Ltd A Pty

Common

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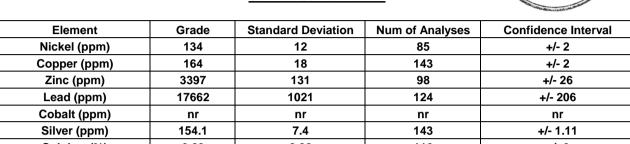
GEOSTATS PTY LTD

Mining Industry Consultants Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

GBM919-16

Certified Control Values



Sulphur (%) 0.29 0.02 116 +/- 0 **CRM Details Neutron Activation** Major Elements by **Control Statistic Details** Control statistics were produced from results accumulated in the October-2008. October-2019 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 High Grade silver Ore. Colour Designation (ISCC-NBS, SP440) This material is light gray in colour. 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.

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

Material Safety

This product is not hazardous and non-toxic.

unless otherwise noted) Antimony 0.2 Fe 3.54 Arsenic 1.95 SiO2 62.37 Barium 2305 Al2O3 14.97 Bromine <1.2 TiO2 0.65 Cadmium <5 MnO 0.07 Cassium 1.4 CaO 2.94 Calcium (%) nr P 0.126 Cerium 215 S 0.3 Chromium 39.5 MgO 1.69 Cobalt 11 K2O 4.23 Europium 2.2 Na2O 3.56 Gold (ppb) 43.5 LOI1000 1.51 Hafnium 9.5 Iridium (ppb) <50 Neutron Activation Iron (%) 3.35 Neutron Activation Analyses and Fusion / Lutetium 0.65 Mranlyses are single results and are Mercury nr Neutron Activation nr Neodymium nr Nr Nr Neodymium <th colspan="2">Analysis Results (ppm,</th> <th colspan="2">Fusion / XRF (%)</th>	Analysis Results (ppm,		Fusion / XRF (%)	
Arsenic 1.95 SiO2 62.37 Barium 2305 Al2O3 14.97 Bromine <1.2 TiO2 0.65 Cadmium <5 MnO 0.07 Caesium 1.4 CaO 2.94 Calcium (%) nr P 0.126 Cerium 215 S 0.3 Chromium 39.5 MgO 1.69 Cobalt 11 K2O 4.23 Europium 2.2 Na2O 3.56 Gold (ppb) 43.5 LOI1000 1.51 Hafnium 9.5 Neutron Activation Iridium (ppb) <50 Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These Mercury nr indicative only. These Mercury nr indicative only. These Molybdenum 107.5 Samarium 13.35 Scandium 8.25 Selenium <5	unless otherwise noted)			
Barium 2305 Al2O3 14.97 Bromine <1.2	Antimony	0.2	Fe	3.54
Bromine <1.2	Arsenic	1.95	SiO ₂	62.37
Cadmium <5	Barium	2305	Al ₂ O ₃	14.97
Caesium 1.4 CaO 2.94 Calcium (%) nr P 0.126 Cerium 215 S 0.3 Chromium 39.5 MgO 1.69 Cobalt 11 K2O 4.23 Europium 2.2 Na2O 3.56 Gold (ppb) 43.5 LOl1000 1.51 Hafnium 9.5 Neutron Activation Iridium (ppb) 3.35 Neutron Activation Iron (%) 3.35 XRF Analyses and Fusion / Lanthanum 115.5 XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes. Neodymium nr Nr Not Reported Neutron Activation Nr Nr Mercury nr indicative only. These are provided for matrix identification purposes. Neutron Activation nr nr': Not Reported Samarium 13.35 Scandium 8.25 Selenium <5	Bromine	<1.2	TiO ₂	0.65
Calcium (%) nr P 0.126 Cerium 215 S 0.3 Chromium 39.5 MgO 1.69 Cobalt 11 K2O 4.23 Europium 2.2 Na2O 3.56 Gold (ppb) 43.5 LOl1000 1.51 Hafnium 9.5 Neutron Activation Iridium (ppb) 3.35 Neutron Activation Iron (%) 3.35 XRF Analyses and Fusion / Lanthanum 115.5 XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes. Neodymium nr Nr Not Reported Neutron Activation Nalyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes. Neodymium nr Not Reported Samarium 13.35 Scandium 8.25 Selenium <5	Cadmium	<5	MnO	0.07
Cerium 215 S 0.3 Chromium 39.5 MgO 1.69 Cobalt 11 K2O 4.23 Europium 2.2 Na2O 3.56 Gold (ppb) 43.5 LOI1000 1.51 Hafnium 9.5 Neutron Activation Iridium (ppb) 4.50 Neutron Activation Iron (%) 3.35 Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification Nickel 137 purposes. Potassium (%) 107.5 nr': Not Reported Samarium 13.35 Scandium 8.25 Selenium <5	Caesium	1.4	CaO	2.94
Chromium 39.5 MgO 1.69 Cobalt 11 K2O 4.23 Europium 2.2 Na2O 3.56 Gold (ppb) 43.5 LOl1000 1.51 Hafnium 9.5 Neutron Activation Iridium (ppb) 3.35 Neutron Activation Iron (%) 3.35 XRF Analyses and Fusion / Lanthanum 115.5 XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes. Neodymium nr 146.5 nr Rubidium 107.5 nr Not Reported Samarium 13.35 Scandium 8.25 Selenium <5	Calcium (%)	nr	-	0.126
Cobalt Europium 11 K2O 3.56 Gold (ppb) 43.5 LOI1000 1.51 Hafnium 9.5 Iridium (ppb) <50 Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.	Cerium	215	S	0.3
Europium 2.2 Na2O 3.56 Gold (ppb) 43.5 LOl1000 1.51 Hafnium 9.5 Neutron Activation Iridium (ppb) 3.35 Neutron Activation Iron (%) 3.35 XRF Analyses and Fusion / Lanthanum 115.5 XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes. Neodymium nr 146.5 nr Rubidium 107.5 nr Not Reported Samarium 13.35 Scandium 8.25 Selenium <5	Chromium	39.5	MgO	1.69
Gold (ppb) 43.5 LOI1000 1.51 Hafnium 9.5 Neutron Activation Iridium (ppb) 3.35 Neutron Activation Iron (%) 3.35 XRF Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes. Neodymium Nickel 137 purposes. Neodymium Nickel 137 purposes. Potassium (%) 13.35 Not Reported Samarium Silver Silver Silver Silver 153 8.25 Selenium (%) 2.69 Strontium nr Tantalum 1.6 1.6 Tellurium 1.25 Thorium 39.15 39.15 Tin Tin 100 9.5 Uranium 5.1 Ytterbium 4.75 3335	Cobalt	11	K ₂ O	4.23
Hafnium (ppb) Iridium (ppb) Iron (%) Lanthanum (pfb) Lutetium (pfb) Mercury (pf) Molybdenum (pf) Neodymium (pf) Nickel (pf) Rubidium (pf) Samarium (pf) Samarium (pf) Scandium (pf) Scandium (pf) Scandium (pf) Scandium (pf) Scandium (pf) Scandium (pf) Strontium (pf) Terbium (pf) Terbium (pf) Tin (pf) Tin (pf) Tungsten (pf) Iron (pf) Iridium (ppb) Indicative and Fusion / ARF Analyses are single results and are indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix identification purposes. Indicative only. These are provided for matrix iden	Europium	2.2	Na ₂ O	3.56
Iridium (ppb) Iron (%) Iron (%) Lanthanum Lutetium Mercury Molybdenum Nickel Potassium (%) Samarium Samarium Silver Silver Silver Silver Silver Silver Tantalum Tantalum Terbium Terbium Terbium Tin Tungsten Uranium Ytterbium Tin Samarium Silver Sil	Gold (ppb)	43.5	LOI1000	1.51
Iron (%) Lanthanum Lutetium Mercury Molybdenum Nickel Potassium (%) Samarium Samarium Silver Silver Silver Silver Silver Silver Tantalum Tantalum Tantalum Terbium Trebium Trebium Tin Tin Tungsten Uranium Ytterbium Lutetium 115.5 Analyses and Fusion / ARF Analyses are single results and are indicative only. These are provided for matrix identification purposes. 'nr': Not Reported	Hafnium	9.5		
Lanthanum Lutetium Mercury Molybdenum Nickel Potassium Samarium Saliver Selenium Sodium (%) Strontium Tantalum Tantalum Terbium Tin Terbium Tin Tin Tungsten Uutetium Lutetium No.65 Silver Sodium Sod	Iridium (ppb)	<50	Neutron Activation	
Lutetium Mercury Molybdenum Neodymium Nickel Potassium (%) Samarium Scandium Sclenium Sclenium Sclenium Tantalum Tantalum Terbium Terbium Tin Tungsten Uranium Ytterbium Mercury Nr Nable Neodymium Nr 146.5 Nr 146.5 Nr Nr Hubidium 107.5 Nr Not Reported Nr': Not Reported Nr': Not Reported Not	Iron (%)	3.35	Analyses and Fusion /	
Mercury Molybdenum Neodymium Nickel Potassium (%) Samarium Scandium Sclenium Sclenium Sclenium Tantalum Tantalum Terbium Terbium Tin Tungsten Uranium Ytterbium Molybdenum Nr 146.5 nr 147.5 147.5 indicative only. These are provided for matrix identification purposes. 'nr': Not Reported	Lanthanum	115.5	XRF Analyses are	
Molybdenum Neodymium Nickel Potassium (%) Rubidium Samarium Scandium Sclenium Sclenium Sodium (%) Soliver Silver Silver Strontium Tantalum Terbium Terbium Terbium Tin Tungsten Uranium Ytterbium Ytterbium Neodymium Nr Tantal 1.6 Tellurium Terbium Terbium Tin	Lutetium	0.65	single results and are	
Neodymium Nickel Potassium (%) Rubidium Samarium Scandium Selenium Sodium (%) Sodium (%) Strontium Tantalum Terbium Terbium Tin Tin Tungsten Uranium Ytterbium Vickel 137 Nor 107.5 Not Reported 13.35 S.25 Selenium S.25 Selenium S.26 Selenium Nor 1.6 Tellurium 1.6 Tellurium 1.6 Tellurium 1.25 Thorium 39.15 Tin Vitterbium 5.1 Ytterbium 4.75 Zinc 3335	Mercury	nr	indicative only. These	
Nickel 137 purposes. Potassium (%) nr Rubidium 107.5 'nr': Not Reported Samarium 13.35 Scandium 8.25 Selenium <5	Molybdenum	146.5	are provided for matrix	
Potassium (%) nr Rubidium 107.5 Samarium 13.35 Scandium 8.25 Selenium <5	Neodymium	nr	identification	
Rubidium 107.5 'nr': Not Reported Samarium 13.35 selenium 8.25 Selenium <5	Nickel	137	purposes.	
Samarium 13.35 Scandium 8.25 Selenium <5	Potassium (%)	nr		
Scandium 8.25 Selenium <5	Rubidium	107.5	'nr': Not Rep	orted
Selenium <5	Samarium	13.35		
Silver 153 Sodium (%) 2.69 Strontium nr Tantalum 1.6 Tellurium <10	Scandium	8.25		
Sodium (%) 2.69 Strontium nr Tantalum 1.6 Tellurium <10	Selenium	<5		
Strontium nr Tantalum 1.6 Tellurium <10	Silver	153		
Tantalum 1.6 Tellurium <10		2.69		
Tellurium <10	Strontium	nr		
Terbium 1.25 Thorium 39.15 Tin <100	Tantalum	1.6		
Thorium 39.15 Tin <100	Tellurium	<10		
Tin <100	Terbium	1.25		
Tungsten 9.5 Uranium 5.1 Ytterbium 4.75 Zinc 3335	Thorium	39.15		
Uranium 5.1 Ytterbium 4.75 Zinc 3335		<100		
Ytterbium 4.75 Zinc 3335				
Zinc 3335		5.1		
	Ytterbium	4.75		
Zirconium 380		3335		
	Zirconium	380		

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