS8150211 | 1-Jul-08 | 4.5 | 3118 | 4.4 | 3010 | - | - | 2280 | - | 135 | 432 | 8 | 2 | 24700 | 28400 | 1860 | 1860 | 32 | 31 | 9450 | 9940 | 11900 | 12000 | 19300 | 19900 | 9500 | 9470 | 326 | 323 | 19000 | 19900 |
| GS8150211 | 7-Aug-08 | 4.3 | 5120 | 4.1 | 4670 | - | - | 3930 | - | 224 | 753 | 19 | 19 | 59500 | 60900 | 520 | 700 | 55 | 58 | 16600 | 17500 | 21100 | 21600 | 32700 | 34200 | 17400 | 17700 | 596 | 607 | 34 | 36 |
| GS8150211 | 9-Oct-08 | 7.3 | 1120 | 7.6 | 961 | - | 123 | 427 | - | 70 | 91 | 14 | 1 | 91 | 1310 | 20 | 80 | 3 | 3 | 284 | 536 | 1140 | 1160 | 1880 | 1950 | 869 | 694 | 29 | 37 | 1810 | 2020 |
| GS8150211 | 6-Nov-08 | 7.9 | 946 | 7.9 | 800 | - | 154 | 291 | - | 62 | 64 | 14 | 1 | 83 | 296 | 80 | 120 | 1 | 1 | 115 | 154 | 489 | 503 | 905 | 925 | 396 | 402 | 20 | 20 | 517 | 577 |
| GS8150211 | 17-Feb-09 | 6.8 | 153 | 6.9 | 126 | - | 10 | 42 | - | 4 | 10 | 3 | 1 | 76 | 971 | 100 | 400 | 0 | 0 | 63 | 136 | 50 | 53 | 145 | 155 | 46 | 49 | 1 | 5 | 66 | 67 |
| GS8150211 | 5-Mar-09 | 7.8 | 186 | 6.8 | 159 | - | 21 | 55 | - | 5 | 14 | 3 | 1 | 71 | 320 | 100 | 340 | 0 | 0 | 66 | 120 | 64 | 66 | 137 | 138 | 51 | 52 | 4 | 7 | 84 | 89 |
| GS8150211 | 17-Mar-09 | 7.0 | 186 | 6.7 | 159 | - | 20 | 56 | - | 5 | 14 | 3 | 1 | 59 | 496 | 160 | 600 | 0 | 0 | 57 | 97 | 51 | 53 | 137 | 140 | 40 | 44 | 3 | 6 | 61 | 66 |
| GS8150211 | 2-Apr-09 | 7.0 | 627 | 6.9 | 554 | - | 33 | 267 | - | 19 | 63 | 4 | 1 | 17 | 588 | 20 | 640 | 1 | 1 | 113 | 308 | 317 | 321 | 796 | 798 | 256 | 257 | 11 | 23 | 349 | 378 |
| GS8150211 | 27-May-09 | 6.0 | 1911 | 7.1 | 1260 | - | 94 | 675 | - | 76 | 135 | 11 | 1 | 46 | 3530 | 200 | 820 | 7 | 7 | 1030 | 1930 | 2590 | 2640 | 4240 | 4310 | 2170 | 2210 | 26 | 57 | 4260 | 4520 |
| GS8150211 | 28-Sep-09 | 6.9 | 1440 | 6.8 | 1190 | - | 122 | 680 | - | 73 | 127 | 13 | 1 | 48 | 875 | 200 | 200 | 5 | 7 | 431 | 663 | 2280 | 2750 | 3630 | 4350 | 1870 | 2270 | 26 | 38 | 3240 | 3970 |
| GS8150211 | 18-Nov-09 | 7.2 | 1882 | 6.9 | 1700 | - | 52 | 1060 | - | 100 | 215 | 15 | 4 | 161 | 768 | 200 | 200 | 10 | 10 | 1150 | 1330 | 4050 | 4060 | 7050 | 7070 | 3380 | 3390 | 24 | 32 | 6660 | 6750 |
| GS8150211 | 15-Dec-09 | 6.9 | 403 | 6.6 | 381 | - | 9 | 174 | - | 20 | 34 | 5 | 2 | 127 | 750 | 40 | 440 | 1 | 1 | 146 | 348 | 313 | 319 | 476 | 483 | 253 | 262 | 3 | 6 | 413 | 438 |
| GS8150211 | 13-Jan-10 | 6.9 | 92 | 6.5 | 105 | - | 6 | 35 | - | 4 | 7 | 2 | 2 | 152 | 408 | 160 | 340 | 0 | 0 | 84 | 87 | 47 | 48 | 206 | 211 | 44 | 46 | 4 | 5 | 38 | 42 |
| GS8150211 | 10-Feb-10 | 7.1 | 222 | 7.2 | 184 | - | 13 | 76 | 2 | 6 | 15 | 3 | 1 | 20 | 360 | 50 | 330 | 0 | 1 | 65 | 142 | 80 | 77 | 183 | 180 | 66 | 64 | 4 | 8 | 86 | 108 |
| GS8150211 | 16-Feb-10 | 6.9 | 290 | 7.3 | 170 | - | 11 | 59 | 2 | 5 | 13 | 2 | 1 | 20 | 540 | 50 | 280 | 0 | 1 | 59 | 124 | 65 | 67 | 190 | 194 | 53 | 55 | 2 | 6 | 82 | 104 |
| GS8150211 | 26-Feb-10 | 5.8 | 10 | 6.9 | <20 | - | 47 | 2 | 3 | 1 | 1 | 1 | 1 | 110 | 230 | 130 | 220 | 5 | 5 | 10 | 10 | 5 | 5 | 17 | 17 | 5 | 5 | 5 | 5 | 23 | 20 |
| GS8150211 | 1-Mar-10 | 6.0 | 146 | 6.5 | 108 | - | 35 | 39 | 1 | 3 | 9 | 2 | 1 | 1200 | 1300 | 190 | 260 | 5 | 5 | 220 | 220 | 52 | 52 | 140 | 140 | 54 | 54 | 5 | 5 | 91 | 86 |
| GS8150211 | 15-Mar-10 | 6.9 | 146 | 6.9 | 119 | - | 43 | 39 | 1 | 3 | 10 | 2 | 1 | 630 | 800 | 210 | 200 | 0 | 5 | 150 | 150 | 49 | 50 | 120 | 130 | 46 | 48 | 5 | 5 | 84 | 84 |
| Site 02 | 15-Apr-09 | - | - | 5.9 | 1282 | - | - | 627 | - | 43 | 124 | 5 | 1 | 102 | - | 1000 | - | - | - | 618 | - | 1370 | - | 2730 | - | 1120 | - | 13 | - | 1980 | - |
| EFDC | 6-Aug-10 | 7.4 | 1700 | 5.1 | 1775 | - | 1210 | <5 | 96.3 | 255 | 4.2 | 2.2 | 2160 | ##### | <200 | 1600 | 8.8 | 8.4 | 6910 | 12200 | 4540 | 4560 | 9970 | 10100 | 3060 | 3050 | 218 | 842 | 2650 | 1700 | |
| EFDC | 6-Aug-10 | 8.2 | 800 | 6.0 | 963 | - | 415 | 5 | 78.5 | 111 | 4.8 | 0.6 | 59 | 44 | <200 | - | <0.2 | <0.2 | 40 | 85 | 35 | 99 | 109 | 438 | 24 | 28 | 49 | 50 | 17 | 800 | |
| EFDC | 10-Aug-10 | 7.5 | 1970 | - | - | - | 1120 | 10 | 133 | 252 | 8.2 | 1.8 | 29 | 112 | <200 | 400 | 0.2 | 0.2 | 38 | 65 | 47 | 49 | 365 | 396 | 102 | 104 | 72 | 73 | 54 | 1970 | |
| Compass Cr. | 10-Feb-10 | 6.8 | 20 | 7.1 | 19 | - | 6 | 2 | 1 | 0 | 1 | 2 | 1 | 40 | 140 | 80 | 210 | 0 | 1 | 1 | 5 | 1 | 5 | 3 | 9 | 1 | 5 | 0 | 1 | 5 | 13 |
| Compass Cr. | 16-Feb-10 | 6.5 | 19 | 7.0 | 14 | - | 5 | 2 | 1 | 0 | 0 | 2 | 1 | 40 | 80 | 60 | 150 | 0 | 1 | 1 | 5 | 1 | 5 | 1 | 9 | 1 | 5 | 0 | 1 | 5 | 15 |
| Compass Cr. | 10-Aug-10 | 8.0 | 665 | - | - | - | 202 | 5 | 59.7 | 46.5 | 13.9 | 0.4 | 4 | 12 | <200 | - | <0.2 | <0.2 | 7 | 8 | 0 | 1 | 7 | 8 | 5 | 5 | 2 | 2 | 5 | 665 | |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable
 Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B8a. Water quality data for the Whites Open Cut, 2008 to 2010

| Site | Date | FIELD DATA | | LAB DATA | | | MAJOR IONS (in mg/L) | | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | | | | | | | | |
|-----------|-----------|------------|-------------|----------|-------------|-------------|----------------------|-----|-----|------|-----|-----|---|---------------------------------|------|------|------|------|------|------|-------|------|------|------|------|------|------|-----|-----|------|------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Al_t | Fe_d | Fe_t | Cd_d | Cd_t | Cu_d | Cu_t | Co_t | Co_d | Mn_d | Mn_t | Ni_d | Ni_t | U_d | U_t | Zn_d | Zn_t |
| | 6-Aug-10 | 7.8 | 165 | - | - | - | 61 | <5 | 7.1 | 11.6 | 3.4 | 0.8 | 9 | 84 | <200 | 400 | <0.2 | <0.2 | 42 | 62 | 64 | 63 | 723 | 732 | 58 | 58 | 4 | 7 | 22 | 165 | |
| East side | 30-Jun-08 | 5.8 | 208 | 5.6 | 196 | - | 1 | 79 | - | 8 | 14 | 4 | 1 | 71 | 118 | 120 | 460 | 0 | 0 | 120 | 138 | 106 | 114 | 1140 | 1240 | 94 | 97 | 5 | 12 | 37 | 36 |
| East side | 11-Aug-08 | 4.8 | 243 | 4.6 | 231 | - | 1 | 97 | - | 10 | 17 | 4 | 1 | 292 | 299 | 60 | 180 | 0 | 0 | 200 | 203 | 138 | 140 | 1600 | 1640 | 123 | 123 | 21 | 27 | 48 | 48 |
| East side | 3-Sep-08 | 4.6 | 277 | 4.9 | 234 | - | 1 | 105 | - | 10 | 17 | 5 | 1 | 360 | 446 | 340 | 460 | 0 | 0 | 245 | 254 | 152 | 166 | 1710 | 1870 | 135 | 145 | 23 | 30 | 59 | 54 |
| East side | 9-Oct-08 | 4.1 | 286 | 4.4 | 253 | - | | 102 | - | 10 | 17 | 5 | 1 | 471 | 489 | 300 | 460 | 0 | 0 | 248 | 272 | 150 | 170 | 1680 | 1880 | 132 | 144 | 23 | 31 | 54 | 56 |
| East side | 12-Nov-08 | 4.7 | 298 | 4.5 | 258 | - | | 104 | - | 10 | 18 | 5 | 1 | 452 | 579 | 260 | 420 | 0 | 0 | 262 | 300 | 154 | 168 | 1750 | 1960 | 134 | 147 | 26 | 31 | 51 | 61 |
| East side | 15-Dec-08 | 6.0 | 312 | 4.7 | 271 | - | 1 | 107 | - | 10 | 18 | 4 | 1 | 470 | 490 | 200 | 340 | 0 | 0 | 277 | 287 | 163 | 166 | 1850 | 1870 | 144 | 146 | 24 | 32 | 59 | 60 |
| East side | 28-Sep-09 | 7.1 | 205 | 6.3 | 181 | - | 8 | 84 | - | 8 | 12 | 4 | 1 | 12 | 24 | 20 | 40 | 0 | 0 | 47 | 51 | 75 | 82 | 846 | 907 | 72 | 78 | 4 | 5 | 26 | 28 |
| East side | 13-Oct-09 | 7.5 | 207 | 5.9 | 19 | - | 10 | 81 | - | 9 | 14 | 4 | 1 | 33 | 231 | 60 | 380 | 0 | 0 | 66 | 79 | 76 | 78 | 845 | 865 | 74 | 76 | 5 | 5 | 27 | 27 |
| East side | 18-Nov-09 | 7.2 | 197 | 6.1 | 190 | - | 3 | 75 | - | 8 | 13 | 4 | 1 | 49 | 86 | 40 | 100 | 0 | 0 | 56 | 57 | 75 | 74 | 834 | 824 | 76 | 74 | 5 | 5 | 30 | 30 |
| East side | 14-Jan-10 | 7.1 | 90 | 4.6 | 220 | - | 5 | 89 | 2 | 8 | 11 | 2 | 1 | 50 | 3670 | 140 | 1720 | 0 | 1 | 4140 | 8800 | 161 | 310 | 309 | 428 | 193 | 393 | 37 | 62 | 105 | 191 |
| East side | 3-Mar-10 | 5.8 | 124 | 5.5 | 117 | - | 15 | 47 | 1 | 5 | 7 | 2 | 1 | 970 | 950 | 440 | 440 | 5 | 5 | 1800 | 1800 | 92 | 94 | 230 | 230 | 110 | 110 | 23 | 24 | 62 | 65 |
| West side | 30-Jun-08 | 5.7 | 204 | 5.8 | 196 | - | 4 | 79 | - | 8 | 14 | 4 | 1 | 68 | 112 | 120 | 440 | 0 | 0 | 116 | 134 | 105 | 115 | 1120 | 1230 | 93 | 97 | 5 | 12 | 36 | 36 |
| West side | 11-Aug-08 | 4.7 | 244 | 4.5 | 227 | - | 1 | 96 | - | 10 | 17 | 4 | 1 | 291 | 332 | 60 | 400 | 0 | 0 | 200 | 204 | 138 | 139 | 1620 | 1650 | 123 | 123 | 20 | 28 | 47 | 48 |
| West side | 9-Oct-08 | 4.3 | 308 | 4.4 | 252 | - | | 102 | - | 10 | 17 | 5 | 1 | 470 | 481 | 280 | 440 | 0 | 0 | 246 | 271 | 151 | 170 | 1680 | 1880 | 132 | 144 | 25 | 31 | 56 | 57 |
| West side | 12-Nov-08 | 4.6 | 299 | 4.5 | 259 | - | | 105 | - | 10 | 18 | 5 | 1 | 447 | 503 | 280 | 320 | 0 | 0 | 247 | 282 | 153 | 167 | 1740 | 1950 | 133 | 146 | 23 | 30 | 51 | 59 |
| West side | 15-Dec-08 | 6.1 | 325 | 4.6 | 262 | - | 1 | 108 | - | 10 | 17 | 4 | 1 | 464 | 495 | 200 | 320 | 0 | 0 | 277 | 291 | 162 | 166 | 1840 | 1870 | 143 | 146 | 23 | 32 | 58 | 59 |
| West side | 28-Sep-09 | 7.1 | 200 | 6.2 | 183 | - | 8 | 94 | - | 9 | 14 | 5 | 1 | 6 | 19 | 20 | 20 | 0 | 0 | 32 | 54 | 75 | 92 | 841 | 1000 | 72 | 87 | 1 | 5 | 26 | 31 |
| West side | 13-Oct-09 | 7.6 | 206 | 6.1 | 208 | - | 15 | 82 | - | 9 | 14 | 4 | 1 | 8 | 12 | 20 | 20 | 0 | 0 | 45 | 45 | 74 | 76 | 820 | 843 | 72 | 74 | 4 | 4 | 25 | 26 |
| West side | 18-Nov-09 | 7.2 | 190 | 6.1 | 190 | - | 3 | 76 | - | 8 | 13 | 4 | 1 | 148 | 582 | 320 | 1000 | 0 | 0 | 147 | 173 | 78 | 77 | 848 | 840 | 79 | 79 | 9 | 10 | 32 | 33 |
| West side | 14-Jan-10 | 7.2 | 92 | 4.3 | 257 | - | | 116 | - | 11 | 14 | 2 | 2 | 417 | 4620 | 200 | 1040 | 0 | 1 | 1200 | 11800 | 42 | 412 | 54 | 545 | 53 | 517 | 9 | 90 | 21 | 232 |
| West side | 3-Mar-10 | 6.0 | 134 | 6.1 | 92 | - | 30 | 33 | 1 | 5 | 7 | 2 | 1 | 1200 | 1200 | 510 | 510 | 5 | 5 | 2200 | 2200 | 110 | 110 | 260 | 250 | 130 | 130 | 28 | 28 | 70 | 70 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B8b. Water quality data for the Intermediate Open Cut, 2008 to 2010

| Site | Date | FIELD DATA | | LAB DATA | | | MAJOR IONS (in mg/L) | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | | | | | | | | | |
|------------|-----------|------------|-------------|----------|-------------|-------------|----------------------|-----|-----|------|-----|-----|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|------|------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Al_t | Fe_d | Fe_t | Cd_d | Cd_t | Cu_d | Cu_t | Co_t | Co_d | Mn_d | Mn_t | Ni_d | Ni_t | U_d | U_t | Zn_d | Zn_t |
| East side | 6-Aug-10 | 8.5 | 182 | 5.9 | 165 | - | 63 | <5 | 7.2 | 13.1 | 3.4 | 0.8 | 21 | 47 | <200 | - | <0.2 | <0.2 | 76 | 90 | 44 | 44 | 318 | 325 | 57 | 57 | 2 | 3 | 25 | 182 | |
| East side | 3-Jun-08 | 6.7 | 150 | 6.7 | 140 | - | 51 | - | 5 | 10 | 4 | 1 | 27 | 136 | 20 | 200 | 0 | 0 | 82 | 131 | 61 | 63 | 310 | 327 | 57 | 63 | 2 | 4 | 19 | 21 | |
| East side | 1-Jul-08 | 7.0 | 190 | 6.9 | 174 | - | 65 | - | 7 | 13 | 4 | 1 | 15 | 77 | 20 | 140 | 0 | 0 | 63 | 101 | 65 | 70 | 384 | 417 | 67 | 70 | 2 | 3 | 28 | 29 | |
| East side | 8-Jul-08 | 7.3 | 237 | 7.0 | 214 | - | 10 | 83 | - | 10 | 18 | 4 | 1 | 18 | 69 | 20 | 160 | 0 | 0 | 59 | 104 | 72 | 72 | 451 | 470 | 74 | 76 | 2 | 4 | 30 | 32 |
| East side | 3-Sep-08 | 7.2 | 277 | 6.9 | 234 | - | 14 | 98 | - | 11 | 19 | 4 | 1 | 10 | 68 | 20 | 200 | 0 | 0 | 36 | 82 | 70 | 80 | 470 | 532 | 73 | 82 | 2 | 4 | 33 | 34 |
| East side | 29-Jun-09 | 7.0 | 230 | 6.8 | 259 | - | 7 | 64 | - | 7 | 13 | 4 | 1 | 17 | 69 | 20 | 100 | 0 | 0 | 80 | 120 | 71 | 73 | 425 | 429 | 68 | 69 | 2 | 3 | 32 | 33 |
| East side | 30-Jul-09 | 7.3 | 200 | 6.8 | 187 | - | 6 | 69 | - | 7 | 14 | 4 | 1 | 10 | 61 | 2000 | 2000 | 2 | 2 | 79 | 117 | 74 | 78 | 472 | 494 | 76 | 79 | 1 | 3 | 20 | 14 |
| East side | 1-Sep-09 | 7.6 | 230 | 6.5 | 197 | - | 12 | 90 | - | 8 | 15 | 4 | 1 | 13 | 84 | 20 | 140 | 0 | 0 | 66 | 159 | 84 | 106 | 489 | 598 | 86 | 108 | 1 | 3 | 36 | 46 |
| East side | 28-Sep-09 | 7.3 | 256 | 6.1 | 208 | - | 15 | 88 | - | 9 | 17 | 4 | 1 | 27 | 44 | 60 | 80 | 0 | 0 | 135 | 139 | 88 | 91 | 500 | 519 | 90 | 94 | 3 | 3 | 38 | 39 |
| East side | 18-Nov-09 | 7.2 | 282 | 6.5 | 210 | - | 6 | 81 | - | 9 | 16 | 4 | 1 | 29 | 48 | 60 | 80 | 0 | 0 | 103 | 105 | 78 | 79 | 471 | 477 | 84 | 84 | 2 | 2 | 36 | 37 |
| East side | 14-Jan-10 | 7.6 | 89 | 6.9 | 90 | - | 5 | 27 | 2 | 3 | 6 | 2 | 1 | 194 | 240 | 50 | 1350 | 0 | 1 | 42 | 88 | 30 | 37 | 206 | 228 | 28 | 39 | 2 | 4 | 22 | 27 |
| East side | 3-Mar-10 | 6.7 | 104 | 6.2 | 90 | - | 22 | 29 | 1 | 3 | 5 | 2 | 1 | 210 | 230 | 240 | 240 | 5 | 5 | 83 | 87 | 34 | 35 | 200 | 210 | 32 | 33 | 5 | 5 | 23 | 27 |
| North side | 9-Dec-08 | 7.8 | 343 | 7.0 | 295 | - | 5 | 114 | - | 13 | 22 | 4 | 1 | 7 | 76 | 20 | 220 | 0 | 0 | 40 | 97 | 99 | 104 | 744 | 752 | 94 | 99 | 1 | 2 | 50 | 50 |
| North side | 15-Dec-08 | 8.0 | 345 | 7.0 | 286 | - | 7 | 115 | - | 12 | 22 | 4 | 1 | 7 | 72 | 20 | 300 | 0 | 0 | 63 | 119 | 100 | 102 | 755 | 775 | 96 | 103 | 2 | 2 | 45 | 46 |
| North side | 9-Jan-09 | - | - | 4.7 | 267 | - | 1 | 111 | - | 11 | 19 | 4 | 1 | 239 | 312 | 20 | 200 | 0 | 0 | 611 | 647 | 236 | 239 | 1700 | 1710 | 176 | 180 | 10 | 18 | 94 | 95 |
| North side | 29-Jun-09 | 7.3 | 281 | 6.9 | 163 | - | 6 | 65 | - | 7 | 13 | 3 | 1 | 18 | 69 | 20 | 20 | 0 | 0 | 94 | 132 | 74 | 75 | 441 | 447 | 71 | 72 | 2 | 3 | 31 | 32 |
| West side | 3-Jun-08 | - | - | 6.8 | 139 | - | 49 | - | 5 | 10 | 4 | 1 | 34 | 206 | 40 | 320 | 0 | 0 | 58 | 127 | 57 | 57 | 298 | 317 | 54 | 61 | 2 | 4 | 18 | 20 | |
| West side | 1-Jul-08 | 6.8 | 202 | 6.8 | 179 | - | 64 | - | 7 | 13 | 4 | 1 | 16 | 73 | 20 | 120 | 0 | 0 | 55 | 92 | 61 | 61 | 368 | 400 | 64 | 67 | 2 | 3 | 27 | 28 | |
| West side | 7-Aug-08 | 6.9 | 236 | 7.0 | 222 | - | 86 | - | 10 | 18 | 4 | 1 | 14 | 140 | 20 | 300 | 0 | 0 | 37 | 101 | 65 | 65 | 430 | 459 | 67 | 71 | 2 | 5 | 26 | 29 | |
| West side | 6-Oct-08 | 7.5 | 291 | 7.1 | 251 | - | 7 | 101 | - | 12 | 20 | 4 | 1 | 17 | 53 | 20 | 160 | 0 | 0 | 53 | 99 | 72 | 83 | 495 | 572 | 77 | 89 | 2 | 4 | 39 | 39 |
| West side | 6-Nov-08 | 7.7 | 318 | 6.7 | 267 | - | 10 | 107 | - | 11 | 20 | 4 | 1 | 6 | 52 | 60 | 200 | 0 | 0 | 37 | 73 | 112 | 112 | 763 | 756 | 102 | 102 | 1 | 3 | 39 | 41 |
| West side | 16-Apr-09 | - | - | 6.9 | 153 | - | 10 | 50 | - | 5 | 10 | 4 | 1 | 32 | 106 | 20 | 200 | 0 | 0 | 80 | 144 | 74 | 75 | 411 | 414 | 66 | 68 | 3 | 5 | 21 | 23 |
| West side | 29-Jun-09 | 7.2 | 188 | 6.8 | 163 | - | 7 | 64 | - | 6 | 13 | 3 | 1 | 18 | 75 | 20 | 100 | 0 | 0 | 89 | 127 | 74 | 74 | 429 | 431 | 70 | 69 | 2 | 3 | 39 | 40 |
| West side | 30-Jul-09 | 7.1 | 198 | 6.8 | 195 | - | 6 | 69 | - | 7 | 13 | 3 | 1 | 10 | 38 | 2000 | 2000 | 2 | 2 | 72 | 102 | 74 | 75 | 462 | 471 | 77 | 77 | 1 | 3 | 22 | 14 |
| West side | 28-Sep-09 | 7.2 | 229 | 6.5 | 197 | - | 12 | 90 | - | 8 | 15 | 4 | 1 | 33 | 87 | 40 | 140 | 0 | 0 | 137 | 154 | 85 | 94 | 487 | 539 | 87 | 96 | 3 | 3 | 37 | 41 |
| West side | 13-Oct-09 | 8.2 | 229 | 6.1 | 208 | - | 15 | 88 | - | 9 | 17 | 4 | 1 | 28 | 56 | 60 | 100 | 0 | 0 | 128 | 130 | 84 | 85 | 482 | 485 | 87 | 88 | 3 | 3 | 39 | 38 |
| West side | 18-Nov-09 | 7.1 | 210 | 6.5 | 206 | - | 6 | 81 | - | 9 | 15 | 4 | 1 | 29 | 46 | 60 | 80 | 0 | 0 | 119 | 120 | 85 | 85 | 496 | 498 | 89 | 89 | 2 | 2 | 39 | 39 |
| West side | 14-Jan-10 | 7.9 | 82 | 6.4 | 91 | - | 9 | 30 | - | 3 | 6 | 2 | 2 | 156 | 450 | 140 | 340 | 0 | 0 | 84 | 92 | 38 | 40 | 234 | 245 | 38 | 40 | 4 | 5 | 11 | 14 |
| West side | 3-Mar-10 | 6.8 | 123 | 6.9 | 88 | - | 34 | 26 | 1 | 3 | 5 | 2 | 1 | 210 | 200 | 220 | 220 | 5 | 5 | 87 | 87 | 34 | 34 | 200 | 200 | 33 | 33 | 5 | 5 | 26 | 27 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable
 Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B9. Surface water quality for gauges GS8150200 and GS8150097, 2008 to 2010

| Site | Date | FIELD DATA | | LAB DATA | | | MAJOR IONS (in mg/L) | | | | | | | Metals concentrations (in ug/L) | | | | | | | | | | | | | | | | | |
|--|-----------|------------|-------------|----------|-------------|-------------|----------------------|------|----|------|------|------|-----|---------------------------------|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-----|-----|-------|-------|
| | | pH | EC uS/cm | pH | EC uS/cm | Alk mg/L | HCO3 | SO4 | Cl | Ca | Mg | Na | K | Al_d | Al_t | Fe_d | Fe_t | Cd_d | Cd_t | Cu_d | Cu_t | Co_t | Co_d | Mn_d | Mn_t | Ni_d | Ni_t | U_d | U_t | Zn_d | Zn_t |
| <i>East Finnis River immediately downstream of mine site</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GS8150200 | 28-Apr-08 | 6.6 | 460 | 6.7 | 424 | - | 15 | 189 | - | 18 | 43 | 4 | 1 | 12 | 261 | 20 | 500 | 1 | 1 | 149 | 237 | 380 | 387 | 846 | 864 | 319 | 321 | 5 | 10 | 484 | 494 |
| GS8150200 | 6-May-08 | 4.8 | 2225 | 4.6 | 2190 | - | 1 | 1570 | - | 108 | 293 | 8 | 2 | 6590 | 7950 | 200 | 1520 | 17 | 19 | 6310 | 7240 | 7190 | 8180 | 12100 | 12500 | 5890 | 6660 | 134 | 167 | 10500 | 10800 |
| GS8150200 | 1-Jul-08 | 4.5 | 3026 | 4.4 | 2930 | - | | 2220 | - | 134 | 419 | 8 | 2 | 21800 | 23600 | 200 | 700 | 30 | 29 | 8420 | 8950 | 11100 | 11400 | 18100 | 19100 | 8970 | 9150 | 282 | 293 | 17500 | 19000 |
| GS8150200 | 7-Aug-08 | 4.5 | 4770 | 4.3 | 4470 | - | | 3670 | - | 215 | 721 | 20 | 8 | 39200 | 40300 | 400 | 440 | 56 | 56 | 15 | 16 | 19800 | 20300 | 31 | 33 | 16200 | 16400 | 500 | 533 | 33 | 33 |
| GS8150200 | 9-Oct-08 | 4.5 | 5714 | 7.3 | 1310 | - | 52 | 732 | - | 77 | 145 | 14 | 3 | 39 | 414 | 200 | 200 | 7 | 7 | 762 | 953 | 2460 | 2750 | 4220 | 4650 | 2080 | 2230 | 34 | 36 | 4070 | 4190 |
| GS8150200 | 6-Nov-08 | 7.4 | 1517 | 7.2 | 1290 | - | 55 | 691 | - | 76 | 133 | 16 | 2 | 42 | 301 | 200 | 200 | 4 | 5 | 280 | 383 | 1680 | 1810 | 3640 | 3960 | 1310 | 1400 | 29 | 34 | 2180 | 2240 |
| GS8150200 | 17-Dec-08 | 8.7 | 806 | 7.2 | 709 | - | 55 | 311 | - | 48 | 57 | 11 | 3 | 138 | 1180 | 80 | 820 | 1 | 1 | 138 | 257 | 397 | 401 | 822 | 829 | 327 | 351 | 13 | 18 | 620 | 722 |
| GS8150200 | 20-Jan-09 | 6.3 | 683 | | | - | 31 | 266 | - | 24 | 60 | 6 | 1 | 66 | 489 | 240 | 1050 | - | - | 135 | 236 | 365 | 364 | 951 | 950 | 323 | 317 | 7 | 14 | 547 | 564 |
| GS8150200 | 4-Feb-09 | 6.9 | 431 | | | - | | 171 | - | 13 | 41 | 4 | 1 | 8 | 314 | 20 | 600 | - | - | 78 | 191 | 274 | 275 | 696 | 693 | 230 | 232 | 5 | 11 | 376 | 381 |
| GS8150200 | 17-Feb-09 | 6.5 | 154 | | | - | 8 | 46 | - | 5 | 10 | 3 | 1 | 75 | 473 | 180 | 480 | - | - | 67 | 113 | 64 | 65 | 320 | 330 | 57 | 58 | 3 | 7 | 49 | 48 |
| GS8150200 | 17-Mar-09 | 6.9 | 171 | 6.6 | 149 | - | 17 | 53 | - | 5 | 12 | 3 | 1 | 53 | 322 | 120 | 540 | - | - | 69 | 114 | 70 | 71 | 255 | 259 | 62 | 63 | 3 | 6 | 63 | 64 |
| GS8150200 | 16-Apr-09 | - | - | 6.7 | 902 | - | 23 | 460 | - | 34 | 98 | 5 | 1 | 13 | 188 | 20 | 620 | 3 | 3 | 300 | 436 | 1020 | 1030 | 1960 | 2080 | 827 | 837 | 8 | 14 | 1350 | 1410 |
| GS8150200 | 27-May-09 | 5.6 | 2162 | 5.7 | 2090 | - | 1 | 1400 | - | 120 | 276 | 9 | 1 | 1170 | 2350 | 280 | 400 | 6 | 6 | 2400 | 2840 | 2370 | 2390 | 4740 | 4800 | 2190 | 2220 | 80 | 99 | 3720 | 3810 |
| GS8150200 | 28-Sep-09 | 6.9 | 1405 | 7.0 | 1120 | - | 113 | 641 | - | 71 | 119 | 13 | 1 | 36 | 406 | 200 | 200 | 4 | 5 | 352 | 504 | 1850 | 2170 | 2840 | 3340 | 1530 | 1800 | 28 | 35 | 2610 | 3090 |
| GS8150200 | 18-Nov-09 | 7.4 | 1781 | 6.9 | 1660 | - | 49 | 1030 | - | 97 | 203 | 15 | 4 | 418 | 561 | 200 | 200 | 9 | 9 | 963 | 1000 | 3710 | 3690 | 6570 | 6590 | 3060 | 3070 | 21 | 29 | 6120 | 6140 |
| GS8150200 | 15-Dec-09 | 6.9 | 321 | 6.5 | 311 | - | 7 | 136 | - | 16 | 27 | 4 | 2 | 124 | 716 | 40 | 400 | 1 | 1 | 129 | 255 | 233 | 232 | 523 | 514 | 192 | 193 | 3 | 6 | 288 | 294 |
| GS8150200 | 13-Jan-10 | 7.0 | 100 | 7.2 | 100 | - | 6 | 31 | 2 | 3 | 7 | 2 | 1 | 40 | 260 | 50 | 2210 | 0 | 1 | 45 | 84 | 37 | 46 | 183 | 208 | 33 | 44 | 2 | 4 | 38 | 49 |
| GS8150200 | 15-Mar-10 | 7.0 | 138 | 7 | 113 | - | 42 | 36 | 1 | 4 | 9 | 2 | 1 | 250 | 250 | 250 | 240 | 5 | 5 | 110 | 100 | 56 | 57 | 190 | 200 | 53 | 54 | 5 | 5 | 62 | 59 |
| GS8150200 | 30-Oct-08 | - | - | 6.9 | 1834 | - | - | 969 | - | 95 | 185 | 17 | 3 | 45 | - | 20 | - | - | - | 456 | - | 2690 | - | 5250 | - | 2200 | - | 30 | - | 4420 | - |
| GS8150200 | 15-Apr-09 | - | - | 6.6 | 938 | 140 | 171 | 408 | - | 32 | 80 | 5 | 1 | 27 | - | 200 | - | - | - | 297 | - | 880 | - | 1810 | - | 736 | - | 9 | - | 1250 | - |
| GS8150200 | 6-Aug-10 | 8.0 | 570 | 6.3 | 513 | | | 209 | 10 | 26 | 51.3 | 7.6 | 2.3 | 4 | 16 | 200 | - | 0.2 | 0.2 | 17 | 19 | 4 | 6 | 61 | 81 | 14 | 15 | 4 | 4 | 17 | |
| <i>East Finnis River 2.5 km downstream of mine site</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rail bridge | 6-Aug-10 | 6.6 | 1140 | 6.2 | 834 | | | 458 | 15 | 50.1 | 94.8 | 10.6 | 1.1 | 3 | 7 | 200 | 200 | 0.2 | 0.2 | 13 | 22 | 23 | 25 | 160 | 169 | 46 | 46 | 2 | 2 | 45 | 1140 |
| <i>East Finnis River 5.6 km downstream of mine site</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GS8150097 | 3-Jun-08 | 7.2 | 800 | 7.2 | 774 | - | 72 | 359 | - | 44 | 77 | 8 | 1 | 3 | 8 | 60 | 120 | 0 | 0 | 18 | 24 | 11 | 14 | 120 | 141 | 49 | 55 | 14 | 16 | 45 | 52 |
| GS8150097 | 1-Jul-08 | 7.3 | 915 | 7.6 | 889 | - | 81 | 415 | - | 50 | 91 | 9 | 2 | 2 | 10 | 40 | 80 | 0 | 0 | 15 | 20 | 2 | 7 | 61 | 123 | 26 | 27 | 18 | 18 | 28 | 30 |
| GS8150097 | 6-Aug-08 | 7.9 | 914 | 7.6 | 923 | - | 74 | 434 | - | 54 | 99 | 10 | 2 | 2 | 28 | 20 | 80 | 0 | 0 | 13 | 25 | 0 | 16 | 1 | 244 | 13 | 21 | 13 | 14 | 12 | 26 |
| GS8150097 | 8-Oct-08 | 7.6 | 954 | 7.5 | 784 | - | 80 | 338 | - | 43 | 76 | 10 | 3 | 4 | 118 | 20 | 140 | 0 | 0 | 14 | 31 | 0 | 11 | 3 | 488 | 11 | 16 | 12 | 13 | 3 | 12 |
| GS8150097 | 6-Nov-08 | 7.8 | 745 | 7.4 | 648 | - | 67 | 258 | - | 33 | 59 | 9 | 3 | 6 | 426 | 60 | 600 | 0 | 0 | 15 | 88 | 0 | 35 | 4 | 1160 | 10 | 28 | 9 | 11 | 2 | 33 |
| GS8150097 | 17-Dec-08 | 8.5 | 278 | 7.3 | 244 | - | 23 | 87 | - | 11 | 20 | 3 | 2 | 212 | 1440 | 60 | 600 | 0 | 0 | 21 | 40 | 2 | 9 | 56 | 156 | 11 | 15 | 1 | 2 | 10 | 17 |
| GS8150097 | 8-Jan-09 | 9.0 | 361 | 6.9 | 312 | - | 22 | 122 | - | 12 | 28 | 4 | 1 | 94 | 272 | 180 | 580 | 0 | 0 | 43 | 68 | 42 | 45 | 154 | 169 | 70 | 75 | 2 | 4 | 77 | 89 |
| GS8150097 | 17-Feb-09 | 6.7 | 211 | 6.9 | 142 | - | 9 | 49 | - | 6 | 10 | 3 | 1 | 65 | 396 | 160 | 420 | 0 | 0 | 59 | 98 | 57 | 60 | 288 | 303 | 53 | 56 | 3 | 5 | 45 | 45 |
| GS8150097 | 5-Mar-09 | 6.4 | 167 | | | - | 22 | 57 | - | 7 | 13 | 3 | 1 | 49 | 220 | 100 | 360 | - | - | 58 | 104 | 65 | 66 | 210 | 212 | 58 | 59 | 3 | 5 | 63 | 67 |
| GS8150097 | 17-Mar-09 | 8.2 | 200 | 6.7 | 156 | - | 20 | 54 | - | 6 | 12 | 3 | 1 | 58 | 202 | 120 | 420 | - | - | 56 | 90 | 55 | 57 | 207 | 212 | 51 | 53 | 2 | 4 | 52 | 56 |
| GS8150097 | 29-Mar-09 | 7.0 | 178 | 7.4 | 648 | - | 55 | 263 | - | 35 | 62 | 7 | 1 | 1 | 36 | 80 | 200 | 0 | 0 | 13 | 25 | 0 | 22 | 2 | 179 | 39 | 46 | 6 | 8 | 29 | 43 |
| GS8150097 | 27-May-09 | 7.5 | 1240 | 7.6 | 1110 | - | 62 | 571 | - | 68 | 116 | 11 | 1 | 2 | 7 | 200 | 200 | 0 | 0 | 19 | 22 | 7 | 9 | 75 | 93 | 44 | 45 | 11 | 11 | 39 | 41 |
| GS8150097 | 24-Jun-09 | 6.6 | 652 | 7.4 | 659 | - | 63 | 282 | - | 36 | 65 | 7 | 2 | 1 | 14 | 40 | 320 | 0 | 0 | 6 | 9 | 8 | 31 | 406 | 722 | 16 | 17 | 5 | 6 | 13 | 16 |
| GS8150097 | 14-Oct-09 | 7.5 | 901 | 5.9 | 192 | - | 11 | 333 | - | 44 | 79 | 10 | 3 | 2 | 47 | 200 | 200 | 0 | 0 | 7 | 7 | 2 | 8 | 643 | 1070 | 12 | 13 | 12 | 12 | 4 | 4 |
| GS8150097 | 3-Dec-10 | 7.3 | 786 | 7.9 | 753 | - | 204 | 212 | - | 36 | 64 | 10 | 32 | 3 | 102 | 20 | 300 | 0 | 0 | 10 | 22 | 6 | 15 | 1440 | 2530 | 17 | 20 | 42 | 47 | 2 | 8 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable
Alkalinity concentrations (when available) are given in mg/L as CaCO3

Table B10a. Water quality data for Whites Open Cut, October 1990 and May 1991

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L | SO4 mg/L | Ca mg/L | Mg mg/L | Cu_t mg/L | Mn_t mg/L | Zn_t mg/L | Ni_t mg/L | Fe_t mg/L | Al_t mg/L |
|---|--------------------|--------|-----|-------------|---------------|------------|-------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Pit water quality for the first 15 years after mining operations ceased</i> | | | | | | | | | | | | | | | |
| 0 | 60 | 1959 | 4.8 | - | - | - | 180 | - | - | 4 | 3 | - | - | - | - |
| 50 | 10 | 1959 | 4.8 | - | - | - | 200 | - | - | 4 | 3 | - | - | - | - |
| 0 | 60 | 1969 | 2.7 | - | - | - | 4750 | - | - | 52 | 86 | - | - | - | - |
| 0 | 60 | 1970 | 2.8 | - | - | - | 6000 | - | - | 53 | 115 | - | - | - | - |
| 0 | 60 | 1974 | 2.4 | - | - | - | 5700 | - | - | 56 | 150 | - | - | - | - |
| 50 | 10 | | 2.2 | - | - | - | 9200 | - | - | 60 | 220 | - | - | - | - |
| <i>Typical water quality immediately prior to rehabilitation (from Mining and Processing Engineering Services report)</i> | | | | | | | | | | | | | | | |
| 15 | 39 | Aug-85 | 2.5 | - | - | - | 8200 | 400 | 900 | 55 | 230 | 6 | 14 | 430 | 230 |
| <i>Depth profiling in October 1990 (from Henkel, 1991b)</i> | | | | | | | | | | | | | | | |
| 0 | 60 | Oct-90 | 4.6 | 640 | - | - | 300 | - | - | 0.8 | 4.4 | 0.2 | - | - | - |
| 2 | 58 | Oct-90 | 4.8 | 630 | - | - | 300 | - | - | 0.8 | 4.2 | 0.2 | - | - | - |
| 12 | 48 | Oct-90 | 4.7 | 630 | - | - | 310 | - | - | 0.8 | 4.2 | 0.2 | - | - | - |
| 14 | 40 | Oct-90 | 4.6 | 640 | - | - | 300 | - | - | 0.9 | 4.3 | 0.2 | - | - | - |
| 20 | 38 | Oct-90 | 4.6 | 640 | - | - | 310 | - | - | 0.9 | 4.3 | 0.2 | - | - | - |
| 22 | 36 | Oct-90 | 3.0 | 6600 | - | - | 4900 | - | - | 22.0 | 120.0 | 4.1 | - | - | - |
| 24 | 34 | Oct-90 | 3.0 | 7900 | - | - | 6400 | - | - | 44.0 | 180.0 | 6.1 | - | - | - |
| 26 | 32 | Oct-90 | 2.9 | 8500 | - | - | 7600 | - | - | 54.0 | 200.0 | 6.4 | - | - | - |
| 28 | 30 | Oct-90 | 2.9 | 8600 | - | - | 7700 | - | - | 55.0 | 210.0 | 6.9 | - | - | - |
| 30 | 28 | Oct-90 | 2.9 | 8600 | - | - | 8200 | - | - | 56.0 | 210.0 | 6.9 | - | - | - |
| <i>Depth profiling in May 1991 (from Henkel, 1991b)</i> | | | | | | | | | | | | | | | |
| 0 | 60 | May-91 | 6.5 | 170 | - | - | 63 | - | - | 0.1 | 0.6 | 0.0 | - | - | - |
| 2 | 58 | May-91 | 6.0 | 170 | - | - | 66 | - | - | 0.2 | 0.6 | 0.1 | - | - | - |
| 12 | 48 | May-91 | 6.5 | 170 | - | - | 65 | - | - | 0.2 | 0.6 | 0.0 | - | - | - |
| 14 | 46 | May-91 | 6.5 | 170 | - | - | 66 | - | - | 0.1 | 0.6 | 0.0 | - | - | - |
| 20 | 40 | May-91 | 6.0 | 220 | - | - | 94 | - | - | 0.3 | 1.1 | 0.0 | - | - | - |
| 22 | 38 | May-91 | 5.7 | 240 | - | - | 100 | - | - | 0.5 | 1.3 | 0.1 | - | - | - |
| 24 | 36 | May-91 | 4.7 | 380 | - | - | 260 | - | - | 1.0 | 3.0 | 0.2 | - | - | - |
| 26 | 34 | May-91 | 2.9 | 8000 | - | - | 6500 | - | - | 46.0 | 184.0 | 6.4 | - | - | - |
| 28 | 32 | May-91 | 2.9 | 8300 | - | - | 7500 | - | - | 57.0 | 220.0 | 6.9 | - | - | - |
| 30 | 30 | May-91 | 2.9 | 8200 | - | - | 7700 | - | - | 59.0 | 240.0 | 6.6 | - | - | - |
| 36 | 24 | May-91 | 2.9 | 8300 | - | - | 7700 | - | - | 61.0 | 230.0 | 7.0 | - | - | - |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Table B10b. Water quality data for Whites Open Cut, April 1998

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L | SO4 mg/L | Ca mg/L | Mg mg/L | Cu_d mg/L | Mn_d mg/L | Zn_d mg/L | Ni_d mg/L | Fe_d mg/L | Al_d mg/L |
|--|--------------------|--------|-----|-------------|---------------|------------|-------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Depth profiling in April 1998 (from Lawton and Overall, 2002)</i> | | | | | | | | | | | | | | | |
| 0 | 60.01 | Apr-98 | 6.8 | 157 | 30.8 | 6.6 | 61 | 4 | 13 | 0.1 | 0.3 | 0.0 | 0.1 | 0.5 | 0.1 |
| 5 | 55.01 | Apr-98 | 6.5 | 172 | 30.3 | 5.9 | - | - | - | 0.1 | 0.3 | 0.1 | 0.1 | 0.4 | 0.1 |
| 10 | 50.01 | Apr-98 | 6.1 | 110 | 29.6 | 5.3 | 41 | 3 | 8 | 0.1 | 0.3 | 0.0 | 0.1 | 0.4 | 0.2 |
| 15 | 45.01 | Apr-98 | 5.7 | 115 | 28.9 | 5.2 | - | - | - | 0.1 | 0.5 | 0.0 | 0.1 | 0.2 | 0.1 |
| 20 | 40.01 | Apr-98 | 5.4 | 151 | 28.2 | 5.5 | 64 | 6 | 11 | 0.2 | 0.7 | 0.0 | 0.1 | 0.1 | 0.1 |
| 25 | 35.01 | Apr-98 | 5.4 | 171 | 28.2 | 5.4 | - | - | - | 0.2 | 0.8 | 0.1 | 0.1 | 0.1 | 0.1 |
| 30 | 30.01 | Apr-98 | 4.4 | 274 | 27.9 | 4.6 | 137 | 12 | 20 | 0.8 | 2.5 | 0.1 | 0.2 | 0.1 | 1.9 |
| 31 | 29.01 | Apr-98 | 4.1 | 458 | 27.7 | 3.6 | - | - | - | 1.3 | 4.4 | 0.2 | 0.4 | 0.2 | 5.2 |
| 32 | 28.01 | Apr-98 | 3.7 | 993 | 27.7 | 0.1 | - | - | - | 3.1 | 17.7 | 0.4 | 1.0 | 0.9 | 14.8 |
| 33 | 27.01 | Apr-98 | 3.8 | 7168 | 27.6 | 0 | - | - | - | 54.0 | 244.0 | 5.5 | 18.6 | 378.0 | 215.0 |
| 34 | 26.01 | Apr-98 | 3.8 | 7478 | 27.4 | 0 | - | - | - | 60.0 | 269.0 | 7.4 | 16.7 | 404.0 | 226.0 |
| 35 | 25.01 | Apr-98 | 3.8 | 7558 | 27.3 | 0 | 8270 | 481 | 902 | 62.0 | 254.0 | 7.8 | 19.0 | 420.0 | 236.0 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Table B10c. Water quality data for Whites Open Cut, May 2008

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L | SO4 mg/L | Ca mg/L | Mg mg/L | Cu_t mg/L | Mn_t mg/L | Zn_t mg/L | Ni_t mg/L | Fe_t mg/L | Al_t mg/L |
|---|--------------------|--------|----|-------------|---------------|------------|-------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Depth profiling in May 2008 (by Tropical Water Solutions Pty Ltd.)</i> | | | | | | | | | | | | | | | |
| 0 | 60.01 | May-08 | - | - | - | - | 60 | 6.5 | 11.9 | 0.1 | 0.1 | 0.0 | 0.1 | 0.4 | 0.1 |
| 5 | 55.01 | May-08 | - | - | - | - | 60 | 6.7 | 12.4 | 0.1 | 0.1 | 0.0 | 0.1 | 0.7 | 0.2 |
| 30 | 30.01 | May-08 | - | - | - | - | 60 | 6.6 | 12.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.7 | 0.2 |
| 36 | 24.01 | May-08 | - | - | - | - | 63 | 6.9 | 12.8 | 0.1 | 0.1 | 0.0 | 0.1 | 1.0 | 0.2 |
| 41 | 19.01 | May-08 | - | - | - | - | 7710 | 481 | 914 | 38.0 | 219.0 | 6.2 | 12.3 | 851.0 | 170.0 |
| 43 | 17.01 | May-08 | - | - | - | - | 7810 | 469 | 892 | 26.0 | 220.0 | 5.2 | 10.4 | 1160.0 | 107.0 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Table B11a. Water quality data for the Intermediate Open Cut, October 1990 and May 1991

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L | SO4 mg/L | Ca mg/L | Mg mg/L | Cu_t mg/L | Mn_t mg/L | Zn_t mg/L | Ni_t mg/L | Fe_t mg/L | Al_t mg/L |
|---|--------------------|--------|-----|-------------|---------------|------------|-------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Typical water quality prior to rehabilitation (from Mining and Processing Engineering Services report)</i> | | | | | | | | | | | | | | | |
| 15 | 42 | Aug-85 | 3.5 | - | - | - | 3100 | 200 | 400 | 60 | 60 | 7 | 14 | 2 | 60 |
| <i>Depth profiling in October 1990 (from Henkel, 1991b)</i> | | | | | | | | | | | | | | | |
| 0 | 57 | Oct-90 | 4.9 | 900 | - | - | 460 | - | - | 1.2 | 2.1 | 0.3 | - | - | - |
| 1 | 56 | Oct-90 | 4.5 | 900 | - | - | 460 | - | - | 1.1 | 2.1 | 0.3 | - | - | - |
| 15 | 42 | Oct-90 | 4.7 | 890 | - | - | 450 | - | - | 1.1 | 2.0 | 0.3 | - | - | - |
| 17 | 40 | Oct-90 | 4.7 | 890 | - | - | 460 | - | - | 1.1 | 2.0 | 0.3 | - | - | - |
| 21 | 36 | Oct-90 | 4.7 | 890 | - | - | 460 | - | - | 1.1 | 2.1 | 0.3 | - | - | - |
| 23 | 34 | Oct-90 | 4.7 | 890 | - | - | 460 | - | - | 1.1 | 2.1 | 0.3 | - | - | - |
| 25 | 32 | Oct-90 | 4.7 | 3600 | - | - | 2500 | - | - | 0.7 | 1.7 | 0.6 | - | - | - |
| 27 | 30 | Oct-90 | 4.8 | 3800 | - | - | 2700 | - | - | 0.6 | 1.9 | 0.6 | - | - | - |
| 29 | 28 | Oct-90 | 5.2 | 4000 | - | - | 2800 | - | - | 0.4 | 1.5 | 0.4 | - | - | - |
| <i>Depth profiling in May 1991 (from Henkel, 1991b)</i> | | | | | | | | | | | | | | | |
| 0 | 58 | May-91 | 6.6 | 180 | - | - | 71 | - | - | 0.4 | 0.8 | 0.1 | - | - | - |
| 2 | 56 | May-91 | 4.6 | 190 | - | - | 76 | - | - | 0.4 | 0.8 | 0.1 | - | - | - |
| 12 | 48 | May-91 | 5.9 | 180 | - | - | 73 | - | - | 0.2 | 0.8 | 0.1 | - | - | - |
| 14 | 38 | May-91 | 6.3 | 180 | - | - | 73 | - | - | 0.4 | 0.8 | 0.0 | - | - | - |
| 20 | 36 | May-91 | 6.1 | 190 | - | - | 76 | - | - | 0.4 | 0.9 | 0.0 | - | - | - |
| 22 | 34 | May-91 | 5.5 | 250 | - | - | 110 | - | - | 0.5 | 1.2 | 0.1 | - | - | - |
| 24 | 32 | May-91 | 5.2 | 380 | - | - | 220 | - | - | 0.5 | 1.5 | 0.2 | - | - | - |
| 26 | 30 | May-91 | 5.4 | 3600 | - | - | 2800 | - | - | 0.6 | 3.6 | 0.5 | - | - | - |
| 28 | 26 | May-91 | 6.1 | 3700 | - | - | 3100 | - | - | 0.2 | 4.4 | 0.3 | - | - | - |
| 30 | 24 | May-91 | 6.4 | 3700 | - | - | 3100 | - | - | 0.2 | 4.3 | 0.4 | - | - | - |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Table B11b. Water quality data for Intermediate Open Cut, April 1998

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L | SO4 mg/L | Ca mg/L | Mg mg/L | Cu_d mg/L | Mn_d mg/L | Zn_d mg/L | Ni_d mg/L | Fe_d mg/L | Al_d mg/L |
|--|--------------------|--------|-----|-------------|---------------|------------|-------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Depth profiling in April 1998 (from Lawton and Overall, 2002)</i> | | | | | | | | | | | | | | | |
| 0 | 57.92 | Apr-98 | 6.9 | 143 | 31.8 | 6.8 | 53 | 4 | 11 | 0.2 | 0.4 | 0.0 | 0.1 | 0.4 | 0.2 |
| 5 | 52.92 | Apr-98 | 6.7 | 141 | 31.0 | 6.4 | - | - | - | 0.1 | 0.4 | 0.0 | 0.1 | 0.4 | 0.2 |
| 10 | 47.92 | Apr-98 | 6.5 | 130 | 30.7 | 6 | 48 | 4 | 10 | 0.1 | 0.4 | 0.0 | 0.1 | 0.3 | 0.2 |
| 15 | 42.92 | Apr-98 | 5.6 | 124 | 28.8 | 5.8 | - | - | - | 0.2 | 0.7 | 0.0 | 0.1 | 0.0 | 0.2 |
| 20 | 37.92 | Apr-98 | 5.5 | 125 | 28.5 | 6 | 51 | 4 | 9 | 0.2 | 0.7 | 0.0 | 0.1 | 0.0 | 0.2 |
| 25 | 32.95 | Apr-98 | 5.4 | 137 | 28.5 | 5.8 | - | - | - | 0.2 | 0.7 | 0.0 | 0.1 | 0.0 | 0.2 |
| 30 | 27.92 | Apr-98 | 5.3 | 161 | 28.1 | 5.2 | 71 | 6 | 12 | 0.3 | 0.9 | 0.1 | 0.2 | 0.1 | 0.2 |
| 31 | 26.92 | Apr-98 | 5.0 | 240 | 27.8 | 4.7 | - | - | - | 0.4 | 1.2 | 0.1 | 0.2 | 0.1 | 0.3 |
| 32 | 25.92 | Apr-98 | 4.7 | 418 | 27.6 | 3.4 | - | - | - | 0.6 | 1.7 | 0.2 | 0.3 | 0.1 | 0.5 |
| 33 | 24.92 | Apr-98 | 4.5 | 1104 | 27.2 | 0.1 | - | - | - | 1.1 | 3.5 | 1.0 | 1.0 | 0.1 | 1.1 |
| 34 | 23.92 | Apr-98 | 4.8 | 2278 | 27.0 | 0 | - | - | - | 1.1 | 9.6 | 2.0 | 1.8 | 16.1 | 1.6 |
| 35 | 22.92 | Apr-98 | 4.7 | 3478 | 26.8 | 0 | 2410 | 250 | 322 | 0.1 | 9.8 | 0.7 | 1.1 | 25.0 | 0.4 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Table B11c. Water quality data for Intermediate Open Cut, May 2008

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L | SO4 mg/L | Ca mg/L | Mg mg/L | Cu_t mg/L | Mn_t mg/L | Zn_t mg/L | Ni_t mg/L | Fe_t mg/L | Al_t mg/L |
|---|--------------------|--------|----|-------------|---------------|------------|-------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Depth profiling in May 2008 (by Tropical Water Solutions Pty Ltd.)</i> | | | | | | | | | | | | | | | |
| 0 | 60.01 | May-08 | - | - | - | - | 45 | 5 | 9.9 | 0.1 | 0.3 | 0.0 | 0.1 | 0.2 | 0.1 |
| 15 | 45.01 | May-08 | - | - | - | - | 45 | 5 | 9.9 | 0.1 | 0.3 | 0.0 | 0.1 | 0.2 | 0.1 |
| 31 | 29.01 | May-08 | - | - | - | - | 101 | 12.2 | 20.7 | 0.1 | 0.6 | 0.0 | 0.1 | 0.1 | 0.0 |

Note: Red numbers indicate that the concentration was below the indicated detection limit and hyphens indicate that data is unavailable

Table B12a. Water quality profiles for Whites Open Cut, April 1998

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L |
|------------|--------------------|--------|-----|-------------|---------------|------------|
| 0 | 60.01 | Apr-98 | 6.8 | 157 | 30.8 | 6.6 |
| 1 | 59.01 | Apr-98 | 6.8 | 157 | 30.8 | 6.6 |
| 2 | 58.01 | Apr-98 | 6.8 | 158 | 30.8 | 6.6 |
| 3 | 57.01 | Apr-98 | 6.7 | 159 | 30.8 | 6.6 |
| 4 | 56.01 | Apr-98 | 6.6 | 157 | 30.5 | 6.2 |
| 5 | 55.01 | Apr-98 | 6.5 | 172 | 30.3 | 5.9 |
| 6 | 54.01 | Apr-98 | 3.3 | 144 | 30.0 | 5.7 |
| 7 | 53.01 | Apr-98 | 6.3 | 138 | 29.9 | 5.6 |
| 8 | 52.01 | Apr-98 | 6.2 | 121 | 29.7 | 5.4 |
| 9 | 51.01 | Apr-98 | 6.1 | 113 | 29.6 | 5.3 |
| 10 | 50.01 | Apr-98 | 6.1 | 110 | 29.6 | 5.3 |
| 11 | 49.01 | Apr-98 | 6.0 | 107 | 29.4 | 5.3 |
| 12 | 48.01 | Apr-98 | 6.0 | 105 | 29.4 | 5.3 |
| 13 | 47.01 | Apr-98 | 5.9 | 108 | 29.2 | 5.2 |
| 14 | 46.01 | Apr-98 | 5.9 | 109 | 29.2 | 5.1 |
| 15 | 45.01 | Apr-98 | 5.7 | 115 | 28.9 | 5.2 |
| 16 | 44.01 | Apr-98 | 5.6 | 119 | 28.6 | 5.4 |
| 17 | 43.01 | Apr-98 | 5.5 | 118 | 28.5 | 5.4 |
| 18 | 42.01 | Apr-98 | 5.4 | 122 | 28.3 | 5.5 |
| 19 | 41.01 | Apr-98 | 5.4 | 138 | 28.2 | 5.6 |
| 20 | 40.01 | Apr-98 | 5.4 | 151 | 28.2 | 5.5 |
| 21 | 39.01 | Apr-98 | 5.4 | 159 | 28.2 | 5.4 |
| 22 | 38.01 | Apr-98 | 5.4 | 164 | 28.2 | 5.4 |
| 23 | 37.01 | Apr-98 | 5.5 | 170 | 28.2 | 5.4 |
| 24 | 36.01 | Apr-98 | 5.5 | 141 | 28.2 | 5.4 |
| 25 | 35.01 | Apr-98 | 5.4 | 171 | 28.2 | 5.4 |
| 26 | 34.01 | Apr-98 | 5.4 | 171 | 28.2 | 5.3 |
| 27 | 33.01 | Apr-98 | 5.4 | 180 | 28.2 | 5.3 |
| 28 | 32.01 | Apr-98 | 5.3 | 182 | 28.1 | 5.2 |
| 29 | 31.01 | Apr-98 | 4.8 | 199 | 28.0 | 5.0 |
| 29.5 | 30.51 | Apr-98 | 4.5 | 244 | 27.9 | 4.8 |
| 30 | 30.01 | Apr-98 | 4.4 | 274 | 27.9 | 4.6 |
| 30.5 | 29.51 | Apr-98 | 4.3 | 395 | 27.7 | 3.9 |
| 31 | 29.01 | Apr-98 | 4.1 | 458 | 27.7 | 3.6 |
| 31.5 | 28.51 | Apr-98 | 4.0 | 571 | 27.7 | 2.6 |
| 32 | 28.01 | Apr-98 | 3.7 | 993 | 27.7 | 0.1 |
| 32.5 | 27.51 | Apr-98 | 3.9 | 5308 | 27.6 | 0.0 |
| 33 | 27.01 | Apr-98 | 3.8 | 7168 | 27.6 | 0.0 |
| 33.5 | 26.51 | Apr-98 | 3.8 | 7408 | 27.5 | 0.0 |
| 34 | 26.01 | Apr-98 | 3.8 | 7478 | 27.4 | 0.0 |
| 34.5 | 25.51 | Apr-98 | 3.8 | 7538 | 27.4 | 0.0 |
| 35 | 25.01 | Apr-98 | 3.8 | 7558 | 27.3 | 0.0 |

Table B12b. Water quality profiles for Whites Open Cut, May 2008

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L |
|------------|--------------------|--------|-----|-------------|---------------|------------|
| 0.2 | 59.81 | May-08 | 6.2 | 161 | 26.5 | 6.9 |
| 0.3 | 59.71 | May-08 | 6.2 | 161 | 26.4 | 7.3 |
| 1.6 | 58.41 | May-08 | 6.1 | 161 | 26.5 | 6.9 |
| 1.7 | 58.31 | May-08 | 6.1 | 161 | 26.5 | 7.0 |
| 3.2 | 56.81 | May-08 | 6.0 | 162 | 26.5 | 6.8 |
| 5 | 55.01 | May-08 | 6.0 | 162 | 26.5 | 6.8 |
| 6.4 | 53.61 | May-08 | 6.0 | 163 | 26.5 | 7.4 |
| 6.9 | 53.11 | May-08 | 6.0 | 163 | 26.5 | 7.6 |
| 9 | 51.01 | May-08 | 6.0 | 163 | 26.5 | 8.0 |
| 11 | 49.01 | May-08 | 6.0 | 163 | 26.5 | 6.8 |
| 12.9 | 47.11 | May-08 | 6.0 | 163 | 26.5 | 7.0 |
| 14.8 | 45.21 | May-08 | 6.0 | 163 | 26.5 | 6.8 |
| 14.9 | 45.11 | May-08 | 6.0 | 162 | 26.5 | 7.2 |
| 16.8 | 43.21 | May-08 | 6.0 | 162 | 26.5 | 7.6 |
| 18.8 | 41.21 | May-08 | 6.0 | 163 | 26.5 | 6.8 |
| 20.8 | 39.21 | May-08 | 6.0 | 163 | 26.5 | 7.3 |
| 20.9 | 39.11 | May-08 | 6.0 | 164 | 26.5 | 6.8 |
| 21.6 | 38.41 | May-08 | 6.0 | 164 | 26.5 | 7.0 |
| 22.8 | 37.21 | May-08 | 6.0 | 164 | 26.5 | 6.9 |
| 24.7 | 35.31 | May-08 | 6.0 | 165 | 26.5 | 7.1 |
| 26.7 | 33.31 | May-08 | 5.9 | 164 | 26.5 | 6.8 |
| 28.7 | 31.31 | May-08 | 5.9 | 164 | 26.5 | 6.8 |
| 28.8 | 31.21 | May-08 | 5.9 | 165 | 26.5 | 6.5 |
| 30.7 | 29.31 | May-08 | 5.9 | 165 | 26.5 | 7.5 |
| 32.6 | 27.41 | May-08 | 5.9 | 165 | 26.5 | 6.9 |
| 32.7 | 27.31 | May-08 | 5.9 | 164 | 26.5 | 6.9 |
| 34.5 | 25.51 | May-08 | 5.9 | 165 | 26.5 | 6.8 |
| 36.4 | 23.61 | May-08 | 5.9 | 166 | 26.5 | 6.9 |
| 36.5 | 23.51 | May-08 | 5.9 | 166 | 26.5 | 6.6 |
| 36.6 | 23.41 | May-08 | 5.9 | 166 | 26.5 | 6.6 |
| 38.4 | 21.61 | May-08 | 5.9 | 166 | 26.5 | 6.6 |
| 38.5 | 21.51 | May-08 | 5.9 | 169 | 26.5 | 6.6 |
| 40.1 | 19.91 | May-08 | 3.8 | 7643 | 26.4 | 5.4 |
| 40.2 | 19.81 | May-08 | 3.8 | 8232 | 26.4 | 0.4 |
| 42.4 | 17.61 | May-08 | 3.8 | 8303 | 26.4 | 0.2 |
| 42.5 | 17.51 | May-08 | 3.9 | 8304 | 26.4 | 0.3 |
| 42.6 | 17.41 | May-08 | 3.9 | 8300 | 26.4 | 0.2 |
| 42.7 | 17.31 | May-08 | 3.8 | 8312 | 26.5 | 0.2 |
| 42.8 | 17.21 | May-08 | 3.9 | 8304 | 26.4 | 0.2 |
| 44.2 | 15.81 | May-08 | 4.1 | 8556 | 26.6 | 0.2 |
| 44.3 | 15.71 | May-08 | 4.1 | 8539 | 26.6 | 0.2 |

Table B12c. Water quality profiles for the Intermediate Open Cut, April 1998

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L |
|------------|--------------------|--------|-----|-------------|---------------|------------|
| 0 | 57.92 | Apr-98 | 6.9 | 143 | 31.8 | 6.8 |
| 1 | 56.92 | Apr-98 | 6.9 | 143 | 31.8 | 6.7 |
| 2 | 55.92 | Apr-98 | 6.8 | 144 | 31.3 | 6.6 |
| 3 | 54.92 | Apr-98 | 6.8 | 142 | 31.2 | 6.6 |
| 4 | 53.92 | Apr-98 | 6.8 | 142 | 31.1 | 6.5 |
| 5 | 52.92 | Apr-98 | 6.7 | 141 | 31.0 | 6.4 |
| 6 | 51.92 | Apr-98 | 6.7 | 139 | 30.9 | 6.3 |
| 7 | 50.92 | Apr-98 | 6.7 | 138 | 30.9 | 6.3 |
| 8 | 49.92 | Apr-98 | 6.6 | 138 | 30.8 | 6.3 |
| 9 | 48.92 | Apr-98 | 6.6 | 135 | 30.8 | 6.2 |
| 10 | 47.92 | Apr-98 | 6.5 | 130 | 30.7 | 6.0 |
| 11 | 46.92 | Apr-98 | 6.4 | 124 | 30.6 | 6.0 |
| 12 | 45.92 | Apr-98 | 6.2 | 116 | 30.1 | 6.0 |
| 13 | 44.92 | Apr-98 | 5.9 | 120 | 29.5 | 5.7 |
| 14 | 43.92 | Apr-98 | 5.7 | 123 | 29.0 | 5.8 |
| 15 | 42.92 | Apr-98 | 5.6 | 124 | 28.8 | 5.8 |
| 16 | 41.92 | Apr-98 | 5.6 | 124 | 28.7 | 5.9 |
| 17 | 40.92 | Apr-98 | 5.6 | 124 | 28.6 | 6.0 |
| 18 | 39.92 | Apr-98 | 5.6 | 125 | 28.6 | 6.0 |
| 19 | 38.92 | Apr-98 | 5.6 | 124 | 28.6 | 6.0 |
| 20 | 37.92 | Apr-98 | 5.5 | 125 | 28.5 | 6.0 |
| 21 | 36.92 | Apr-98 | 5.5 | 128 | 28.5 | 6.0 |
| 22 | 35.92 | Apr-98 | 5.5 | 129 | 28.5 | 5.9 |
| 23 | 34.92 | Apr-98 | 5.5 | 131 | 28.5 | 5.9 |
| 24 | 33.92 | Apr-98 | 5.5 | 132 | 28.5 | 5.8 |
| 25 | 32.92 | Apr-98 | 5.4 | 137 | 28.5 | 5.8 |
| 26 | 31.92 | Apr-98 | 5.4 | 138 | 28.5 | 5.8 |
| 27 | 30.92 | Apr-98 | 5.4 | 141 | 28.4 | 5.7 |
| 28 | 29.92 | Apr-98 | 5.4 | 138 | 28.4 | 5.6 |
| 29 | 28.92 | Apr-98 | 5.4 | 141 | 28.3 | 5.5 |
| 30 | 27.92 | Apr-98 | 5.3 | 161 | 28.1 | 5.2 |
| 30.5 | 27.42 | Apr-98 | 5.2 | 183 | 28.0 | 5.0 |
| 31 | 26.92 | Apr-98 | 5.0 | 240 | 27.8 | 4.7 |
| 31.5 | 26.42 | Apr-98 | 4.8 | 306 | 27.7 | 4.3 |
| 32 | 25.92 | Apr-98 | 4.7 | 418 | 27.6 | 3.4 |
| 32.5 | 25.42 | Apr-98 | 4.7 | 539 | 27.4 | 2.8 |
| 33 | 24.92 | Apr-98 | 4.5 | 1104 | 27.2 | 0.1 |
| 33.5 | 24.42 | Apr-98 | 4.5 | 1728 | 27.1 | 0.0 |
| 34 | 23.92 | Apr-98 | 4.8 | 2278 | 27.0 | 0.0 |
| 34.5 | 23.42 | Apr-98 | 5.3 | 2878 | 26.9 | 0.0 |
| 35 | 22.92 | Apr-98 | 5.7 | 3478 | 26.8 | 0.0 |

Table B12d. Water quality profiles for the Intermediate Open Cut, May 2008.

| Depth m | Elevation m AHD | Date | pH | EC uS/cm | Temp deg C | DO mg/L |
|------------|--------------------|--------|-----|-------------|---------------|------------|
| 0 | 57.92 | May-08 | 6.8 | 132 | 26.4 | 7.5 |
| 0.3 | 57.62 | May-08 | 6.7 | 131 | 26.7 | 6.9 |
| 0.4 | 57.52 | May-08 | 6.7 | 131 | 26.8 | 6.9 |
| 3.1 | 54.82 | May-08 | 6.7 | 131 | 26.8 | 6.6 |
| 4.7 | 53.22 | May-08 | 6.6 | 131 | 26.8 | 7.1 |
| 4.8 | 53.12 | May-08 | 6.6 | 131 | 26.8 | 6.7 |
| 6.7 | 51.22 | May-08 | 5.6 | 133 | 26.8 | 7.0 |
| 6.8 | 51.12 | May-08 | 6.6 | 131 | 26.8 | 7.1 |
| 7.7 | 50.22 | May-08 | 6.6 | 132 | 26.8 | 7.1 |
| 9.6 | 48.32 | May-08 | 6.6 | 132 | 26.8 | 6.8 |
| 9.7 | 48.22 | May-08 | 6.6 | 131 | 26.8 | 6.7 |
| 11.6 | 46.32 | May-08 | 6.6 | 131 | 26.8 | 6.8 |
| 12.6 | 45.32 | May-08 | 6.6 | 132 | 26.8 | 7.0 |
| 13.7 | 44.22 | May-08 | 6.6 | 131 | 26.8 | 6.6 |
| 13.8 | 44.12 | May-08 | 6.6 | 131 | 26.8 | 6.6 |
| 14.9 | 43.02 | May-08 | 6.5 | 132 | 26.8 | 7.6 |
| 15.6 | 42.32 | May-08 | 6.5 | 131 | 26.8 | 7.0 |
| 15.6 | 42.32 | May-08 | 6.5 | 132 | 26.8 | 6.8 |
| 17.5 | 40.42 | May-08 | 6.5 | 131 | 26.8 | 6.7 |
| 20 | 37.92 | May-08 | 6.5 | 131 | 26.8 | 6.8 |
| 20.6 | 37.32 | May-08 | 6.5 | 131 | 26.8 | 6.8 |
| 22.3 | 35.62 | May-08 | 6.5 | 132 | 26.8 | 6.6 |
| 22.4 | 35.52 | May-08 | 6.5 | 132 | 26.8 | 6.7 |
| 23.7 | 34.22 | May-08 | 6.5 | 132 | 26.8 | 7.9 |
| 24.6 | 33.32 | May-08 | 6.5 | 132 | 26.8 | 6.4 |
| 26.4 | 31.52 | May-08 | 6.5 | 132 | 26.8 | 6.7 |
| 26.5 | 31.42 | May-08 | 6.5 | 132 | 26.8 | 6.6 |
| 28.4 | 29.52 | May-08 | 6.5 | 132 | 26.8 | 6.6 |
| 29.1 | 28.82 | May-08 | 6.5 | 132 | 26.8 | 6.7 |
| 31.2 | 26.72 | May-08 | 6.4 | 140 | 26.7 | 6.1 |
| 31.3 | 26.62 | May-08 | 6.5 | 144 | 26.7 | 6.4 |
| 31.4 | 26.52 | May-08 | 6.5 | 145 | 26.7 | 6.4 |
| 31.5 | 26.42 | May-08 | 6.4 | 143 | 26.7 | 6.3 |
| 32.7 | 25.22 | May-08 | 6.4 | 159 | 26.7 | 6.6 |
| 33.9 | 24.02 | May-08 | 6.1 | 278 | 25.9 | 5.4 |