



## CERTIFICATE OF ACCREDITATION

*In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-*

**QOTHO MINERALS (PTY) LTD**

**Co. Reg. No.: 2013/001430/07**

Accreditation Number: **RMP012**

is a South African National Accreditation System accredited Reference Material Producer provided that all SANAS conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying scope of accreditation Annexure "A", bearing the above accreditation number for

**PRODUCER OF REFERENCE MATERIALS**

The facility is accredited in accordance with the recognised International Standard

**ISO 17034:2016**

The accreditation demonstrates technical competency for a defined scope and the operation of a quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to use the relevant SANAS accreditation symbol to issue facility reports and/or certificates

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**Mr T Baleni**  
**Acting Chief Executive Officer**

**Effective Date: 07 September 2021**

**Certificate Expires: 24 July 2024**



## ANNEXURE A

## SCOPE OF ACCREDITATION

Accreditation Number: RMP012

<b>Permanent Address of Laboratory:</b> Qotho Minerals (Pty) Ltd Reference Materials Producer 36 Pelindaba Road Broederstroom Madibeng North West 0240  <b>Postal Address:</b> P O Box 13 Broederstroom 0240  Tel: (087) 004-3200 Tel: (083) 702-3393 E-mail: <a href="mailto:hannelie@qotho.co.za">hannelie@qotho.co.za</a> or <a href="mailto:joslyne@qotho.co.za">joslyne@qotho.co.za</a>	<b>Technical Signatories:</b> Dr H de Beer Mr TAJ Tsapayi  <b>Nominated Representative:</b> Dr H de Beer  <b>Issue No.:</b> 04 <b>Date of Issue:</b> 07 September 2021 <b>Expiry Date:</b> 24 July 2024
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ITEM	PROPERTY(IES) CHARACTERISED	DETAILS of PROPERTY CHARACTERISED	RANGE of PROPERTY CHARACTERIZED	METHOD USED TO ASSIGN PROPERTY VALUE
2	<b>CERTIFIED REFERENCE MATERIAL (CRM)</b>			
2.1	<b>Metals and Minerals (Inorganic and Physical testing)</b>			
<b>Note</b>	Multi-element analysis of nongaseous elements of the periodic table, expressed either as metals, oxides, sulphides, carbonates, or other similar substance; specific gravity and Loss on Ignition, for items 2.1.1 to 2.1.7 below			
2.1.1	Base metal ores, concentrate & tails	Ag, Al, As, Au, Bi, C, Ca, Co, Cr, Cu, Fe, H <sub>2</sub> O, K, LOI, Mg, Mn, Na, Ni, Pb, S, Sb, SG, Si, Sn, Ti, U, V, Zn	0,001 to 70 %	Study in a network of Competent Laboratories
2.1.2	Ferrous metal ores, concentrates & tails	Al, Ba, C, Ca, Cr, Fe, H <sub>2</sub> O, K, LOI, Mg, Mn, Na, P, Pb, S, SG, Si, Ti, V	0,001 to 70 %	
2.1.3	Precious metal ores, concentrates & tails	Ag, Au, C, Co, Cr, Cu, Fe, Ir, Ni, Pd, Pt, 4E, 6E, Rh, Ru, S, Si	0,001 to 2 000 g/t for PGM's and 0,001 to 70 % for the remainder	
2.1.4	Ferrous metal, Alloys & Slags	Al, Ba, C, Ca, Co, Cr, Fe, K, Mg, Mn, Ni, O <sub>2</sub> , P, S, Si, Ti, V	0,001 to 85 %	
2.1.5	Base metals	Ag, Al, As, Au, Bi, C, Cd, Co, Cr, Cu, Fe, Mn, Ni, O <sub>2</sub> , P, Pb, S, Sb, Se, Si, Sn, Te, Zn	Impurities: 1 ppm to 10 000 ppm; metal purity: 70 to 99,995 %	
2.1.6	Quartz, Lime, mineral "blanks"	All elements listed, dependent on the blank required	0,01 to 99 %	
2.1.7	Ferrous metal industry reductants (Coke, Coal Anthracite, etc)	Al, Ash, Ca, Fixed C, Fe, H <sub>2</sub> O, Mg, P, S, Si, Volatiles	0,001 to 95 %	

Original Date of Accreditation: 25 July 2019

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The CMC, expressed as an expanded uncertainty of measurement, is stated as the standard uncertainty of measurement multiplied by a coverage factor  $k = 2$ , corresponding to a confidence level of approximately 95%

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM


  
Accreditation Manager