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Ore shoot targeting in the Gosowong Vein Zone, Halmahera, Indonesia

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# APPENDIX II Gosowong Vein Zone Database

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Appendix II – GVZ Database

| Goso               | wong Lo            | ong Sec                         | tion                                              | Data      | base                  |                  | ļ                                     |               |            |                       | <b></b>                 |                   | · · · · · · · · · · · · | ••••••                  | 1                | ļ                                             |                 |           | .                  |                  |          | · · ·                   |                        |                        |             |
|--------------------|--------------------|---------------------------------|---------------------------------------------------|-----------|-----------------------|------------------|---------------------------------------|---------------|------------|-----------------------|-------------------------|-------------------|-------------------------|-------------------------|------------------|-----------------------------------------------|-----------------|-----------|--------------------|------------------|----------|-------------------------|------------------------|------------------------|-------------|
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| Humber             | True width Au      | À A R Cu                        | Pb                                                | Zn /      | Aa Gb                 | ΑωΑα             | Au/Au+Au Sb/Sb4                       | As Cu+Pb+Zn A | uí Cu      |                       | Zin Auf                 | As Au/Sb          | As/Cu+Pb+Zn J           | u/Cu+Pb+Zi              | a Ca/Cu+Zr       | CHCutP                                        | :<br>b,ZaÆn+Pb  | Aq/Cu A   | g/Pb: Ag/Z         | n Au             | Aq Cu    | Pb                      | Zn As                  | 86 CL                  | J+Pb+Zn     |
|                    | m 94               | gi pom                          | ррш                                               | beer p    | ан ррш                |                  | ж 198 н 195                           |               | 1.000      | a1,546   a1           |                         | 10 x110           | K 1,010                 | x 1,600                 | k 114            | x100                                          | K 100           | x1.000 K  | 1.099 1.1.89       | 9 g'm            | 0.m bbw, | в ррити р               | Des. In Disee,         | m ppm m                | open'm      |
| T10075             | 0.8 1.0            | 2 10,0 3                        | 349                                               | 10        | 13                    | 0,10             | 9                                     | 390           | 33         | 3                     | 182                     | 8                 | 33.3                    | 0.                      | 3 71             |                                               | θ 3             | 323       | 29 100             | 0 1              | 8 2      | 5 286                   | 6 1                    | 1                      | 320         |
| T10112             |                    | 5, 6,6 1                        | 4 69                                              | 20        |                       | 4.31             | 81                                    | 32 103        | 2006       | 413 1                 | 1459                    | 127   892         | 65.0                    | 27.                     | 7 4              | i i                                           | 7               | 185       | 96 33              | 8 284            | 66 14    | 1 686                   | 194 6                  | \$ 32                  | 1022        |
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| T 10200            | 13.4 37.8          | 8.3 1                           | 6 26                                              | 9         | 6 3                   | 3.96             | 80                                    | 52            | 2001       | 1241 3                | 589                     | 43                | 116.3                   | 63.                     | 1 6              | 1 3                                           | <b>ə</b> 21     | 505       | 313 90             | 5 141            | 111 22   | 1 356                   | 123 8                  | 1 45                   | 699         |
| T10225             | 24.0 29.2          | 9.9i Z                          | 1 64                                              |           |                       | 2.95             | 75                                    | 95            | 1377       | 460 7                 | 7 <b>88</b> ; ;<br>619; | 62<br>87          | 84,6                    | 30.3                    | ?; 6;<br>2'`` 60 | 7 2                                           | 5' 10<br>M 3    | 156       | 156 94<br>87 113   | 14 702<br>15 AL  | 236 51   | 0:1527                  | 252 19                 |                        | 2289        |
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| T10350             | 17.7 45.9          | 5 61.6 7                        | 10 185                                            | 35        | 5                     | D.73             | 42                                    | 290           | 647        | 244 1                 | 1290 (                  | 136               | 18.6                    | 15.                     | 6 G              | i 2                                           | 7 16            | 883       | 333 178            | 0 790            | 1069 123 | 4 3273                  | 619 5                  | 5                      | 5126        |
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| DFD-009            | 22.9 0.3           | 0.8 10                          | 0 0                                               | 102       | 12 6                  | 0,49             | 33                                    | 33 210        | <b>ļ</b>   | 46                    |                         | 3 6               | 56.8                    |                         | 2 3              | 1 9                                           | 3 5             | 8         | . 95               | 8 5              | 16 725   | 9 184                   | 2332 27                | 4 138                  | 4814        |
| DS0 001            | 1.7 2.0            | 5 0.0 25                        | ин тэ<br>19 19                                    | 89]<br>54 | <i>A</i> <sup>.</sup> |                  | ····                                  | 331           |            | 256                   | 32                      |                   |                         |                         | 5 B              | ). 9                                          | 7 84            | ¦         | • •                | 3                |          | 0 14.                   | 109: 1/                | •                      | 563         |
| DSD 002            | 0.8 0.1            | 3 0.0 50                        | 12 36                                             | 37        | 124 4                 |                  |                                       | 3 575         | Q          |                       |                         | <u>d</u> 3        | 215.7                   | Û.                      | 0 S              | 9                                             | 3 5             | (° -      |                    |                  |          | 2 79                    | 30                     | 9 3                    | 450         |
| 050403             | 5.1 0.3            | 9 1.3 73<br>1 0.0 6             | 10 03<br>11                                       | 302       | 37 7                  | 0,30             | 23                                    | 15 590        | ¥.         | 1                     | 1)                      | 0 0               | \$2.7<br>30.7           | <u>96</u>               | 1 4<br>0 4       |                                               | 2 8;<br>5 69    |           | 25                 | 4 <u>X</u>       | B 143    | 4 323<br>8 34           | 273 1                  | 6 4U                   | 3599        |
| GSD 001            | 174 187            | 71.4 3                          | 6 147                                             | 12        | 10                    | 1,76             | 64                                    | 194,          | 3490       | 857 10                | ыль (                   | ni.               | 50.9                    | 64.                     | i 1              | s z                                           | 0 1             | 1900      | 487 606            | 6 2070           | 1242 62  | 5 2550                  | 205 17                 | 20                     | 3380        |
| GS0 002<br>GSD 003 | 6.1 2.0            | 1 <u>9,6</u> 140<br>125,919     | 19 <u>68</u><br>19 39                             | . 1389 .  | 12 4                  | 0.21             | 43                                    | 20 664        | 198        | 30                    | 310                     | 16 48             | 18.7                    | .0.<br>9.1              | а; 6<br>6 6      | 1                                             | 6 7.<br>7 63    | 24        | 147 J              | 16               | 76,330   | 2: 348                  | 1520 10                | 10; <u>34</u><br>10 10 | 5970        |
| GSD 004            | 5.6 13.7           | 11.5 8                          | 2 65                                              | 23        | 19 4                  | 1.19             | 54                                    | 18 169        | 168        | 213                   | 999                     | 73 331            | 111.2                   | 8.                      | 1 7              | 9. S                                          | 6 2             | 141       | 179 50             | 01 I II          | 113 80   | 0 631                   | 224 16                 | 14 41                  | 1655        |
| GSD 005            | 3.6 5.5            | 5.0) 4<br>s' nó 7               | 10 34<br>16 15                                    | 40        | 10 5                  | 1.12             | 53                                    | 35 114        | 138        | 166                   | 138                     | 58 108            | 84.5                    |                         | 8- <u>5</u>      | 5                                             | 4 5             | 124       | 147 12             | 20 20            | _ 16_14  | 4 125                   | 145 3                  | 15 <u>18</u>           | 410         |
| GS0 007            | 1.7 1.0            | 5 6.6 16                        | 6 41                                              | 55        | 7 6                   | 0.12             | 11                                    | 46 262        | 6          | 26:                   | 19                      | 14 16             | 26.3                    | 0.                      | 4 7              | 5 1                                           | 0 51            | 52        | 211 15             | 6 2              | 15 28    | 6 70                    | 95                     | 3 11                   | 451         |
| GSD 000            | 1.7 15.1           | 3 B.O 6                         | B 29                                              | 10        | 4 5                   | 1.89             | 65                                    | 53 106        | ZZ4:       | 531 1                 | 1513                    | 378 336           | 37.7                    | 16.                     | 3 8              | 7                                             | 0 21            | 119       | 281 80             | 0 76             | 14 11    | 7 49!                   | 17                     | 7 8                    | 184         |
| GSD-010            | 16.5 8.4           | 5 21.5 6                        | 7 26                                              | 79:       | 10                    | 0.39             | 28                                    | 193           | 97         | 319.                  | 106                     | 981               | 50.0                    | 43.                     | 8 5              | 2 7                                           | 7 7             | 247       | 811 27             | 163              | 364 147  | 3 449                   | 1346 16                | 3 0                    | 3258        |
| GSD 011            | 13.0 37.5          | 35.4 24                         | Z 54                                              | 99        | 13                    | 1.06             | <b>1</b>                              | 395           | 155        | 694                   | 381 3                   | 203               | 33.6                    | 95.                     | 3 7              | 1 8                                           | 2 6             | 146       | 654 35             | 9 460            | 400. 314 | 2 703                   | 1281 1                 | 2 0                    | 5126        |
| 650.013            | 4.5 1.0            | 5: 10.3 J                       | ¤ <u>93</u><br>№ 16                               | 70        | 18:<br>9.             | 0.19             | 9                                     | 125           | 27         | 64                    | 15                      | -#:               |                         | 11.<br>8.               | 5                | s 7                                           | 6 B             | 264       | 628 14             | 0 5              | 47 17    | 7 74                    | 315                    | 12 0                   | 566         |
| GSD OT4            | 15.9 10.2          | 2 130.3 6                       | <b>9</b> BO                                       | 73        | 12                    | 0.08             | · · · · · · · · · · · · · · · · · · · | 222           | 149        | 120                   | 140                     | 85                | 54.1                    | 46.                     | 0 4              | •                                             | 6 4             | 1896      | 1625 177           | B 162            | 2069 103 | 1 127                   | 1163 19                | i d                    | 3528        |
| GSD 015            | 3.3 5.6            | 62.1 5                          | 10 191<br>16 56                                   | 74        | 18                    | 0.03             | 8                                     | 196           | 100        | 101                   | 76                      | 32                | 94.5                    |                         | 3 4              | 3. 5                                          | 0 5             | 1101      | 1369 143           | 17 19            | 204 18   | <u>5 1938</u><br>5 100, | Z44                    | ni ();<br>na: ()       |             |
| GSD 817            | 4.1 _3.6           | 44,9 19                         | 0 103                                             | 81        | 8                     | 0.09             |                                       | 374           | 20         | 37                    | 46                      | 461               | 72,6                    | 10.                     | 3 7              | 6                                             | 5 4             | 236       | 435 5              | 3 16             | 186 7    | 6 427                   | 335 1                  | 5 0                    | 1548        |
| GSD 018<br>GSD 019 | 27.4 0.2           | 2.3 9                           | M 34<br>M 24                                      |           | 12                    | 0.11             | 10,                                   | 227           |            | 8*<br>10 <sup>*</sup> | 3:                      | 2 6               | 53.4<br>52.0            | 1. <sup>.</sup><br>12   | 1 _4             | 9. 7<br>1. 5                                  | 3.74<br>9.8     | 25        | 69; 2<br>95i 2     |                  | 64. 25/  | 2 505                   | 2714 <u>3</u><br>363 3 | 2 0                    | 6221<br>570 |
| GSD 020            | 3.8 0.4            | 4,8,10                          | 7 73                                              | 87        | 11                    | 0.69             | 8                                     | 268           | 4          | 6                     | 5                       | 3                 | 50.8                    | _1,                     | 6 5              | 5 6                                           | ai 6            | 45        | 66                 | 5 2              | 18 4     | 1 200                   | 335                    | iz D                   | 1026        |
| GSD 021            | 5.6 5.7<br>18 D2   | 2, 91.3, 16                     | 10 305<br>5 46                                    | 200       | 111<br>291            | 0.05<br>10 10 11 | 6<br>17                               | 722           |            |                       | 29                      | 60<br>1           | 13.2                    | 7.                      | 9i 40            | 3                                             | 6 3i<br>S 8i    | 487       | 273: 45            | 571 20<br>š n    | 425,93   | 4 1663                  | 596                    | 17: D:<br>17: N        | 3598        |
| GSD 023            | 2.3 7.0            | <b>65</b> .7 6                  | a 55                                              | 57        | 2                     | 0.08             | 8                                     |               | 110        | 129                   | 123                     | 373               | 10.7                    | 39.                     | 9 5              | j j                                           | 4 5             | 1333      | 1563 143           | 10 16            | 200 15   | 0 129                   | 134                    | 4 0                    | 413         |
| GSD 074            | 1.9 0.1            | 1.5 9                           | 7 10                                              | 91.       | 12 4                  | 0.13             | 11                                    | 25 197        | 253        | 20:                   | 109                     | 2  5              | 81.1                    | 1.)<br>501 <sup>-</sup> | 0.0              | 2' 9                                          | 1 91<br>B 64    | 1 16      | _158 1<br>16991 11 | 17   0<br> 4. 33 |          | 1: 18 <br>6: 497        | 170 3                  | 3 B                    | 369<br>567  |
| GSD-076            | 5.7 1,3            | 17 7                            | 6 15,                                             | 60        | -11                   | B.21             | 17                                    | 172           | 5          | 22⊤                   | 4                       | 3                 | 66.1                    | 2.                      | 6 4              | i i                                           | 3 6             | 22        | 108 2              | 1 2              | 10, 43   | 6 89                    | 462 0                  | 5 0                    | 986         |
| GSD 027            | 10.6 145.1         | 1 66.4 27                       | 4 <u>212</u>                                      | 324       | 19                    | 1.64             |                                       | 610           | 529        | 586                   | 448                     | 783               | 22.9                    | 179.                    | 2                | §                                             | 6 6             | 323       | 4 8 27             | 3 1535           | 935 28   | 9 2238                  | 3426 1                 | 6 0                    | 8564        |
| G\$0.029           | 11.3 10.9          | 1 36.4 23                       | 3 34                                              | 70        | 19                    | 0.30             | 23                                    | 337           | 47         | 324                   | 155                     | 61                | 53.3                    | 32.                     | 3 7              |                                               | 7 8             | 156       | 1081 51            | 124              | 413 264  | 1 362                   | 758 20                 | <b>H</b> . D           | 3821        |
| GSD 030            | 12.7 4.5           | 4.6 19                          | 1 9                                               | 64        | 12                    | 1.07             | 5Z                                    | - 264         | 26         | 544                   | 75                      | 40.               | 47.1                    | 18.                     | 9. 7             | 5 9                                           | ଶା କ            | 24        | 507 7              | 3 53             | 59 241   | 9 115                   | B09 1                  | 8 0                    | 3343        |
| GSD 032            | 8.0 19.3           | 2 <u>194.2</u> 3<br>2 24.1 11   | 9' <u>151</u><br>2' 59                            | 92        | 10                    | 0.27             | 45                                    | 263           | 173        | 331                   | 210                     | 199               | 37.1                    | 73,                     | 6 <u>2</u>       | 5. í                                          | 6 <b>6</b>      | 216       | 412! 20            | 6 499<br>2 104   | 197 85   | J 1464<br>1. 467        | 734                    | 14 10                  | 2092        |
| GSU 033            | 9.0 1.3            | 5.1 9                           | 8 14                                              | 86        | _!                    | 0.27             | 21                                    | 198           | 14         | 99                    | 16                      | 21                | 33.0                    | 6,                      | 9 5              | ) <u>B</u>                                    | 8 60            | 52        | 371 5              | 12               | 46 58    | 5 124                   | 776                    | 3 0                    | 1786        |
| GSD-034<br>GSD-035 | 4.8 0.1            | 1 0, <u>9 10</u><br>1 10,9 15   | 14 7 j<br>51 85                                   | 145       | 10:                   | 0.12             |                                       | 257           | 29         | - 14                  | 5                       | 41                | 30.0                    |                         | 4. 4.<br>6. 6    | 5 6                                           | G               | 1 72      | 126 12             | 6 1<br>7 52      | 132:183  | 8 36                    | 963 13<br>963 13       | 7 0                    | 1231        |
| GSN 036            | 1B.4 12.9          | 1 14.4 3E                       | <b>B</b> 36                                       | 97        | 16                    | 0.90             | 47                                    | 520           | 13         | 364                   | 134                     | 83                | 29.8                    | 24.                     | 9 8              | 1 <b>-</b>                                    | 2 7             | 37        | 405 14             | 9 239            | 265 713  | 2: 654                  | 1776 2                 | 5 O                    | 9552        |
| GSD-038            | 13.8 2.6           | 81 11.7 <u>18</u><br>21 20.3 30 | 19 33<br>10 10 10 10 10 10 10 10 10 10 10 10 10 1 | 69<br>84  | 12                    | 0.23             | 19                                    | 291           | 14:<br>10- | 87:                   |                         | Z3                | 40.3                    | 9.                      | Z' 7             | 3: 0                                          | 51 <b></b>      | 62'<br>54 | 356 18             | 9 37<br>1 30     | 161 281  | 3 452                   | 9511 18<br>378: 4      | 2 Di<br>4 B            | 4016        |
| GSD-040            | 12.2 127.7         | 128.3 21                        | 7 291                                             | 140       | 10                    | 1.00             | 50                                    | 537           | 589        | 708                   | 911 1                   | 314               | 18.2                    | 237                     | 6 6              | 1, 5                                          | 5 4             | 592       | 711 91             | 5 1559           | 1566 264 | 6 2203                  | 1711 1                 | 0                      | 6560        |
| GS0-042            | 17.E 0.E           | 1 25.2 i 20                     | 13 <u>61</u>                                      | ം ഓ       | 4                     | 0.15             | 13                                    | 326           | <u>19</u>  |                       | 60                      | 102 <sup>1</sup>  | 11.3                    |                         | 5 7              |                                               | 7 5             | 124       | 415: 48            | 2 11.            | 80       | 6 181                   | 187                    | 1 0                    | 975         |
| GSD 044            | 22,3 6.2           | 30.5 12                         | 1 35                                              | 99        | й.                    | 0.20             | 17                                    | 255           | - 52       | 178                   | ei,                     | 19                | 131.7                   | 24                      | 5, 2             | ····· · · · · · · · · · · · · · · · ·         | 7               | 253       | 869 30             | 139              | 581 283  | 7: 764                  | 2209 7                 | 9 0                    | 5690        |
| GSD-045            | 7.9 13.7           | 151.3 15                        | 1 79                                              | 95        | .14                   | 0.03             | 6                                     | 325           | 91         | 173                   | 145                     | 100               | 42.1                    | 42.                     | 3 5              | <u>,                                     </u> | 6 <u>5</u>      | 1021      | 1949 16            | 109              | 1216 11  | 1 624                   | 745 10                 | 8 0                    | 2561        |
| GSD 046<br>GSD 047 | 13.4 1.6           | 2 9.5 19                        | no: 14<br>16. 21                                  | //:<br>75 | 72                    | 0.31             | 15                                    | 292           | 24<br>8    | 79                    | 22                      | 7                 | 76.4                    |                         | 6 T              | 2; 5                                          | r, 16≉<br>0¦ 71 | 48        | 460 12             | 7 22             | 127 262  | 2 100<br>9 276          | 996 29                 | a 0                    | 3903        |
| G\$0.040           | 3.6 3.5            | t 39.0 s                        | 105                                               | 153       | 11                    | 0.09             | 8                                     | 351           | 39;        | 33                    | 23                      | 32 i              | 31.4                    | 10.0                    | õ 3              | 8 4                                           | 7 5             | 419       | 371 2              | 6 13             | 111 35   | 7 381                   | 553                    | ă ă                    | 1271        |

|                    | ! :                 |                       |                    |                 |               |             | ĩ :                                           |            | 1                     | ·····         |                 |                                       |            | · <b>-</b> ·· · ·                     | ,               |         |                  |                                              |               |
|--------------------|---------------------|-----------------------|--------------------|-----------------|---------------|-------------|-----------------------------------------------|------------|-----------------------|---------------|-----------------|---------------------------------------|------------|---------------------------------------|-----------------|---------|------------------|----------------------------------------------|---------------|
|                    |                     |                       |                    | ، <b></b>       |               | <u></u>     |                                               |            | <u>-</u>              |               |                 | !. <u></u>                            |            | :                                     |                 |         |                  | , +-                                         |               |
|                    | Coord               | nales                 |                    |                 |               |             | ì                                             |            |                       |               |                 | <u>.</u>                              |            |                                       |                 |         | <u> </u>         | ;<br>;;                                      |               |
| <i></i>            | North               | Eust                  | RL                 | THIL            | Total Quart   | Angle of    | True Quarte                                   | Vein Dip   | Dilation              | True Ollation | Velo tex        | Tex code                              | Heat teck  | Footanii                              | Hengingwell     | Fitemp  | f I salinity     | PUMA IN 1                                    |               |
|                    |                     | 19                    | =                  |                 | Thicknee      | Insidente   | Thickness                                     | Angle      | Thickness             | Thickness     |                 |                                       |            | 1                                     |                 | GHQ C   | 45 equiv Mat     | • ••• ••• ••• ••••••••••••••••••••••••       | -             |
| T10075             | 10075.72            | 4990.74               | 203                | 223.3           | · · · · - · · |             | 3.7                                           | - 73       | 1.5                   | 1.3           |                 | 4                                     | - ·        |                                       |                 | 217     | 0,71             | III keo *                                    |               |
| T10112             | 10112.93            | 4998.79               | 192                | 209.0           |               | 1           | 13.6                                          | 75         | 7.1                   | 6.4           | bn-bx           | 1                                     | 4 · · ·    |                                       |                 |         |                  | ······                                       |               |
| T10120             | 10146.5             | 4996.5                | 186                | 217.0           |               | 1           | 25.3                                          | 70         | 17.7                  | 15.9          | bn bx           | ·                                     | ·          | ł                                     | • ••• · ·       | ······- |                  |                                              |               |
| T10175             | 10176.5             | 4993.43               | 185                | 296.7           |               |             | 34.7                                          | 20         | 12.4                  | 11.2          | bn by           | !                                     |            | -                                     |                 |         |                  |                                              |               |
| T10225             | 10225.5             | 4:199.5<br>5004.5     | 171                | 199.4           | ····]····-    | <u>+</u>    | 31.1                                          | /3         | 13.5                  | 12.2          | bn bx           | · -                                   |            |                                       |                 |         |                  | KSA-III SULOC                                |               |
| T18250             | 10239               | 5013.5                | 162                | 178.2           |               |             | 15.8                                          | 70         | 10.3                  | 93            | ch an           | 3                                     | Ļ          |                                       |                 | 209     | 0.71             | hao lii                                      |               |
| T10300             | 10297.5             | 5020                  | 143                | 160 Z           |               | † ·         | 6.1                                           | 70         | 5.1                   | 4.6           | ch-bn           | 3                                     | +          | · · · · · · · · ·                     |                 |         |                  | lii kaç                                      |               |
| T10325             | 10327.1             | 5029.4                | 133                | 145.5           | - · · ·       |             | 24.5                                          | . 61       | 2.6                   | 2.3           | i bi <u>bn</u>  | 2                                     | <u> </u>   |                                       |                 |         | ·<br>· · · · ··· | III kan "                                    |               |
| T 10375            | 10373               | 5034,5                | 124                | 136.5           |               |             | 17.3                                          | 60         | 8.7                   | 7,8           | bilen.          | z                                     |            | i                                     |                 |         | :                | -1-                                          | ····· ··· ··· |
| T10400<br>T10415   | 10354<br>10414.5    | 5042<br>5007.5        | 111                | 104.7           |               |             | 8.4                                           |            | 10.6<br>9.4           |               | bi-si           | 4                                     |            | -                                     |                 |         | •                | ;                                            |               |
| DFD-G09            | 10,209              | 5416                  | 275.7              | 415.9           | 10            | 45          | 7.1                                           | 50         | 64                    | 4.5           | ch-bŋ_          | 3                                     | Ve.        | Ve_                                   | Vs              | .914    | 0, <b>1</b> 9    | ch)-ep                                       |               |
| D\$0-001           | 10416.29            | 3.61.049<br>5360      |                    | 237.9           | B             | 70          | 7.5                                           | 40<br>50   | 4.3<br>7.3            | 4.0<br>6.0    | xi-bii<br>xi-bi |                                       | . Vil.,    | Ve                                    | V4              |         | ·<br>·           | cheep                                        |               |
| DSD-002            | 9800.38             | 5002.5                | 207.3              | 218.0           |               | 45          | <u>, , , , , , , , , , , , , , , , , , , </u> | 75         | 0.0                   | 0,0           |                 | . ş                                   |            | 1                                     |                 |         |                  | dic man til na                               | ic            |
| DSD-004            | 9739.44             | 5074.3                | 66.5               | 67.7            | 6             | 49          |                                               | 55         | i 4.3                 | 2.7           |                 | , 4                                   | i - 1      |                                       | • .<br>•        |         |                  | lilimon                                      | ·             |
| GSO M1             | 10147.1             | 5009.741              | 156.394            | 176.9           | 29            | 69          | 28.6                                          | 61         | 15.0                  | 14.8          | bn              | <b>:</b>                              | Vc         | , Vc                                  | Vc              |         |                  | ill-mon-hai                                  |               |
| GS0 803            | 10144.5             | 5074.183              | 57.501             | 61,5            | 12            | 80          | 11.8                                          | 45         | 4.2                   | ä             | Bn-xl           |                                       | ٧m         | AI                                    | Vin             |         |                  | ill-chi                                      |               |
| GS0 004            | 10200.27            | 5020.825              | 146.256            | 161.9           | 44            | 10          | 41.3<br>54 4                                  |            | 16.9                  | 15.8          | bn<br>bn        | . 1                                   | Ve<br>Ve   | Ve<br>Ve                              | Ve              |         |                  | .01                                          |               |
| GS0 006            | 10099.25            | 5030.263              | 140,979            | 151.4           | _29           | 65          | 76.9                                          | 65         | 1,0                   | 2.7           |                 |                                       |            | ŀ- ••                                 |                 |         |                  | ·"····                                       |               |
| IGS0 007           | 10102.3             | 5043.527              | 115.34             | 182.2<br>136.0  | 6             | 65          | 16.3                                          | 55         | 2.0                   | 1.0           | hnhv            |                                       |            |                                       | Ve              |         |                  |                                              |               |
| G\$0.009           | 10247.92            | 5054.339              | 67.519             | 62.5;           | 16            | 65          | 14.5                                          | 45         | \$7                   | 5.1           | Un bx           | , i.                                  | AI         | Â.                                    | A               |         |                  | <b>†</b>                                     |               |
| GSD 810<br>GSD 811 | 10352.54<br>10296.6 | 5039.31               | 61.225<br>54.419   | 65.8<br>112.2   |               | 55          | 20.7                                          |            | 1, 4.T<br>1, 8.1      | 4.5           | bn ba           | : 1                                   | - Al<br>Va | Al Vc                                 | <u>N</u>        |         |                  | ŗ                                            |               |
| GSD 012            | 10347.62            | 5042.555              | 56.179             | 111.1           | 20            | 70          | <b>18.6</b>                                   | 60         | 6.6                   | 6.2           | bn-xl           | . <u>.</u>                            | Vc         | Vc                                    | Vc              |         |                  |                                              |               |
| GSD 014            | 10348.49            | 5067.634              | 69.373             | 74.5            | 21            |             | 16.4<br>20.7                                  |            | I <u>∠⊥</u><br>1. 9.3 | 9.1           | bn-xl           | 1.1                                   | Ve         | Vs                                    | Vc              | ·· • ·· | 1                | · ··· ·                                      |               |
| GS0 015            | 10395.78            | 5100.869              | 68.34              | 50.2            | 21            | 75          | 27.0<br>33 0                                  | 35         | 5.0                   | 8.7           | bn bx           | <u> </u>                              | ٧s         | ٧s                                    | ¥e!             | 253     | 0.33             | chi ili<br>Ili chi mon an                    |               |
| GS0 017            | 10449.47            | 5117.002              | 49.788             | 25.1            | 23            | 70          | 21,6                                          |            | 5.3                   | 5.0           | <u> </u>        |                                       |            |                                       |                 |         |                  |                                              | ·             |
| GSD-018<br>GSD-019 | 10495.92            | 5160.757              | 38.723             | 29.4            | .34           | 75          | 32.6                                          | . 40<br>40 | 4.7                   | 4.5           |                 |                                       |            | Υr                                    | ·               | 796     | л 59             | ch1cx1III.en                                 |               |
| GSO 020            | 10400.68            | 5152.791              | 26.965             | 16.4            | 21            | 55          | 17.2                                          |            | 4.8                   | 4.0           |                 |                                       |            | · · · · · · · · · · · · · · · · · · · |                 |         |                  |                                              | • • •         |
| GSD 021            | 10445.93            | 5171.015              | 38.053             |                 |               | - 55        | 36,4<br>0,8                                   | 40         | 13.2<br>1 0.7         |               | ×               | *                                     | YC         | Vc                                    | . <b>*</b> _    |         |                  |                                              |               |
| GSD 023            | 10346,75            | 5113.825              | 60.004             | 35.2            | 21            | 65          | 19.0                                          | 40         | 6.0                   | 5.5           | i xi            | 4                                     | Vc         | Vc                                    | Vm              |         | <u>.</u>         |                                              |               |
| GSD-024            | 10:47.9             | 5068.18               | 54.31<br>55.022    | 63.9            |               | 60<br>60    | 9.8<br>213                                    |            | U.3<br>6.0            | 0.2<br>5.2    | bn-bx           |                                       | Ve         | Ve                                    | Vm              |         | 1                |                                              |               |
| GSD 026            | 10296.63            | 5114.587<br>AD48 472  | 26.77              | 11.1            | 14            |             | 13.5                                          | 35         |                       | 4.3           |                 | ,<br>                                 |            |                                       |                 | . 499 - |                  |                                              |               |
| GSD 028            | 10294.23            | 5098.986              | 52.336             | 40.2            |               | 90          | 19.0                                          | 31         | 52                    | 5.2           | an<br>bh-bx     | · · · - (                             | Vc         | Vc                                    | Vm<br>Vs        | 220     |                  | m-cm-gyp                                     |               |
| GSD 029<br>GSD 030 | 10232.56            | 5059.962              | 71,253             | 87.6<br>17.6    | 36            | 85          | 35.9                                          | 45         | 6 <u>3</u><br>75      | 6.3<br>7 7    | ba-bx<br>xi.he  |                                       | V.         | Vs.<br>Vc                             | . АГ            |         |                  | .m                                           |               |
| 650 431            | 10326.45            | 5113.712              | 51.054             | 31.0            |               |             | 21.7                                          | 35         | 7.9                   | 6.6           |                 | · · · · · · · · · · · · · · · · · · · | † <b>*</b> | ·                                     |                 |         | ·                | • <b>•••</b> • • • • • • • • • • • • • • • • |               |
| GSD-032<br>GSD-033 | 102.35.38           | 5080,255              | 56,461<br>55_215   | 55.5            | 25            | - <u>80</u> | 24.6                                          | 40         | 9.2                   | 9.0           | <u>ki</u> pu    | 4                                     | Vc         | Vc                                    | <u>∀c</u>       |         |                  |                                              |               |
| GSD 034            | 10294.25            | 5149.531              | -10.74             | 40.1            |               | 50          | 6.9                                           | ж          | 0.9                   | 0.9           | bn              |                                       | ÷          | j <u>,</u>                            |                 |         | 1                |                                              | <br>          |
| GSD 035<br>GSD 036 | 10326.93            | 5058.104.<br>5059.501 | 69.782)<br>69.599i | 81.5            | 13            | ្រ 85<br>ស  | 15.6                                          | 15<br>1    | 3.2                   | 3.2           | bn-xi<br>bn-ch  |                                       | Vs         | Ve<br>Ve                              | Vc<br>Vc        |         | <u>.</u>         | •                                            |               |
| GSD 038            | 10325.65            | 5037.017              | 104.159            | 120.7           |               | 65          | 19.0                                          | 6          | 2.6                   | 2.3           | al ch           | 3                                     | Ya         | Ve                                    | Υc              |         |                  |                                              |               |
| G\$D-040           | 10273.78            | 5073.75<br>5038.563   | 87.325             | + 96-2<br>107-7 | 35            | 55          | 19.4                                          | 55         | 3.1<br>11.6           | 4.6           | bx-bn           | : 1                                   | Va<br>Vin  | VC                                    | VC<br>Vr        |         |                  | ch14II.*                                     |               |
| G50.042            | 10274.04            | 5023.724              | 115.63             | 136.4           | 12            | 70          | 11.3                                          | 65         | 35                    | 3.3           | - M he          | 2                                     |            |                                       |                 |         | ļ                | ····                                         |               |
| G50 644            | 10348.92            | 5060,595              | 84.715             | 90.3            | 20            | 1           | 20,0                                          | 40         | 5.5                   | 5.6           | bn ch           | 1                                     | Vis        | Yo                                    | Vm              |         | !·               | jii moo cal<br>Ul hal                        |               |
| GSD-845<br>GSD-845 | 10374.67            | 5057.65<br>6090 n28   | 85.832<br>38.973   | 99.2            | 25            | 60          | 21.3                                          | - 40       | 5.2                   | 4.5           | xl-ch           | 3                                     | + Vc       | Va<br>Ve                              | Vc              |         |                  | ab III mar                                   |               |
| GSD-047            | 10374.38            | 5038.994              | 100,450            | 116.7           | 13            | 50          | 12.8                                          | 40<br>51   | 9.7                   |               |                 | ; <b>.</b>                            | 1          | ·                                     | , <sup>рц</sup> |         |                  |                                              |               |
| GSD 048            | 18374.2             | 5101.601              | 65.605             | 47.8            | 21            | 55          | 17.2                                          | 51         | ): J.Ø                | 3.1           |                 |                                       |            | 1                                     |                 |         |                  | T                                            |               |

•.

| Number              | True width             | Au             | Ap                 | Cu Pi            | Z             | n As                 | 86 A            | ulAg Aw       | Au+Ag 8           | b/Sh+As (  | Cu+Pb+Zr          | AwCu A    | u/Pb i      | Aw2n Au      | lAs Auls          | b As/CutPb+2         | n Au/Cu+Pb+z            | n CulCu+Z    | n Cu/Cu+P                  | b Za/Za+Pb            | Ag/Cu Ag      | /Pb Ag           | 2n A             | u Ag                    | ( <b>c</b> a _ 1    | PD Zn                             | A:         | 5b Cu+Pb+Zn             |
|---------------------|------------------------|----------------|--------------------|------------------|---------------|----------------------|-----------------|---------------|-------------------|------------|-------------------|-----------|-------------|--------------|-------------------|----------------------|-------------------------|--------------|----------------------------|-----------------------|---------------|------------------|------------------|-------------------------|---------------------|-----------------------------------|------------|-------------------------|
| GSD 049<br> GSD 050 | 5.4                    | 2,62<br>6.87   | - 15.3<br>- 81.7   | _130<br>         | 28<br>56      | 60 <u>1</u><br>106 1 | 9.              | 0.17          | <u>15</u><br>     | ¦          | 217<br>260        | 20        | 104         | 44 j<br>65 j | 89                |                      | <u>.6'</u>              | 1            | 8 8<br>5 5                 | 2 69<br>7 62          | 118<br>937 1  | 558i<br>232i     | 256<br>768       | 14 83<br>65i 222        | 704<br>BZS          | 150 328<br>527 <b>10</b> 06       | 56<br>73   | D' 1180<br>D: 2457      |
| GSD 451             | 2.9                    | 0.27           | 0.0                | 91               | ĵ <u>j</u> :  | 242 1                |                 |               |                   |            | 346               | 3         | 21          | 1            | 2                 | 47                   | 9                       | 02           | 7 6                        | 95                    |               |                  |                  | 1 0                     | 258                 | 36 692                            | 47         | 0 967                   |
| GSD-053             | 14.3                   | 25.73          | 47.3               | 167              | 45            | 66 6                 |                 | 0.54          | 35                |            | 276               | 151       | 577         | 390          | 331               | - <u>- 26</u>        |                         | 8; ··· - 7   | 2 7                        | 9 60                  | 283.1         | 061              | 716 3            | 5U 213<br>68 875        | 2390                | 637 943                           | 1111       | D 3969                  |
| GSD-054             | 7.2                    | 5,79           | 62.0i              | 18               | 40            | 100 j                |                 | 0.69          |                   |            | 156               | 320       | 143         | <br>57       | 62<br>210         | 59                   | 0 36.<br>B              | <u>6</u> 1   | 5 3°                       | 1 71                  | 3425 1        | 536              | 622              | 42 <u>445</u><br>65 007 | 130                 | 290 716<br>900 962                | 67         | 0 1135                  |
| GSD-056             | _2.6                   | 75.63          | 126.0              | 63 1             | 52            | 234 1                |                 | 9.60          | 38                |            | 445               | 119       | 496         | 374          | 584               | x                    | .4 168                  | <u>i</u> 2   | 1 2                        | 9 61                  | 1989          | 827              | 539 1            | 96 327                  | 165                 | 396 607                           | 39         | 0 1167                  |
| GSD 057<br>GSD 058  | 14.3                   | 5.56.          | 82.8<br>10.1       | 155 1            | 61.<br>17     | 136 A<br>47 25       | G:              | 0.07          | 6<br>47           |            | 45i<br>105        | 36<br>196 | 35<br>506   | 41<br>188    | 129               | 268                  | 5 12.<br>7 80.          | 3 5          | 3 (1<br>9 7                | 9 46                  | 534           | 516<br>580       | 608<br>214       | 79 1183<br>34 34        | 2216 2              | 295 1947<br>67: 181               | 61         | 0 6457                  |
| GSD-069             | 16.5                   | 4.57           | 55.0               | <u></u>          | 36            | 60                   |                 | 0.09          |                   |            | 295               | 46        | 34          | 78           | 52                | 16                   | 9 15.                   | 5 6          | 2 4                        | 2 31                  | 559           | 404              | 915              | 76 910                  | 1629 <sup>1</sup> 2 | 253 995                           | 82         | 0 4877                  |
| GSD-060<br>GSD-061  | 2.0                    | 2.15           | 32.01              | 231              | 83 ·          | 148 17<br>58 3       |                 | 1_09)<br>0.07 | <u>52</u>         |            | - 365<br>411      | 426<br>9  | 800<br>25   | 417          | 370<br>72         |                      | .1 166.                 | 9 4<br>Z 7   | 9 6<br>0 7                 | 5 66<br>4 54          | 395<br>136    | 308              | 387 7<br>328     | 4 63                    | 1 <b>834</b><br>455 | 977* 1974<br>162* 197             | 211<br>6   |                         |
| GSD-962             | 5.4                    | 0,49;          | 3.3                | 172:             | 27            | B6 19                |                 | 0.15          | 13                |            | 200               | 3         | 18          | 6            | 3                 | , <u>6</u>           | 7 1                     | 7 6          | 7 0                        | 6 70                  | 19            | 120              | 30               | 3 10                    | 937                 | 147 469                           | 102        | 0 1553                  |
| GSD-064             | 10.6                   | 4.61           | 15.7               | 203              | 58            | 206 25               | <u></u>         | 0.29          | 23                |            | 467               | 23        | BC          | 22           | 18 1ª             |                      |                         | 9: 5         | 0 7                        | 8 78                  | 77            | 272              | 76               | 49 167                  | 2159;               | 613 2195                          | 269        | D 4967                  |
| GSD-065             | 1.4                    | 0.05           | 1.0                | 31               | 9             | 51 12                |                 | 0.05          | 12                |            | 90                | 2         | 6           | 1            | D                 | 138                  | .9 0.<br>6 10           | 6 3          | 7                          | 8 85<br>c 55          | 23<br>126     | 118<br>390       | 20               | 0 1                     | 43                  | 12 72                             | ,18<br>.3e | 0 127                   |
| GSD-067             | 0.9                    | 42.82          | 13.0               | 23               | 15            | <u></u>              | -               | 3.30          | 77                |            | 'n                | 1056      | 2786        | 1292 1       | 164               | 51                   | 4 598                   | 2 4          | 1 6                        | 0. 68                 | 563           | 645              | 352 3            | 79 115                  | 204                 | 136 294                           | 33.        | D 634                   |
| GSDJ67R             | 10.6                   | 120,92<br>0.34 | 20.2               | . 43             | 58<br>77      | 36 10<br>73 6        | }: <b>⊮</b> ∣.– | 5.98          | 89                | 36         | <u>138</u><br>179 | 2816      | 2081        | 3503 1       | 157 206<br>6:     | 3: <u>77</u><br>34   | 1 692.<br>9 2           | a <u>i</u> s | <u> </u>                   | 2 <u>37</u><br>4 71   | 471           | 348 : :<br>159 i | 565   12<br>Will | 6 215                   | 457                 | 618. 367<br>1931 1740             | 111        | 62 1442<br>n 7977       |
| GSD D69             | 8.6                    | 10.79          | 10.4               | 97               | 33            | 53                   | 5 5             | 1.04          | 51                | 50         | 187               | 112       | 329         | 204          | 197 19            | 7 30                 | .0 59.                  | Z 6          | 5 7                        | 5 6Z                  | 108           | 317              | 196              | 90 69                   | 830                 | 282 456                           | 47         | 47 1568                 |
| GSB-070R            | 14.4                   | 167,85         | 64.0               | 42               | 59<br>96      | 20 1                 |                 | 2.62          | 72                | 45         | 13/               | 3953      | 916<br>1749 | 5783 1       | 644 220           | 4 <u>///</u><br>6 54 | .9: 2001.<br>.4: 1002.  | эы<br>Э.5    | 3 <u>-</u><br>9 <b>3</b>   | 9 27<br>1 23          | 1507          | 413 1<br>667 Z   | 205 25           | 11 408<br>13 956        | 636 1               | 437:435                           | 136        | 57 1971<br>110 2507     |
| GSD-071             | 5.9                    | 16.24          | 13.0               | 107              | 55            | 63 4                 |                 | 1.25          | 56                | 52         | 22                | 152       | 296         | 256          | 428 38            | 8 16                 | 8 72                    | 1 6          | <u> </u>                   | 6 54                  | 12            | 236              | 204              | 96 76                   | 625                 | 324 374                           | 27         | 25 1327                 |
| GSD-072<br>GSD-073  | 14.3                   | 1.57           | 19.0               | 69               | 7             | 53                   |                 | 0.08          | 8                 | 67         | 149               | 207       | 224         | 138J<br>30j  | 430<br>39 2       | 0; 26                | .1: 135.<br>.8 10.      | 5 6          | 5 9<br>9                   | 3 68                  | 213 2         | 714              | 808] 11<br>358]  | 2 21                    | 139368 J<br>! 961   | 8 58                              | 260        | 9 164                   |
| GSD-075             | 12.3                   | 8.71           | 7.3                | 192              | 19<br>49      | 78 1                 | ٩               | 1.20          | - <del>55</del> . | 26         | 280               | 45        | 460         | 112          | 76 22             | B . 40               | 0 <u>30</u>             | 2 7          | 19<br>2 5                  | 1 80                  | 38            | 384<br>064 - 2   | 94 1             | 07 89                   | 2358                | 233 955                           | 142        | 49 3545                 |
| G SD 474            | 25.9                   | 0.64           | 6.0                | 201              | 12            | D4 {                 | [               | 0.14          | 12                | • • •• •   | 367               | 4         | 26          | 6            | 7                 | 33                   | 5 2.                    | 3 6          | n in                       | 6 81                  | 30            | 186              | 45               | 22 155                  | 5107                | 834 3457                          | 317        | 0 \$476                 |
| G SD 079M           | 16.3                   | 192.24         | 165.4<br>97.9      | . 397. 1<br>141. | 37<br>56      | 43 21                |                 | 1.16          | 27                | •          | 576               | 484       | 1401        | 4442         | 918:<br>467       |                      | 2 332.                  | 6 is<br>6 is | 0. 7<br>8 7                | 4 24                  | 416 1         | 206 3            | 621 31           | 43, 2704                | 6498j 2             | 243 708                           | 342        | 0 5448                  |
| GSD 082             | 25,9                   | 4.23           | 9.0                | 99               | 59            | 61 1                 |                 | 0.47          | 32                |            | 200               | 43        | 71          | 103          | 28                | 75                   | J 21                    | 2 7          | 1 6                        | 1 11                  | 91            | 151              | 218 1            | 11 233                  | 2573 1              | 542 1868                          | 369        | 0 5183                  |
| GSD-083<br>GSD-085  | 19.0                   | 12.50<br>56.54 | 21.1<br>77.8       | 131: 1           | 4/<br>65      | 55 20<br>154: 11     | <b>!</b> :      | 0.61          | 42                | •••••      |                   | 433       | 2/6<br>342  | ZJ6<br>368   | 524               |                      | .0 125.                 | 7 4<br>6 4   | 6 4                        | 1 54<br>4 48          | 430<br>596    | 451              | 386<br>506 5     | 95 <u>156</u><br>63 775 | 362<br>1300 1       | 045; 403<br>646 <sup>1</sup> 1931 | 109        | 0 1110                  |
| G 50-086            | 8.9                    | 1.33           | 17.8               | 364 1            | 35            | 31 6                 |                 | 0.07          | 7                 |            | 53                |           | 10          | 43           | 22                | 11                   | 3 2                     | 5 9          | 2 7                        | 3 18                  | 49            | 132              | 583              | 12 156                  | 3229 1              | 196 271                           | 53         | 0 1696                  |
| GSD-007<br>GSD-088  | 12.7                   | 70.62          | 14.4               | 212              | 71            | 93 6<br>153 8        |                 | 1.43          | 59                |            | 436               | 97        | 209         | 135          | 274               | /·                   | 2 47.                   | 4 4<br>3 5   | 8 7                        | 5: 68                 | 68            | 202              | 54 2             | 62; 45<br>62; 183       | 2690                | 2219 609<br>904 1938              | 95,        | D 5532                  |
| GSD-089<br>CSD-090  | · 7,0                  | 1.55           | 4.2                | 165              | 14            | 91 11                | 2               | 0.37          |                   |            | 270               | 9         | 109         | 17           | 15                |                      | 4 5.                    | 7 6          | 5 9                        | 2 BS                  | 25            | 293              | 46               | 11 29                   | 1152                | 99 632<br>346 066                 | 72         | U 1983                  |
| GSD-091             | 15.3                   | 44.19          | 29.7               | 575              | 6J :          | 80 21                | ( AL            | 1.49          | 60                | 15         | 12                | π         | 656         | 553          | 212 122           | ś. 20                | 6 61                    | <u>z 6</u>   | 8 9                        | 0; 54                 | 52            | 441              | 372 6            | 74 453                  | 8770 1              | 027 1219                          | 318        | 55 11025                |
| GSD-092<br>GSD-093  | 5.9                    | 3.85           | 42.0.              | 102 1            | 10.           | 81 6<br>B9 42        | 2               | 1.26          | 8)<br>56)         | +          | - 293             | 38)<br>13 | 35<br>154   | 47<br>26     | 46                | .: 27<br>152         | .3 <u>13</u> .<br>.2 8. | 2 5<br>3 6   | 6 4                        | 8 <u> </u> 43<br>Z 85 | 112)<br>10)   | 383<br>120       | 517<br>20        | 23 246<br>51 36         | 603<br>3794         | 648 480<br>328 1927               | 47         | 0 1730                  |
| GSD 694             | 7.0                    | 4.51           | 10.6               | 211              | 60            | 225 3                | 2               | 0.42          | 30                |            | 497               | 21        | 75          | 20           | 14                |                      | 9 9                     | 1 1          | 6' 7                       | 8 79                  | 50            | 176              | 47               | 32 75                   | 1478                | 424 <b>1</b> 581                  | 233        | 0 3464                  |
| GSD-097T            | 10.7                   | 19.20          | 5.7                |                  | 21            | 73 11                | i               | 1.62          | 65                |            | 201               | 93        | 497         | 140          | 56                |                      | .4                      | 2 6          | 4 9.<br>0 B                | a 92<br>a 78          | 51            | 273              | 77               | 75 41                   | 1214<br>609:        | <u>97 1852</u><br>151 535         | 140        | 0 1495                  |
| GSD-099T            | 9.4                    | 0.22;          | 2.3                | 88               | 1Z            | 103 12               |                 | 0.10          | 9                 | •          | 202               | <u>,</u>  | 19          | <u>Z</u>     | 7                 |                      | 7                       | 1 4          | 6 8                        | 8 90<br>8 90          | 27            | 198              | 23               | 2 27                    | 815                 | 111 959                           | _113       | 0 1690                  |
| GSD 1021            | 3.7                    | 0.24           | 1.7                | 77               | ສ             | 53 10                | 5 5             | 0.14          | 12                | 26         | 155               | э         | 10          | 5            | 2                 | 4100                 | 2 1                     | ة<br>5       | e 1                        | 5 68                  | 22            | 67               | 32               | 1 6                     | 281                 | 92 194                            | 57         | 20 568                  |
| GSD-103<br>GSD-104T | · · · · · · 3.6        | 0.06           | 0.0!               | 46:              | 54 ()<br>49 ( | 125 8                | 9               | 6.07          | <u>-</u>          | 54;<br>291 | 225               | 1         | 1           |              | 1                 | 1 35<br>F 41         | .» 0.                   | 3 2          | 7                          | 6; /0<br>3 66         | 37            | 100              | 51               | ยั แ<br>ว่วจร           | 166                 | 198 455<br>161 705                | 29         | 34 828                  |
| GSD 105             | 9.1                    | B.20           | 1.5                | 129              | 0             | 82 )                 | <u> </u>        | 6.12          | 11                |            | 25                | Z         | 25          | 2            | 3                 | 32                   | 9 0.                    | 9 6          | í <u> </u>                 | 4 92                  | 12            | 211              | 19               | 2 13                    | 1166                | 69 747                            | 65         | 0 1981                  |
| GSD-1061            | 17.9                   | 10.45          | 13.2               | 64               | 31            | 12 10                | 5.              | 0.41          | 29<br>44          | · · ··!·   |                   | 163       | 41;<br>341  | 619          | 108               | 41                   | ,0 2,<br>,3, 97,        | 1            | 3 9                        | 1                     | 10            | 99<br>430 i i    | 12<br>058 1      | 5 13<br>67 236          | 1252<br>1148        | 131; 1155<br>5401 223             | 102        | 0 2499                  |
| GSO-108             | 12.6                   | 17.67          | 10.2               | 66               | 47            | 26 7                 |                 | 1.73          | 63                |            | 147               | 268       | 373         | 524          | 242               | 51                   | 6 124                   | 7 1          | 0 5                        | 8 37                  | 155           | 216              | 361 2            | 26 131                  | 842                 | 606 362                           | 93         | 0 1610                  |
| GSD-11DT            | 3.4                    | 0.33           | 3.3                | 19               | 6             | 30 0<br>06 13        |                 | 0.10          | °                 | •••••      | 112               | 17        |             | 4            | 2                 | 119                  | 10 2.<br>19 2.          | 4<br>9 1     | aj 51<br>B <sup>1</sup> 7( | 0 91                  | 174           | 403              | 38               | 1 11                    | 65                  | 20 23                             | 46         |                         |
| GSD-111T            | 10.6                   | 3.50           | 2.7                | 48 -             | 15<br>B       | 10 . 1               | 5 5             | 1.28          | 56                | 49<br>40   | 73                | 73        | 231         | 347          | 89 7              | 2 69                 | 5 47.<br>3 140          | 9 B          | 3 7                        | 6; 40<br>e: 07        | 57<br>200     | 180 :<br>1903 :  | 270              | 37 29                   | 505                 | 161 107                           | 54         | 51 777                  |
| GSD 113             | 6.3                    | 2.25           | 30.3               | 864; 3           | 00            | 193 7                | 4               | 0.08          | 7                 | 37         | 1357              | 3         | 8           | 12           | 31 5              | 3 5                  | .4 1.                   | 7] 6         | 2 7                        | 4; 39                 | 305           | 101              | 157              | 15 192                  | 5180 1              | 903 1227                          | 47         | 27 8609                 |
| 6SD 114T            | 7.2                    | 6.37           | <u>5.4</u><br>74.9 | 243              | 37<br>51:     | 45 E                 | <u>} 6</u>      | 1.18          | 54                | 45         | 375               | 26<br>53  | 173         | 141          | ,63° 10<br>34 i 6 | 0 <u>23</u>          | .6 19.<br>.0: 23.       | 6 B<br>3 C   | 4' 8<br>11: 6              | 7 55                  | <u>72</u>     | 146              | 119              | 46 39<br>7 104          | 1758                | 268 328                           | 55<br>>11  | 46 2354                 |
| GSD 116             | 19.2                   | 41.98          | 33.1               | 290              | 75            | 240 16               | 4               | 1.27          | 56                | 20         | 515               | 21D       | 561         | 175          | 270 105           | 2                    | 2 81                    | š 1          | 5 7                        | 3 76                  | 185           | 442              | 138 5            | S2 436                  | 2634                | 985, 3160                         | 205        | 52 6779                 |
| GSD-117<br>GSD-118  | 11.0                   | 0.32           | 0.D)<br>7.4!       | 144              | 26<br>48      | 6Z 6<br>96 6         |                 | 0.11          | 10                | 53.<br>48  | 159<br>288        | 6         | 12          | 5            | 5<br>13 1         | 4: 40<br>4: 22       | .0 2.<br>.4 2.          | U 5<br>9 6   | 3 7<br>0 7                 | 4 71<br>5 57          | 52            | 156              | π.               | 4 0<br>7 57             | 785<br>1112         | 209 687<br>368 744                | 70<br>50   | 79 1755<br>46 2224      |
| GSD-119             | 11.3                   | 0.10           | 1.8                | 86<br>100        | 23            | 170 17               | 1               | 0.06          | 5                 | 26         | 279               | 1         |             | 1            |                   | 2 41                 | 9 0.                    | 3 3          |                            | 9 159                 | 20            | 75               | 10               | 1 28                    | 967                 | 264 1916                          | 138        | 49 3145                 |
| GSD-121             | . <b>1</b> .9<br>( 4.9 | 14.70          | 193.0              | 319 i            | 41            | 95 34                | 1 8             | 0.08          | 201<br>7j         | 67         | 555               | 46        | 104         | 155          | 366 18            | 4 7                  | <u>M</u> t.<br>2 26     | 5 7          | 7 6                        | 9 31<br>9 40          | 8;<br>i675, 1 | 31<br>369 21     | 0.12             | 2 <u>1 9</u><br>14 183  | <u>1151</u><br>302  | 291 132<br>133: 90                |            | <u>40</u> 1574<br>8 525 |
| GSD-122T<br>GSD-121 | 4.0                    | 0.03           | 1.0                | 54<br>54         | 25            | 46 7                 |                 | 0.03<br>0.09  | 3                 | :          | 125               | 1         | 1           | 1            | 1                 | 54                   | .1 0.                   | 3 5          | 4 6                        | 9 65                  | 19            | 40               | 22               | 0 4                     | 214                 | 99 184                            | 27         | 0 497                   |
| GSD 124             | <br>                   | 124            | 3.1                | 121              | H.            | 101                  |                 | 0.40          | 28                | ·······    | 236               | 18        | 91          | 12           | 13                | 39                   | 73                      | 3 5          | 4 9                        | 0 88                  |               | 228              | 31               | 4, 10                   | 373                 | 42 312                            | 29         | 0 726                   |
| GSD 125             | {2                     | 4.25           | 0.0                | 179              | 52<br>52      | 79 15<br>53 4        |                 | 6.09          |                   | ;          | 268<br>6110       | 2         | 39*<br>70   | 4)<br>81     | 2                 | 70                   | 1                       | 2 6<br>7 R   | 9 9<br>9 7                 | 6. 90<br>4: 26        | 115           | 377 4            | 443              | 1 0                     | 277                 | 35 334                            | 79         | C 1126                  |
| GSD 127             | 3,9                    | 0.01           | 0.0                | 51               | 13            | 63                   |                 |               |                   | ··         | 126               | 0         | Ē           | 0            | 0,                | 35                   | ž – č                   | 1 4          | 5                          | 0 83                  | - 1945        |                  |                  | a; a                    | 195                 | 50 241                            | 17         | 0 487                   |



| nZ+dT+uX  | 1053           | 447   | 1105     | 494          | 1534 | 187        | 12021   | 2464 | 6530  | 2621  | 2166        | 634   | 3658        | 1922               | 415                                          | 744      | 4576        | 246            | 2803        | 163          | 1321            | 2001       | 340   | 864   | 298        | 540  | 1195 | 917      | 1059       | 149        | 287       | 2104 | 3482                                    | 2961 | 8/E        | 996    | 1806           | 1893     | LIA        | 5220           | 2124       | 8261       | 1890    | 728     | 1819       | CVCF     | 867     | 2359 | 262 |        |    |                    |    |    |                  |           |    |
|-----------|----------------|-------|----------|--------------|------|------------|---------|------|-------|-------|-------------|-------|-------------|--------------------|----------------------------------------------|----------|-------------|----------------|-------------|--------------|-----------------|------------|-------|-------|------------|------|------|----------|------------|------------|-----------|------|-----------------------------------------|------|------------|--------|----------------|----------|------------|----------------|------------|------------|---------|---------|------------|----------|---------|------|-----|--------|----|--------------------|----|----|------------------|-----------|----|
| es<br>S   | -              | -     | -        | -            | •    | ۶          | -       | 0    | -     | -     | - 15        | 46    | •           | 2                  | 2 4                                          | ŧ        | -           | 2              | 10          | -            | 24              | 2 6        | 2     | 82    | 9 0        | •    | 0    | 12       | 2 %        | 3          | -         | -    | 5 6                                     | R    | -          | = F    | -              | æ        |            | •              | 22         | ₽          | -       | -       |            | -        | 0       | ÷    | -   | 1      | 1  |                    |    | +  |                  |           | t  |
| As        | 5              | 5     | 8        | 5            | * 19 | 24         | 5 5     | 82   | 431   | 662   | 7 <b>S</b>  | 2     | 8           | 22                 | 99                                           | 8        | <b>18</b> 6 | E uc           | 5           | -            |                 | 194        | 4     | R     | ₽.         | 2    | 84   | ç        | 2          | 2 =        | 33        | 52   | 211                                     | 136  | 238        | 4      | <del>،</del> ۳ | 64       | - UE       | 210            | 13         | 7 8        | -       | -       | -          | -        | 0       | 112  | 5   | +      | 1  |                    | rt | +  | Ħ                | +         | +  |
| ž         | 9EE            | 199   | 484      | 220          | 825  | 519        | 132     | 767  | 5233  | 986   | 1050        | 233   | 2682        | 969                | 188                                          | 383      | 1732        | 2              | 1040        | 5            | 1415            | 404        | 178   | 438   | 122        | ESE  | 464  | 526      | 478<br>200 | 38         | 140       | 59   | 200<br>1526                             | 126  | 166        | 295    | 624            |          | 443        | 2878           | 915        | E0/E       | 695     | 249     | 1006       | 1030     | 559     | 751  | 8   | Ť      | T  | Π                  |    | +  | +                |           | +  |
| 8         | 8 <del>2</del> | 6     | 62       | <u>5</u>     | 52   | 55         | 57 53   | 39   | 1718  | 6     | 487         | 8     | 593         | <b>4</b><br>4<br>4 | 9                                            | 5        | 529         | ÷              | 109         | 9            | Ē               | 202        | 42    | 92    | 24         | 8 5  | 65   | 5        | B (        | 3 00       | <b>\$</b> | 5    | 213                                     | 160  | 5          | 5 5    | 346            | 248      |            | 319            | 93         | 82         | 89      | 2       | 8 <b>9</b> |          | 8       | 484  | 33  | <br>,  |    |                    | П  | t  | ++               |           | +  |
| 3         | 705            | 169   | 542      | 115          | 612  | 213        | 6       | 1387 | 2580  | 1433  | 629         | 315   | 383         | 806                | 340                                          | 52       | 2219        | 9297           | 1126        | 6            | 2766            | 856<br>856 | 120   | 334   | 346        |      | 672  | 334      | 66         | 8          | ģ         |      |                                         | 1864 | 200        | LIFE   | 837            | 941      | 3441       | 2024           | 112        | 4269       | 1127    | 408     | 502        | 1763     | 213     | 1126 | 125 | ;      | 1  |                    | Π  | +- | Ħ                | +         | +  |
| Ag        | -              | 74    | 8        | 8            | 2    | 13         | - x     | 31   | 114   | -     | 337         | 44    | 23          | <u></u>            | 2 4                                          | 33       | ន           | n ¥            | 264         | 2            | •               | 24         | 2     | 8     | -          |      | P    | 14       | 8 -        | -          | 6         | •    | <del>4</del> 0                          | 45   | ~ '        |        | 108            | 2        | 2 %        | 30             | <b>e</b> , | -          | -       | -       | - ç        | 8 5      | ;=      | 216  | 24  | u/Ag   | 1  |                    | Π  | +  |                  | -         | 1  |
| Ā         | -              | •     | ~        | -            |      | -          | - 5     | 2 ~  | 8     | -     | 260 4       | 8     | 2           | 144                | • •                                          | ₽        | -           | •              | - 198       | 2            | -               | - 52       | -     | 33    | -          | -    | -    | 2        | 2          | -          | 2         | -    | 2-                                      | 2    | e          | ri) 47 | 143            | 5        |            | , <del>.</del> | - '        | ~ ~        | -       | -       | - :        | = ~      |         | 164  | ₽   | 0.77 A | t  | T                  | Π  | 1  | +                |           | +  |
| uZ 6      | 1              | EÆ    | \$       | 346          | 2    | 25         | V       | 38   | 320   |       | 321         | 6     | 6           | <u>ب</u>           | 98                                           | 8        | 5           | <del>2</del> 9 | 254         | 22           | -               | 2 8        | 8     | 92    | -          | 7 2  | 21   | 2        | <u>6</u>   | t          | 140       | -    | 2                                       | 48   | R          | E 87   | 174            | <u>5</u> | 25         | 2              | =          | T          | Π       | ę       | 36         | 89       | 2       | 453  |     | Ì      | T  |                    |    | Ť  | Ħ                | +         | T  |
| ₽ d¶/g    | T              | 643   | 278      | 482          | 28   | 232        | 36.8    | 38   | 416   | ġ,    | <b>1</b> 69 | 517   | 9           | 247                | 202                                          | 193      | 99          | 261            | 414         | 158          | 150             | 8          | 127   | 434   | R C        | 8 9  | 164  | 250      | <u>8</u>   | 5          | 483       |      | 55                                      | 282  | 5 <u>5</u> | 154    | 313            | 882      | 3 6        |                | 185        |            |         | 48      | 757        | 146      | 1       | 402  |     | +      | +- |                    |    | 1  | TT               | +         | ╈  |
| JCu A     | 1              | 441   | \$       | 664          | E    | 8          | P       | 5    | 211   | 77    | 535         | 141   | 5           | <u>1</u>           | 2 2                                          | Ξ        | 2           | 2              | 234         | <b>\$</b>    | -               |            | 4     | 120   | 2 2        | 4    | 4    | 4        | 5          | -          | 181       |      | ß                                       | 24   | 8          | 144    |                | 2        | 2          | -              | 6          |            |         | -       | 40         | 2        | 8       | 294  |     | -      | +- | 1                  |    | -  |                  |           | +- |
| +Pb Ag    | 5 96           | 2     | 8        | 8            | 92   | 8          | 2 8     | 3    | 25    | 8×    | 88          | £     | 82          | 26                 | 2 6                                          | 74       | 2           | 2 3            | 88          | 58           | 2               | 20         | 5     | 83    | <b>R</b> 0 | 3 99 | 68   | 8        | 58         | 38         | 78        | 8    | 2 28                                    | 8    | 8          | 85     | 64             | 74       | 2 8        | 6              | <b>7</b> 6 | 88         | 91      | 2       | B 5        | 2        | 86      | 59   |     |        | -  |                    | +  |    |                  |           | +  |
| ZhZn      |                |       |          |              |      |            |         |      |       |       |             |       |             |                    |                                              |          | _           |                |             |              |                 |            |       |       |            |      |      |          |            |            |           |      |                                         |      |            |        |                |          |            |                |            |            |         |         |            |          |         |      |     |        | -  |                    |    |    |                  |           |    |
| /Cu+Pb    |                | 8     | 8        | 4            | 86   | 62         | 8 5     | 82   | 8     | 88    | 295         | 62    | 8           | 88                 | 5                                            | 8        | 8           | 8 8            | 33          | 82           | 8               | <b>P</b>   | 74    | 78    | 8:8        | 19   | 92   | 8        | 28         | 8          | 73        | 8    | 268                                     | 92   | 8          | 26     | 2              | 2        | 28         | 88             | 88         | 83         | 94      | 8       | 8 7        | 5        | 69      | R    |     | Ì      |    |                    |    |    |                  |           |    |
| +Zn Cu    | h 99           | 46    | 8        | 85           | 34   | 62         | 2 5     | 3    | 2     | 8     | 31          | 25    | 5           | 88                 | R (7                                         | 37       | 3           | 83             | 22          | 88           | 99              | 5          | 4     | 43    | 8 3        | 8    | 59   | 6        | 8 8        | 20         | 43        | 8    | ₹ 8                                     | 29   | 8          | 3      | 15             | 5        | 47         | 41             | <u>بع</u>  | 8 5        | 62      | 3       | 4 8        | 8 4      | 87      | 5    |     | +      | +  | $\left  \right $   | +  | +  |                  | -         | +  |
| Curcu     |                |       |          |              |      |            |         |      |       |       |             |       |             |                    |                                              |          | _           |                |             |              | _               | _          |       |       |            |      |      |          | ,<br>,     |            |           |      | !                                       |      |            |        |                |          |            |                |            |            |         |         |            |          |         |      |     |        |    |                    |    |    |                  |           |    |
| uZ+qd+    | 32             | 17.4  | 2        | Ę            | 22   | 1.1        |         | 22   | 6.9   | 5.0   | 120.0       | 49.9  | <b>9</b> .5 | 74.8               | 4.01                                         | 26.2     | 5           | 13.0           | 38.5        | 10.2         | 0.3             | 3          | 21.8  | 37.6  | 56         | E    | Ξ    | -        | 87         | 5          | 8         | 1.6  | 20                                      | 1.1  | 8.4        | 110.7  | 79.2           | 20.2     | - 6        | 0.2            | 0.2        | 22         | 0.2     | 2       | 56         | 18       | 9.0     | 42   |     |        |    |                    |    |    |                  |           | ĺ  |
| AurCut    |                |       |          | 1            |      |            |         |      |       |       |             |       |             |                    |                                              |          |             |                |             |              |                 |            |       |       |            |      |      |          |            |            |           |      |                                         |      |            |        |                |          |            |                | 1          |            |         |         |            |          |         |      |     | 1      |    |                    |    |    |                  | ļ         |    |
| n2+dq     | 23.3           | 34.5  | 56.8     | 9.8          | 22.7 | 30.0       | 1.8.1   | 33.3 | 0.99  | 114.0 | 86.7        | 113.4 | 18.8        | 13.1               | 102.2                                        | 133.3    | 40.6        | 17.1           | 26.6        | 5.0          | 46.6            | 101.7      | 120.0 | 91.7  | 26.37      | 8.06 | 70.7 | 58.2     | 5.5        | 75.6       | 110.4     | 29.7 | 60.6<br>60.6                            | 46.0 | 629.2      | 32.3   | 44.6           | 25.9     | 6 BE       | 40.2           | 23.0       | 11.9       |         |         | 1          |          |         | 3    |     |        | Τ  |                    |    |    |                  |           | T  |
| As/Cu+    |                |       |          |              |      |            |         |      |       |       |             |       |             |                    |                                              |          | 1           | Ì              |             |              |                 |            |       |       | 1          |      |      |          |            |            |           | l    |                                         |      |            |        |                |          |            |                |            |            |         |         |            |          |         |      |     | ļ      |    |                    |    |    |                  |           |    |
| Au/Sb     |                |       |          |              |      | 13         | +       |      |       |       | 511         | 8     |             | 5                  | 38                                           | ĝ        | 1           | 7              | 105         |              | 5               | 202        | 33    | 15    | - 5        | -    |      | 2        | 14L        | -          |           |      | 2                                       | S    | T          | Ş      |                | 401      | Ť          |                | ~          | 5 50       |         | 1       | 1          | Ť        |         | 230  | 1   | Ì      | 1  |                    | -  | T  |                  | T         |    |
| ul'As /   | -              | 5     | -        | Ē            | P P  | 90         | -       |      | 9     | -     | 124         | 44    | m           | 572                | 2                                            | 8        | -           |                | 145         | 203          |                 | - 8        | 8     | 4     | -          | •    | -    | 6        | 4          | -          | ~         | -    | 2                                       | 5    | -          | 343    | 178            | 22       | 20         | -              |            |            |         | +       | Ì          | 1-       | 1       | 156  | 1   | +      | T  |                    |    | +  | T                |           | t  |
| A nZu     | -              | 8     | 4        | <u>ہ</u>     | 4    | -          | en re   | 9 00 | 92    | - 3   | 248         | 136   | -           | 241                | 2                                            | 5        | -           | 5              | <b>1</b> 04 | 8            | -               | 18         | 42    | 2     | 2          | 5 -  | e    | <b>m</b> | 2.4        | -          | 1         | 5    | 3-                                      | 23   | ₽.         | 254    | 229            | <u>8</u> | 2          | . 0            |            | -          | -       | 4       | <b>.</b>   | 7        | -       | 364  | -   |        |    |                    |    | +  | $\mathbf{f}$     | $\dagger$ | T  |
| Pb A      | 2              | 66    | 8        | 8-           | 49   | <b>ب</b> ع | - 188   | 8    | 8.    | 4 6   | 534         | 369   | m :         | 4<br>2<br>2        | 351                                          | 148      | -           | 38             | 169         | 107          | <del>00</del> 4 | 216        | 176   | 351   | 2          | 2 -  | 21   | 8        |            | -          | 8         | 2    | 8 4                                     | 132  | 273        | 264    | 414            | 532      | Ę          | <u>.</u>       | ۍ د        | 3 m        | ~       | 4       | 7          | 50       | s       | 225  | ┥   | +      | ╈  | -                  |    |    | +                | +         | +- |
| Cu A      | -              | 46    | 4        | 8 <b>9</b> c | . 9  |            | 2 2     | ~    | 2     | - :   | 413         | 9     | 5           | 158                | 31                                           | 58       | -           | 2 -            | 96          | 53           |                 | 74         | 62    | 26    | -<br>-     | - 1  | 2    | 5        | ę -        | .0         | 8         | ~ 9  |                                         | Ŧ    | 9          | 163    | 171            | 141      | 20         |                | -          |            | •       | ~       | -          |          | 2       | 210  |     |        | +  | -                  | -  | +  | +-+              | +         | ╞  |
| Zn Au     | 815            | 23    | 82       | 99           | 94   | 99         | 2 2     | 19   | 13    | 66    | 19          | 81    | 62          | 24                 | 92                                           | 8        | 8           | 52             | 46          | 66           | 23              | 69         | 95    | 8     | 200        | 02   | 22   | 10       | 5          | 212        | 27        | 5    | 7 5                                     | 8    | 62         | 62     | 3              | 86       | 36         | 68             | 2.5        | 1 80       | 2       | ₽ 9     | 87         | 58       | 6       | 19   |     | +      | +  |                    |    |    |                  | +         | +  |
| Cut+Pb+   | ~~~~           | -     | -        | ~            |      | 2          |         |      | e     |       |             |       | ~           | 2                  |                                              | -        | 2           |                |             | -            |                 |            |       | -     |            |      | -    |          |            | -          | •         |      | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | e    | ſ          |        | 2              | 2        | 10         | , <del>-</del> | ~ -        | - 47       | 2       | ~       | 4 -        |          |         | ~    |     |        |    |                    |    |    |                  |           |    |
| A+d8/d    |                |       |          |              |      | 6          |         |      |       |       | 2           | Ĩ     |             | 4 6                |                                              | -        | ,           | -              | 2           |              |                 |            | , en  | 2     |            | 2    |      | -        | N -        |            |           | 1    |                                         | 2    |            | 8      |                | 4        |            |                |            |            |         |         |            |          |         | 'n   |     |        |    |                    |    |    |                  |           |    |
| +Ag S     | +              | 6     | -        | ~            | 64   | ę          | - 12    | 5    | ~     | BC.   | 3           | 4     | ~ {         | 87                 |                                              | 43       | -           | 7              | 52          | 48           | •               | 46 0       | 85    | 45    | - 5        | 2 17 | 12   | Ŧ        | 20         | •          | Ŧ         | ÷    | ž                                       | 32   | 8          | • 23   | 25             | 65       | • =        | -              | s          | $\dagger$  |         | 8       | 8          | 2 00     | 1       | 8    |     | +      |    |                    | -  | +- | $\left  \right $ | +         | -  |
| Au/Au     |                |       |          |              |      |            |         |      |       |       |             |       |             |                    |                                              |          |             |                |             |              |                 |            |       |       |            | -    |      |          |            |            |           |      |                                         |      |            |        |                |          |            |                | - marine - |            |         |         |            |          |         |      |     |        |    |                    |    |    |                  |           |    |
| Au/Ag     |                | 0.10  | 8.8      | 5            | 1.75 | 0.11       | 1.57    | 0.12 | 0.08  | 0.10  | 11.0        | 0.71  | 0.08        | 66.1               | 38                                           | 0.77     | 0.03        | 5C"N           | 0.41        | 0.68         |                 | 0.85       | 1.39  | 1.81  | 1.0        | 2070 | 0.13 | 0.12     | 500        | 2          | 0.12      | 1    | 14                                      | 0.47 | 0.49       | G.U    | 1.32           | 1.86     | 50         |                | 50.0       |            |         | 1.29    | 0.24       | 0.09     |         | 0.71 |     | -      |    |                    |    |    |                  |           |    |
| 48        | T              |       | 1        |              |      | 4          | 1       |      |       | t     | 4           | 9     | 1           | -                  | <u>,                                    </u> | <b>e</b> | 1           | -              | 2           |              | ~               | - 6        | 9     | 4     |            | -    |      | -        |            | 1          |           | 1    | 4                                       | 4    |            | 13     |                | 2        |            |                | ~ 7        | +-         |         |         | 1          |          |         | ŝ    |     | -      |    |                    |    | 1  |                  | +         | t  |
| Ås,       | <b>.</b> 9     | 4     | ÷٩       | <del>ب</del> | 2 8  | 8          | 8 %     | 5    | 2     | 8     | •           | 6     | ÷.          | -                  | 2                                            | 17       | •           | - 4            | 4 9         | -            | 5               | •          | ÷     | ÷     | 0          | 7 5  | 6    | 9        | <u>م</u> د | 1 <b>5</b> | 7         | =    | • <del>(</del>                          | 14   | <b>\$</b>  | ~      | Ŧ              | œ :      | × 6        |                | 5,6        | <b>-</b> 6 |         | -+      |            | 1        |         | 5    | 1   | 1      |    |                    |    | +- |                  |           |    |
| 5         | 8              | 5     | <u>ت</u> | 114          | 441  | 176        | 22      | 113  | 10    | 28    | 2 68        | 30    | 115         | R                  | 87                                           | 67       | =           | 20             | 33          | Ŧ            | 106             | 19         | 49    | 8     | 5          | 9    | 47   | 63       | 8 Ę        | 69         | 23        | 3    | 113                                     | 8    | Ř          |        | 87             | Ē        | 145        | 104            | 83         | 228        | Ē       | 2       | <u>8</u> × | 121      | 28      | 88   | -   | +      |    |                    | +  | 3  | ┢╌┼              | +         | t  |
| ۲<br>م    |                | 22    | е (      | 84           | 2 28 | 19         | 1       | 46   | 83    | £ 8   | 8 9         | ÷     | 126         | 49                 | 8                                            | 23       | 28          | p \$           | 2 22        | <del>6</del> | 7               | 26         | 12    | е,    | - 2        | 3 12 | 9    | 9        | <u> </u>   | 4          | ₽         | -    | q ¦₽                                    | 16   | 2 2        | 28     | 48             | R        | 5 8        | 5              | <u>, 5</u> | 2 @        | ₽       | 21      | 4          | 42       | \$      | 21   | -   | ;      |    |                    | -  | +- |                  |           | ╞  |
| a.        | 8 8            | 47    | 5        | 28           | 11   | 2          | 2 5     | 50   | 8     | 60 10 | 2           | 40    | 83          |                    | 6                                            | 40       | 66          | 76             | 565         | 69           | 202             | 5          | R     | 46    | 76         | 88   | 68   | 88       | 5 2        | 66         | 47        | 101  | 62                                      | 68   | 42         | 2 6    | 112            | 148      | 2 12       | 12             | = 1        | 1 2        | 62      | 22      | 8 5        | 9        | 22      | 24   |     |        |    | $\left  - \right $ |    | +  |                  | -         | +- |
| ũ<br>,    |                | 5     | 2        | 5, U         | 20   | 5          | 9       | 12 2 | 2     | 2 9   |             | 9     | 0.0         |                    |                                              | 7        | 9.9         |                | . 8.        | 0            | 0.0             | 9          | 5     | 5     | 3.5        | 20   | 0.   | 9        |            | 22         | 9.6       | 2    | 29                                      | 9    | 4          | 10     | -              |          | -          |                | -          | 29         |         |         | 90         | 1        | 0       | E    | _   | +      | -  |                    | _  | -  |                  |           | -  |
| A,        |                | 14 20 | 35       | 5 F          | 5    | 99         |         | 1    | 3     | 20    | 9 27        | 2     | 6           | 1<br>2<br>2        |                                              | 9        |             | 200            | 22          | 3            | 89              | 9          | 16    | 5     | 5 7        | 5    | E    | 61       |            | 1 0        | 12 6      | 5    | .9                                      | 4    | 9          | 4      | 15             | <u>ب</u> | 38         |                | 50         | 9          | 1       | 5       |            | 2        | 9       | 1 22 | -   |        | -  | Ц                  |    |    |                  | _         | -  |
| H Au      | 0.0            | 6 2.  | 0        | 1 2.1        |      | 0.0        | 10.1    | 8    | 9 2.1 |       | 1 21        | 9 4.1 | 7 0.        | 9 16.              | 2.6                                          | 7 3.4    | 2           | 20             | 2 5.6       | 8 2.1        | 1.0             | 5.6        | 6 2.6 | 3 4.4 | 200        | 0.0  | 9    | 8        |            | 0.0        | 3 1.6     | 0.0  | 0.0                                     | 9 2. | 10         | 9.9    | 2 19.5         | 3 20.    |            | 0.0            | 10         |            | 0.0     |         |            | 5.0      | 0.0     | 5    | -   | 1      |    |                    |    |    |                  |           |    |
| True widt | 3.6            | 31    | 9        |              | ÷    | Ë          |         | ŝ    | 20.   | 13.   | 12.         | 1     | 4           | .8                 | 2.                                           | -9       | 22.         | 781            | 19.1        | 1.0          | 13.             | 11.5       | 3.6   | 2     |            | 1    | 9.6  | 8.       |            | 10         | 2.        | 5    | 13.6                                    | 6    | 4          | 0.6    | 7.7            | 9        |            | 27.6           | ę          | 16.2       | 1.7     |         | 36.6       | 15.2     | .6      | 1.6  | -   |        |    |                    |    |    |                  |           |    |
| mber      | 129            | 130   | -132     | 133          | -135 | -136       | 138     | 139  | 140   | 141   | 14          | -145  | -146        | 148                | 23                                           | 153      | -154        | -135           | 150         | -161         | 163             | 199        | -168  | -170  | 5.6        | 12   | -174 | -176     | 21         | 8          | -181      | -182 | <u>192</u>                              | 187  | -189       | 193    | 1951           | 196      | 2001       | 208            | 503        | 511        | 1010001 | 1020001 | 104000     | 1065001  | 1065002 | age  |     |        |    |                    |    |    |                  |           |    |
| ž         | S              | GSD   | SS       | SS           | GSD  | GSD        | CSD CSD | SS   | GSD   | 30    | GSD         | GSD   | GSD         | S                  | CS S                                         | GSD      | SS          | 300            | GSD         | GSD          | 6SI<br>C        | CSD SD     | GSD   | GSD   | 30         | CSD  | GSD  | 6SD      | 30         | SS         | GSD       | 6SD  | CSD CSD                                 | GSD  | 6SD        | SS     | GSD            | SS       | CSD<br>CSD | SS             | 88         | SS         | GSD     | 0S9     |            | CSD<br>0 | GSD     | Aver |     |        |    |                    |    |    |                  |           |    |

|                    |                      |           |          |          |          |          |          |            | 4        |          |          | T          | -        |          |          | ,        |           |            |          |           |          |                | T       | T        |         |               |                      |           |          |          |          |          |          |               | T              |          |            |            |            | T               |          |          |          |           | -                 |             |                 |       |   |             | T    |   |   |   |
|--------------------|----------------------|-----------|----------|----------|----------|----------|----------|------------|----------|----------|----------|------------|----------|----------|----------|----------|-----------|------------|----------|-----------|----------|----------------|---------|----------|---------|---------------|----------------------|-----------|----------|----------|----------|----------|----------|---------------|----------------|----------|------------|------------|------------|-----------------|----------|----------|----------|-----------|-------------------|-------------|-----------------|-------|---|-------------|------|---|---|---|
| PIMA alt           | non-ill<br>I.mon.cal | ID-HOII-H |          |          | -mon-cal | -ch      | da-uom-u | hl-mon-ill |          |          | nom-1    | _          | l-ch     |          |          | hi-mon   |           | ll-mon-chi |          | da-uom-II |          | non-ep-chl-III | nom-    | nom-l    |         | hl-ep-ank-act | l-chl                | Il-mon-ep | nom-I    |          | p-act    |          | II-chi   | ll-mon-chi-ep | II-chi mor hal | Il-chi   | ll-chl-mon | II-chl-mon | chi-mgclay |                 | te-lt    | chi-ep   | the p    | 7         | hi<br>nus.chi.cal | non-chl-dic | ap-chi          |       |   |             |      |   |   |   |
| salinity           |                      |           |          |          | 0.71     | -        |          |            |          |          | -        |            |          |          |          |          |           |            |          |           |          | -              |         | 0.53     |         |               | 0.71                 | 0.53      | 0.35     |          |          | -        |          | 0.35          | 0.71           |          |            |            |            | 0.71            | 0.71     | 0.71     | 0.10     | 0.53      |                   |             | 0.53            | -     |   |             |      | - |   |   |
| temp FI            | 1                    | 1         |          |          | 208      |          |          |            |          |          | -        | +-         |          | -        |          | +        |           |            |          | -         |          |                |         | 248      |         |               | 224                  | 242       | 242      | -        |          | -        | -        | 265           | 862            |          |            |            |            | 235             | 259      | 239      | 643      | 757       | -                 | -           | 250             |       |   |             |      | t |   |   |
| Ingwall FI         | +                    | +         |          |          | ¥.       | 8        | +        | A          |          | -        | Ę        |            | e)       |          |          |          | E         | At         |          | 2         | +        | N              | R       | Ę        |         | ∧s            | Ns.                  | u)        | A        | Ve       |          |          | Ę        | ٨s            | kan<br>Wa      |          |            | -          |            | Vs.             | Vs.      | Vc.      | SA<br>SA | رد<br>رد  | Vs                | Vs          | A               |       |   |             | -    |   | - |   |
| II Hang            | +                    | -         | _        |          |          | -        | _        |            |          | _        | _        | -          |          | -        |          | _        | -         |            |          |           | _        |                | _       | -        |         | _             | -                    | -         | -        | -        |          | -        |          |               |                |          |            | -          |            | -               |          |          |          | -         |                   |             |                 |       | - |             | _    | + |   |   |
| k Footwe           |                      | -         | -        |          | Ę        | 8N<br>N  |          | Vs         |          | -        | ž        |            | Š        |          |          |          | S         | ۸          | 5        | Š         |          | A              | ¥       | ۸s<br>۷  |         | ş             | Ns.                  | μŊ        | \$∧<br>S | ٩٨       |          |          | 5        | SV            | \$ %           | 2        |            | -          |            | Vs              | ş        | 2        | 55       | Š         | s s               | s s         | \$ <sup>N</sup> | _     | - |             | _    |   |   |   |
| Host roc           |                      |           |          |          | a        | S,       |          | Vs         |          |          | ×8       |            | Š        |          |          |          | 5         | Vs.        |          | Ň         |          | A              | Ę       | s>       |         | Š             | Š                    | m>        | AI       | ×        |          |          | ¥        | A             | S N            |          |            |            |            | Å               | SN .     | \$       | \$       | ÿ         | SN SN             | Ns.         | A               |       |   |             |      |   |   |   |
| Tex code           |                      |           |          |          | 2        | 4        | 4        | 4          |          |          | 4        |            | 4        |          |          | -        | 4         | 2          |          | 4         |          | 4              | 2       | 4        |         | ₹.            | 2                    | 4         | 4        | P        | 4        | -        | 4        | 4             | •              |          |            |            |            | 4               | 4        | 4        | •        | 4         | 4                 | •           | 4               |       |   |             |      |   |   |   |
| Veln tex           |                      |           |          |          | 9-1×     | ×        | ×        | xl.bn      |          |          | xl-bx    |            | xl-bx    |          |          |          | ×         | bl-xl      |          | ×         |          | ×              | Q X     | xl-bn    |         | ×             | bl.xl                | xl-bx     | ×        | when     | x        |          |          | ×             | uq-ix          |          |            |            |            | xt-bx           | ×        | ×        | Pix Pi   | xl-bn     | nd-ix             | pu-xi       | xl-bn           |       |   | 1           |      |   |   |   |
| DILation           | 1.5                  | 49        | 3.7      | 5.4      | 2.0      | 9        | 20       | 6.4        | 3.5      | 4.9      | 2.3      | 0.5<br>6.2 | 11.9     | 3.7      | 3.4      | 46       | 4.0       | 5.7        | 2.7      | 115       | -        | 0.2            | 4.0     | 2        | 2.6     | <b>2</b> 5    | 40                   | 61        | 5        | 4.9      | 0.1      | 5.3      | 4.0      | 22            | 6.9            | 19       | 10.5       | 12         | 2.4        | 92              | 5.0      | 8        | 36       | 1.4       | 2.9               | 52          | 5.1             | 5.2   |   |             |      |   |   |   |
| on Icu             | 1.8                  | 22        | 3.7      | 5.4      | 2.6      | 0.7      | 80       | 7.9        | 3.5      | 1.7      | 3.0      |            | 12.1     | 3.9      | 3.4      | 4.7      | 1.5       | 8.0        | 2.8      | 116       | 11       | 0.2            | 4.7     | 1.5      | 3.0     | 2.4           | 46                   | 23        | 2.2      | 5.1      | 0.1      | 6.1      | 42       | 2.4           | 7.3            | 22       | 13.7       | 61         | 2.4        | 3.0             | 55       | 0.8      | 9.6      | 1.4       |                   | 5.5         | 5.3             | 5.9   |   |             | -    |   |   |   |
| Dilatio            |                      |           |          |          | 5        | 23       |          |            | 8        | 00       | 92 9     | 3 4        | 2 12     | 22       | 2        | 2        | 0 10      | 8          | 2        | 8 9       | 22       | 9              | 8 9     | 2 9      | 9       | 5             | 2 52                 | 12        | 8        | 8 9      | 192      | 22       | 0 50     | S             | = x            | 2        | 12         | 2 2        | 8          | 8 5             | 8        | 2        | 2 5      | 52        | 2 5               | 200         | 00              | 8     | - |             |      |   | - |   |
|                    |                      |           |          |          |          |          |          |            |          |          |          |            |          |          |          |          |           |            |          |           |          |                |         |          |         |               |                      |           |          |          |          |          |          |               |                |          |            |            |            |                 |          |          |          |           |                   |             |                 | 41    |   |             |      |   |   |   |
| ne Mualt           | 29.4                 | 516       | 9.6      | 30.5     | 13.0     | 11.8     | 10.4     | 34.4       | 9,6      | 18.6     | 10.0     | 1.1        | 20.7     | 14.1     | 15.6     | 10.1     | 14.1      | 31.        | 12.6     | 10        | 4        | 0.0            | 19.1    | E.C.     | 9.9     | 13.0          | 7.5                  | 3.6       | 12.1     | é 2      | 13       | 512      | 1        | 1             | 16.0           | 9.6      | 29.        | 15.        | 71<br>71   | r67             | 10.01    | Ē        | 14 0     | 51        | 15.               | 8           | .B.             | 17.   |   |             |      |   |   |   |
| ligite or          | 8 5                  |           | 8        | 8        | 8        | 3        | 8 5      | 55         | 8        | 40       | 83       | 8 2        | 8        | 2        | 8        | 8        | 3 13      | 45         | 75       | 2 2       | 88       | 59             | 9       | 8        | 60      | 8             | 6 9                  | 55        | 45       | 26       | 2        | 8        | 22       | 2             | 2 5            | 22       | 50         | <u>9</u>   | <b>S</b> 8 | 65              | 53       | 5        | 8        | 6         | 5 5               | 32          | 52              | 68.4  |   | ·<br>·      |      |   | - |   |
| MUALTZ A           | 34                   | - 02      | 300      | 31       | 17       | 13       | 4        | 42         | 6        | 29       | <b>t</b> | 9 ţ        | 31       | 5        | 16       | E I      | 2         | 44         | 13       | 5         | 5 50     | 0              | 2       | 4        | 8       | 5             | 2 0                  | 12        | 11       | 17       |          | 32       | 2 m      | 8             | 11             | 200      | 88         | 17         | 7          | æ               | 5        | 4        | - 5      | 2         | - t               | 6           | 6               | 19.4  | + | -           | +    |   | - |   |
| Total              |                      |           |          |          | -        | ~        | -        |            |          |          | -        |            |          |          |          |          |           | ļ.         |          | -         | -        |                |         |          |         |               |                      |           |          | -        |          |          |          |               | ata k          |          |            |            | A 114      |                 |          |          |          |           |                   |             |                 | 1 v 1 |   |             | <br> | - |   |   |
| a care a service a | E                    | P         | 1        | 9.9      | 11       |          | 5        | 2          | Ŀ        | .4       | 8.0      | P.0        | 5.4      | 8        | 6.9      | 8.9      | P 1       | 8.6        | 1.4      | 7         | 2        | 22             |         | 8.4      |         | 5             | 27                   | 22        | 5.1      |          |          | 8.       | 9.6      | ·9.1          | 5.1            | 2.4      | 9.1        | 5.6        | 2.6        | 1.7             | 8.3      | 2.6      | 21       | 1.6       | 11                | 2.0         | 2.6             |       |   |             |      | _ |   |   |
| F                  | 11. 11               |           | 28<br>28 | 2        | 8 2      | 1        | 4 6      | 5          | -12      | 96 77    | 150 -150 | 8 1        | 1 1      | 8        | 32 52    | 98<br>1  | 19 19     | 14 23      | 99       | 5         |          | 31 .95         |         | 14       | 5       | 19            | 9                    | 325       | 11 2     | 14 2     | EI- E/   | 19       | 90       | 13 .15        | 53             | 1.       | 13         | 1          | 19         |                 | -        | 32       | 5 DE     | 32 20     | 17 21             | 38          | 11- 12          |       |   | <br>   <br> |      |   |   |   |
| ᆋ                  | 3 64.23              | 1 407     | 1 0.5    | 1 36.01  | 2.6'     | 7 32.04  | 15-UT- 1 | -18        | 2 10.4   | 5 75.5   | 1 91.3   | 20.61      | 1 25.0   | 1.7      | 1 48.95  | 9.2      | a 11 208/ | 7 .146.70  | 3 25.9   | 1912      | 9.8      | 3 -60.946      | 12.7    | 7 -72.41 | 5 9.3   | 6 -103.8      | 1.19 Q               | 3 234.8   | 8 5.     | 3 95.0   | 9 82.0   | 32.7     | 193.1    | 6 80.5        | 2 45.8         | 1, 13.6  | 9 136.     | 59.762     | 6. 8.3     | 17.96.71. 17.36 | 4 4.1    | E9 E     | 120-3    | 8 -106.98 | 122.1             | 5 45.8      | 7 59.70         |       |   |             |      |   |   |   |
| East               | 5058.42              | 215       | 5137.56  | 5134.07  | 5142.04  | 5062.32  | 00'00LC  | 5158.08    | 5131.13  | 5069.    | 5233.93  | 100012     | 5151.89  | 5163.46  | 5077.74  | 5136.57  | 5158 20   | 5295.91    | 5119.06  | 5111.38   | 5137.93  | 517            | 5172.33 | 5240.98  | 5142.75 | 5281.84       | 20.9716              | 5371.5    | 5133.90  | 515 515  | 5212.87  | 5195.36  | 5178.2   | 5241.64       | 5099.71        | 5134.69  | 5049.87    | 5060.5     | 5200.40    | 5158.07         | 5111.17  | 5111.26  | 00.0210  | 5293.11   | 5280.91           | 5104.18     | 5202.9          |       |   |             |      |   |   |   |
| North              | 9687.924             | 10348 AG  | 10193.31 | 10330.16 | 9695.154 | 9949.403 | 10133.04 | 9946.539   | 10173.69 | 10399.34 | 9693.339 | 10.1100    | 3.1 2001 | 10152.47 | 10095.39 | 10153-38 | 10085 27  | 9708.825   | 10124.85 | 9/35.774  | 10122.13 | 19.9679        | 9606.16 | 9594.998 | 10065.1 | 10297.79      | 10040.01<br>9889 588 | 9704.739  | 9894.61  | 10043.91 | 10247.73 | 10040.92 | 90U3.Uds | 9962.347      | 10099.25       | 10103.35 | 10099.47   | 10102.34   | 10354.85   | 10276.53        | 11047.59 | 11249.41 | 7 CPUN   | 10193.13  | 10406.3           | 10651.77    | 10647.56        |       |   |             |      |   |   |   |
| -                  | 128                  | 011       | -132     | -133     | 134      | -135     | 130      | 138        | 139      | 0-140    | 0-141    | -143       | 145      | -146     | 0-148    | 0-150    | 201-0     | 1.154      | 0-155    | 151-0     | 161      | 0-163          | 0-164   | 168      | 0-170   | 171           | 7113                 | 174       | 0.176    | 111-0    | 188      | 181      | 1183     | 0-185         | 187            | 191A     | 0.193      | 1961-0     | 197        | 2081            | 0.209    | 0-210    | 10101010 | 102001    | 1040001           | 1002001     | 01065002        | rage  |   |             |      |   |   |   |
| 1                  | SS                   |           | CSD      | GSD      | GSD      | GSI      | 155      | GSO        | GSD      | GSD      | GSI      | 55         |          | esp      | GSD      | GSI      | CSI CSI   | 650        | GSL      |           | CSI      | GSD            | ISB     | CS D     | GSD     | SS            | 3                    | esi       | GSL      | S        | ese      | GSL      | GSD      | GSL           | ISS            | esi      | GSC        | GSD        | GSL        | GSL             | GSI      | GSL      |          | GSC       | 1S5               | SS          | GSL             | Ave   |   |             |      |   |   | - |

# APPENDIX III Cross-Section Geology

Appendix III - Cross Section Geology

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# APPENDIX IV PIMA Results

Appendix IV – PIMA Results

| 9500N       |         |              |                  |            |                           |              |                  |
|-------------|---------|--------------|------------------|------------|---------------------------|--------------|------------------|
| Index       |         | Index        | TSA Mineral1     | TSA Weight | <sup>1</sup> TSA Mineral2 | TSA W eight2 | <b>TSA Error</b> |
| 1:Hx068642  | Pim a81 | GSD182 84.8  | Montm orillonite | 0.709      | Paragonite                | 0.291        |                  |
| 2:Hx068643  | Pim a81 | GSD182 168.2 | Montm orillonite | 0.586      | Paragonite                | 0.414        |                  |
| 3:Hx068644  | Pima81  | GSD182 332.0 | NULL             | NULL       | NULL                      | NULL         |                  |
| 4:Hx068645  | Pima81  | GSD182 459.7 | In tC h lo rite  | -          | NULL                      |              |                  |
| 5:Hx068646  | Pima81  | GSD182 370.4 | Illite           | -          | NULL                      | NULL         |                  |
| 6:Hx068647  | Pima81  | GSD182 377.7 | Illite           | -          | NULL                      | NULL         |                  |
| 7:Hx068648. | Pima81. | GSD182 381.4 | Montm orillonite | 0.617      | Epidote                   | 0.383        |                  |
| -           |         |              |                  |            |                           | 1            |                  |

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Appendix IV – PIMA Results

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# TSA Mineral1 TSA Weight1 TSA Mineral2 TSA Weight2 TSA Error

| Index       |         | Index         | TSA Mineral1     | TSA Weight1 | <b>TSA Mineral2</b> | TSA We |
|-------------|---------|---------------|------------------|-------------|---------------------|--------|
| 1:Hx068624  | Pima81  | GSD168 294.8  | Illite           | -           | NULL                | NULL   |
| 2:Dsd001b   | Pima81  | DSD-001 302.6 | IntC hlorite     | 0.638       | Illite              | 0.362  |
| 3:Dsd001c   | Pima81  | DSD-001 324.  | NULL             | NULL        | NULL                | NULL   |
| 4:Dsd001d   | Pima81  | DSD-001 351.8 | IntC hlorite     | 0.798       | Illite              | 0.202  |
| 5:Hx068482  | Pima81  | GSD164 16.3   | Paragonite       | 0.515       | Montm orillonite    | 0.485  |
| 6:Hx068483. | Pima81∿ | GSD164 70.5   | Montm orillonite | 0.7         | Illite              | 0.3    |
| 7:Hx068484  | Pima81  | GSD164 289.9  | Illite           | 0.728       | Halloysite          | 0.272  |
| 8:Hx068485  | Pima81  | GSD164 237.3  | Illite           | 0.555       | Opal                | 0.445  |
| 9:Hx068486  | Pima81  | GSD164 246.2  | Montm orillonite | 0.687       | Paragonite          | 0.313  |
| 10:Hx068487 | Pima81  | GSD164 260.4  | Paragonite       | 0.557       | Montm orillonite    | 0.443  |
| 11:Hx068488 | Pima81  | GSD168 39.5   | Montm orilionite | 0.759       | Nacrite             | 0.241  |
| 12:Hx068489 | Pima81  | GSD168 148.7  | Montm orillonite | 0.557       | In tC h lorite      | 0.443  |
| 13:Hx068621 | Pima81  | GSD168 315.5  | Phengite         | 0.622       | Illite              | 0.378  |
| 14:Hx068622 | Pima81  | GSD168284.6   | Illite           | 0.633       | Montm orillonite    | 0.367  |
| 15:Hx068623 | Pima81  | GSD168 287.7  | Illite           | 0.759       | Phengite            | 0.241  |
| 16:Dsd001a  | Pima81  | DSD-001 249.1 | Prehnite         | 0.629       | Phlogopite2         | 0.371  |



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| Index        |          | Index                     | TSA Mineral      | ITSA Weight1 | TSA Mineral2     | TSA Weight2 | <b>TSA E</b> rror |
|--------------|----------|---------------------------|------------------|--------------|------------------|-------------|-------------------|
| Hx068032     | Pima81   | GSD128 20.1               | Kaolinite        | 0.575        | H alloy site     | 0.425       |                   |
| H×068033     | Pima81   | GSD12860.0                | Montm orillonite | 0.87         | Epidote          | 0.13        |                   |
| Hx068034     | Pima81   | GSD128210.5               | Montm orillonite | 0.599        | Paragonite       | 0.401       |                   |
| H x 068035   | Pima81   | GSD128 217.4              | Illite           | -            | NULL             | NULL        |                   |
| H x 068036   | Pima81   | GSD128 227.1              | Illite           | 0.791        | Magnesium_Clay s | 0.209       |                   |
| Hx068047     | Pima81   | GSD141 78.8               | Montm orillonite | 0.678        | Calcite          | 0.322       |                   |
| Hx068048     | Pima81   | GSD141 162.9              | Montm orillonite | 0.725        | Prehnite         | 0.275       |                   |
| H×068049     | Pima81   | GSD141 220.0              | Prehnite         | -            | NULL             | NULL        |                   |
| Hx068050 *   | Pima81   | <sup>1</sup> GSD141 310.0 | Illite           | 0.724        | Paragonite       | 0.276       |                   |
| 0:H×068476 , | Pim a 81 | GSD141 297.3              | NULL             | NULL         | NULL             | NULL        |                   |
| 1:Hx068490   | Pim a 81 | GSD134 110.0              | FeChlorite       | 0.588        | Illite 🖌         | 0.412       |                   |
| 2:Hx068491   | Pim a81  | ·GSD134 189.6             | FeChlorite       | 0.555        | Illite           | 0.445       |                   |
| 3:Hx068492   | Pima81   | GSD134 219.0              | Paragonite       | 0.622        | Montm orillonite | 0.378       |                   |
| 4:H x068493  | Pima81   | GSD134 231.5              | Illite           | 0.816        | Calcite          | 0.184       |                   |
| 5:H x068494  | Pima81   | GSD134 246.5              | NULL             | NULL         | NULL             | NULL        |                   |
| 5:Hx068577   | Pima81   | GSD154 20.7               | Montm orillonite | 0.748        | IntChlorite      | 0.252       |                   |
| 7:Hx068578   | Pima81   | GSD154 190.8              | IntChlorite      | 0.542        | Montm orillonite | 0.458       |                   |
| 3:Hx068579   | Pima81   | GSD154 362.1              | IntChlorite      | 0.768        | Epidote          | 0.232       |                   |
| 9:Hx068580   | Pima81   | GSD154 304.4              | Illite           | -            | NULL             | NULL        |                   |
| 0:Hx068581   | Pima81   | GSD154 321.0              | Illite           | -            | NULL             | NULL        |                   |
| 1:H x068582  | Pima81   | GSD154 334.1              | Illite           | 0.737        | Montm orillonite | 0.263       |                   |
| 2:Hx068602   | Pima81   | GSD174 39.3               | NULL             | NULL         | NULL             | NULL        |                   |
| 3:Hx068603   | Pima81   | GSD174 159.8              | IntChlorite      | 0.768        | Illite           | 0.232       |                   |
| 4:Hx068604   | Pima81   | GSD174 281.1              | IntChlorite      | 0.751        | Illite           | 0.249       |                   |
| 5:Hx068605   | Pima81   | GSD174 407.2              | Montm orillonite | 0.573        | Epidote          | 0.427       |                   |
| 5:Hx068606   | Pima81   | GSD174 424.6              | Illite           | -            | NULL             | NULL        |                   |
| 7:Hx068607   | Pima81   | GSD174 428.2              | Paragonite       | 0.626        | Py rophillite    | 0.374       |                   |
| 3:Hx068608   | Pima81   | GSD174 456.9              | Montm orillonite | 0.572        | Epidote          | 0.428       |                   |
| 9:Hx068670   | Pima81   | GSD12025.5                | Halloy site      | 0.613        | Illite           | 0.387       |                   |
| 0:Hx068671   | Pima81   | GSD120 36.3               | Halloy site      | 0.545        | Kaolinite        | 0.455       | ]                 |
| 1:Hx068672   | Pima81   | GSD12065.6                | H alloy site     | 0.651        | Illite           | 0.349       |                   |
| 2:Hx068673   | Pima81   | GSD12082.7                | Dickite          | -            | NULL             | NULL        |                   |
| 3:Hx068674   | Pima81   | GSD12072.1                | Dickite          | -            | NULL             | NULL        |                   |
| 4:H x068675  | Pima81   | GSD120 99.2               | Nacrite          | 0.597        | Halloy site      | 0.403       |                   |
| 5:Hx068676   | Pima81   | GSD120179.9               | NULL             | NULL         | NULL             | NULL        | 1                 |

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Appendix IV – PIMA Results

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| Index       |          | Index            | <b>TSA Mineral1</b> | TSA Weight1 | TSA Mineral2       | TSAWeight2 | <b>TSA</b> Error |   |
|-------------|----------|------------------|---------------------|-------------|--------------------|------------|------------------|---|
| 1:H×068477  | Plma81   | GSD-163 91.7     | Montm orillon Ite   | 0.821       | Calcite 0          | .179       |                  |   |
| ?:H×068478  | Pima81   | GSD-163 201.3    | Prehnite            | 0.532       | Montm orilionite 0 | .468       |                  |   |
| 1:H×068479  | Pim a 81 | GSD-163 280.4    | Montm orillonite    | 0.793       | Paragonite         | .207       |                  |   |
| 1:H×068480  | Pim a 81 | GSD-163 305.5    | IntC hlorite        | 0.64        | Epidote 0          | .36        |                  |   |
| 5:H×068481  | Pim a 81 | GSD-163 315.1    | Montm orlilonite    | 0.734       | Epidote 0          | .266       |                  |   |
| ):Hx068583  | Pima81   | GSD-157 50.0     | NULL                | N ULL       | NULL N             | IULL       |                  |   |
| ':H×068584  | Pim a 81 | GSD-157 129.6    | Montmorillonite     | 0.691       | Paragonite 0       | .309       |                  |   |
| 1:H×068585  | Pim.a8.1 | GSD-157 258.5    | Montmorilonite      | 0.706       | Epidote 0          | .294       |                  |   |
| ):H×068586  | Pima81   | GSD-157 199.8    | Paragonite          | -           | N ULL N            | 10 L L     |                  |   |
| 10:H×068587 | Pim a 81 | GSD-157 219.6    | Montm orllonite     | 0.749       | Paragonite 0       | .251       |                  |   |
| 1:H×075163  | Pim a 81 | DSD-002_36.4M    | DickIte             | -           | N ULL N            | וחרר       |                  |   |
| 2:H×075164  | Pima81   | DSD-002_48.4M    | Nacrite             | 0.535       | Kaolinite          | .465       |                  |   |
| 3:H×075165  | Pima81   | D SD -002_70.0M  | Dickite             | -           | NULL               | INTL       | <u>.</u>         |   |
| 14:H×075166 | Plm a81  | D SD -002_62.8M  | Nacrite             | 0.563       | Dickite            | .437       |                  |   |
| 15:H×075167 | Pima81   | D SD -002_70.6M  | Nacrite             | 0.612       | Dickite            | .388       |                  |   |
| 16:H×075168 | Pima81   | DSD-002_74.0M    | Int Chlorite        | 0.587       | llilte C           | .413       |                  |   |
| 7:H×075169  | Pima81   | DSD-002_89.9M    | Montm orillonite    | -           | NULL               | 10 LL      |                  |   |
| B:H×075170  | Pim a 81 | DSD-002_93.5M    | Montm orilionite    | 0.615       | Illite C           | .385       |                  |   |
| 9:H×075171  | Pima81   | DSD-002_98.7M    | Montm orillonite    | 0.552       | Illite             | .448       |                  |   |
| 0:H×075172  | Pima81   | D SD -003_97.7M  | Dickite             | -           | NULL               | IULL       |                  |   |
| 21:H×075173 | Pima81   | D SD -003_104.0M | Dickite             | -           | NULL N             | 1011       |                  |   |
| 2:H×075174  | Pima81   | DSD-003_31.7M    | Dickite             | -           | NULL               | 1011       |                  |   |
| 3:H×075175  | Pima81   | DSD-003_92.2M    | D ickite            | -           | NULL               | 1011       |                  |   |
| 34:H×075176 | Pim a81  | DSD-003_131.6M   | Dickite             | 0.504       | Allite 0           | .496       |                  |   |
| 35:H×075177 | Plm a81  | D SD-003_41.1M   | Dickite             | 0.634       | IIIIte 0           | .366       |                  |   |
| 26:H×075178 | Pima81   | D SD -003_63.2M  | Illite              | 0.686       | Halloysite         | .314       |                  |   |
| ?7:H×075179 | Pim a 81 | DSD-003_135.7M   | Dickite             | 0.547       | Nacrite            | .453       |                  |   |
| 28:H×075180 | Pim a 81 | DSD-003_138.6M   | Kaolinite           | 0.802       | Dicklte 0          | .198       |                  |   |
| 29:H×075181 | Pim a81  | DSD-003_99.8M    | Nacrite             | 0.522       | Dickite            | .478       |                  |   |
| 10:H×075182 | Pima81   | D SD -003_73.9M  | DickIte             | 0.757       | Muscovite 0        | .243       |                  |   |
| 11:H×075183 | Pima81   | D SD -003_69.8M  | Dickite             | 0.559       | Nacrite            | .441       |                  |   |
| 12:H×075184 | Plm a81  | DSD-003_34.0M    | Dickite             | 0.672       | Kaolinite          | .328       |                  |   |
| 33:H×075185 | Pim a 81 | DSD-004_179.1M   | Dickite             | 0.672       | Kaolinite 0        | .328       |                  |   |
| 34:H×075186 | Plm a81  | DSD-004_150.5M   | lilite              | 0.761       | Montm orillonite 0 | .239       |                  |   |
| 15:H×075187 | Pima81   | DSD-004_141.0M   | Montm orillonite    | 0.674       | Paragonite 0       | .326       |                  |   |
| 86:H×075188 | Pim a81  | D SD -004166.7M  | Montm orillonite    | 0.612       | Paragonite 0       | .388       |                  |   |
| 17:H×075189 | Pima81   | DSD-004_173.0M   | illite              | 0.718       | Phengite 0         | .282       |                  |   |
| ka:Hvn75190 | Dim a 81 | M5 727 200-020   | Montmorillonite     | 0 786       | Calcite            | 214        |                  | - |
|             |          |                  |                     |             |                    | 0          | 0 250 50         | 0 |

Appendix IV – PIMA Results

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| Index         |         | Index         | <b>TSA Mineral1</b> | TSA Weight1 | TSA Mineral2     | <b>FSA Weight2</b> | <b>TSA Error</b>       |
|---------------|---------|---------------|---------------------|-------------|------------------|--------------------|------------------------|
| 1:Hx068506    | Pima81  | GSD17940.2    | Montm orillonite    | 0.839       | Opal             | 0.161              |                        |
| 2:Hx068598    | Pima81  | GSD17664.5    | Montm orillonite    | 0.664       | Paragonite       | 0.336              |                        |
| 3:H×068599    | Pima81  | GSD176 142.6  | Illite              | 0.626       | Montm orillonite | 0.374              |                        |
| 4:Hx068600    | Pima81  | GSD176216.0   | Illite              | 0.769       | Halloysite       | 0.231              |                        |
| 5:Hx068601    | Pima81  | GSD176222.3   | Montm orillonite    | 0.838       | Paragonite       | 0.162              |                        |
| 6:Hx068609    | Pima8'1 | . GSD173 30.5 | Montm orillonite    | -           | NULL             | NULL               |                        |
| 7 :H x06861 0 | Pima81  | GSD173 119.4  | NULL                | NULL        | NULL .           | NULL               |                        |
| 8:H x068611   | Pima81  | GSD173 196.4  | Illite              | -           | NULL             | NULL               |                        |
| 9:Hx068612    | Pima81  | GSD173 153.5  | Illite              | -           | NULL             | NULL               |                        |
| 10:Hx068613   | Pima81  | GSD173168.4   | lilite              | 0.615       | IntChlorite      | 0.385              |                        |
| 11:Hx068649   | Pima81  | GSD179178.6   | NULL                | NULL        | NULL             | NULL               |                        |
| 12:Hx068650   | Pima81  | GSD179276.5   | Montm orillonite    | 0.529       | Paragonite       | 0.471              |                        |
| 13:Hx068651   | Pima81  | GSD179293.9   | Illite              | 0.61        | Opal             | 0.39               |                        |
| 14:Hx068652   | Pima81  | GSD179 382.2  | Illite              | -           | NULL             | NULL               | Nonalystees Halesonnes |
|               |         |               |                     |             |                  |                    |                        |

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Appendix IV – PIMA Results

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| Index            |          | Index                   | <b>TSA Mineral1</b> | TSA Weight1 | <b>TSA Mineral2</b> | TSA Weight2 | <b>TSA</b> Error                                                                                                |
|------------------|----------|-------------------------|---------------------|-------------|---------------------|-------------|-----------------------------------------------------------------------------------------------------------------|
| :Fr068042        | Pima81   | GSD138 178.4 fracture f | iCalcite            | 0.505       | Montm orillonite    | 0.495       | 12.0                                                                                                            |
| ::Hx068042       | Pima81   | GSD138 178.4            | NULL                | NULL        | NULL                | NULL        | the second se |
| ::Hx068043       | Pima81   | GSD138 10.3             | Illite              | 0.754       | D ickite            | 0.246       |                                                                                                                 |
| :Hx068044        | Pima81   | GSD138 224.2            | Montm orillonite    | 0.626       | Paragonite          | 0.374       |                                                                                                                 |
| :Hx068045        | Pim a81  | GSD138248.7             | In tC h lo rite     | 0.796       | Magnesium_Clays     | 0.204       |                                                                                                                 |
| :Hx068046        | - Pima81 | GSD138263.2             | In tC h lo rite     | t           | NULL                | NULL        |                                                                                                                 |
| ':Hx068495       | Pima81   | GSD127 147.8            | Paragonite          | 0.552       | Montm orillonite    | 0.448       |                                                                                                                 |
| 1:H x068496      | Pima81   | GSD135 131.5            | Illite              | 0.613       | Palygorskite        | 0.387       |                                                                                                                 |
| 1:H x0 6 8 4 9 7 | Pima81   | GSD135 108.8            | Montm orillonite    | 0.5         | Paragonite          | 0.5         |                                                                                                                 |
| 0:Hx068498       | Pima81   | GSD135 207.2            | IntC hlorite        | 0.718       | Epidote             | 0.282       |                                                                                                                 |
| 1:Hx068499       | Pima81   | GSD13558.6              | Illite              | +           | NULL                | NULL        |                                                                                                                 |
| 2:Hx068500       | Pima81   | GSD135 160.7            | Illite              | 0.517       | FeChlorite          | 0.483       |                                                                                                                 |
| 3:Hx068501       | Pima81   | GSD135176.4             | Illite              | 0.563       | Paragonite          | 0.437       |                                                                                                                 |
| 4:Hx068593       | Pima81   | GSD127 48.4             | Montm orillonite    | 0.583       | Kaolinite           | 0.417       |                                                                                                                 |
| 5:Hx068594       | Pima81   | GSD127 120.3            | Montm orillonite    | 0.556       | Paragonite          | 0.444       |                                                                                                                 |
| 6:Hx068595       | Pima81   | GSD12772.6              | Illite              | +           | NULL                | NULL        |                                                                                                                 |
| 7:Hx068596       | Pim a81  | GSD12780.4              | Illite              | +           | NULL                | NULL        |                                                                                                                 |
| 8:Hx068597       | Pima81   | GSD127 86.4             | Montm orillonite    | 0.564       | Paragonite          | 0.436       |                                                                                                                 |
| 9:Hx068630       | Pima81   | GSD185 119.6            | Illite              | 0.523       | Montm orillonite    | 0.477       |                                                                                                                 |
| 0:Hx068631       | Pima81   | GSD185200.0             | Phengite            | 0.793       | Epidote             | 0.207       |                                                                                                                 |
| :1:Hx068632      | Pim a81  | GSD185 279.3            | Illite              | +           | NULL                | NULL        |                                                                                                                 |
| 2:Hx068633       | Pim a 81 | GSD185289.2             | Illite              | 0.671       | IntC h lorite       | 0.329       |                                                                                                                 |
| 3:Hx068634       | Pima81   | GSD185 300.8            | Montm orillonite    | 0.604       | Epidote             | 0.396       |                                                                                                                 |
|                  |          |                         |                     |             |                     |             |                                                                                                                 |

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Appendix IV – PIMA Results

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TSA Mineral1 TSA Weight1 TSA Mineral2 TSA Weight2 TSA Error Index

|             |         |               |                    | •     |                        | )     |                                                                                                                 |
|-------------|---------|---------------|--------------------|-------|------------------------|-------|-----------------------------------------------------------------------------------------------------------------|
| 1:Hx068694  | Pima81  | GSD-117 176.4 | IntChlorite        | 0.712 | Epidote                | 0.288 | -                                                                                                               |
| 2:Hx068564  | Pima81  | GSD-145 123.4 | Illite             | 0.815 | Gypsum                 | 0.185 |                                                                                                                 |
| 3:Hx068565  | Pima81  | GSD-145 241.3 | IntChlorite        | 0.702 | Calcite                | 0.298 |                                                                                                                 |
| 4:Hx068566  | Pima81  | GSD-145 202.0 | Illite             |       | NULL                   | NULL  |                                                                                                                 |
| 5:Hx068567  | Pima81  | GSD-145 216.6 | Illite             | 0.814 | Gypsum                 | 0.186 |                                                                                                                 |
| 6:Hx068572  | Pimia81 | *GSD-152 10.9 | M on tm orillonite | 0.835 | Paragonite             | 0.165 |                                                                                                                 |
| 7:Hx068573  | Pima81  | GSD-152 140.0 | M on tm orillonite | 0.633 | lillite ,              | 0.367 | 1                                                                                                               |
| 8:Hx068574  | Pima81  | GSD-152 279.5 | IntChiorite        | 0.661 | Montmorillonite        | 0.339 |                                                                                                                 |
| 9:Hx068575  | Pima81  | GSD-152 229.5 | Illite             | 0.688 | Paragonite             | 0.312 |                                                                                                                 |
| 10:Hx068576 | Pima81  | GSD-152 248.1 | IntChlorite        | 1     | NULL                   | NULL  |                                                                                                                 |
| 11:Hx068588 | Pima81  | GSD-125 21.1  | Illite             | 0.562 | Gypsum                 | 0.438 |                                                                                                                 |
| 12:Hx068589 | Pima81  | GSD-125 55.6  | M ontm orillonite  | 0.738 | Illite                 | 0.262 |                                                                                                                 |
| 13:Hx068590 | Pima81  | GSD-125 120.8 | Illite             | 0.745 | Gypsum                 | 0.255 |                                                                                                                 |
| 14:Hx068591 | Pima81  | GSD-125 70.7  | Illite             | 0.51  | IntChlorite            | 0.49  |                                                                                                                 |
| 15:Hx068592 | Pima81  | GSD-125 81.7  | Paragonite         | 0.664 | M ontm orillonite      | 0.336 |                                                                                                                 |
| 16:Hx068635 | Pima81  | GSD-189 44.4  | IIIite             | 0.518 | FeChlorite             | 0.482 |                                                                                                                 |
| 17:Hx068636 | Pima81  | GSD-189 129.2 | Palygorskite       | 0.844 | Calcite                | 0.156 | fuer and the second  |
| 18:Hx068637 | Pima81  | GSD-189 178.1 | NULL               | NULL  | NULL                   | NULL  |                                                                                                                 |
| 19:Hx068638 | Pima81  | GSD-189 327.8 | MgChlorite         | 0.584 | Epidote                | 0.416 |                                                                                                                 |
| 20:Hx068639 | Pima81  | GSD-189 282.5 | Illite             | 0.664 | Pyrophillite           | 0.336 |                                                                                                                 |
| 21:Hx068640 | Pima81  | GSD-189 295.9 | Illite             | -     | NULL                   | NULL  |                                                                                                                 |
| 22:Hx068641 | Pima81  | GSD-189 307.1 | IntChlorite        | 0.882 | Halloysite             | 0.118 |                                                                                                                 |
| 23:Hx068684 | Pima81  | GSD-112 25.4  | M ontm orillonite  | 0.89  | Ankerite               | 0.11  | a ministra da función de la compañsión de l |
| 24:Hx068685 | Pima81  | GSD-112 64.9  | Paragonite         | 0.689 | Opal                   | 0.311 |                                                                                                                 |
| 25:Hx068686 | Pima81  | GSD-112 170.6 | Montmorillonite    | 0.832 | Paragonite             | 0.168 |                                                                                                                 |
| 26:Hx068687 | Pima81  | GSD-112 142.0 | Illite             | 0.655 | Paragonite             | 0.345 |                                                                                                                 |
| 27:Hx068688 | Pima81  | GSD-112 153.4 | IntChlorite        | 0.619 | Illite                 | 0.381 |                                                                                                                 |
| 28:Hx068689 | Pima81  | GSD-112 193.4 | IntChlorite        | 0.726 | <b>Montmorillonite</b> | 0.274 |                                                                                                                 |
| 29:Hx068690 | Pima81  | GSD-117 50.3  | NULL               | NULL  | NULL                   | NULL  | - 197- ,                                                                                                        |
| 30:Hx068691 | Pima81  | GSD-117 109.7 | M ontm orillonite  | 0.631 | Paragonite             | 0.369 |                                                                                                                 |
| 31:Hx068692 | Pìma81  | GSD-117 145.0 | Paragonite         | 0.665 | M ontmorillonite       | 0.335 |                                                                                                                 |
| 32:Hx068693 | Pima81  | GSD-117 153.2 | M ontm orillonite  | 0.866 | Illite                 | 0.134 | -                                                                                                               |
| 33:Hx068563 | Pima81  | GSD-145 51.6  | Illite             | 0.61  | Opal                   | 0.39  |                                                                                                                 |

Appendix IV – PIMA Results

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TSA Mineral1 TSA Weight1 TSA Mineral2 TSA Weight2 TSA Error

| Index          |         | Index                      | TSA Mineral1       | TSA Weight1 | <b>TSA Mineral2</b> | TSA Weight2 | <b>TSA Error</b>                                                                  |
|----------------|---------|----------------------------|--------------------|-------------|---------------------|-------------|-----------------------------------------------------------------------------------|
| 2:H x068626    | Pim a81 | GSD-187 11.5               | M ontm or illonite | 0.715       | Paragonite          | 0.285       |                                                                                   |
| 3;H x068627    | Pim a81 | GSD-187 80.0               | Montmorilonite     | 0.676       | Mite                | 0.324       |                                                                                   |
| 4:H x068628    | Pim a81 | GSD-187 130.4              | Illite             | -           | NULL                | NULL        |                                                                                   |
| 5:H x 068629   | Pim a81 | GSD~187 143.4              | IntC hlorite       | -           | NULL NULL           | NULL        | 7                                                                                 |
| 6:H x068655    | Pjm a81 | GSD-1010001 91.8           | M ontm or illonite | 0.731       | Paragonite (        | 0.269       |                                                                                   |
| 7:H x068656    | Pim a81 | GSD-1010001 123.1          | M uscovite         | 0.785       | Montmorillonite     | 0.215       |                                                                                   |
| 8:H x068657    | Pim a81 | GSD-1010001 200.4          | Illite             | 0.598       | Opal (0             | 0.402       |                                                                                   |
| 9:H x068658    | Plm a81 | GSD-1010001 274.9          | IIIIte             | -           | NULL                | NULL        |                                                                                   |
| 10:H x 068659  | Pima81  | GSD-1010001 308.8          | Epidote            | 0.609       | M gChlorite 0       | 0.391       |                                                                                   |
| 11:Hx068660    | Pim a81 | GSD-1010001 342.0          | IntC hlorite       | -           | NULL                | NULL        |                                                                                   |
| 12:H x075106   | Pim a81 | GSD-193, 25.0M             | Illite             | 0.774       | Gypsum              | 0.226       |                                                                                   |
| 13:H x075107   | Pim a81 | <sup>*</sup> GSD-193_36.0M | M ontm or Illonite | 0.637       | Illite              | 0.363       |                                                                                   |
| 14:H x075108 , | Pima81  | GSD-193_41.8M              | Illite             | 0.733       | Gypsum              | 0.267       | 「<br>で<br>で<br>で<br>、<br>、<br>、<br>、<br>、<br>、<br>、<br>、<br>、<br>、<br>、<br>、<br>、 |
| 15:H x075109   | Pima81  | GSD-193_56.5M              | IIIIte             | 0.673       | IntChlorite         | 0.327       |                                                                                   |
| 16:H x075110   | Pima81  | GSD-193_90.0M              | Illite             | 0.531       | FeChlorIte (        | 0.469       |                                                                                   |
| 17:H×075111    | Pima81  | GSD-193_130.0M             | M ontm or Illonite | 0.745       | Illite (            | 0.255       |                                                                                   |
| 18:H×075112    | Pima81  | GSD-183_35.0M              | Illite             | -           | NULL                | NULL        |                                                                                   |
| 19:H×075113    | Pima81  | GSD-183_90.0M              | M ontm orillonite  | 0.822       | Paragonite (        | 0.178       |                                                                                   |
| 20:H x075114   | Pim a81 | GSD-183_115.0M             | Illite             | Ŧ           | NULL                | NULL        |                                                                                   |
| 21:H×075115    | Pim a81 | GSD-183_150.0M             | Phenglte           | 0.636       | Halloysite (        | 0.364       |                                                                                   |
| 22:Hx075116    | Pima81  | GSD-193_177.6M             | IntC hlorite       | -           | NULL                | NULL        |                                                                                   |
| 23:H×075117    | Plma81  | G SD-183_192.7M            | NULL               | NULL        | NULL                | NULL        |                                                                                   |
| 24:H x075118   | Pima81  | GSD-183_230.0M             | Epidote            | -           | N U L L             | NULL        |                                                                                   |
| 25:Hx075119    | Pima81  | GSD-191_50.0M              | M ontm or Illonite |             | NULL                | N U LL      |                                                                                   |
| 26:H×075120    | Pim a81 | GSD-191_65.0M              | M ontm or illonite | 0.725       | IIIIte              | 0.275       |                                                                                   |
| 27:H x075121   | Pima81  | GSD-191A_110.0M            | IntC hlorite       | 0.62        | Epidote (           | 0.38        |                                                                                   |
| 28:H×075122    | Pim a81 | GSD-191A_158.3M            | Illite             | -           | NULL                | NULL        |                                                                                   |
| 29:H x075123   | Pim a81 | GSD-191A_165.7M            | IntC hlorite       | 0.555       | M gChlorite (       | 0.445       |                                                                                   |
| 30:H x075124   | Pima81  | GSD-191A_190.0M            | IntC hlorite       | Ŧ           | NULL                | NULL        |                                                                                   |
| 31:H x075125   | Pima81  | GSD-196_15.0M              | Illite             | 0.59        | M ontm oritionite   | 0.41        |                                                                                   |
| 32:H×075126    | Pìm a81 | GSD-196_39.5M              | lilite             | 0.565       | Opai (              | 0.435       |                                                                                   |
| 33:H×075127    | Pim a81 | GSD-196_90.0M              | NULL               | NULL        | NULL                | NULL        |                                                                                   |
| 34:H x075128   | Pim a81 | GSD-196_118.5M             | IIIIte             | -           | NULL                | NULL        |                                                                                   |
| 35:H x075129   | Pim a81 | GSD-196_126.0M             | IntC hlorite       | 0.537       | M ontm orillonite   | 0.463       |                                                                                   |
| 36:H x075130   | Plm a81 | GSD-196_160.0M             | M ontm or illonite | 0.777       | Epidote (           | 0.223       |                                                                                   |
| 37:Hx075134    | Pima81  | GSD-97_15.0M               | NULL               | NULL        | NULL                | NULL        |                                                                                   |
| 38:H×075135    | Pima81  | GSD-97_34.3M               | M ontm or Illonite | 0.615       | Kaolinite (         | 0.385       |                                                                                   |
| 39:H x075136   | Pima81  | GSD-97_45.8M               | Hlite              |             | NULL                | NULL        |                                                                                   |
| 40:H x075137   | Pima81  | GSD-97_55.4M               | IIIIte             | 0.701       | Epidote (           | 0.299       |                                                                                   |
| 41:H×075138    | Pim a81 | GSD-97_70.0M               | M ontm or illonite | 0.619       | Epidote (           | 0.381       |                                                                                   |
| 42:H×075144    | Pima81  | GSD-213_9.3M               | M ontm orilionite  | 0.665       | Kaolinite (         | 0.335       |                                                                                   |
| 43:H×075145    | Pima81  | GSD-213_16.0M              | Illite             | -           | NULL                | NULL        |                                                                                   |
| 44:Hx075146    | Pima81  | GSD-213_25.0M              | Illite             | 0.777       | Epidote (           | 0.223       |                                                                                   |
| 45:H×075147    | Pima81  | GSD-213_50.0M              | Illite             | -           | NULL                | NULL        |                                                                                   |
| 46:H x075148   | Pima81  | GSD-213_85.0M              | IntChiorite        | 0.709       | Epidote (           | 0.291       |                                                                                   |

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Appendix IV – PIMA Results

| ht2 TSA Error    |                   |                   |                   |                   |                   | ~                 |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    | 1000               |                    |                    |                    |
|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| I2TSA Weig       | 0.27              | 0.372             | NULL              | 0.111             | 0.498             | NULL              | 0.452             | 0.243             | 0.276              | NULL               | 0.422              | 0.151              | 0.235              | NULL               | NULL               | NULL               | 0.385              | NULL               | 0.5                | 0.48               | 0.412              | 0.249              | 0.431              | NULL               | 0.186              | 0.233              | 0.31               |
| t1TSA Minera     | Montmorillonite   | Montmorillonite   | NULL              | Gypsum            | Montmorillonite   | NULL              | FeChlorite        | Halloysite        | Gypsum <b>.</b>    | NULL               | Montmorillonite    | Gypsum             | Ankerite           | NULL               | NULL               | NULL               | Illite             | NULL               | Montmorillonite    | Halloysite         | Halloysite         | Epidote            | Muscovite          | NULL               | Py rophillite      | Brucite            | Gypsum             |
| I TSA Weigh      | 0.73              | 0.628             | -                 | 0.889             | 0.502             | -                 | 0.548             | 0.757             | 0.724              | -                  | 0.578              | 0.849              | 0.765              | -                  | -                  | NULL               | 0.615              | -                  | 0.5                | 0.52               | 0.588              | 0.751              | 0.569              | NULL               | 0.814              | 0.767              | 0.69               |
| TSA Mineral      | IntChlorite       | FeChlorite        | Gypsum            | IntChlorite       | Paragonite        | llite             | llite             | Muscovite         | Montmorillonite    | llite              | IntChlorite        | llite              | IntChlorite        | llite              | Halloy s ite       | NULL               | IntChlorite        | Illite             | Halloysite         | Opal               | Kaolinite          | Montmorillonite    | Montmorillonite    | NULL               | Paragonite         | MgChlorite         | llite              |
| Index            | GSD-150_150.0M    | GSD-150_146.6M    | GSD-150_155.6M    | GSD-150_180.0M    | GSD-150_49.0M     | GSD-94_15.0M      | GSD-94_40.4M      | GSD-94_66.6M      | GSD-53_10.0M       | GSD-53_70.0M       | GSD-53_97.0M       | GSD-53_128.0M      | GSD-53_138.7M      | GSD-212_5.0M       | GSD-212_17.2M      | GSD-212_60.0M      | GSD-212_113.0M     | GSD-1_8.1M         | GSD-1_18.7M        | GSD-1_22.1M        | GSD-1_32.1M        | GSD-1_80.0M        | GSD-60_17.0M       | GSD-60_45.0M       | GSD-60_80.0M       | GSD-60_140.0M      | GSD-60_101.5M      |
| 10,150N<br>Index | 1:Hx075101 Pima81 | 2:Hx075102 Pima81 | 3:Hx075103 Pima81 | 4:Hx075104 Pima81 | 5:Hx075105 Pima81 | 6:H×075131 Pima81 | 7:Hx075132 Pima81 | 8:Hx075133 Pima81 | 9:Hx075139' Pima81 | 10:Hx075140 Pima81 | 11:Hx075141 Pima81 | 12:Hx075142 Pima81 | 13:Hx075143 Pima81 | 14:Hx075149 Pima81 | 15:Hx075150 Pima81 | 16:Hx075151 Pima81 | 17:Hx075152 Pima81 | 18:Hx075153 Pima81 | 19:Hx075154 Pima81 | 20:Hx075155 Pima81 | 21:Hx075156 Pima81 | 22:Hx075157 Pima81 | 23:Hx075158 Pima81 | 24:Hx075159 Pima81 | 25:Hx075160 Pima81 | 26:Hx075161 Pima81 | 27:Hx075162 Pima81 |

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Appendix IV – PIMA Results

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| Index       |         | Index             | TSA Mineral1    | TSA Weight1 | TSA Mineral2    | TSA Weight2 | <b>TSA Error</b> |
|-------------|---------|-------------------|-----------------|-------------|-----------------|-------------|------------------|
| 1:Hx068530  | Pima81  | GSD-027 10.2      | llite           | 0.531       | Halloysite      | 0.469       |                  |
| 2:Hx068531  | Pima81  | GSD-027 27.7      | Muscovite       | 0.629       | Illite          | 0.371       |                  |
| 3:Hx068532  | Pima81  | GSD-027 130.1     | IntChlorite     | 0.697       | Montmorillonite | 0.303       |                  |
| 4:Hx068533  | Pima81  | GSD-027 44.2      | llite           | 0.548       | FeChlorite      | 0.452       |                  |
| 5:Hx068534  | Pima81  | GSD-027 52.2      | llite           | 0.641       | Paragonite      | 0.359       | ]                |
| 6:Hx068535  | Pima81  | GSD-027 64.3      | Muscovite       | 0.586       | Montmorillonite | 0.414       |                  |
| 7:Hx068536  | Pima81  | TWD-001 16.00     | MgChlorite      | 0.652       | Illite          | 0.348       |                  |
| 8:Hx068537  | Pimä 81 | ĠŠD-027 98.9      | llite           | 0.854       | Gypsum          | 0.146       |                  |
| 9:Hx068653' | Pima81  | DFD-009 388.7     | Mg Chlorite     | 0.735       | Epidote         | 0.265       |                  |
| 10:Hx068654 | Pima81  | DFD-009 395.6     | MgChlorite      | 0.649       | Epidote         | 0.351       | 1                |
| 11:Hx068661 | Pima81  | GSD-1020001 24.4  | NULL            | NULL        | NULL            | NULL        | _                |
| 12:Hx068662 | Pima81  | GSD-1020001 48.0  | Epidote         | -           | NULL            | NULL        |                  |
| 13:Hx068663 | Pima81  | GSD-1020001 129.5 | Biotite         | 0.795       | A nkerite       | 0.205       |                  |
| 14:Hx068664 | Pima81  | GSD-1020001 179.9 | Muscovite       | 0.619       | Montmorillonite | 0.381       |                  |
| 15:Hx068665 | Pima81  | GSD-1020001 236.4 | IntChlorite     | 0.637       | Epidote         | 0.363       |                  |
| 16:Hx068666 | Pima81  | GSD-1020001 267.0 | MgChlorite      | 0.588       | Epidote         | 0.412       |                  |
| 17:Hx068667 | Pima81  | GSD-1020001 288.9 | IntChlorite     | -           | NULL            | NULL        |                  |
| 18:Hx068668 | Pima81  | GSD-1020001 293.3 | IntChlorite     | -           | NULL            | NULL        |                  |
| 19:Hx068669 | Pima81  | GSD-1020001 336.6 | IntChlorite     | -           | NULL            | NULL        |                  |
| 20:Hx068800 | Pima81  | GSD-136_159.5M    | IntChlorite     | 0.619       | Montmorillonite | 0.381       |                  |
| 21:Hx068801 | Pima81  | GSD-136_151.5M    | NULL            | NULL        | NULL            | NULL        |                  |
| 22:Hx068802 | Pima81  | GSD-136_142.5M    | Montmorillonite | 0.516       | Epidote         | 0.484       |                  |
| 23:Hx068815 | Pima81  | GSD-46_106.6M     | FeChlorite      | 0.544       | llite           | 0.456       | - ·              |
| 24:Hx068816 | Pima81  | GSD-46_117.7M     | Paragonite      | 0.563       | llite           | 0.437       | 1                |
| 25:Hx068817 | Pima81  | GSD-46_132.1M     | IntChlorite     | 0.827       | Montmorillonite | 0.173       |                  |
| 26:Hx068818 | Pima81  | GSD-46_131.5M     | IntChlorite     | 0.666       | Montmorillonite | 0.334       |                  |
|             |         |                   |                 |             |                 |             |                  |

Appendix IV – PIMA Results
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# TSA Mineral1TSA Weight1TSA Mineral2TSA Weight2 TSA Error

|              |              |              | l -            |                |                 |                |                |  |
|--------------|--------------|--------------|----------------|----------------|-----------------|----------------|----------------|--|
| NULL         | 0.438        | NULL         | 0.17           | NULL           | NULL            | NULL           | 0.428          |  |
| NULL         | Illite       | NULL         | Epidote        | NULL           | NULL            | NULL           | Actinolite     |  |
| -            | 0.562        | -            | 0.83           | -              | -               | -              | 0.572          |  |
| Illite       | FeChlorite   | Illite       | IntC hlorite   | Illite         | In tC h lo rite | Epidote        | Epidote        |  |
| GSD-88_69.0M | GSD-88_52.3M | GSD-88_47.0M | GSD-115_142.6M | GSD-115_147.4M | GSD-115_155.1M  | GSD-180_230.1M | GSD-180_232.1M |  |
| Pim a81      | Pim a81      | Pima81       | Pima81         | Pim a81        | Pima81          | Pim a8.1       | Pima81         |  |
| 1:Hx068794   | 2:Hx068795   | 3:Hx068796   | 1:Hx068797     | 5:Hx068798     | 3:Hx068799      | 7:Hx068807.    | 3:Hx068808     |  |

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## 10,300N

| NTO OCTO    |             |                   |                  |              |                  |             |                  |
|-------------|-------------|-------------------|------------------|--------------|------------------|-------------|------------------|
| index       |             | Index             | TSA Mineral1     | TSA Weight1  | TSA Mineral2     | TSA Weight2 | <b>TSA Error</b> |
| 1:Hx068538  | Pima81      | GSD-029 20.7      | Illite           | 0.754        | H alloys ite     | 0.246       |                  |
| 2:Hx068539  | Pima81      | GSD-029 38.1      | Paragonite       | 0.678        | Montm orillonite | 0.322       |                  |
| 3:Hx068540  | Pima81      | GSD-029 59.3      | Illite           | 0.581        | FeChlorite       | 0.419       |                  |
| 4:Hx068541  | Pima81      | GSD-029 98.3      | IntC hlorite     | 0.803        | Ankerite         | 0.197       |                  |
| 5:Hx068542  | Pima81      | GSD-029 78.0      | Illite           | -            | NULL             | NULL        |                  |
| 6:Hx068543  | Pima81      | GSD-029 84.8      | Illite           | +            | NULL             | NULL        |                  |
| 7:Hx068614. | .Pim a, 81. | GSD-171 32.0      | FeChlorite       | 0.599        | Illite           | 0.401       |                  |
| 8:Hx068615  | Pima81      | GSD-171 76.7      | Illite           | -            | NULL             | NULL        |                  |
| 9:Hx068616  | Pima81      | GSD-171 123.6     | Muscovite        | 0.588        | Opai             | 0.412       |                  |
| 10:Hx068617 | Pim a81     | GSD-171 185.3     | Montm orillonite | 0.656        | Ankerite         | 0.344       |                  |
| 11:Hx068618 | Pim a81     | GSD-171 204.7     | In tC h lo rite  | <del>.</del> | NULL             | NULL        |                  |
| 12:Hx068619 | Pima81      | GSD-171 254.5     | Epidote          | 0.507        | Actinolite       | 0.493       |                  |
| 13:Hx068620 | Pima81      | GSD-171 263.5     | IntC hlorite     | 0.838        | Ankerite         | 0.162       |                  |
| 14:Hx068811 | Pima81      | GSD-34_85.2M      | Montm orillonite | 0.845        | Paragonite       | 0.155       |                  |
| 15:Hx068812 | Pima81      | GSD-34_96.1M      | Illite           | -            | NULL             | NULL        |                  |
| 16:Hx068813 | Pima81      | GSD-34_106.2M     | Illite           | +            | NULL             | NULL        |                  |
| 17:Hx068814 | Pima81      | GSD-34_116.1M     | IntC hlorite     | 0.817        | Magnesium_Clay   | /0.183      |                  |
| 18:Hx68539a | Pima81      | GSD-029 38.1 frac | Illite           | 0.635        | FeChlorite       | 0.365       |                  |
|             |             |                   |                  |              |                  |             |                  |
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## 10,350N Index

## TSA Mineral1 TSA Weight1 TSA Mineral2 TSA Weight2 TSA Error

| Index       |        | Index          | TSA Mineral1     | TSA Weight1 | TSAMineral2      | TSA Weight2 |                   |
|-------------|--------|----------------|------------------|-------------|------------------|-------------|-------------------|
| 1:Hx068544  | Pima81 | GSD-043 8.0    | Illite           | -           | NULL             | NULL        | 2507              |
| 2:H x068545 | Pima81 | GSD-043 18.8   | Montm orillonite | 0.536       | Ankerite         | 0.464       |                   |
| 3:Hx068546  | Pima81 | GSD-043 26.7   | IntC hlorite     | 0.553       | Montm orillonite | 0.447       |                   |
| 1:Hx068547  | Pima81 | GSD-043 42.1   | IntChlorite      | 0.811       | Montm orillonite | 0.189       |                   |
| 5:Hx068803  | Pima81 | GSD-44_26.5M   | Illite           | 0.674       | Halloysite       | 0.326       | Production of the |
| 3:Hx068804  | Pima81 | GSD-44_33.4M   | Illite           | -           | NULL             | NULL        | - I               |
| 7:Hx068805  | Pima81 | GSD-44_44.7M   | Illite           | 0.601       | Halloysite       | 0.399       |                   |
| 3:Hx068806  | Pima81 | GSD-44_64.3M   | In tC h lo rite  | 0.624       | Montm orillonite | 0.376       |                   |
| ):Hx068809  | Pima81 | GSD-197_156.2M | MgChlorite       | 0.575       | IntC hlorite     | 0.425       |                   |
| 10:Hx068810 | Pima81 | GSD-197_163.4M | MgChlorite       | 0.801       | Magnesium_Cla;   | y:0.199     | 2                 |
|             |        |                |                  |             |                  | ]           | L .               |



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## 10,400N

| Index         |         | Index             | <b>TSA Mineral</b> | 1 TSA Weight1 | <b>TSA Mineral2</b>      | TSA Weight2 | <b>TSA Error</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|---------|-------------------|--------------------|---------------|--------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1:H×068548    | Pima81  | GSD-015 7.1       | Illite             | 0.605         | Halloy site              | 0.395       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2:Hx068549    | Pima81  | GSD-015 20.0      | Epidote            | -             | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3:H×068550    | Pima81  | GSD-015 130.9     | IntChlorite        | -             | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4:Hx068551    | Pima81  | GSD-015 41.2      | FeC hlorite        | 0.673         | Illite                   | 0.327       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 5:H×068552    | Pima81  | GSD-015 50.6      | IntC hlorite       | -             | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6:Hx068553    | Pima81  | GSD-015 77.6      | IntC hlorite       | 0.678         | Montm orillonite         | 0.322       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 7:Hx068560    | Pima81  | DFD-014 129.4     | Montm orillonite   | 0.926         | Trem olite               | 0.0736      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 8:Hx068561    | Pima81  | DFD-014 214.5     | IntChlorite        | 0.759         | Paly gorskite            | 0.241       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 9:Hx068562    | Pima81  | ∿DFD-014 248.4    | IntC hlorite       | 0.737         | Paly gorskite            | 0.263       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 10:H×068568 , | Pima81  | DFD-014 307.5     | IntC hlorite       | 0.759         | Epidote                  | 0.241       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 11:H×068569   | Pima81  | DFD-014 380.9     | IntC hlorite       | 0.518         | MgC hlorite <sup>4</sup> | 0.482       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 12:H×068570   | Pima81  | DFD-014 324.2     | MgC hlorite        | 0.678         | Epidote                  | 0.322       | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 13:Hx068571   | Pima81  | DFD-014 335.3     | Epidote            | 0.651         | Montm orillonite         | 0.349       | 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 14:Hx068677   | Pima81  | GSD-113 20.0      | Halloy site        | 0.524         | Montm orillonite         | 0.476       | ×                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 15:Hx068678   | Pima81  | GSD-113 48.7      | NULL               | NULL          | NULL                     | NULL        | ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 16:Hx068679   | Pima81  | GSD-113 68.2      | NULL               | NULL          | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 17:H×068680   | Pima81  | GSD-113 79.6      | IntChlorite        | 0.792         | 11lite                   | 0.208       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 18:Hx068681   | Pim a81 | GSD-113 97.1      | MgC hlorite        | 0.592         | Epidote                  | 0.408       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 19:Hx068682   | Pima81  | GSD-113 127.7     | Montm orillonite   | 0.636         | Ankerite                 | 0.364       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 20:Hx068683   | Pima81  | GSD-113 149.5     | MgC hlorite        | 0.635         | Epidote                  | 0.365       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 21:Hx068695   | Pima81  | GSD-1040001 75.1  | Illite             | 0.844         | Montm orillonite         | 0.156       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 22:Hx068696   | Pima81  | GSD-1040001 123.1 | IntChlorite        | 0.719         | Montm orillonite         | 0.281       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 23:H×068697   | Pima81  | GSD-1040001 207.5 | NULL               | NULL          | NULL                     | NULL        | NAME OF A DESCRIPTION OF A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 24:Hx068698   | Pima81  | GSD-1040001 228.4 | MgChlorite         | 0.619         | Epidote                  | 0.381       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 25:Hx068699   | Pima81  | GSD-1040001 261.6 | IntChlorite        | -             | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 26:H×068700   | Pima81  | GSD-1040001 297.1 | MgChlorite         | 0.595         | IntC hlorite             | 0.405       | 10000000000000000000000000000000000000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 27:Hx068776   | Pima81  | GSD-1040001 363.8 | NULL               | NULL          | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 28:Hx068777   | Pima81  | GSD-206 22.6      | Magnesium_C lay s  | 0.595         | Actinolite               | 0.405       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 29:Hx068778   | Pima81  | GSD-206 95.5      | Montm orillonite   | 0.639         | Int Chlorite             | 0.361       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 30:H×068779   | Pima81  | GSD-206 124.9     | Illite             | -             | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 31:H×068780   | Pima81  | GSD-206 195.3     | Montm orillonite   | 0.518         | Epidote                  | 0.482       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 32:Hx068781   | Pima81  | GSD-206 232.4     | Montm orillonite   | 0.62          | Epidote                  | 0.38        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 33:Hx068782   | Pima81  | GSD-206 279.0     | Prehnite           | 0.537         | Epidote                  | 0.463       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 34:Hx068783   | Pima81  | GSD-206 309.9     | MgChlorite         | 0.645         | Epidote                  | 0.355       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 35:Hx068784   | Pima81  | GSD-52_13.8M      | Illite             | -             | NULL                     | NULL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 36:Hx068785   | Pima81  | GSD-52_18.9M      | MgC hlorite        | 0.688         | Magnesium_Clay s         | 0.312       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 37:H×068786   | Pima81  | GSD-52_24.1M      | IntChlorite        | 0.765         | Magnesium_Clay s         | 0.235       | Carlos and a state of the state |

Appendix IV – PIMA Results

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## 10,450N

| Index      |         | Index         | TSA Minera      | al1 TSA Weight1 | TSA Mineral      | TSA Weight2 | <b>TSA Error</b> |
|------------|---------|---------------|-----------------|-----------------|------------------|-------------|------------------|
| 1:Hx068788 | Pima81  | GSD-16_41.2M  | Illite          | 0.7             | Calcite          | 0.3         |                  |
| 2:Hx068789 | Pima81  | GSD-16_50.1M  | IntC hlorite    | 0.811           | Montm orillonite | 0.189       |                  |
| 3:Hx068790 | Pim a81 | GSD-16_60.7M  | IntC hlorite    | 0.801           | Montm orillonite | 0.199       |                  |
| 4:Hx068791 | Pima81  | GSD-65_162.6M | In tC h lo rite | 0.633           | MgChlorite       | 0.367       |                  |
| 5:Hx068792 | Pima81  | GSD-65_172.1M | In tC h lo rite | 0.803           | Ankerite         | 0.197       |                  |
| 6:Hx068793 | Pima81  | GSD-65_182.8M | In tC hlorite   | 0.808           | Ankerite         | 0.192       |                  |
| 7:Hx068822 | Pima81  | GSD-61_89.3M  | IntC hlorite    | 0.772           | Ankerite         | 0.228       |                  |
| 8:Hx068823 | Pima81  | GSD-61_96.5M  | IntC hlorite    | 0.808           | Ankerite         | 0.192       |                  |
| 9:Hx068824 | Pim a81 | GSD-61_104.6M | IntC hlorite    | 0.622           | MgCfilorite      | 0.378       |                  |

 Appendix IV – PIMA Results

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## 10,500N

| Index | <pre>&lt;068554</pre> |
|-------|-----------------------|

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## TSA Mineral1TSA Weight1TSA Mineral2TSA Weight2 TSA Error

| 81 GSD-019 51.5 Montmorillonite 0.695 IntChlorite 0.305 | 81 GSD-019 141.1 IntChlorite 1 NULL NULL NULL | 81 GSD-019 76.9 IntChlorite 0.805 Ankerite 0.195 | 81 GSD-019 97.6 Paragonite 0.565 Illite 0.435 | 81 GSD-019 107.8 Epidote 0.755 Calcite 0.245 | 8.1 GSD-102_44.6M Illite 0.647 Pyrophillite 0.353 | 81 GSD-102_46.5M Jarosite 0.588 Halloysite 0.412 | 81 GSD-102_55.7M IntChiorite 1 NULL <sup>6</sup> NULL WULL |
|---------------------------------------------------------|-----------------------------------------------|--------------------------------------------------|-----------------------------------------------|----------------------------------------------|---------------------------------------------------|--------------------------------------------------|------------------------------------------------------------|
| GSD-019 51.5 Montm                                      | GSD-019 141.1 IntChlo                         | GSD-019 76.9 IntChlo                             | GSD-019 97.6 Parago                           | GSD-019 107.8 Epidot                         | GSD-102_44.6M Illite                              | GSD-102_46.5M Jarosit                            | GSD-102_55.7M IntChio                                      |
| Pima81                                                  | Pima81                                        | Pima81                                           | Pima81 (                                      | Pima81                                       | Pima81 (                                          | Pima81 (                                         | Pima81                                                     |
| 2:Hx068555                                              | 3:Hx068556                                    | 4:Hx068557                                       | 5:Hx068558                                    | 6:Hx068559                                   | 7:Hx068819                                        | 8:Hx068820                                       | 9:Hx068821                                                 |

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| 10,575N     |          | 3                 |                  |             |                 |             |
|-------------|----------|-------------------|------------------|-------------|-----------------|-------------|
| Index       |          | Index             | TSA Mineral1     | TSA Weight1 | TSA Mineral2    | TSA Weight2 |
| 1:H x068517 | Pima81   | GSD-1057501 10.0  | Opal             | -           | NULL            | NULL        |
| 2:H x068518 | Pima81   | GSD-1057501 24.3  | NULL             | NULL        | NULL            | NULL        |
| 3:H x068519 | Pima81   | GSD-1057501 35.3  | Muscovite        | 0.62        | In tC h lo rite | 0.38        |
| 4:Hx068520  | Pim a81  | GSD-1057501 70.1  | In tC h lo rite  | 0.816       | Ankerite        | 0.184       |
| 5:Hx068521  | Pim a81  | GSD-1057501 101.4 | In tC h lo rite  | 0.591       | Montm orillonit | 0.409       |
| 6:Hx068522  | Pim a 81 | GSD-1057501 120.6 | IntC h lo rite   | -           | NULL            | NULL        |
| 7:H x068523 | Pima81   | GSD-1057501 135.1 | Montm orillonite | 0.765       | Ankerite        | 0.235       |
| ÷           | ₹        | ~                 |                  |             |                 |             |

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|------|------|-------------------------------------------|----------|--------------|------|----------|
| NULL | NULL | 0.38                                      | 0.184    | niti0.409    | NULL | 0.235    |
| NULL | NULL | In tC h lo rite                           | Ankerite | Montm orillo | NULL | Ankerite |

**TSA E**rror

Appendix IV – PIMA Results

## 10,650N

| Index             |          | index             | TSA Mineral1     | TSA Weight1 | TSA Mineral2     | TSA Weight2 | <b>TSA E</b> rror                   |
|-------------------|----------|-------------------|------------------|-------------|------------------|-------------|-------------------------------------|
| 1:Hx068001        | Pima81   | GSD-078 20.8      | Kaolinite        | 0.665       | Montm orillonite | 0.335       |                                     |
| 2:H x068002       | Pima81   | GSD-078 109.8     | Montm orillonite | 0.651       | Epidote          | 0.349       |                                     |
| 3:Hx068003        | Pim a 81 | GSD-078 204.8     | IntC hlorite     | 0.785       | Ankerite         | 0.215       |                                     |
| l:Hx068004        | Pimia 81 | GSD-078 45.9      | Muscovite        | 0.71        | Halloysite       | 0.29        |                                     |
| 5 :H x0 6 8 0 0 5 | Pim a 81 | GSD-078 61.6      | IntChlorite      | 0.717       | Muscovite        | 0.283       |                                     |
| 3:H x068502       | Pima81   | GSD-073 205.5     | Mg Chlorite      | 0.59        | Epidote          | 0.41        |                                     |
| 7:Hx068503        | Pima81   | GSD-073 116.8     | IntC hlorite     | -           | NULL             | NULL        |                                     |
| 3:Hx068504*       | Pima 81^ | 'GSD'-073 23.4    | Montm orillonite | 0.516       | N on tronite     | 0.484       |                                     |
| ):H x068505       | Pima81   | GSD-073 35.9      | IntC h lo rite   | 0.617       | Montm prilionite | 0.383       |                                     |
| 0:Hx068512        | Pim a 81 | GSD-1065001 25.4  | Illite           | -           | NULL             | NULL        |                                     |
| 1:Hx068513        | Pima81   | GSD-106500154.6   | Illite           | -           | NULL             | NULL        |                                     |
| 2:Hx068514        | Pim a 81 | GSD-1065001 128.0 | IntC h lo rite   | 0.691       | Montm orillonite | 0.309       |                                     |
| 3:Hx068515        | Pim a 81 | GSD-1065001 93.7  | Montm orillonite | 0.802       | D ickite         | 0.198       | The south of the south of the south |
| 4 :H x0 6 8 5 1 6 | Pim a 81 | GSD-1065001 104.5 | IntC h lo rite   | 0.643       | Montm orillonite | 0.357       |                                     |
| 5:Hx068524        | Pim a81  | GSD-1065002 60.3  | IntC h lo rite   | 0.754       | Epidote          | 0.246       |                                     |
| 6:Hx068525        | Pima81   | GSD-1065002 94.8  | IntC h lo rite   | 0.842       | Ankerite         | 0.158       |                                     |
| 7:Hx068526        | Pim a81  | GSD-1065002 249.1 | IntC hlorite     | 0.524       | Montm orillonite | 0.476       |                                     |
| 8:Hx068527        | Pima81   | GSD-1065002 188.8 | Epidote          | 0.617       | Magnesium_Clays  | 0.383       |                                     |
| 9:Hx068528        | Pima81   | GSD-1065002 197.7 | Mg Chlorite      | 0.593       | Epidote          | 0.407       |                                     |
| 0:Hx068529        | Pima81   | GSD-1065002 145.6 | In tC h lo rite  | <b>-</b>    | NULL             | NULL        |                                     |
|                   |          |                   |                  |             |                  |             |                                     |

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## TSA Mineral1 TSA Weight1 TSA Mineral2 TSA Weight2 TSA Error

| In de x      |          | Index         | TSA Mineral1     | TSA Weight1 | <b>TSA Mineral2</b> | TSA Weight2 | TSA |
|--------------|----------|---------------|------------------|-------------|---------------------|-------------|-----|
| 1 :H x068041 | Pim a 81 | GSD-095 198.8 | In tC h lo rite  | -           | NULL                | NULL        |     |
| 2:Hx068038   | Pima81   | GSD-095 141.6 | Montm orillonite | 0.666       | In tC h lo rite     | 0.334       |     |
| 3:Hx068039   | Pima81   | GSD-095 240.9 | NULL             | NULL        | NULL                | NULL        |     |
| 4 :H x068040 | Pima81   | GSD-095 190.1 | In tC h lo rite  | 0.718       | Montm orillonite    | 0.282       |     |
| 5:Hx068037   | Pima81   | GSD-095 60.6  | Epidote          | 0.554       | Montm orillonite    | 0.446       |     |

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## 10,750N Index

| Index       |           | Index         | <b>TSA Mineral1</b> | TSA Weight1 | <b>TSA Mineral2</b> | TSA Weight2 | <b>TSA Error</b> |
|-------------|-----------|---------------|---------------------|-------------|---------------------|-------------|------------------|
| 1:Hx068006  | Pima81    | GSD-090 13.0  | Illite              | 0.55        | Montm orillonite    | 0.45        |                  |
| 2:Hx068007  | Pima81    | GSD-090 120.7 | IntC hlorite        | 0.724       | Montm orillonite    | 0.276       |                  |
| 3:Hx068008  | Pima81    | GSD-090 32.2  | NULL                | NULL        | NULL                | NULL        |                  |
| 4:Hx068009  | Pima81    | GSD-090 37.3  | Muscovite           | -           | NULL                | NULL        |                  |
| 5:Hx068010  | Pima81    | GSD-090 47.0  | Montm orillonite    | 0.563       | Halloysite          | 0.437       |                  |
| 6:Hx068507  | Pima81    | GSD-086 173.9 | IntChlorite         | 0.796       | Palygorskite        | 0.204       |                  |
| 7:Hx068508, | Pim a 81. | GSD-086 122.9 | Epidote             | 0.528       | Montm orillonite    | 0.472       |                  |
| 8:Hx068509  | Pima81    | GSD-086 50.1  | IntC hlorite        | Ŧ           | NULL                | NULL        |                  |
| 9:Hx068510  | Pim a 81  | GSD-086 13.7  | Illite              | +           | NULL '              | NULL        |                  |
| 10:Hx068511 | Pima81    | GSD-086 12.8  | Halloysite          | 0.514       | Kaolinite           | 0.486       |                  |
|             |           |               |                     |             |                     |             | ]                |

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| Anggrek     |             |               |                    |            |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |
|-------------|-------------|---------------|--------------------|------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Index       |             | Index         | <b>TSA Mineral</b> | TSA Weight | ITSA Mineral     | TSA Weight2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>TSA Erro</b> |
| :Hx068011   | Pima81      | GSD-208 43.5  | IntC hlorite       | 0.684      | Epidote          | 0.316                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 2:Hx068012  | Pima81      | GSD-208 65.7  | NULL               | NULL       | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 3:Hx068013  | Pima81      | GSD-208 197.1 | IntC hlorite       | 1          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| t:Hx068014  | Pima81      | GSD-208 104.9 | IntC hlorite       | -          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 5:Hx068015  | Pima81      | GSD-208 132.8 | In tC h lo rite    | 0.754      | MgC hlorite      | 0.246                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 6:Hx068016  | Pima81      | GSD-210 29.4  | Actinolite         | 0.561      | Epidote          | 0.439                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | · -             |
| 7:Hx068017. | P.im a 8,1. | GS/D-210 50.9 | IntC hlorite       | 0.509      | MgC hlorite      | 0.491                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 8:Hx068018  | Pima81      | GSD-210 120.8 | Mg C hlorite       | 0.763      | Epidote          | 0.237                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 9:Hx068019  | Pima81      | GSD-210 171.6 | Montm orillonite   | +          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 10:Hx068020 | Pima81      | GSD-21087.4   | Mg C h lo rite     | -          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 11:Hx068021 | Pima81      | GSD-209 29.3  | Paragonite         | 0.519      | Illite           | 0.481                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 12:Hx068022 | Pima81      | GSD-209 44.7  | Illite             | -          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 13:Hx068023 | Pim a 81    | GSD-209 90.0  | MgChlorite         | 0.8        | NH4_Alunite      | 0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |
| 14:Hx068024 | Pima81      | GSD-209 183.9 | IntC hlorite       | -          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 15:Hx068025 | Pim a81     | GSD-209 144.5 | IntC hlorite       | 0.673      | Epidote          | 0.327                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 16:Hx068026 | Pima81      | GSD-209 163.9 | MgChlorite         | 0.539      | Epidote          | 0.461                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 17:Hx068027 | Pima81      | GSD-211 89.9  | In tC h lo rite    | -          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 18:Hx068028 | Pima81      | GSD-211 128.1 | Epidote            | -          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 19:Hx068029 | Pima81      | GSD-211 178.7 | IntC hlorite       | -          | NULL             | NULL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                 |
| 20:Hx068030 | Pima81      | GSD-211 24.2  | IntC hlorite       | 0.639      | Montm orillonite | 0.361                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
| 21:Hx068031 | Pima81      | GSD-211 62.3  | MgChlorite         | 0.757      | Montm orillonite | 0.243                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |
|             |             |               |                    |            |                  | NAME AND ADDRESS OF ADDRE |                 |

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Appendix IV – PIMA Results

187 Appendix V - Fluid Inclusion/Petrology Results

|                      |          | 8          |            |                  | -            |
|----------------------|----------|------------|------------|------------------|--------------|
| Location             | Domain   | Average Th | Average Tm | Average salinity | Comments     |
| Hole & Depth         |          | °C         | °C         | Wt % NaCl        |              |
| GSD-211 18.7m        | QS       | 247        | 0.1        | 0                |              |
| GSD-211 63.0m        | QS       | 242        | -0.2       | 0.35             |              |
| GSD-209 151.0m       | QS       | 259        | -0.4       | 0.71             | _            |
| GSD-134 239.3m       | QS       | 208        | -0.4       | 0.71             |              |
| GSD-185 299.4m       | QS       | 265        | -0.2       | 0.35             |              |
| GSD-015 46.2m        | QC       | 253        | -0.2       | 0.35             |              |
| GSD-182 381.2m       | QS       | NA         | NA         | NA               |              |
| DFD-009 393.1m       | DC       | 314        | -0.1       | 0.18             |              |
| GSD-176 224.0m       | QS       | 242        | -0.2       | 0.35             |              |
|                      |          |            |            |                  |              |
| GSD-027 89.4m        | QC       | 220        | -0.3       | 0.53             | Coote, 2000b |
| GSD-168 287.0m       | QS       | 248        | -0.3       | 0.53             | Coote, 2000b |
| GSD-187 136.4        | QC       | 238        | -0.4       | 0.71             | Coote, 2000b |
| GSD-113 89.0m        | QS       | 232        | -0.3       | 0.53             | Coote, 2000b |
| GSD-174 425.3        | QS       | 242        | -0.3       | 0.53             | Coote, 2000b |
| GSD-1020001 290.3    | QS       | 237        | -0.3       | 0.53             | Coote, 2000b |
| GSD-019 92.6m        | QS       | 234        | -0.3       | 0.53             | Coote, 2000b |
| GSD-086 7.0m         | QS       | 239        | -0.4       | 0.71             | Coote, 2000b |
| GSD-210 87.9m        | QS       | 239        | -0.4       | 0.71             | Coote, 2000b |
| GSD-208 120.8m       | QS       | 235        | -0.4       | 0.71             | Coote, 2000b |
| GSD-1065002 196.2m   | QS       | 250        | -0.3       | 0.53             | Coote, 2000b |
| GSD-112 143.1m       | QC       | 240        | -0.3       | 0.53             | Coote, 2000b |
| GSD-173 168.3m       | QS       | 224        | -0.4       | 0.71             | Coote, 2000b |
|                      |          |            |            |                  |              |
| RL180, 10090N, 4995E | QA late  | 211        | NA         | NA               | Coote, 2000a |
| RL180, 10125N, 5000E | QA       | 201        | NA         | NA               | Coote, 2000a |
| RL180, 10150N, 5000E | QA       | 173        | NA         | NA               | Coote, 2000a |
| RL180, 10163N, 4986E | QA       | 203        | NA         | NA               | Coote, 2000a |
| RL180, 10175N, 4995E | QA early | 223        | NA         | NA               | Coote, 2000a |
| RL170, 10150N, 5000E | QA late  | 220        | NA         | NA               | Coote, 2000a |
| RL170, 10150N, 4995E | QA early | 215        | NA         | NA               | Coote, 2000a |
| RL170, 10150N, 4990E | QA       | 214        | NA         | NA               | Coote, 2000a |
| RL170, 10220N, 5005E | QA       | 190        | NA         | NA               | Coote, 2000a |
| RL170, 10225N, 5005E | QA       | 189        | NA         | NA               | Coote, 2000a |
| RL175, 10090N, 5005E | QA       | 224        | NA         | NA               | Coote, 2000a |
|                      |          |            |            |                  |              |
| GSD-1065001 101.3m   | QS       | 257        | NA         | NA               | Coote, 1998  |
|                      |          |            |            |                  |              |
| Trench10100          | ćQA      | 217        | -0.4       | 0.71             | Bogie, 1994  |
| Trench10250a         | QA       | 209        | -0.4       | 0.71             | Bogie, 1994  |
| Trench10250b         | 'QA      | 234        | -0.5       | 0.88             | Bogie, 1994  |

## **Gosowong Fluid Inclusion Summary**

| Location                              | Petrography                  | Primary<br>Th (C) | Primary<br>Tm (C) | Secondary<br>Th (C) | Secondary<br>Tm (C) |
|---------------------------------------|------------------------------|-------------------|-------------------|---------------------|---------------------|
| GSD-209 151.0m                        | Coarse xtln qtz stwk vein    | 232               | -0.6              |                     |                     |
|                                       |                              | 245               | -0.2              |                     | <u> </u>            |
| ,                                     |                              | 251               | -0.8              | <u> </u>            | <u> </u>            |
|                                       |                              | 251               | -0.6              |                     | -                   |
| · · · · · · · · · · · · · · · · · · · |                              | 253               | -0.4              |                     | <u> </u>            |
|                                       |                              | 254               | -0.7              |                     |                     |
|                                       |                              | 256               | -0.4              |                     |                     |
|                                       |                              | 259               |                   | -                   |                     |
|                                       |                              | 260               | -0.7              |                     |                     |
|                                       |                              | 262               | -0.7              | <u> </u>            |                     |
|                                       |                              | 262               | -0.1              | -                   | <u> </u>            |
|                                       |                              | 267               | -0.5              |                     |                     |
|                                       |                              | 267               | -0.4              |                     |                     |
|                                       |                              | 267               |                   |                     |                     |
|                                       |                              | 269               | -0.1              |                     |                     |
| ·                                     |                              | 274               | -0.6              |                     |                     |
|                                       | · · · · ·                    | 280               | -0.1              | -                   |                     |
|                                       |                              |                   | -0.2              |                     |                     |
|                                       |                              |                   | -0.1              |                     |                     |
|                                       |                              |                   | -0.2              |                     |                     |
|                                       |                              |                   | -0.4              | I.                  |                     |
|                                       |                              |                   | -0.5              |                     |                     |
|                                       |                              |                   |                   |                     |                     |
|                                       | Average Th and Tm            | 259               | -0.4              |                     |                     |
|                                       | Number of data points        | n=17              | n=20              |                     |                     |
|                                       |                              | 100               |                   |                     |                     |
| GSD-134 239.3m                        | Fine xtln qtz stwk vn, vuggy | 190               | -0.6              |                     |                     |
|                                       |                              | 193               |                   |                     |                     |
|                                       |                              | 194               |                   |                     |                     |
|                                       |                              | 195               |                   |                     |                     |
|                                       |                              | 196               |                   |                     |                     |
|                                       |                              | 197               |                   |                     |                     |
|                                       |                              | 200               |                   |                     |                     |
|                                       |                              | 200               |                   |                     | <u> </u>            |
|                                       |                              | 200               |                   |                     |                     |
|                                       |                              | 203               | -0.4              |                     | -                   |
|                                       |                              | 203               | -0.3              | <u> </u>            |                     |
|                                       |                              | 209               |                   | <u> </u>            | <u> </u>            |
|                                       |                              | 210               | -0.4              |                     |                     |
|                                       |                              | 212               |                   |                     |                     |
|                                       | :                            | 212               |                   |                     |                     |
|                                       | 2                            | 213               | -0.2              |                     |                     |
|                                       |                              | 214               |                   |                     |                     |
|                                       | 1                            | 215               | -0.1              |                     |                     |
|                                       |                              | 217               | -0.2              |                     |                     |
|                                       | ÷                            | 220               | -0.4              |                     |                     |
|                                       |                              | 221               | -0.6              |                     |                     |
|                                       |                              | 224               |                   |                     |                     |

## **Gosowong Fluid Inclusion Results**

189 Appendix V - Fluid Inclusion/Petrology Results

| 233   -0.6   -0.7     238   -0.3   -0.5     -0.5   -0.4   -0.4     Average 'Th and Tm   208   -0.4     Number of data points   n=25   n=14     GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4     223   -0.4   -0.4   -0.4     223   -0.4   -0.4   -0.4     223   -0.4   -0.4   -0.4     223   -0.4   -0.4   -0.4     223   -0.4   -0.4   -0.4     223   -0.4   -0.4   -0.4     223   -0.4   -0.4   -0.4     223   -0.4   -0.4   -0.4     234   -0.4   -0.4   -0.4     235   -0.3   -0.3   -0.3     241   -0.3   -0.3   -0.1     246   -0.1   -0.1   -0.1     265   -0.3   -0.1   -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 238   -0.3   -0.3     -0.5   -0.5   -0.4     -0.4   -0.4   -0.4     Average Th and Tm   208   -0.4     Number of data points   n=25   n=14     Coarse xtln banded qtz stwk vn   211   -0.4     GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4     233   -0.4   -0.4   -0.4     GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4   -0.4     1   -0.4   -0.4   -0.4   -0.4   -0.4     1   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4     1   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4   -0.4                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| -0.3   -0.3     -0.5   -0.4     -0.4   -0.4     -0.4   -0.4     Average Th and Tm   208   -0.4     Number of data points   n=25   n=14     GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4     233   234   -0.4   -0.4     234   235   -0.3   -0.3     236   -0.3   -0.3   -0.3     241   246   -0.3   -0.1     247   259   -0.1   -0.1     265   -0.3   -0.3   -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| -0.5   -0.4     Average Th and Tm   208   -0.4     Number of data points   n=25   n=14     GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4     223   -0.4   -0.4   -0.4     GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4   -0.4     233   -0.4   -0.4   -0.4   -0.4     233   -0.4   -0.4   -0.4   -0.4     233   -0.4   -0.4   -0.4   -0.4     233   -0.4   -0.4   -0.4   -0.4     233   -0.4   -0.4   -0.4   -0.4     233   -0.4   -0.4   -0.4   -0.4     233   -0.4   -0.4   -0.4   -0.4     234   -0.3   -0.3   -0.4   -0.4     236   -0.3   -0.3   -0.3   -0.4     -0.1   -0.4   -0.4   -0.4   -0.4     -0.1   -0.4   -0.3   -0.3   -0.4     -0.1   -0.4   -0.4   -0.4   -0.4<                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Average Th and Tm   208   -0.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Average Th and Tm   208   -0.4      Number of data points   n=25   n=14      GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4      Image: Coarse xtln banded qtz stwk vn   211   -0.4       Image: Coarse xtln banded qtz stwk vn   211   -0.4       Image: Coarse xtln banded qtz stwk vn   211   -0.4       Image: Coarse xtln banded qtz stwk vn   211   -0.4       Image: Coarse xtln banded qtz stwk vn   211   -0.4       Image: Coarse xtln banded qtz stwk vn   211   -0.4       Image: Coarse xtln banded qtz stwk vn   211   -0.4        Image: Coarse xtln banded qtz stwk vn   213   Image: Coarse xtln banded qtz stwk vn   213   Image: Coarse xtln banded qtz stwk vn                              <                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Average Th and Tm   208   -0.4   Image Th and Tm   208   n=14     Number of data points   n=25   n=14   Image Th and Tm   Image Th a |  |
| Number of data points   n=25   n=14     GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4     223   234   234     235   236   -0.3     237   237   237     241   241   246     247   259   -0.1     259   -0.3   259     265   -0.3   265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4     223   223   234     234   235   236     236   -0.3   237     241   241   246     246   247   259     259   -0.1   265     265   -0.3   265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| GSD-211 63.0m   Coarse xtln banded qtz stwk vn   211   -0.4     223   223   234     234   235   235     236   -0.3   237     241   241   246     246   247   259     259   -0.1   265   -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| 223 234   234 235   236 -0.3   237 237   241 246   247 247   259 -0.1   265 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 234 234   235 235   236 -0.3   237 237   241 241   246 247   247 259   259 -0.1   265 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| 235 235   236 -0.3   237 237   241 241   246 246   247 259   259 -0.1   265 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
| 236 -0.3   237 237   241 241   246 246   247 259   259 -0.1   265 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| 237 237   241 246   246 247   259 -0.1   265 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| 241   246   247   259   -0.1   265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| 246   247   259   265                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
| 247<br>247<br>259 -0.1<br>265 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| 247       259     -0.1       265     -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| 265 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 200 -0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 272                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 212                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| -0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| -0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| Average In and Im 242 -0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| Number of data points n=12 n=12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| GSD-185 299.4m Mod xtln qtz stwk vn 247 -0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| 256 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 258 -0.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 258 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 260 -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 260 -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 260 -0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 261 -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 264 -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 264                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| 264 -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 265 -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| 267 -0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 267 -0.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 268 -0.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 272 -0.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| 272                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |

| Location      | Petrography                                          | Primary<br>Th (C) | Primary<br>Tm (C) | Secondary<br>Th (C) | Secondary<br>Tm (C) |
|---------------|------------------------------------------------------|-------------------|-------------------|---------------------|---------------------|
|               |                                                      | 273               | -0.2              |                     |                     |
|               |                                                      | 275               | 0                 |                     |                     |
|               |                                                      | 280               |                   |                     |                     |
|               |                                                      |                   |                   |                     |                     |
|               | Average Th and Tm                                    | 265               | -0.2              |                     |                     |
|               | Number of data points                                | n=21              | n=18              |                     |                     |
|               |                                                      |                   |                   |                     |                     |
| GSD-15 46.2m  | Mod xtln qtz, adjacent but earlier than              | 225               | -0.1              | 210                 | -0.1                |
|               | qtz-chl banding                                      | 235               | -0.1              | 211                 | -0.2                |
|               |                                                      | 240               | -0.1              | 214                 | -0.1                |
|               |                                                      | 241               | -0.5              | 217                 | -0.2                |
|               |                                                      | 250               | -0.2              | 222                 |                     |
|               |                                                      | 250               |                   | 227                 | -0.2                |
|               |                                                      | 254               | -0.1              |                     | -0.2                |
|               |                                                      | 254               | -0.2              |                     | -0.2                |
|               |                                                      | 255               | -0.3              |                     |                     |
|               |                                                      | 255               | -0.1              |                     |                     |
|               |                                                      | 258               | -0.1              |                     |                     |
|               |                                                      | 267               | -0.1              |                     |                     |
|               |                                                      | 268               |                   |                     |                     |
|               |                                                      | 268               |                   |                     |                     |
|               |                                                      | 273               | -0.1              | <u> </u>            |                     |
|               |                                                      |                   |                   |                     |                     |
|               | Average Th and Im                                    | 253               | -0.2              | 217                 | -0.2                |
|               | Number of data points                                | n=15              | n=12              | <u>n=6</u>          | n=7                 |
|               |                                                      | 102               |                   |                     |                     |
| GSD-211 18.7m | Fine xtin qtz stwk vn                                | 193               | 0.4               |                     |                     |
|               |                                                      | 228               | -0.1              |                     |                     |
| _             |                                                      | 229               |                   |                     |                     |
|               |                                                      | 233               | 0.1               |                     |                     |
|               |                                                      | 237               |                   |                     |                     |
|               |                                                      | 244               | 0.3               |                     |                     |
|               |                                                      | 255               | -0.2              |                     |                     |
|               |                                                      | 255               | 0.1               |                     |                     |
|               |                                                      | 257               | 0.2               |                     |                     |
|               |                                                      | 261               | 0                 |                     |                     |
|               |                                                      | 264               |                   |                     |                     |
|               |                                                      |                   | 0.3               |                     | <u> </u>            |
|               |                                                      |                   | 0                 |                     |                     |
|               | Average Th and Tre                                   | 247               | 0 1               |                     |                     |
|               | Average In and Im                                    | 247               | 0.1               |                     |                     |
|               | Number of data points                                | n=12              | <u>n=11</u>       |                     |                     |
| DFD-009 393.1 | Mod xtln banded qtz vn, late phase                   | 264               | -0.1              |                     |                     |
|               | veining adjacent to finely laminated                 | 308               |                   |                     |                     |
|               | recrystallized "chalcedonic"<br>banding <sup>?</sup> | 320               | 0                 |                     |                     |
|               |                                                      | 363               |                   |                     |                     |
|               | ÷                                                    |                   | -0.1              |                     |                     |
|               |                                                      |                   | 0                 |                     |                     |

| Location        | Potrography                            | Primary | Drimory | Secondary | Secondary |
|-----------------|----------------------------------------|---------|---------|-----------|-----------|
| Location        | retrography                            | Th (C)  | Tru (C) | Th (C)    | Secondary |
|                 |                                        | 11(C)   |         |           |           |
|                 | Average Th and Tm                      | 314     | -0.1    |           |           |
|                 | Number of data points                  | n=4     | n=4     |           |           |
|                 |                                        |         |         |           |           |
| GSD 176 224 0m  | Fine xtln atz stwk vn                  | 206     | -0.1    |           |           |
| 05D-170 224.011 |                                        | 200     | 0.1     |           |           |
|                 |                                        | 221     | -0.3    |           |           |
|                 |                                        | 220     | -0.2    |           |           |
|                 |                                        | 220     | -0.2    |           |           |
|                 |                                        | 227     | -0.3    |           |           |
|                 |                                        | 227     | -0.3    |           |           |
|                 |                                        | 228     | -0.2    |           |           |
|                 |                                        | 231     | -0.2    |           |           |
|                 |                                        | 234     | -0.1    |           |           |
|                 |                                        | 235     | -0.2    |           |           |
|                 |                                        | 230     | -0.4    | <u> </u>  |           |
|                 |                                        | 237     | -0.2    |           |           |
|                 |                                        | 238     | -0.3    |           |           |
|                 |                                        | 239     | -0.3    |           |           |
|                 | · · · · · · · · · · · · · · · · · · ·  | 243     |         |           |           |
|                 |                                        | 244     | -0.2    |           |           |
|                 |                                        | 245     | -0.2    |           |           |
|                 |                                        | 245     | -0.2    |           |           |
|                 |                                        | 245     |         |           | _         |
|                 |                                        | 247     | -0.2    |           | _         |
|                 |                                        | 248     | -0.4    |           |           |
|                 |                                        | 249     | -0.4    |           |           |
|                 |                                        | 253     | -0.1    |           |           |
|                 |                                        | 254     | -0.2    |           |           |
|                 |                                        | 254     | -0.3    |           |           |
|                 |                                        | 257     | -0.2    |           |           |
|                 |                                        | 267     | -0.2    |           |           |
|                 |                                        | 301     | -0.1    |           |           |
|                 |                                        |         | -0.1    |           |           |
|                 |                                        |         | -0.3    |           |           |
|                 |                                        |         |         |           |           |
|                 | Average Th and Tm                      | 242     | -0.2    |           |           |
|                 | Number of data points                  | n=28    | n=28    |           |           |
|                 |                                        |         |         |           |           |
| GSD-027 89.4m   | Weakly banded qtz vn, alternating fine | 199     |         |           |           |
|                 | and coarse quartz bands                | 200     |         |           |           |
|                 |                                        | 207     |         |           |           |
|                 |                                        | 209     |         |           |           |
|                 |                                        | 210     |         |           |           |
|                 |                                        | 210     | -0.2    |           |           |
|                 |                                        | 215     |         |           | _         |
| ·               |                                        | 216     |         |           |           |
|                 |                                        | 220     | -0.3    |           |           |
|                 |                                        | 225     |         | <u> </u>  |           |
|                 |                                        | 226     | -0.2    |           |           |
|                 |                                        | 226     |         | <u> </u>  |           |
|                 |                                        | 227     |         |           |           |
|                 |                                        |         |         |           |           |

| Location        | Petrography                     | Primary<br>Th (C) | Primary<br>Tm (C) | Secondary<br>Th (C) | Secondary<br>Tm (C) |
|-----------------|---------------------------------|-------------------|-------------------|---------------------|---------------------|
|                 |                                 | 228               | -0.3              |                     |                     |
|                 | -                               | 228               | -0.3              | <u> </u>            |                     |
|                 |                                 | 228               |                   |                     |                     |
|                 |                                 | 228               |                   |                     |                     |
|                 |                                 | 229               |                   |                     |                     |
|                 |                                 | 229               |                   |                     |                     |
|                 |                                 | 220               |                   |                     |                     |
| >               |                                 | 250               |                   |                     |                     |
|                 | Average Th and Tm               | 220               | -0.3              |                     |                     |
|                 | Number of data points           | n=20              | n=4               |                     |                     |
| ,               |                                 | <u> </u>          | <u> </u>          |                     |                     |
| COD 169 297 0m  | Fine grained mosaic atz         | 225               |                   |                     |                     |
| GSD-108 287.000 |                                 | 223               | 0.2               |                     |                     |
|                 |                                 | 234               | -0.3              |                     |                     |
|                 |                                 | 240               |                   |                     |                     |
|                 |                                 | 243               |                   |                     |                     |
| _               |                                 | 247               | -0.2              |                     |                     |
|                 |                                 | 248               |                   |                     |                     |
|                 |                                 | 249               |                   |                     |                     |
|                 | · · ·                           | 249               |                   |                     |                     |
|                 |                                 | 250               |                   |                     |                     |
|                 |                                 | 251               |                   |                     |                     |
|                 |                                 | 252               |                   |                     |                     |
|                 |                                 | 252               | -0.3              |                     |                     |
|                 |                                 | 253               |                   |                     |                     |
|                 |                                 | 255               | -0.3              |                     |                     |
|                 |                                 | 255               |                   |                     |                     |
|                 |                                 | 257               | -0.3              |                     |                     |
|                 |                                 |                   |                   |                     |                     |
|                 | Average Th and Tm               | 248               | -0.3              |                     |                     |
|                 | Number of data points           | n=16              | n=5               |                     |                     |
|                 |                                 |                   |                   |                     |                     |
| GSD-187 136.4   | Coarse xtaln crustiform qtz vn, | 211               |                   |                     |                     |
|                 | cutting qtz-chl banding         | 227               |                   |                     |                     |
|                 |                                 | 235               |                   |                     |                     |
|                 | _                               | 235               |                   |                     | -                   |
|                 |                                 | 236               | _                 |                     |                     |
|                 |                                 | 236               | _                 |                     |                     |
|                 |                                 | 236               | -0.4              |                     |                     |
|                 |                                 | 237               |                   | -                   |                     |
|                 |                                 | 237               |                   |                     |                     |
|                 |                                 | 239               |                   |                     |                     |
| · · · · · ·     |                                 | 242               |                   |                     |                     |
|                 |                                 | 245               |                   |                     |                     |
|                 |                                 | 245               | -0.4              |                     |                     |
|                 |                                 | 249               | -0.5              |                     |                     |
|                 | e                               | 250               |                   |                     |                     |
|                 |                                 | 250               | _0 3              |                     |                     |
|                 | 1                               |                   | -0.5              |                     |                     |
|                 | Average Th and Tm               | 238               | _0 4              |                     |                     |
|                 | Number of data points           | n=16              | -0.4<br>n=4       |                     |                     |
|                 |                                 | 11-10             | <u> </u>          |                     |                     |
|                 |                                 |                   |                   |                     |                     |

| Location          | Petrography                        | Primary<br>Th (C) | Primary<br>Tm (C) | Secondary<br>Th (C) | Secondary<br>Tm (C) |
|-------------------|------------------------------------|-------------------|-------------------|---------------------|---------------------|
| GSD-113 89.0m     | Coarse grained xtaln prismatic qtz | 215               | -0.3              |                     |                     |
|                   | _                                  | 223               |                   | -                   |                     |
|                   |                                    | 225               | -0.3              |                     |                     |
|                   |                                    | 226               |                   |                     |                     |
|                   |                                    | 228               | -0.3              |                     |                     |
|                   |                                    | 229               | -0.3              |                     |                     |
| ,                 | -                                  | 230               |                   |                     |                     |
|                   |                                    | 235               |                   |                     |                     |
|                   |                                    | 235               |                   |                     |                     |
|                   |                                    | 236               |                   |                     |                     |
| *                 |                                    | 238               | -0.3              |                     |                     |
|                   |                                    | 238               |                   |                     |                     |
|                   |                                    | 255               |                   | _                   |                     |
|                   | Average Th and Tm                  | 232               | -0.3              |                     |                     |
|                   | Number of data points              | n=13              | n=5               |                     |                     |
|                   |                                    |                   |                   |                     |                     |
| GSD-174 425.3     | Coarse xtaln qtz                   | 229               | -0.3              | 210                 |                     |
|                   | Ψ                                  | 239               |                   | 220                 |                     |
|                   |                                    | 239               | -0.2              | 223                 |                     |
|                   |                                    | 240               | -0.3              | 225                 |                     |
|                   |                                    | 240               | -0.3              |                     |                     |
|                   |                                    | 240               |                   |                     |                     |
|                   |                                    | 241               |                   |                     |                     |
|                   |                                    | 245               |                   |                     |                     |
|                   |                                    | 252               |                   |                     |                     |
|                   |                                    | 255               |                   |                     |                     |
|                   |                                    | 242               | 0.2               | 220                 |                     |
|                   | Average In and Im                  | 242               | -0.3              | 220                 |                     |
|                   | Number of data points              | n-10              | <u>n=4</u>        | <u>n=4</u>          |                     |
| GSD-1020001 290.3 | Coarse xtaln quartz vn             | 220               | -0.2              |                     |                     |
|                   |                                    | 225               | -0.2              |                     |                     |
|                   |                                    | 234               | -0.3              |                     |                     |
|                   |                                    | 236               |                   |                     |                     |
|                   |                                    | 236               |                   |                     | -                   |
|                   |                                    | 237               |                   |                     | -                   |
|                   |                                    | 238               |                   |                     |                     |
|                   |                                    | 239               |                   |                     |                     |
|                   |                                    | 239               |                   |                     |                     |
|                   |                                    | 239               | -0.3              |                     |                     |
|                   | ,                                  | 240               |                   |                     |                     |
|                   | J.                                 | 240               |                   |                     |                     |
|                   |                                    | 243               |                   |                     |                     |
|                   |                                    | 257               |                   |                     |                     |
|                   |                                    |                   |                   |                     |                     |
| ,<br>             | Average Th and Tm                  | 237               | -0.3              |                     |                     |
|                   | Number of data points              | n=14              | 4                 |                     |                     |
|                   | Don dod ocomo ut-1: -t-            | 222               | 0.2               | 157                 |                     |
| GSD-019 92.6m     | Banded coarse stain qtz            | 222               | -0.3              | 157                 |                     |
|                   |                                    | 225               | -0.3              | 201                 |                     |

.

| т (!             |                                 |             | <b>D</b> • |               |           |
|------------------|---------------------------------|-------------|------------|---------------|-----------|
| Location         | Petrography                     | Primary     | Primary    | Secondary     | Secondary |
|                  |                                 | Th (C)      | <u> </u>   | <u>Th (C)</u> | Tm (C)    |
|                  |                                 | 233         |            | 203           |           |
|                  |                                 | 234         |            | 204           |           |
|                  |                                 | 236         |            | 206           |           |
|                  |                                 | 237         |            |               |           |
|                  |                                 | 238         | -0.3       |               |           |
|                  |                                 | 239         |            |               |           |
|                  |                                 | 245         |            |               |           |
|                  | *                               |             |            | <u> </u>      | -         |
|                  | Average Th and Tm               | 234         | -0.3       | 194           |           |
|                  | Number of data points           | n=9         | n=3        | n=5           |           |
|                  |                                 |             |            |               |           |
| 00D 00( 7.0      | Eine to medium emined stals atz | 215         |            | <u> </u>      |           |
| GSD-080 /.0m     | The to medium granied stam qiz  | 213         |            |               |           |
|                  |                                 | 235         | -0.4       |               |           |
|                  |                                 | 237         |            |               |           |
|                  |                                 | 238         |            |               |           |
|                  |                                 | 239         |            |               |           |
|                  |                                 | 239         |            |               |           |
|                  |                                 | 240         | -0.3       |               |           |
|                  |                                 | 241         | -0.3       |               |           |
|                  |                                 | 241         |            |               |           |
|                  |                                 | 242         |            |               |           |
|                  |                                 | 242         |            |               |           |
|                  |                                 | 242         | -0.4       |               |           |
|                  |                                 | 243         | -0.4       |               |           |
|                  |                                 | 252         |            |               |           |
|                  |                                 |             |            |               |           |
|                  | Average Th and Tm               | 239         | -0.4       |               |           |
|                  | Number of data points           | <u>n=13</u> | n=5        |               |           |
|                  |                                 |             |            |               |           |
| GSD-210 87.9m    | Coarse xtaln qtz vn stringers   | 232         | -0.3       |               |           |
|                  |                                 | 235         |            | _             |           |
|                  |                                 | 236         |            |               |           |
|                  |                                 | 237         |            |               |           |
|                  |                                 | 237         |            |               |           |
|                  |                                 | 237         |            |               |           |
|                  |                                 | 239         | 0.4        |               |           |
|                  |                                 | 239         | -0.4       |               |           |
|                  |                                 | 240         | -0.4       |               |           |
| ······           |                                 | 240         |            |               |           |
|                  |                                 | 241         | -0.4       |               |           |
|                  |                                 | 241         | -0.4       |               |           |
|                  |                                 | 242         |            |               |           |
|                  |                                 | 248         |            | _             |           |
|                  |                                 |             |            |               |           |
|                  | Average. Th and Tm              | 239         | -0.4       |               |           |
|                  | Number of data points           | n=13        | n=5        |               |           |
|                  | * *                             |             |            |               | <u> </u>  |
| GSD_208 120 8m   | Fine to medium grained xtln atz | 226         |            | 185           | · · ·     |
| GSD-200 120.0III | - me to meaning public Alli yiz | 220         |            | 105           |           |
|                  |                                 | 230         |            | 180           |           |
|                  |                                 | 231         | -0.3       | 187           |           |
|                  |                                 | 235         | -0.4       | 190           |           |
|                  |                                 | 236         | -0.4       | 191           |           |
|                  |                                 | 236         |            | 195           |           |

| Location              | Petrography                           | Primary           | Drimary | Secondary | Secondary |
|-----------------------|---------------------------------------|-------------------|---------|-----------|-----------|
| Location              | r eu ography                          | Thus $\mathbf{y}$ | Tm(C)   | Th (C)    | Secondary |
|                       |                                       | 238               | -0.3    | 196       |           |
|                       |                                       | 239               |         |           |           |
|                       |                                       | 241               |         |           |           |
|                       |                                       |                   |         |           |           |
|                       | Average Th and Tm                     | 235               | -0.4    | 190       |           |
|                       | Number of data points                 | n=9               |         | n=7       |           |
|                       |                                       |                   |         |           |           |
| GSD-1065002 196 2m    | Crustiform banded fine grained atz    | 244               | -0.3    |           |           |
| USD-1005002 170.2m    |                                       | 248               | -0.3    | -         |           |
|                       |                                       | 248               | -0.3    |           | _         |
| 1                     |                                       | 248               | -0.2    |           |           |
|                       |                                       | 249               |         |           |           |
|                       |                                       | 250               |         |           | _         |
|                       |                                       | 250               |         |           |           |
|                       |                                       | 251               |         |           |           |
|                       |                                       | 251               |         | _         |           |
|                       |                                       | 252               |         |           |           |
|                       |                                       | 252               |         |           |           |
|                       |                                       | 254               | 0.2     |           |           |
|                       | · · · · · · · · · · · · · · · · · · · | 255               | -0.2    | -         |           |
|                       | Average Th and Tm                     | 250               | 0.3     |           |           |
|                       | Number of data points                 | 250<br>n=12       | -0.3    |           |           |
|                       | Number of data points                 | <u>II</u> -12     | n-4     |           |           |
| CSD 112 142 1         | coarre staln atz, atz ahl handa       | 224               |         |           |           |
| GSD-112 143.1m        | coarse xtain qtz, qtz-cin bands       | 224               |         |           |           |
|                       |                                       | 234               | -0.2    |           |           |
|                       |                                       | 235               |         |           |           |
|                       |                                       | 238               |         |           |           |
|                       |                                       | 238               | -0.3    |           |           |
|                       |                                       | 240               |         |           |           |
|                       |                                       | 241               |         |           |           |
|                       |                                       | 243               |         |           |           |
|                       |                                       | 243               | 0.2     |           |           |
|                       | _                                     | 244               | -0.2    |           |           |
| _                     |                                       | 245               | 0.2     |           |           |
|                       |                                       | 245               | -0.3    |           |           |
|                       |                                       | 240               |         |           |           |
|                       |                                       | 247               |         |           |           |
|                       | Average Th and Tm                     | 240               | 0.3     |           |           |
|                       | Number of data points                 | n=14              | -0.3    |           |           |
|                       |                                       |                   |         |           |           |
| CSD 172 169 2m        | Coarse grained ytain gtz              | 213               |         |           |           |
| <u>USD-1/5 108.5m</u> |                                       | 213               |         |           |           |
|                       |                                       | 213               |         |           |           |
|                       | ······                                | 214               |         |           |           |
|                       |                                       | 215               |         |           |           |
|                       |                                       | 210               | 0.0     |           |           |
|                       |                                       | 21/               | -0.2    |           |           |
|                       |                                       | 218               | -0.2    |           |           |
| _                     |                                       | 220               |         |           |           |
|                       | n                                     | 221               |         |           |           |
|                       |                                       | 223               |         |           |           |

| Location                | Petrography                    | Primary | Primary | Secondary | Secondary                             |
|-------------------------|--------------------------------|---------|---------|-----------|---------------------------------------|
|                         |                                | Th (C)  | Tm (C)  | Th (C)    | Tm (C)                                |
|                         |                                | 225     | (_)     |           |                                       |
|                         |                                | 231     | -0.4    |           |                                       |
|                         |                                | 232     | -0.4    |           |                                       |
|                         |                                | 233     |         |           |                                       |
|                         |                                | 233     | -0.5    |           |                                       |
|                         |                                | 235     |         |           |                                       |
| 8                       |                                | 237     |         |           |                                       |
|                         |                                | 238     | -0.4    |           |                                       |
|                         |                                |         |         |           |                                       |
|                         | Average Th and Tm              | 224     | -0.4    |           |                                       |
|                         | Number of data points          | n=18    | n=6     |           |                                       |
|                         |                                |         |         |           |                                       |
| RL180, 10090N,<br>4995E | Late qtz veinlet               | 180     |         |           |                                       |
|                         |                                | 185     |         |           |                                       |
|                         |                                | 186     |         |           | _                                     |
|                         |                                | 207     |         |           |                                       |
|                         |                                | 220     |         |           |                                       |
|                         | • •                            | 222     |         | _         |                                       |
|                         |                                | 230     |         |           |                                       |
|                         |                                | 232     |         |           |                                       |
|                         |                                | 235     |         |           |                                       |
|                         |                                |         |         |           |                                       |
|                         | Average Th                     | 211     |         |           |                                       |
|                         | Number of data points          | n=9     |         |           |                                       |
|                         |                                |         |         |           | _                                     |
| RL180, 10125N,<br>5000E | Crustiform banded quartz       | 199     |         |           |                                       |
|                         | quartz after carbonate present | 201     |         |           |                                       |
|                         |                                | 201     |         |           |                                       |
|                         |                                | 204     |         |           |                                       |
|                         |                                |         |         |           |                                       |
|                         | Average Th                     | 201     |         |           |                                       |
|                         | Number of data points          | n=4     |         |           |                                       |
|                         |                                |         |         |           |                                       |
| RL180, 10150N,<br>5000E | Crustiform banded quartz       | 170     |         |           |                                       |
|                         | quartz after carbonate present | 175     |         |           |                                       |
|                         |                                |         |         |           |                                       |
|                         | Average Th                     | 173     |         |           |                                       |
|                         | Number of data points          | n=2     |         |           |                                       |
|                         |                                |         |         |           |                                       |
| RL180, 10163N,<br>4986E | Crustiform banded quartz       | 197     |         |           |                                       |
|                         |                                | 199     |         |           |                                       |
|                         | ć                              | 200     |         |           |                                       |
|                         |                                | 201     |         |           |                                       |
|                         | 1                              | 202     |         | _         |                                       |
|                         |                                | 202     |         |           |                                       |
|                         |                                | 202     |         |           |                                       |
|                         |                                | 202     | -       |           |                                       |
|                         |                                | 205     |         |           |                                       |
|                         |                                |         |         |           | · · · · · · · · · · · · · · · · · · · |

| Location                | Petrography                              | Primary             | Primary<br>Trn (C) | Secondary | Secondary |
|-------------------------|------------------------------------------|---------------------|--------------------|-----------|-----------|
|                         |                                          | $\frac{11(C)}{208}$ |                    |           |           |
|                         |                                          | 208                 |                    |           |           |
|                         |                                          | 209                 |                    |           |           |
|                         |                                          |                     |                    |           |           |
|                         | Average Th                               | 203                 |                    |           |           |
|                         | Number of data points                    | n=12                |                    |           |           |
|                         | · · · · · · · · · · · · · · · · · · ·    |                     |                    |           |           |
| RL180, 10175N,<br>4995E | Early quartz cement, CO2, vapor-<br>rich | 214                 |                    |           |           |
|                         | Fis present                              | 215                 |                    |           |           |
| •                       |                                          | 216                 |                    |           |           |
|                         |                                          | 218                 |                    |           |           |
|                         |                                          | 218                 |                    |           |           |
|                         |                                          | 221                 |                    |           |           |
|                         |                                          | 223                 |                    |           |           |
|                         |                                          | 225                 |                    |           |           |
|                         |                                          | 225                 |                    |           |           |
|                         |                                          | 228                 |                    |           |           |
|                         | • •                                      | 230                 |                    |           |           |
|                         |                                          | 235                 |                    |           |           |
|                         |                                          | 237                 |                    |           |           |
|                         |                                          |                     |                    |           |           |
|                         | Average Th                               | 223                 |                    |           |           |
|                         | Number of data points                    | n=13                |                    |           |           |
|                         |                                          |                     |                    |           |           |
| RL170, 10150N,<br>5000E | Late quartz veinlet                      | 218                 |                    |           |           |
|                         |                                          | 220                 |                    |           |           |
|                         |                                          | 221                 |                    |           |           |
|                         |                                          |                     |                    |           |           |
|                         | Average 1h                               | 220                 |                    |           |           |
| -                       | Number of data points                    | n=3                 |                    |           |           |
| RL170, 10150N,          | Early massive quartz vein cement         | 209                 |                    |           |           |
|                         |                                          | 210                 |                    |           |           |
|                         |                                          | 211                 |                    | <u> </u>  |           |
|                         |                                          | 213                 |                    |           |           |
| •••                     |                                          | 214                 |                    |           |           |
|                         |                                          | 215                 |                    |           |           |
|                         |                                          | 215                 |                    |           |           |
|                         |                                          | 217                 |                    |           |           |
|                         |                                          | 219                 |                    |           | _         |
|                         |                                          | 220                 |                    |           |           |
|                         |                                          | 225                 |                    |           |           |
|                         | <i>c</i>                                 |                     |                    |           |           |
|                         | Average Th                               | 215                 |                    |           |           |
|                         | Number of data points                    | n=11                |                    |           |           |
|                         | · -                                      |                     |                    |           |           |
| RL170, 10150N,<br>4990E | Massive quartz cement. CO2, vapor        | 207                 |                    |           |           |
|                         | rich Fis present                         | 210                 |                    |           |           |
|                         | -                                        |                     |                    |           |           |

| Location                | Petrography                            | Primary<br>Th (C) | Primary<br>Tm (C) | Secondary<br>Th (C) | Secondary |
|-------------------------|----------------------------------------|-------------------|-------------------|---------------------|-----------|
|                         |                                        | 211               | <u>Im(C)</u>      |                     |           |
|                         |                                        | 211               |                   | <u> </u>            |           |
|                         |                                        | 212               |                   |                     |           |
|                         |                                        | 212               |                   |                     |           |
|                         |                                        | 213               |                   | <u> </u>            |           |
|                         |                                        | 213               |                   |                     |           |
|                         |                                        | 213               |                   | <u> </u>            |           |
| >                       |                                        | 215               |                   |                     | <u> </u>  |
|                         |                                        | 215               |                   |                     | <u> </u>  |
|                         |                                        | 216               |                   |                     |           |
|                         |                                        | 210               |                   | <u> </u>            |           |
|                         |                                        | 210               |                   | <u> </u>            |           |
|                         |                                        | 225               |                   |                     |           |
|                         |                                        |                   |                   |                     |           |
|                         | Average Th                             | 214               |                   |                     |           |
|                         | Number of data points                  | n-15              |                   |                     |           |
|                         | Number of data points                  | 11-13             |                   | <u> </u>            |           |
| RL170, 10220N,          | Crustiform banded quartz, CO2<br>vapor | 187               |                   |                     | <u> </u>  |
| 5005E                   | rich Fis                               | 190               |                   |                     |           |
|                         |                                        | 190               |                   |                     |           |
|                         |                                        | 190               |                   |                     |           |
|                         |                                        | 197               |                   |                     |           |
|                         |                                        | 192               |                   |                     |           |
|                         | Average Th                             | 100               |                   |                     |           |
|                         | Number of data points                  | 190               |                   |                     | <u> </u>  |
|                         | Number of data points                  | 11-3              |                   |                     |           |
| RL170, 10225N,<br>5005E | Crustiform banded quartz               | 188               |                   |                     |           |
|                         |                                        | 188               |                   |                     |           |
|                         |                                        | 189               |                   |                     |           |
|                         |                                        | 189               |                   |                     |           |
|                         |                                        |                   |                   |                     |           |
|                         | Average Th                             | 189               |                   |                     |           |
|                         | Number of data points                  | n=4               |                   |                     |           |
|                         |                                        |                   |                   |                     |           |
| RL175, 10090N,<br>5005E | Milky white quartz                     | 210               |                   |                     |           |
|                         |                                        | 212               |                   |                     |           |
|                         |                                        | 212               |                   |                     |           |
|                         |                                        | 214               |                   |                     |           |
|                         |                                        | 215               |                   |                     |           |
|                         |                                        | 216               |                   |                     |           |
|                         | **<br>                                 | 229               |                   |                     | _         |
|                         |                                        | 230               |                   |                     |           |
|                         | 2                                      | 230               |                   |                     |           |
|                         |                                        | 231               |                   |                     | _         |
|                         |                                        | 234               | _                 |                     |           |
|                         |                                        | 235               |                   |                     |           |
|                         |                                        | 236               |                   |                     |           |
|                         | -                                      |                   |                   |                     |           |
|                         |                                        | 236               |                   |                     |           |

| Location           | Potrography                   | Duimony  | Duimour    | Secondami | Samular   |
|--------------------|-------------------------------|----------|------------|-----------|-----------|
| Location           | recrography                   | Th (C)   | Tr (C)     | Secondary | Secondary |
|                    | Average Th                    | 224      |            |           | 1 m (C)   |
|                    | Number of data points         | n=14     |            | <u> </u>  |           |
|                    |                               | <u> </u> |            | +         |           |
| GSD-1065001 101.3m | Coarse gtz yn by cement       | 233      |            | 198       |           |
|                    |                               | 235      |            |           |           |
|                    |                               | 233      |            |           |           |
|                    |                               | 242      |            | <u> </u>  |           |
| <u> </u>           |                               | 248      |            | <u> </u>  |           |
|                    |                               | 2.50     |            |           |           |
|                    |                               | 250      |            |           |           |
|                    |                               | 252      |            |           |           |
|                    |                               | 254      |            |           |           |
|                    |                               | 262      |            | ···       |           |
|                    |                               | 280      |            |           |           |
|                    |                               | 290      |            |           |           |
|                    |                               | 297      |            |           |           |
|                    |                               |          |            |           |           |
|                    | Average Th                    | 257      |            |           |           |
|                    | Number of data points         | n=13     | _          |           |           |
|                    |                               |          |            |           |           |
| T10100             | Fine xtln quartz vein breccia | 214      | -0.7       |           |           |
|                    | cement                        | 10       | 0.5        |           |           |
|                    |                               | 219      | -0.7       |           |           |
|                    |                               |          | -0.4       |           |           |
|                    |                               |          | -0.4       |           |           |
|                    |                               | ·        | -0.3       |           | <u> </u>  |
|                    |                               |          | -0.3       |           |           |
|                    |                               | <u> </u> | -0.2       |           |           |
|                    |                               |          | -0.2       |           |           |
|                    | Average Th & Tm               | 217      | _0.4       |           |           |
|                    | Number of data points         | n=2      | -0.4       |           | <u> </u>  |
|                    | Trainoer of data points       | 1-2      | <u>n-8</u> |           | <u> </u>  |
| T10250a            | Crustiform banded quartz vein | 198      | -0.4       |           | +         |
| 110250a            | breccia                       | 170      | 0.1        |           |           |
|                    |                               | 199      | -0.4       |           |           |
|                    |                               | 209      | -0.3       |           |           |
|                    |                               | 210      |            |           |           |
|                    |                               | 214      |            |           |           |
|                    |                               | 214      |            |           |           |
|                    |                               | 221      |            |           |           |
|                    |                               |          |            |           |           |
|                    | Average Th & Tm               | 209      | -0.4       |           |           |
|                    | Number of data points         | n=7      | n=3        |           |           |
|                    |                               |          |            |           |           |
| T10250b            | Coarse xtln quartz vein       | 220      | -0.9       |           |           |
|                    |                               | 224      | -0.6       |           |           |
|                    |                               | 224      | -0.5       |           |           |
|                    |                               | 235      | -0.5       |           |           |
|                    |                               | 240      | -0.5       |           |           |
|                    | n                             | 260      | -0.5       |           |           |
|                    |                               |          | -0.4       |           |           |

| Location | Petrography           | Primary<br>Th (C) | Primary<br>Tm (C) | Secondary | Secondary |
|----------|-----------------------|-------------------|-------------------|-----------|-----------|
|          |                       | III (C)           | -0.4              |           |           |
|          |                       |                   |                   |           |           |
|          | Average Th            | 234               | -0.5              |           |           |
|          | Number of data points | n=6               |                   |           |           |













207 Appendix V - Fluid Inclusion/Petrology Results





## **Petrological Descriptions**

### Sample Number: GSD-174, 425.5m

Location: Gosowong

Hand Specimen Description: Banded quartz vein, coarsely banded with fine to medium grained quartz, grayish white with brown blebs.

Thin Section Description: Quartz 90%, illite 7%, epidote 1%, chlorite 1%, pyrite 1%.

- Lithology: Predominantly vein material. Protolith unknown, alteration is complete.
- <u>Alteration</u>: Alteration is complete, 100% replacement. Illite and quartz with lesser and variable amounts of epidote and chlorite totally replacing wallrock. Protolith unknown.
- <u>Deposition</u>: Medium to fine crystalline quartz vein. Coarser bands generally mosaic to prismatic quartz crystals forming linear to wavy bands. Between the coarse bands are bands of very fine microcrystalline quartz intermixed with minor amounts of illite, epidote, chlorite, and an unidentified opaque black mineral which may be finely comminuated wallrock material. These bands fill in around euhedral quartz terminations and thicken and thin to fill in the "topography". Occasionally very large quartz fragments get caught up in these bands. Late stage quartz veins crosscut all banding and clasts.

<u>Comments</u>: The clastic rich bands provide a smooth surface for further quartz crystals to precipitate upon. These bands also sometimes fill the vugs between crystal terminations in comb quartz veins.

### Sample Number: GSD-154, 332.2m

### Location: Gosowong

Hand Specimen Description: Quartz vein, white, fine crystalline quartz and bladed calcite pseudomorphs.

Thin Section Description: Quartz 96%, calcite 1%, illite 2%, sericite 1%, pyrite trace.

- Lithology: No wall rock present.
- <u>Alteration</u>: No altered wallrock present.
- <u>Deposition</u>: Fine crystalline quartz, crude crustiform banding as indicated by variations in crystal grain size. Most quartz consists of subhedral prismatic to mosaic quartz intergrown with traces of illite grading to sericite. Small amounts of calcite are intergrown locally with the mosaic quartz. Narrow, linear zones of microcrystalline quartz occur adjacent to the banded area often forming a lattice texture with interstitial vugs. Bladed calcite is nearly 100% replaced by fine prismatic quartz. Late stage veins crosscut the sample. Traces of very fine grained disseminated pyrite present.

### Comments:
#### Sample Number: GSD-1010001, 273.5m

#### Location: Gosowong

Hand Specimen Description: Quartz vein, bladed calcite pseudomorphs, fine grained crystalline quartz, white to light gray.

Thin Section Description: Quartz 98%, illite 1%, epidote 1%, adularia trace.

- <u>Lithology</u>: No wall rock present.
- <u>Alteration</u>: No altered wall rock present.
- <u>Deposition</u>: Fine crystalline quartz vein, generally consisting of prismatic to mosaic quartz. Obvious fluid inclusion rich growth faces. Minor very crude banding as indicated by variations in quartz grain size. Quartz intergrown with epidote and traces of rhombehedral adularia grains. Common linear growths of microcrystalline quartz often forming a lattice texture with interstitial vugs. Replacement of original calcite blades with fine grained quartz and traces of adularia. Locally zones of very fine illite and comminuated wall rock with microcrystalline quartz and epidote. No obvious sulfide content.

#### Sample Number: GSD-173

## Location: Gosowong

Hand Specimen Description: Quartz vein, fine grained, crystalline, small vugs, lattice bladed textures, white to light gray.

Thin Section Description: Quartz 97%, illite 2%, pyrite 1%.

- <u>Lithology</u>: Protolith unknown, alteration is complete.
- <u>Alteration</u>: Intensely illite altered (100%) wall rock fragments.
- <u>Deposition</u>: Medium crystalline prismatic quartz, cross cut by fine grained quartz in linear fractures. Most quartz contains feathery bipennate growth features, while a small proportion shows weak undulose extinction. Fine grained quartz growth after bladed calcite, forming narrow linear zones of microcrystalline quartz growth. Abundant fluid inclusions. Minor wall rock fragments within the vein material, all intensely illite altered. Euhedral to subhedral cubic pyrite, very fine grained, disseminated. No adularia present.

#### Sample Number: GSD-168, 287.0

#### Location: Gosowong

Hand Specimen Description: Finely banded quartz vein, chalcedony and quartz bands, graywhite.

Thin Section Description: Quartz 95%, Illite 4%, pyrite 1%.

- Lithology: Medium grained plagioclase-phyric andesite, relict porphyritic texture.
- <u>Alteration</u>: Plagioclase and groundmass totally altered to illite. Illite most common lining central vein vugs. Late quartz veins cut across wall rock. Pyrite is commonly euhedral, mainly found within the wall rock as and alteration product rather than in the vein material. Wall rock is often brecciated by quartz veining forming fragments within the vein. Limonite staining common as a halo around the pyrite crystals
- <u>Deposition</u>: Crystalline quartz, microcrystalline to coarse grained, white to gray. Large crystals commonly exhibit bipennate growth faces and are fluid inclusion rich. Euhedral quartz crystal terminations growing inward into central vugs. Fine bands of fine grained quartz recrystallized after chalcedony. Crustiform banding is defined by alternating layers of microcrystalline and coarse grained quartz.

<u>Comments</u>: The illite appears to be zoned with varying degrees of birefringence, from yellowbrown to gray-black.

#### Sample Number: GSD-086, 7.0m

# Location: Gosowong

<u>Hand Specimen Description</u>: Quartz vein, fine grained crystalline quartz, crude banding, traces of very fine grained unidentified sulfides.

<u>Thin Section Description</u>: Quartz 92%, illite 4%, epidote 1%, chlorite 1%, pyrite/chalcopyrite/ galena 2%, chalcedony trace, adularia trace.

- Lithology: Protolith unknown, only very fine wall rock fragments observed.
- <u>Alteration</u>: Alteration of wallrock fragments comprises illite with traces of chlorite and epidote. Alteration is complete, affecting both matrix and framework clasts.
- <u>Deposition</u>: Crystalline quartz vein, generally medium to fine grained, mosaic, and commonly brecciated. Traces of very fine, angular wallrock fragments throughout with intense illitic alteration of groundmass and framework clast/phenocrysts. Fine grained disseminated sulfides are observed, occasionally forming in crude crustiform bands but usually intergrown with quartz crystals. Sulfides comprise pyrite, chalcopyrite, galena, and rare covellite. Chalcopyrite often appears pitted and partially replaced by covellite. Occasionally galena is intergrown with chalcopyrite. Traces of rhombic adularia intergrown with quartz.

#### Sample Number: GSD-078, 49.2

#### Location: Gosowong

Hand Specimen Description: Quartz vein, quartz-chlorite banding, finely crystalline to chalcedonic, grayish white.

Thin Section Description: Quartz 92%, illite 5%, epidote 1%, pyrite/chalcopyrite/galena 1%, Fe-Oxides 1%.

- Lithology: Protolith unknown, only very fine wall rock fragments present in sample.
- <u>Alteration</u>: Very fine wall rock fragments intensely altered to illite and quartz. Former augite crystals partially replaced by pyrite.
- <u>Deposition</u>: Crystalline quartz vein, medium grained, generally a mixture of prismatic and mosaic quartz, showing fracturing and recrystallization locally. Finely banded as evidenced by alternating bands of fine and very fine grained crystalline quartz and lesser adularia. Very fine grained quartz may have been recrystallized chalcedony. Sulfides comprise pyrite, chalcopyrite, and galena, usually intergrown with quartz. Pyrite is usually subhedral while chalcopyrite is anhedral and pitted.

# Sample Number: GSD-138, 244.8m

## Location: Gosowong

<u>Hand Specimen Description</u>: Crystalline quartz stringers, gray to white, medium grained crystalline, poorly developed coarse banding.

Thin Section Description: Quartz 94%, Illite 3%, adularia 2%, pyrite 1%.

- Lithology: Protolith unknown, only very fine fragments of wall rock present in the sample.
- <u>Alteration</u>: Very fine angular wall rock fragments exhibit intense illite-quartz and lesser adularia alteration of both matrix and framework clasts.
- <u>Deposition</u>: Quartz vein, fine to moderately crystalline, generally euhedral prismatic quartz intergrown with smaller amounts of rhombic adularia, illite, and pyrite. Wallrock cut by early quartz veinlets which do not cut across vein margins. Brecciation occurs locally, consisting of very fine grained quartz, illite, adularia, and finely comminuated wall rock. Poorly developed crustiform banding is indicated by slight changes in grain size and presence of illite and adularia within certain bands. Pyrite and chalcopyrite occur as disseminations, often associated with the illitic alteration of the wall rock fragments

#### Sample Number: GSD-043, 4.8m

Location: Gosowong

Hand Specimen Description: Quartz vein, bladed calcite pseudomorphs, whitish gray.

Thin Section Description: Quartz 56%, adularia 40%, illite 3%, Fe-oxide 1%.

- Lithology: No wall rock present in sample except as finely comminuated fragments.
- <u>Alteration</u>: Wallrock fragments present in sample exhibit intense illite-quartz alteration.
- <u>Deposition</u>: Crystalline quartz-adularia vein, medium to coarse grained euhedral quartz intergrown with rhombic adularia forming a pervasive mosaic texture. Crosscut by very thin bands of microcrystalline adularia and quartz, replacing (pseudomorphing) pre-existing bladed calcite, usually lattice bladed. Traces of zones of fine grained illite, likely fragments of illite altered wallrock. No opaques are present. Traces Fe-oxide locally on quartz grain boundaries. Some of the quartz exhibits a radial extinction pattern, likely chalcedony.

Comments: Abundant adularia and bladed calcite pseudomorphs indicate intense boiling.

#### Sample Number: GSD210, 87.4m

#### Location: Gosowong

<u>Hand Specimen Description</u>: Quartz vein stringers, fine crystalline quartz, coarsely banded, grayish white, hosted within chlorite-epidote altered volcaniclastic.

Thin Section Description: Quartz 63%, chlorite 15%, illite 5%, plagioclase, 5%, epidote 1%, pyrite 1%

- <u>Lithology</u>: Clastic texture with poorly sorted, angular to subrounded volcanics fragments comprising andesite, basalt, and fine grained sediments.
- <u>Alteration</u>: Intense alteration of matrix comprising abundant chlorite and lesser amounts of illite, epidote, and quartz. Plagioclase phenocrysts within coherent volcanic fragments are 90% altered to illite and chlorite. Minor Fe-oxide after pyrite.
- <u>Deposition</u>: Fine to moderately crystalline quartz vein, crude banding as indicated by small variations in quartz grain size. Coarser bands are made up of prismatic to mosaic interlocking grains. Fine bands are composed of very fine grained mosaic quartz intergrown with minor amounts of illite and epidote. No adularia. Traces of disseminated pyrite throughout the wall rock.

Comments: Weakly banded quartz vein stringers.

# Sample Number:DFD009, 393.8m

#### Location: Gosowong

Hand Specimen Description: Crustiform banded quartz vein (chalcedony?), very finely laminated, gray and green banded.

Thin Section Description: Quartz 91%, plagioclase 3%, chlorite 3%, illite 2%, epidote 1%.

- <u>Lithology</u>: Sample dominantly quartz vein. Small wall rock fragments present in brecciated zones. Andesite, porphyritic texture, large twinned plagioclase phenocrysts set in a groundmass of fine grained (glassy?) material.
- <u>Alteration</u>: Groundmass has been 90% altered to chlorite with minor amounts of illite on plagioclase phenocrysts and traces of epidote and quartz.
- <u>Deposition</u>: Quartz vein, very fine to microcrystalline quartz. Most quartz exhibits a degree of plumose zoned extinction indicating recrystallization after chalcedony. Coarser bands are composed of interlocking prismatic and mosaic quartz with illite and small amounts of fine grained chlorite and rare anhedral epidote and comminuated wallrock material. The green color is due to the high chlorite/epidote content.

<u>Comments</u>: Very fine rhythmic banding, quartz recrystallizing after chalcedony in former colloform bands.

# APPENDIX VI Prospectivity Matrix

Appendix VI – Prospectivity Matrix



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Vein Dip A B C D E F G H I J K L M NO P Q R S T U VW X Y Z AA AB AC AD AE AF AG AH ALAJAK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD 12 13 14 15 16 17 -200 15 16 17 -400 20 20 22 -600 A B C D E F G H I J K L M NO P Q R S T U VW X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD 9200N 9400N 9600N 9800N 10000N 10200N 10400N 10600N 10800N 11000N 11200N 11400N 11600N 11800N

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# Quartz Vein Texture



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**Prospectivity Matrix Summary** 

|                         | - (           | N        |      | 4 6  | <b>0</b> ( | 0   |        | 00       | 5   | 10  | 11  | 12       | 13      | 14  | 12   | 10  |      | 18   | 10        | 20   | 21   | 22   |               | _            |  |
|-------------------------|---------------|----------|------|------|------------|-----|--------|----------|-----|-----|-----|----------|---------|-----|------|-----|------|------|-----------|------|------|------|---------------|--------------|--|
| BD                      | 0             | 0        | 0110 | 0110 | 5110       | 9   | 0 0    |          | 0 0 | 0 0 | 0   |          |         | 0 0 | 0 0  | 0   | 0    | 0    | 0         | 0    | 0 0  |      | BO            | NO<br>NO     |  |
| BB                      | 0             | 5        | 6 11 | 0 1  | 19         | 9   | 9      | 0        | 5   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 5    | 0         | 0    | 0    | 0    | BC            | 180          |  |
| AB                      | 0             | 0        | 4    | 101  | 6          | ø   | G      | 0        | 0   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | ABE           | <del>,</del> |  |
| N B                     | 0             | õ        | ō    | 10   | 6          | ø   | G      | 0        | 0   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | B             | Z            |  |
| A                       | 0             | 0        | 0    | G    | ø          | ø   | ß      | 0        | 0   | 0   | 0   | 0        | 0       | Ö   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | ΥA            | 000          |  |
| ¥                       | 0             | 0        | 0    | 5    | w          | 9   | G      | 2        | 0   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | ¥,            | 16           |  |
| AM                      | 0             | 0        | 0    | 2    | 9          | 9   | ß      | 2        | 0   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | AW.           | -            |  |
| ¥                       | 0             | 0        | 0    | 0    | 9          | 2   | 9      | 2        | 0   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | ¥.            | 8            |  |
| R                       | 0             | 0        |      | 0    | B          | 8   | 69     | 6        | 0   | 0   | 0 0 | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | ΡŅ            | 40           |  |
| SAT                     | 0             | 0        | 0    | 0    | 2          | 9   | 6      | 6        | 2 0 | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | 8 AT          | 7            |  |
| RA                      | 5             | 0        | 0    | 0    | 0          | 9   | 6      | 6        | N   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | 0    | RAS           | 7            |  |
| Q A                     | 0             | 0        | 0    | 0    | 0          | 4   | 9      | 9        | ى   | 0   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | S    | QAI           | õ            |  |
| P A                     | 0             | 0        | o    | 0    | 5          | đ   | 9      | G        | 4   | 4   | 0   | 0        | 0       | 0   | 0    | 0   | 0    | 0    | 0         | 0    | 0    | ŝ    | PA            | 12(          |  |
| ò                       | 0             | 0        | 0    | 0    | 0          | 9   | ω      | ß        | 4   | 4   | 4   | 0        | 0       | 0   | 0    | 0   | 0    | ö    | 0         | 0    | S    | S    | O A           | ÷            |  |
| AN                      | ō             | 0        | 0    | 0    | 0          | 0   | 6      | ß        | 00  | ŝ   | 00  | 4        | 4       | 0   | 0    | 0   | 0    | 0    | 0         | ιū.  | S    | ŝ    | AN P          | Z            |  |
| AM                      | 0             | 0        | 0    | 0    | 0          | 0   | 15     | 10       | õ   | 00  | 00  | 00       | 4       | 4   | 0    | 0   | 0    | 0    | 0         | LD . | LO . | ŝ    | M             | 00           |  |
| Å                       | 0             | 0        | 0    | 0    | 0          | 0   | 16     | 9        | 10  | 0   | 00  | 00       | 4       | 4   | 0    | 0   | 0    | 0    | un<br>Lin | 50   | 10   | 5    | AL /          | 10           |  |
| ¥                       |               | 0        | 2    | 0    | 0          | 9   | 117    | 5        | 10  | 8   | 8   | 80       | 4       | 4   | 0    | 0   | 0    | 10   | 40        | 40   | 10   | 5    | AK            | -            |  |
| N N                     | 0             | 2        | 0    | 0    | 0          | 4   | 4 1    | 31.2     | 10  | 07  | 8   | 8        | 0       | 0   | 0    | 0   | 0    | 10   | 10        | 10   | 5    | 6    | P             | 0            |  |
| H A                     | 5             | 0        | 5    | 0    | 0          | 6   | 6 2    |          | 0 1 | 4   | 4   | 0        | 0       | 0   | 0    | 0   | 50   | 50   | 40        | in   | 5    | 5    | HA            | 80           |  |
| 90                      | 5             | -        | 5    | 0    | 0          | 1-5 | 8 2    |          | 1   | 6   | 5   | 0        | 0       | 0   | 0    | 0   | 5    | 5    | 50        | S    | 0    | 9    | GA            | 10           |  |
| AF /                    | 8             | 0        | 0    | 0    | 0          | 4 4 | 8      | 2        | 5   | 6   |     | 0        | 4       | 0   | 0    | 0   | 40   | ъ    | LO.       | 0    | 6    | 6    | AF A          | Z            |  |
| Ā                       | 6             | 0        | 6    | 0    | 0          | 9   | 100    | 2        | 12  | Ś   | 0   | 4D       | 4       | 0   | 0    | 0   | w    | ŝ    | 4D        | σ    | σ    | 0    | AE            | 00           |  |
| P                       | ö             | 0        | 0    | 0    | 0          | 0   | 100    | 5        | 14  | w   | 0   | -        | 0       | 0   | 0    | 4   | 9    | 4D   | 40        | 6    | σ    | 6    | AD            | 8            |  |
| 8<br>S<br>G             | ō             | 0        | 0    | 0    | 0          | 0   | 1      | 10       | 7   | ∽-  | Ċ1  | 0        | 0       | 0   | 0    | 4   | g    | S    | m         | σ    | 9    | 9    | AC            | -            |  |
| A AB                    | 0             | Ó        | 0    | 0    | 0          | 0   | 0      | 17       | 17  | 13  | N   | 0        | 0       | 0   | 0    | 4   | 9    | 9    | a)        | σ    | 9    | 9    | AB            | 0            |  |
| ₹.                      | 0             | 0        | 0    | 0    | 0          | 110 | 5      | 8        | 17  | 17  | 0   | CV<br>CV | 0       | 0   | 0    | 4   | 0    | 3113 | 6         | 9    | 6    | 6    | ₹             | 40           |  |
| N                       | 0             | 0        | 0    | 0    | 0          | 2/  | 46     | 9 24     | 024 | 57  | 14  | CN<br>CI |         | 0   | 0    | 4   | 5    |      | 10        | 10   | 10   | Ħ    | N             | 10           |  |
| $\mathcal{S}$           | 0             | 0        |      | 0    | 0          | 4 2 | 94     | ы<br>т   | 920 | 9   | 9   | 10       | 07      | -   | 0    | -   | 4 14 | 4 14 | 4 14      | 0 10 | 010  | 010  | $\mathcal{Z}$ | Z            |  |
| $\geq$                  | 0             | 0        | 0    | 0    | 2          | 34  | 9.4    | 4        | 5   | Q   | 9   | ø        | 2       | -   | N    | -   | 97   | 4    | 4         | 0/1  | 01   | 01   | $\widehat{}$  | 00           |  |
| 5                       | 0             | 0        | 0    | 0    | đ          | 12  | 454    | 43       | 292 | 201 | 16  | G        | 4       | 2   | 2    | -   | 5)   | 4    | 141       | 14 1 | 101  | 10   | 3             | 03           |  |
|                         | 0             | 0        | 0    | 0    | to         | 40  | 8      | 4        | 58  | 24  | 24  | 24       | 4       | 2   | 3    | -   | σ    | 4    | 14        | 14   | 10   | 10   | $\supset$     | Ξ            |  |
| Н                       | Ō             |          | 0    | 0    | ē          | R   | 8      | R        | S   | 8   | 28  | 26       | 17      | Q   | LD.  | S   | Ø    | 14   | 14        | 14   | 14   | 10   | ⊢             | 6            |  |
| S                       | 0             | 0        | 0    | 9    | 10         | 23  | 35     | 3        | 3   | 28  | 28  | 26       | 28      | 9   | σ    | ŝ   | 0    | 4    | 14        | 14   | 13   | ອ    | S             | S            |  |
| er<br>a                 | 0             |          | 0    | r.   | 11         | 23  | 5      | 5        | 8   | õ   | 28  | 2        | 5       | 15  | 40   | 5   | 12   | 13   | 13        | 13   | 13   | 6    | R             | 5            |  |
| S                       | 6             |          | 0    | 8    | ~          | 21  | 6      | 2        | 88  | 8   | 5   | 5        | 4       | 12  | 114  | 8   | 8    | 00   | 0         | 012  | 8 13 | 3 13 | Q             |              |  |
|                         | 6             | E        | 0    | ď    | 0          | 8 2 | 8      | Ň        | 100 | 97  | 316 | 19       | 7       | 10  | 17   | 60  | 8    | 00   | 0         | 0    | 7 1  | 3 1  | а<br>С        | S            |  |
| ž                       | 0             | 0        | 0    | 17   | 0          | 0   | 17     | 0        | 10  | 1   | 61  | =<br>9   | 6 1     |     | 91   | 8   | ŝ    | 00   | 1         | 3    | 0    | 71   | 9             | 80           |  |
| Σ                       | 0             | B        | 0    | 4    | 0          | 0   | 00     | <u>0</u> | 2   | 5   | 4   | 4        | -00     | 5   | 5    | 8   | 00   | 00   | 8         | 91   | 31   | 71   | 5             | Ő            |  |
| _                       | 0             | 0        | 0    | 4    | 2          | 60  | ŵ      | <u>~</u> | ē   | 212 | 4   | 5        | 19      | 5   | 5    | 33  | 161  | 6    | ö         | 13   | 10   | 13   |               | 7            |  |
| Y.                      | 0             | E        | 0    | -    | P.         | R   | ß      | ŵ        | 0   | 1   | 00  | 2        | 22      | 5   | 33   | 3   | 24   | 9    | 00        | 1    | 3    | 10   | $\mathbf{x}$  | ð            |  |
|                         | 0             | 6        | 0    | ō    | 5          | R   | ~      | ω        | 4   | 5   | 3   | 3        | 3       | 3   | 33   | Э   | 27   | 14   | 9         | 13   | 13   | 13   | ר             | õ            |  |
| =                       | 0             | 0        | 0    | 0    | 4          | N   | 2      | ø        | S   | ອ   | 5   | 28       | 27      | 32  | 32   | 34  | 27   | 27   | 13        | 13   | 13   | 13   | —             | 0,           |  |
| T                       | 0             | 0        | 0    | 0    | 4          | N   | ~      | ۵        | ιΩ. | -   | 6   | 5        | 53      | 8   | 8    | 32  | 27   | 27   | 14        | 0    | 13   | 13   | Т             | z            |  |
| 0                       | 0             | 2        | 0    | 0 4  | 0          | -   | In the | 10       | 10  | -   | 110 | 0110     | 3 28    | B   | 1 32 | 8   | 127  | 121  | 53        | **   | 100  | 110  | G             | 8            |  |
| ш                       | 6             | 0        | 0    | 0    | 0          | 10  | IN.    | lea.     | 10  | -   | -   | 10       | N<br>CV | 23  | 6    | 4 3 | 4 34 | 7 27 | 12        | 4 14 | 3 13 | 1    | <u>ш</u>      | 94           |  |
|                         | 0             | 0        | 0    | -    | 0          | 4   | 0      | 5        | 5   | -   | -   | 2        | 6 1     | 10  | 3    | 00  | 30   | 3 2  | 4 2       | 32   | 0    | 10   |               | _            |  |
| $\overline{\mathbf{O}}$ | 0             | 0        | 0    | 0    | 0          | 4   | G      | 40       | 5   | -   | -   | -        | N       | 91  | 8    | 833 | 23   | 803  | 6 2       | 3 2  | 31   | 31   |               | S            |  |
| m                       | 0             | 5        | 0    | 0    | 0          | A   | 9      | 10       | 10  | =   | F   | -        | N       | 5   | 11/2 | 2   | 2613 | 35   | 8         | 35   | 23 2 | 13   | с<br>М        | 20           |  |
| 4                       | 0             | 0        | 0    | 0    | 0          | 4   | w      | S        | 4   | -   | 17  | -        | N       | 6   | 0    | 23  | 22   | 5    | 251       | 3    | 35   | 3    | Ā             | б<br>О       |  |
|                         | -             | N        | 3    | 4    | 5          | 0   | 1      | 8        | 0   | 10  | 1   | 2        | 3       | 4   | 5    | 10  | 17   | 00   | 6         | 50   | 21   | 22   |               |              |  |
|                         | 0 0 0 0 0 0 0 |          |      |      |            |     |        |          |     |     |     |          |         |     |      |     |      |      |           |      |      |      |               |              |  |
|                         | ç             | <b>5</b> |      |      |            | 200 |        |          |     | 0   |     |          | 200     |     |      |     | 10C  |      |           |      | 300  |      |               |              |  |
|                         |               | -        |      | (N   |            |     |        |          |     |     |     |          |         | 1   |      |     |      | Y    |           |      | , (  |      |               |              |  |