



# Copper Cobalt Africa

**BM**  
BASE METALS  
2018

*In Association with*

**The 9<sup>TH</sup> Southern African Base Metals Conference**

## **Copper Cobalt Africa Post-Conference Technical Tour KANSANSI MINE, SMELTER AND HYDROMET PLANT**

**Friday 13 July 2018**

First Quantum Minerals, Solwezi, Zambia

Kansanshi Mining PLC is majority owned by First Quantum Minerals, which currently operates seven mines and one copper smelter and is developing four projects worldwide. The company produces copper, nickel, gold and zinc.

Kansanshi was commissioned in 2005. It is the largest copper mine in Africa and the 8th largest in the world, with capacity of 340 kt/a Cu (210 kt by SXEW), and 130,000 oz/a Au. Copper production in 2017 was 250801 t.

A one-day post-conference technical tour will enable a limited number of delegates (maximum 28) to visit the diversified Kansanshi operation in Solwezi, Zambia. The tour is accredited for one Continuing Professional Development (CPD) point with the Engineering Council of South Africa (ECSA)

### **Kansanshi operations**

Mining is carried out in two open pits using conventional open-pit methods and employing hydraulic excavators and a fleet of haul trucks. Ore treatment is flexible to allow for variation in ore type, with processing possible through an oxide circuit, a sulphide circuit, and a transitional ore 'mixed float' circuit, with facilities to beneficiate flotation concentrate to final cathode.

Sulphide ore is treated by crushing, milling, and flotation to produce copper concentrate. Oxide ore is treated via crushing, milling, flotation, leaching, and SX/EW process to produce sulphidic and gold-bearing flotation concentrates as well as electrowon cathode copper. The hydrometallurgical circuit employs both pressure and atmospheric leaching steps, and has five SX circuits and three tankhouses. The site also has its own dedicated acid plants.

Gold is recovered by gravity concentrators and Gemini tables. A high-grade concentrate is produced for direct smelting to gold bullion.

Commissioning of the Kansanshi smelter commenced in Q3 2014, and first anodes were cast in December 2014. The smelter achieved commercial production in July 2015. Primary processing steps include smelting, converting, fire refining and casting.

The smelter has a nominal capacity of 1.2 million tonnes per annum of concentrate to produce over 300 kt/a copper metal and more than 1.0 million t/a of sulphuric acid as a by-product. Acid production from the smelter permits the Kansanshi process plant to treat mixed cleaner tails through the leaching circuit and produce additional cathode.



### **Tour arrangements**

Following an early airport transfer from the conference venue, delegates will fly with Proflight Charters from Livingstone to Solwezi on Friday 13 July and return to Livingstone in the early evening. Road transfers in Solwezi will be by bus, courtesy of Kansanshi Mine.

The technical tour will visit the mine, smelter, and hydrometallurgical plant. Specific technical requests from delegates will be accommodated where possible.

Delegates are required to provide their own safety boots. Other required PPE will be provided by the mine.

The tour is limited to a maximum of 28 people, based on a first-come, first-served basis. A minimum of 20 delegates is required. Please indicate interest by submitting the Booking Form as soon as possible. No bookings will be accepted after Friday 18 May 2018.

Delegates will be advised by 22 May 2018 whether the tour will go ahead and payment will be required at this time. Full payment must be received by SAIMM by no later than Friday 29 May 2018. A detailed itinerary and further details will be provided to confirmed delegates.

To add your name to the mailing list and to receive further information, please e-mail your contact details to Camielah Jardine: Head of Conferencing  
SAIMM, Tel: +27 (0) 11 834-1273/7, E-mail: [camielah@saimm.co.za](mailto:camielah@saimm.co.za), Website: <http://www.saimm.co.za>



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### REGISTRATION FORM — DEADLINE: FRIDAY 18 MAY 2018

For online registration, go to:  
[www.saimm.co.za/saimm-events/copper-cobalt-africa-9th-base-metals-conference-2018](http://www.saimm.co.za/saimm-events/copper-cobalt-africa-9th-base-metals-conference-2018)

#### PERSONAL DETAILS

Title ..... First Name ..... Other Initials .....

Surname/Family Name .....

Preferred Name (for use on name badge) .....

Company ..... Designation .....

Company VAT Registration (**Compulsory—SA companies**) ..... Order No .....

Invoice Address .....

..... Code ..... Country .....

Tel/Cell: ..... Fax: ..... E-mail: .....

SAIMM Membership No. ....



**SAIMM**  
THE SOUTHERN AFRICAN INSTITUTE  
OF MINING AND METALLURGY

Please complete and return to:

SAIMM, P.O. Box 61127, Marshalltown, 2107  
Tel: +27 11 834 1273/7 · Fax: +27 11 838 5923 or 833 8156  
E-mail: [camielah@saimm.co.za](mailto:camielah@saimm.co.za) (Head of Conferencing) or  
[anna@saimm.co.za](mailto:anna@saimm.co.za) (Registration)

Would you like to become a member of SAIMM?  
Please indicate by (✓ tick) ☐

#### Registration fee: R11 400 per delegate

My main interest would be in visiting (tick all applicable):

Open-pit mine ☐ Leach plants ☐

Smelter ☐ Solvent extraction and Electrowinning ☐

**Cheques**—Please find enclosed a cheque/money order (in SA Rands)  
payable to SAIMM or

**EFT** (Electronic Fund Transfer) — Please attach proof of payment

**Credit Cards**—Please debit (✓ tick) my:

Visa ☐ Mastercard ☐ American Express ☐ Diners Club ☐

Card No.

Expiry Date: ..... Last 3 digits on back of card: .....

Signature: .....

Please print name of card holder:

#### Our banking details are:

Bank: Standard Bank

Branch Code: 000205

Account Type: Cheque Account

Branch: Johannesburg

Account No: 000402974

Swift No. SBZAZAJJ



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