10A Marsh Close, O'Connor Western Australia 6163 Phone +618 93142566 Fax +618 93143699

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Website http://www.geostats.com.au

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Pulp Iron Ore Reference Material - GIOP-102

Certificate of Analysis

Analyte	Units	Average	Standard Deviation	Count	95% Confidence Interval
Fe	%	25.604	0.09	40	+/- 0.029
SiO2	%	53.35	0.26	40	+/- 0.08
Al2O3	%	2.051	0.051	50	+/- 0.015
TiO2	%	0.0832	0.0071	50	+/- 0.002
Mn	%	0.3268	0.0048	50	+/- 0.0014
CaO	%	3.748	0.036	50	+/- 0.01
Р	%	0.0758	0.0013	50	+/- 0.0004
S	%	1.297	0.076	50	+/- 0.022
MgO	%	3.668	0.028	44	+/- 0.008
K2O	%	0.04997	0.00044	37	+/- 0.00015
Zn	%	0.0199	0.0028	50	+/- 0.0008
Pb	%	0.0046			
Cu	%	0.0075	0.0034	38	+/- 0.0011
Ва	%	0.0035			
V	%	0.0037	0.0015	30	+/- 0.0006
Cr	%	0.0046			
CI	%	0.0244	0.0038	47	+/- 0.0011
As	%	0.008			
Ni	%	0.0068			
Со	%	0.004	0.0026	31	+/- 0.001
Sn	%	0.0016			
Sr	%	0.0067			
Zr	%	0.0019			
Na	%	0.071	0.0085	50	+/- 0.0025
LOI425	%	-0.028	0.071	40	+/- 0.023
LOI650	%	-0.041	0.085	39	+/- 0.028
LOI	%	-0.194	0.06	49	+/- 0.017

Control Statistic Details

Control values for this material were determined during a certification program.

Certification Date

This material was certified with the above values on:

20/07/2011

Source Material

Prior to homogenisation and testing, this material was sourced from Yilgarn, Western Australia

<u>Usage</u>

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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

This certified reference material was dried in an oven for a minimum of 8 hours at 105°C. The dry material was pulverised in a "puck and bowl" and then homogenised in a vee-blender. The material is then packaged into 10g plastic packets, ready for shipment.

Certification Testwork

This certified reference material was tested in a dedicated certification program. 10 samples were sent to 5 laboratories for XRF analyses. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.