

# ACID BASE ACCOUNTING TEST REPORT

Homestake Canada Ltd.  
1000 - 700 W. Pender Street  
Vancouver, B.C.  
V6C 1G8

File No. : 94-059

Report No. : 1

Date Reported : 23-Sep-94

Attention : Mr. Percy Pacor, Project Manager

Project : Goose Lake

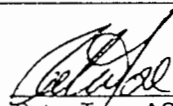
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| Sample I.D.                       | S (tot)<br>% | S (SO4)<br>% | Ca<br>% | CO2<br>% | Paste<br>pH | NP   | MPA  | Net NP |
|-----------------------------------|--------------|--------------|---------|----------|-------------|------|------|--------|
| 1. Comp 1                         | 3.52         | <.01         |         |          | 9.5         | 55.5 | 110. | -54.5  |
| 2. Comp 2                         | 0.09         | <.01         |         |          | 9.2         | 7.77 | 2.81 | 4.96   |
| 3. Comp3                          | 0.43         | 0.02         |         |          | 8.8         | 62.9 | 12.8 | 50.1   |
| 4. 94G056058                      | 0.81         | <.01         |         |          | 8.1         | 10.6 | 25.3 | -14.7  |
| 5. 94G056123                      | 1.95         | <.01         |         |          | 8.8         | 12.1 | 60.9 | -48.8  |
| 6. <del>94G056020</del> 94G069020 | 0.32         | 0.01         |         |          | 8.2         | 93.6 | 9.69 | 83.9   |
| 7. 94G056128                      | 0.19         | <.01         |         |          | 9.1         | 16.0 | 5.94 | 10.1   |
| 8. 94G056129                      | 0.05         | <.01         |         |          | 8.6         | 8.37 | 1.56 | 6.81   |
| 9. 94G056130                      | 0.07         | <.01         |         |          | 9.1         | 9.87 | 2.19 | 7.68   |
| 10. 94G056131                     | <.01         | <.01         |         |          | 8.6         | 5.60 | -    | 5.60   |
| 11. 94G056132                     | 0.24         | <.01         |         |          | 9.4         | 12.6 | 7.50 | 5.10   |
| 12. 94G070001                     | 0.13         | 0.01         |         |          | 8.5         | 6.70 | 3.75 | 2.95   |

Comp1 = 94G056010 + 011

Comp2 = 94G056053 + 054

Comp3 = 94G056095 + 096



Peter Tse, AScT.  
Laboratory Manager

## Notes :

- Analytical methods employed according to procedures described in "Field and Laboratory Methods Applicable to Coal and Minesoils", EPA 600/2-78-054, pp. 45-55, 1978
- NP = Neutralization Potential as determined by acid consumption test  
MPA = Maximum Potential Acidity (%S (tot)  $\times$  31.25)  
Net NP = NP - MPA
- NP, MPA and Net NP are expressed in tonnes CaCO<sub>3</sub> equiv. per 1000 tonnes sample
- Samples with negative Net NP are potential acid producers

# HOMESTAKE CANADA LTD. - ICP REPORT

Goose Lake

Project no : 94-059

| Sample id | Mo<br>ppm | Cu<br>ppm | Pb<br>ppm | Zn<br>ppm | Ag<br>ppm | Ni<br>ppm | Co<br>ppm | Mn<br>ppm | Fe<br>% | As<br>ppm | U<br>ppm | Sr<br>ppm | Cd<br>ppm | Sb<br>ppm | Bi<br>ppm | V<br>ppm | Ca<br>% | P<br>% | La<br>ppm | Cr<br>ppm | Mg<br>% | Ba<br>ppm | Ti<br>% | Al<br>% | Na<br>% | K<br>% | Si<br>% | W<br>ppm | Be<br>ppm |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|----------|---------|--------|-----------|-----------|---------|-----------|---------|---------|---------|--------|---------|----------|-----------|
| Comp 1    | 2         | 42        | 18        | 29        | 1.4       | 20        | 11        | 262       | 13.2    | 4893      | 5        | 53        | 1         | 1         | 3         | 19       | 2.13    | 0.08   | 12        | 35        | 0.35    | 76        | 0.02    | 1.79    | 0.11    | 0.25   | 0.02    | 2        | 1         |
| Comp 2    | 3         | 7         | 16        | 17        | 0.1       | 8         | 2         | 148       | 1.29    | 471       | 5        | 10        | 1         | 1         | 1         | 3        | 0.30    | 0.04   | 18        | 77        | 0.14    | 49        | 0.01    | 0.21    | 0.03    | 0.19   | 0.01    | 1        | 1         |
| Comp 3    | 2         | 13        | 21        | 6         | 0.1       | 11        | 12        | 274       | 14.9    | 72        | 5        | 13        | 1         | 2         | 1         | 12       | 1.50    | 0.06   | 6         | 67        | 0.68    | 77        | 0.03    | 0.6     | 0.04    | 0.19   | 0.02    | 2        | 1         |
| 94G070001 | 5         | 51        | 20        | 35        | 0.2       | 28        | 9         | 421       | 7.77    | 35        | 5        | 58        | 1         | 1         | 1         | 30       | 2.16    | 0.06   | 18        | 82        | 0.71    | 44        | 0.06    | 2.48    | 0.05    | 0.14   | 0.02    | 1        | 1         |
| 94G056120 | 3         | 16        | 15        | 1         | 0.1       | 7         | 9         | 629       | 9.60    | 20        | 5        | 22        | 1         | 1         | 1         | 9        | 4.78    | 0.06   | 6         | 73        | 2.29    | 43        | 0.01    | 0.37    | 0.03    | 0.13   | 0.01    | 1        | 1         |
| 94G056058 | 2         | 92        | 6         | 32        | 3.6       | 47        | 15        | 310       | 9.81    | 86        | 5        | 9         | 1         | 2         | 1         | 18       | 0.73    | 0.01   | 25        | 84        | 0.41    | 33        | 0.06    | 1.98    | 0.06    | 0.07   | 0.02    | 1        | 1         |
| 94G056123 | 3         | 57        | 5         | 63        | 0.2       | 44        | 16        | 465       | 7.05    | 148       | 5        | 15        | 1         | 1         | 3         | 39       | 0.45    | 0.04   | 31        | 167       | 0.71    | 177       | 0.18    | 2.54    | 0.03    | 0.83   | 0.02    | 1        | 1         |
| 94G056128 | 2         | 118       | 13        | 66        | 0.1       | 38        | 33        | 787       | 5.05    | 14        | 5        | 20        | 1         | 2         | 1         | 95       | 1.10    | 0.08   | 6         | 52        | 1.19    | 73        | 0.56    | 2.25    | 0.05    | 0.36   | 0.02    | 1        | 1         |
| 94G056129 | 1         | 19        | 12        | 88        | 0.1       | 65        | 37        | 564       | 10.5    | 21        | 5        | 12        | 1         | 6         | 1         | 86       | 0.29    | 0.05   | 27        | 123       | 1.26    | 254       | 0.27    | 4.26    | 0.03    | 0.89   | 0.02    | 2        | 1         |
| 94G056130 | 3         | 57        | 10        | 73        | 0.2       | 64        | 23        | 303       | 5.01    | 40        | 5        | 7         | 1         | 1         | 1         | 28       | 0.29    | 0.06   | 32        | 104       | 1.1     | 85        | 0.14    | 2.43    | 0.01    | 0.99   | 0.02    | 1        | 1         |
| 94G056131 | 4         | 12        | 13        | 104       | 0.1       | 71        | 37        | 424       | 9.38    | 60        | 5        | 6         | 2         | 4         | 1         | 49       | 0.13    | 0.05   | 29        | 109       | 1.21    | 62        | 0.03    | 3.88    | 0.01    | 0.31   | 0.02    | 2        | 1         |
| 94G056132 | 2         | 54        | 14        | 71        | 0.1       | 54        | 22        | 404       | 4.41    | 29        | 5        | 9         | 1         | 1         | 1         | 41       | 0.27    | 0.04   | 31        | 141       | 0.89    | 133       | 0.22    | 2.04    | 0.03    | 1.25   | 0.02    | 1        | 1         |

## GOOSE LAKE DRILL CORE FOR ARD PROGRAM

Sample 94G056058

Drill Hole 94G056

Sample Interval from 320.80 m to 322.16 m

Rock unit: Sulphide-bearing Silicate Iron Formation

Pyrite 1%

Pyrrhotite 5%

Chlorite 4%

Massive coarse grained hornblende-bearing iron formation with moderate interstitial pyrrhotite and pyrite. Unit is situated in the footwall greywackes.

Samples 94G056095 and 096

Drill Hole 94G056

Sample Interval from 393.00 m to 395.00 m

Rock unit: Oxide Iron Formation

Pyrite 0%

Pyrrhotite 0%

Grunerite 1%

Ankerite 1%

Magnetite 20%

Vein Quartz 2%

Rhythmically interbanded chert and magnetite, moderate chlorite occurs within magnetite rich bands, grunerite rosettes form rinds separating magnetite and chert bands. Unit is situated in the Lower Iron Formation located in the East Limb of the anticline.

Sample 94G056123

Drill Hole 94G056

Sample Interval from 318.50 m to 319.50 m

Rock unit: Greywacke

Pyrite 0.1%

Pyrrhotite 0.1%

Arsenopyrite 0.1%

Chlorite 0.2%

Calcite 0.2%

Vein Quartz 1%

Massive greywacke, minor quartz veinlets with trace chlorite and sulphides. Unit is situated in the footwall greywackes.

Samples 94G056053 and 054

Drill Hole 94G056

Sample Interval from 311.40 m to 313.70 m

Rock unit: Felsic Dyke

Pyrite 0%

Pyrrhotite 0%

Arsenopyrite 0.1 %

Quartz feldspar porphyry dyke, 2 mm wide subhedral quartz phenocrysts in a medium grained feldspar matrix, no veining, weak foliation. Unit if situated in the footwall greywckes.

Sample 94G069020

Drill Hole 94G069

Sample Interval from 36.65 m to 37.70 m

Rock unit: Oxide Iron Formation

Pyrite 0%

Pyrrhotite 0%

Arsenopyrite 0%

Chlorite 3%

Ankerite 2%

Magnetite 10%

Vein Quartz 3%

Rusty red hematite stained, banded chert-magnetite iron formation, Lower Iron Formation unit situated in the west limb of the anticline.

Sample 94G056128

Drill Hole 94G056

Sample Interval from 184.00 m to 185.00 m

Rock unit: Gabbro Dyke

Pyrite 0.1%

Pyrrhotite 0%

Arsenopyrite 0%

Chlorite 2%

Calcite 0.2%

Vein Quartz 0.5%

Massive coarse grained gabbro with minor quartz, calcite and pervasive metamorphic chlorite. Unit situated in the west limb of the anticline.

Sample 94G056129

Drill Hole 94G056

Sample Interval from 151.80 m to 153.10 m

Rock unit: Mudstone

Pyrite 0.1%

Pyrrhotite 0%

Arsenopyrite 0%

Chlorite 0.1%

Calcite 0%

Vein Quartz 0.5%

Massive, dark grey to black siltstone (mudstone, minor quartz veining with trace pyrite, chlorite. Unit situated in the overlying Upper Iron Formation.

Sample 94G056130

Drill Hole 94G056

Sample Interval from 207.20 m to 208.30 m

Rock unit: Greywacke

Pyrite 0%

Pyrrhotite 0%

Arsenopyrite 0%

Chlorite 0%

Ankerite 0.1%

Vein Quartz 0.2%

Massive, medium grey greywacke, with minor quartz-carbonate veining. Unit situated in the overlying Upper Iron Formation.

Sample 94G056131

Drill Hole 94G056

Sample Interval from 217.40 m to 219.40 m

Rock unit: Phyllitic Mudstone

Pyrite 0%

Pyrrhotite 0.1%

Arsenopyrite 0%

Chlorite 0.1%

Ankerite 0.1%

Graphite 3%

Vein Quartz 1%

Black, graphitic phyllitic mudstone, graphite along contorted foliations and slickensides, minor pyrrhotite along foliations. Unit situated in the overlying Middle Mudstone.

#### Sample 94G056132

Drill Hole 94G056

Sample Interval from 360.50 m to 362.00 m

Rock unit: Greywacke

Pyrite 0%

Pyrrhotite 0.1%

Arsenopyrite 0%

Chlorite 0%

Ankerite 0.2%

Vein Quartz 2%

Massive, medium grey greywacke, moderate quartz veinlets with trace carbonate and pyrrhotite, minor chert boudins. Unit situated in the footwall greywackes.

#### Samples 94G056010 and 011

Drill Hole 94G056

Sample Interval from 227.50 m to 229.50 m

Rock unit: Sulphide-Bearing Oxide Iron Formation

Pyrite 0%

Pyrrhotite 5%

Arsenopyrite 0.7%

Grunerite 4%

Chlorite 5%

Calcite 1%

Ankerite 0.2%

Magnetite 1%

Vein Quartz 10%

Banded chlorite, hornblende, grunerite, chert with pyrrhotite, arsenopyrite disseminated and in veinlets. Chert bands are brecciated and healed with sulphide-chlorite veins. Minor magnetite, almost completely replaced or altered. Unit situated in the Lower Iron Formation located in the west limb of the anticline.

#### Sample 94G070001

Drill Hole 94G070

Sample Interval from 98.10 m to 100.90 m

Rock unit: Silicate Iron Formation

Pyrite 0.1%

Pyrrhotite 0%

Arsenopyrite 0%

Grunerite 0%

Chlorite 5%

Calcite 0.5%

Ankerite 0%

Magnetite 1%

Vein Quartz 1%

Massive to weakly foliated hornblende chlorite iron formation, Unit situated in the Upper Iron Formation located in the west limb of the anticline.

# HOMESTAKE CANADA LTD - WHOLE ROCK ANALYSIS REPORT

Goose Lake

Project no : 94-059

| Sample id    | SiO2<br>% | Al2O3<br>% | Fe2O3<br>% | MgO<br>% | CaO<br>% | Na2O<br>% | K2O<br>% | P2O5<br>% | TiO2<br>% | MnO<br>% | BaO<br>% | Cr2O3<br>% | SrO<br>% | LOI<br>% | Total<br>% |
|--------------|-----------|------------|------------|----------|----------|-----------|----------|-----------|-----------|----------|----------|------------|----------|----------|------------|
| Comp 1       | 40.43     | 6.51       | 38.70      | 1.57     | 6.48     | 0.44      | 0.41     | 0.175     | 0.144     | 0.068    | 0.011    | 0.089      | 0.007    | 2.8      | 97.8       |
| Comp 2       | 75.92     | 12.68      | 1.46       | 0.36     | 1.34     | 3.72      | 1.75     | 0.126     | 0.067     | 0.019    | 0.048    | 0.024      | 0.019    | 2.8      | 100.3      |
| Comp 3       | 57.49     | 2.00       | 31.30      | 1.89     | 2.74     | 0.10      | 0.22     | 0.146     | 0.078     | 0.043    | 0.009    | 0.084      | 0.001    | 2.6      | 97.7       |
| 69 94G070001 | 60.52     | 8.65       | 17.07      | 1.87     | 5.87     | 0.46      | 0.33     | 0.135     | 0.345     | 0.071    | 0.010    | 0.063      | 0.010    | 3.4      | 97.8       |
| 94G056020    | 54.13     | 1.47       | 17.58      | 4.54     | 7.63     | 0.06      | 0.27     | 0.139     | 0.069     | 0.066    | 0.006    | 0.059      | 0.002    | 12.5     | 97.5       |
| 94G056058    | 56.65     | 8.73       | 23.04      | 1.53     | 5.14     | 0.44      | 0.26     | 0.054     | 0.399     | 0.072    | 0.007    | 0.078      | 0.002    | 2.2      | 97.6       |
| 94G056123    | 69.62     | 9.91       | 10.05      | 1.43     | 2.54     | 1.48      | 1.10     | 0.078     | 0.432     | 0.055    | 0.032    | 0.067      | 0.018    | 2.0      | 98.8       |
| 94G056128    | 50.23     | 12.29      | 14.46      | 5.52     | 9.98     | 2.06      | 0.59     | 0.204     | 1.502     | 0.196    | 0.016    | 0.055      | 0.016    | 2.2      | 99.3       |
| 94G056129    | 56.70     | 14.78      | 16.06      | 2.60     | 1.73     | 2.48      | 1.26     | 0.096     | 0.619     | 0.059    | 0.038    | 0.062      | 0.019    | 3.1      | 99.6       |
| 94G056130    | 67.49     | 14.70      | 7.38       | 2.47     | 0.68     | 0.22      | 4.08     | 0.160     | 0.583     | 0.032    | 0.062    | 0.056      | 0.004    | 3.2      | 101.1      |
| 94G056131    | 54.91     | 16.25      | 13.95      | 2.64     | 0.47     | 0.16      | 3.16     | 0.083     | 0.692     | 0.043    | 0.053    | 0.082      | 0.005    | 5.4      | 97.9       |
| 94G056132    | 72.17     | 12.72      | 6.04       | 1.74     | 1.77     | 2.38      | 2.32     | 0.074     | 0.491     | 0.045    | 0.045    | 0.056      | 0.017    | 1.7      | 101.6      |

# HOMESTAKE CANADA LTD - WHOLE ROCK ANALYSIS REPORT

Goose Lake

Project no : 94-059

| Sample id    | SiO2<br>% | Al2O3<br>% | Fe2O3<br>% | MgO<br>% | CaO<br>% | Na2O<br>% | K2O<br>% | P2O5<br>% | TiO2<br>% | MnO<br>% | BaO<br>% | Cr2O3<br>% | SrO<br>% | LOI<br>% | Total<br>% |
|--------------|-----------|------------|------------|----------|----------|-----------|----------|-----------|-----------|----------|----------|------------|----------|----------|------------|
| Comp 1       | 40.43     | 6.51       | 38.70      | 1.57     | 6.48     | 0.44      | 0.41     | 0.175     | 0.144     | 0.068    | 0.011    | 0.089      | 0.007    | 2.8      | 97.8       |
| Comp 2       | 75.92     | 12.68      | 1.46       | 0.36     | 1.34     | 3.72      | 1.75     | 0.126     | 0.067     | 0.019    | 0.048    | 0.024      | 0.019    | 2.8      | 100.3      |
| Comp 3       | 57.49     | 2.00       | 31.30      | 1.89     | 2.74     | 0.10      | 0.22     | 0.146     | 0.078     | 0.043    | 0.009    | 0.084      | 0.001    | 2.6      | 97.7       |
| 69 94G070001 | 60.52     | 8.65       | 17.07      | 1.87     | 5.87     | 0.46      | 0.33     | 0.135     | 0.345     | 0.071    | 0.010    | 0.063      | 0.010    | 3.4      | 97.8       |
| 94G056020    | 54.13     | 1.47       | 17.58      | 4.54     | 7.63     | 0.06      | 0.27     | 0.139     | 0.069     | 0.066    | 0.006    | 0.059      | 0.002    | 12.5     | 97.5       |
| 94G056058    | 56.65     | 8.73       | 23.04      | 1.53     | 5.14     | 0.44      | 0.26     | 0.054     | 0.399     | 0.072    | 0.007    | 0.078      | 0.002    | 2.2      | 97.6       |
| 94G056123    | 69.62     | 9.91       | 10.05      | 1.43     | 2.54     | 1.48      | 1.10     | 0.078     | 0.432     | 0.055    | 0.032    | 0.067      | 0.018    | 2.0      | 98.8       |
| 94G056128    | 50.23     | 12.29      | 14.46      | 5.52     | 9.98     | 2.06      | 0.59     | 0.204     | 1.502     | 0.196    | 0.016    | 0.055      | 0.016    | 2.2      | 99.3       |
| 94G056129    | 56.70     | 14.78      | 16.06      | 2.60     | 1.73     | 2.48      | 1.26     | 0.096     | 0.619     | 0.059    | 0.038    | 0.062      | 0.019    | 3.1      | 99.6       |
| 94G056130    | 67.49     | 14.70      | 7.38       | 2.47     | 0.68     | 0.22      | 4.08     | 0.160     | 0.583     | 0.032    | 0.062    | 0.056      | 0.004    | 3.2      | 101.1      |
| 94G056131    | 54.91     | 16.25      | 13.95      | 2.64     | 0.47     | 0.16      | 3.16     | 0.083     | 0.692     | 0.043    | 0.053    | 0.082      | 0.005    | 5.4      | 97.9       |
| 94G056132    | 72.17     | 12.72      | 6.04       | 1.74     | 1.77     | 2.33      | 2.32     | 0.074     | 0.491     | 0.045    | 0.045    | 0.056      | 0.017    | 1.7      | 101.6      |