

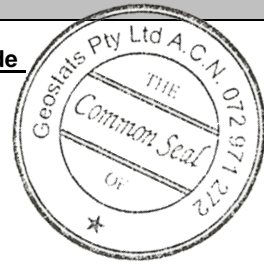
# GEOSTATS PTY LTD

Mining Industry Consultants  
Reference Material Manufacture and Sales

Certified Ore Grade Base Metal Reference Material Product Code

## GBM319-15

Certified Control Values



GBM319-15

Geostats Pty Ltd, Certified Ore Grade Base Metal Reference Material, Product Code:

Element	Grade	Standard Deviation	Num of Analyses	Confidence Interval
Nickel (ppm)	9	2	54	+/- 1
Copper (ppm)	43324	1340	123	+/- 240
Zinc (ppm)	681	45	109	+/- 9
Lead (ppm)	69	20	80	+/- 4
Cobalt (ppm)	nr	nr	nr	nr
Silver (ppm)	51.3	3.0	119	+/- 0.54
Sulphur (%)	0.07	0.01	76	+/- 0

### CRM Details

<u>Control Statistic Details</u>	<u>Neutron Activation Analysis Results (ppm, unless otherwise noted)</u>		<u>Major Elements by Fusion / XRF (%)</u>	
	Control statistics were produced from results accumulated in the April-2019 round robin. The number of results used to certify each analyte is shown in the table above.	Antimony	485	Fe
<u>Material Description</u> This material is described as an Oxide copper (fresh basalt), Pilbara Western Australia.	Arsenic	1270	SiO <sub>2</sub>	57.67
	<u>Colour Designation (ISCC-NBS, SP440)</u> This material is light brown in colour.	Barium	<100	Al <sub>2</sub> O <sub>3</sub>
<u>Usage</u> This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.		Bromine	<2	TiO <sub>2</sub>
	<u>Preparation and Packaging</u> 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.	Cadmium	<10	MnO
<u>Assay Testwork</u> 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.		Caesium	4	CaO
	<u>Stability</u> This product remains stable in its original packaging, away from direct sunlight.	Calcium (%)	nr	P
<u>Material Safety</u> This product is not hazardous and non-toxic.		Cerium	33	S
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Chromium	<20	MgO
<u>'nr': Not Reported</u>		Cobalt	48	K <sub>2</sub> O
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Europium	1.3	Na <sub>2</sub> O
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Gold (ppb)	457	LOI1000
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Hafnium	<5	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Iridium (ppb)	<50	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Iron (%)	12.8	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Lanthanum	14	
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<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Mercury	nr	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Molybdenum	<10	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Neodymium	nr	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Nickel	<20	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Potassium (%)	nr	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Rubidium	50	
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	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Scandium	10.7	
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	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Silver	50	
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	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Strontium	nr	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Tantalum	<2	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Tellurium	<20	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Terbium	<1	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Thorium	1.9	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Tin	<200	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Tungsten	20	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Uranium	<1	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Ytterbium	3	
<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>		Zinc	610	
	<u>Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.</u>	Zirconium	<500	

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