Pty Ltd A

Major Elements by

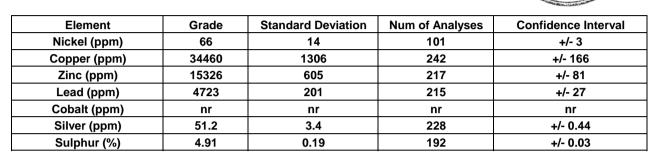
# **GEOSTATS PTY LTD**

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

# **GBM922-15**

#### **Certified Control Values**



### **CRM Details**

| Control | Statistic | Details |
|---------|-----------|---------|
| COLLIG  | Juansing  | Details |

Control statistics were produced from results accumulated in the October-2022, April-2011 round robins. The number of results used to certify each analyte is shown in the table above.

#### **Material Description**

This material is described as a Composite Base Metal Silver.

#### Colour Designation (ISCC-NBS, SP440)

This material is grayish black in colour.

#### Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

## Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

# Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by multiple laboratories from around the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

#### **Stability**

This product remains stable in its original packaging, away from direct sunlight.

#### **Material Safety**

This product is not hazardous and non-toxic.

| Analysis Results (ppm, unless otherwise noted)         Fusion / XRF (%)           Antimony         56.2         Fe         11.028           Arsenic         288         SiO2         44.48           Barium         <100         Al2O3         12.19           Bromine         <2         TiO2         1.69           Cadmium         23         MnO         0.18           Caesium         <2         CaO         7.97           Calcium (%)         nr         P         0.086           Cerium         34         S         4.806           Chromium         162         MgO         4.69           Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5         Neutron Activation           Iron (%)         11.4         Analyses and Fusion           Lutetium         0.4         single results and are indicative only. These are indicative only. These are provided for matrix identification           Neodymium         nr         nr         Number of the provided for matrix identification           Neutron Activation         nr <th colspan="2"></th> <th colspan="2"></th>   |                        |       |                                |        |
|--|------------------------|-------|--------------------------------|--------|
| Antimony         56.2         Fe         11.028           Arsenic         288         SiO2         44.48           Barium         <100         Al2O3         12.19           Bromine         <2         TiO2         1.69           Cadmium         23         MnO         0.18           Caesium         <2         CaO         7.97           Calcium (%)         nr         P         0.086           Cerium         34         S         4.806           Chromium         162         MgO         4.69           Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5         Neutron Activation           Iridium (ppb)         <50         Neutron Activation           Iron (%)         11.4         Analyses and Fusion           Lutetium         0.4         single results and are indicative only. These are provided for matrix identification           Neutron Activation         nr         nr           Neutron Activation         nr           Neutron Activation         nr <tr< th=""><th colspan="2">Analysis Results (ppm,</th><th colspan="2">Fusion / XRF (%)</th></tr<>   | Analysis Results (ppm, |       | Fusion / XRF (%)               |        |
| Arsenic         288         SiO2         44.48           Barium         <100         Al2O3         12.19           Bromine         <2         TiO2         1.69           Cadmium         23         MnO         0.18           Caesium         <2         CaO         7.97           Calcium (%)         nr         P         0.086           Cerium         34         S         4.806           Chromium         162         MgO         4.69           Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5         Neutron Activation           Iridium (ppb)         11.4         Analyses and Fusion           Lutetium         0.4         single results and are indicative only. These are provided for matrix identification           Neutron Activation         Neutron Activation           Neutron Activation         1.78           Samarium         1.78           Samarium         1.78           Salenium         2.2           Selenium         2.1           Silver <th colspan="2"></th> <th></th> <th></th>   |                        |       |                                |        |
| Barium         <100         Al2O3         12.19           Bromine         <2         TiO2         1.69           Cadmium         23         MnO         0.18           Caesium         <2         CaO         7.97           Calcium (%)         nr         P         0.086           Cerium         34         S         4.806           Chromium         162         MgO         4.69           Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5         Iridium (ppb)         Invalues and Fusion Analyses and Fusion Analyses and Fusion Analyses and Fusion Analyses are sindicative only. These are provided for matrix identification purposes.         Neutron Activation Analyses are provided for matrix identification purposes.           Neodymium         nr         1.00         purposes.           Neutron Activation Analyses are indicative only. These are provided for matrix identification purposes.         1.71           Neutron Activation Analyses are indicative only. These are provided for matrix identification purposes.         1.71           Scandium         28.2         2.2           Scandium         28.2 </th <th>Antimony</th> <th>56.2</th> <th>Fe</th> <th>11.028</th>   | Antimony               | 56.2  | Fe                             | 11.028 |
| Bromine         <2   | Arsenic                | 288   | SiO <sub>2</sub>               | 44.48  |
| Cadmium         23         MnO         0.18           Caesium         <2   | Barium                 | <100  | Al <sub>2</sub> O <sub>3</sub> | 12.19  |
| Caesium         <2   | Bromine                | <2    | TiO <sub>2</sub>               | 1.69   |
| Calcium (%)         nr         P         0.086           Cerium         34         S         4.806           Chromium         162         MgO         4.69           Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5  | Cadmium                | 23    | MnO                            | 0.18   |
| Cerium         34         S         4.806           Chromium         162         MgO         4.69           Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5   | Caesium                | <2    | CaO                            | 7.97   |
| Chromium         162         MgO         4.69           Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5   | Calcium (%)            | nr    | Р                              | 0.086  |
| Cobalt         150         K2O         0.402           Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5   | Cerium                 | 34    | S                              | 4.806  |
| Europium         1.4         Na2O         2.46           Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5  | Chromium               | 162   | MgO                            | 4.69   |
| Gold (ppb)         21000         LOI1000         2.72           Hafnium         <5   | Cobalt                 | 150   | K <sub>2</sub> O               | 0.402  |
| Hafnium   <5   | Europium               | 1.4   | Na <sub>2</sub> O              | 2.46   |
| Iridium (ppb) Iron (%) Iron (%) Lanthanum Lutetium Mercury Molybdenum Nickel Potassium (%) Samarium Samarium Silver Selenium Tantalum Tantalum Tantalum Telium Teli | Gold (ppb)             | 21000 | LOI1000                        | 2.72   |
| Iron (%) Lanthanum Lutetium Mercury Molybdenum Nickel Potassium (%) Samarium Silver Selenium Silver Sodium (%) Strontium Tantalum Tantalum Tantalum Thorium Thorium Tin  | Hafnium                | <5    |                                |        |
| Lanthanum Lutetium Mercury Molybdenum Nickel Potassium (%) Samarium Silver Selenium Tantalum Tantalum Tantalum Telium Thorium Tin Tin Thorium Tin  | Iridium (ppb)          | <50   | Neutron Activation             |        |
| Lanthanum Lutetium Mercury Molybdenum Nickel Potassium (%) Samarium Silver Sodium (%) Strontium Tantalum Tantalum Tantalum Thorium Tin Tin Thorium Tin   | Iron (%)               | 11.4  | Analyses and Fusion            |        |
| Mercury Molybdenum Neodymium Nickel Potassium (%) Rubidium Samarium Silver Sodium (%) Strontium Tantalum Tantalum Thorium Thorium Tin Tin Thorium Tin  | Lanthanum              | 17    | XRF Analyses are               |        |
| Molybdenum Neodymium Nickel Potassium (%) Rubidium Samarium Samarium Silver Sodium (%) Strontium Tantalum Tantalum Thorium Thorium Tin Tin Tungsten Uranium Vickel Nr 100 Purposes. Inr Identification purposes. Inr': Not Reported Inr': Not Rep | Lutetium               | 0.4   | single results and are         |        |
| Molybdenum Neodymium Nickel Potassium (%) Rubidium Samarium Samarium Silver Sodium (%) Strontium Tantalum Tantalum Thorium Thorium Tin Tin Tungsten Uranium Vickel Nr 100 Purposes. Inr Identification purposes. Inr': Not Reported Inr': Not Rep | Mercury                | nr    | indicative only. These         |        |
| Nickel   |                        | 145   | are provided for matrix        |        |
| Potassium (%)         nr           Rubidium         28           Samarium         5.2           Scandium         28.2           Selenium         21           Silver         55           Sodium (%)         1.78           Strontium         nr           Tantalum         <2   | Neodymium              | nr    | identification                 |        |
| Rubidium       28       'nr': Not Reported         Samarium       5.2       Scandium         Scandium       28.2       Selenium         Silver       55       Sodium (%)         Strontium       nr       Tantalum         Tantalum       <2   | Nickel                 | <100  | purposes.                      |        |
| Samarium       5.2         Scandium       28.2         Selenium       21         Silver       55         Sodium (%)       1.78         Strontium       nr         Tantalum       <2  | Potassium (%)          | nr    |                                |        |
| Scandium       28.2         Selenium       21         Silver       55         Sodium (%)       1.78         Strontium       nr         Tantalum       <2   | Rubidium               | 28    | 'nr': Not Reported             |        |
| Selenium       21         Silver       55         Sodium (%)       1.78         Strontium       nr         Tantalum       <2   | Samarium               | 5.2   |                                |        |
| Silver       55         Sodium (%)       1.78         Strontium       nr         Tantalum       <2   | Scandium               | 28.2  |                                |        |
| Sodium (%)       1.78         Strontium       nr         Tantalum       <2   | Selenium               | 21    |                                |        |
| Strontium       nr         Tantalum       <2   | Silver                 | 55    |                                |        |
| Tantalum       <2  | Sodium (%)             | 1.78  |                                |        |
| Tellurium       <20  | Strontium              | nr    |                                |        |
| Terbium       <1   | Tantalum               | <2    |                                |        |
| Thorium       2.8         Tin       <200   | Tellurium              | <20   |                                |        |
| Tin       <200   | Terbium                | <1    |                                |        |
| Tungsten     60       Uranium     2       Ytterbium     2.8       Zinc     15500   | Thorium                | 2.8   |                                |        |
| Uranium 2 Ytterbium 2.8 Zinc 15500   | Tin                    | <200  |                                |        |
| Uranium 2 Ytterbium 2.8 Zinc 15500   | Tungsten               | 60    |                                |        |
| Zinc 15500   |                        | 2     |                                |        |
|  | Ytterbium              | 2.8   |                                |        |
| Zirconium <500   | Zinc                   | 15500 |                                |        |
|  | Zirconium              | <500  |                                |        |

**Neutron Activation** 

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