



**A blast at Kakula's new, southern box cut. Once the box cut is completed, a third decline tunnel will be driven to provide access and ventilation to the high-grade copper on the southern side of the underground Kakula Deposit in the DRC.**

Building what will be  
**③** of the world's  
**best mines**  
in Southern Africa's  
legendary mineral fields

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### KAMOA-KAKULA

Initial development  
of two mining areas  
on **world's 4<sup>th</sup>-largest**  
copper discovery

**Democratic Republic  
of Congo's Central  
African Copperbelt**

### PLATREEF

Mine projected to be  
**Africa's lowest-cost producer**  
of platinum-group metals,  
plus nickel, copper & gold

**Northern Limb of South Africa's  
Bushveld Complex**

### KIPUSHI

**Ultra-high-grade**  
historic mine being  
upgraded to produce  
zinc, copper, silver,  
germanium & lead

**D.R. Congo's  
Copperbelt**



## Kamoa-Kakula, DRC

Paving the roadway in Kakula's new, southern box cut. The box cut is planned to be completed next month, allowing for a third decline tunnel to be driven to provide access and ventilation on the southern side of the underground Kakula Deposit.



## Kamoa-Kakula

Marking the centreline for reference at Kakula's southern box cut. The box cut's contractor, China Railway No. 9 Engineering Group (CREC 9), of Beijing, China, also successfully completed the box cut for the twin declines on the northern side of Kakula.



A ventilation shaft being developed by a Master Drilling crew will supply large volumes of fresh air from the surface to Kakula's underground mine workings.



## Kamoa-Kakula

Jumbo drill in operation in the conveyor decline at Kakula. The twin declines are close to intersecting the high-grade ore on the northern edge of the Kakula Deposit, marking the completion of more than 3,600 metres of underground decline development to provide access to the orebody and service the mine.



Peter Reavy, Kamoā-Kakula Project Manager (left), and Paul Arscott, Chief Mine Geologist (right), with a piece of diamictite from one of Kakula's twin northern declines.

Diamictite is a sedimentary rock unit that lies immediately above the high-grade copper zones at Kakula.

The twin declines intersected the mineralized reef in late January. Underground mine development now is progressing toward the initial, high-grade mining area on the northern edge of the Kakula Deposit.



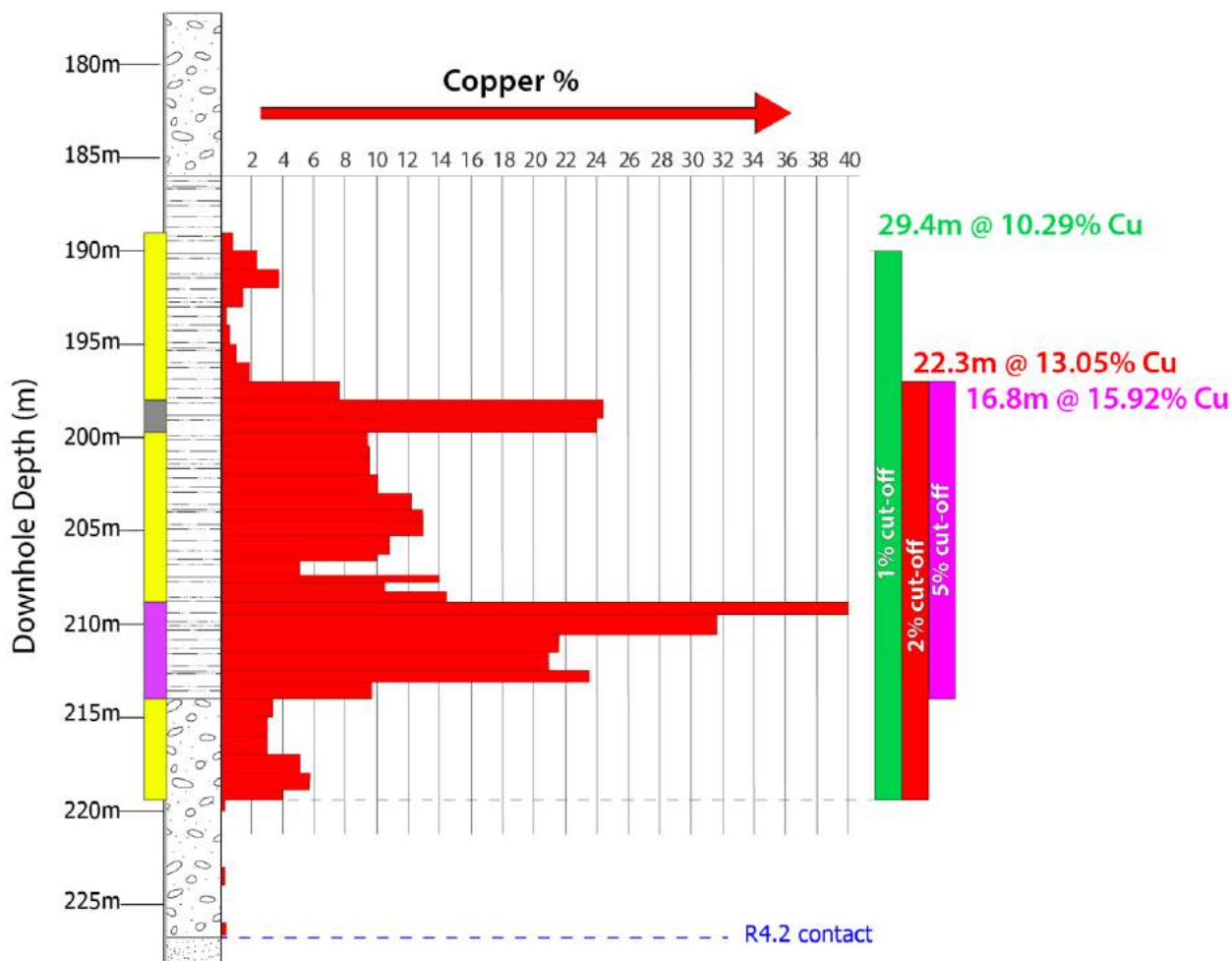
## Kamoa-Kakula

Hole DD1484 being drilled at the Kamoa North discovery area. The ultra-high-grade hole DD1450, which intersected **22.3 metres of 13.05% copper** (at a 2% copper cut-off grade), was drilled vertically from the same site. DD1484 is angled north, aiming to hit high-grade copper mineralization approximately 100 metres north of DD1450's intersection.



# Mineralization Profile

DKMC\_DD1450



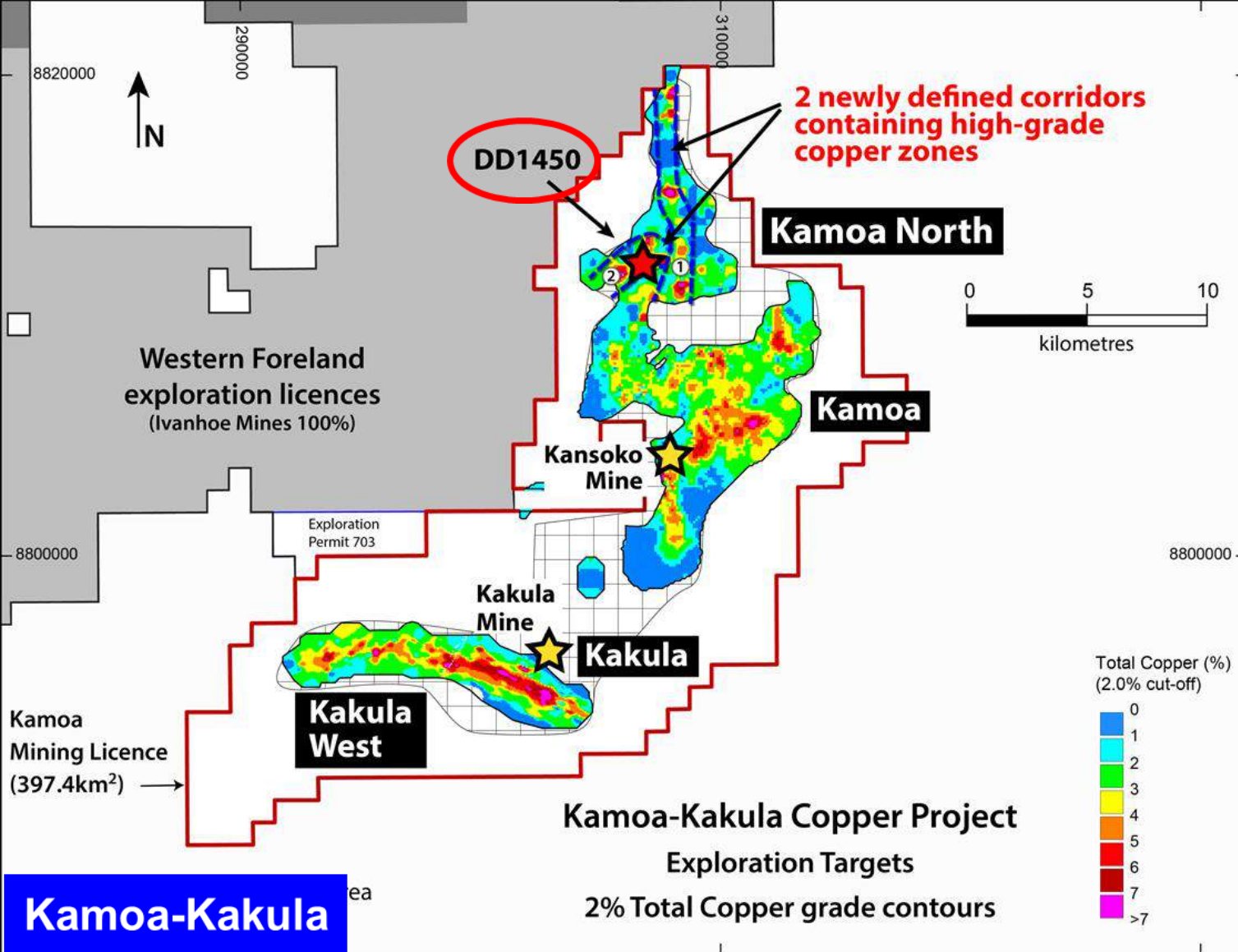
**Kamoa-Kakula**



NOTE: Thickness reported as true thickness

Mineralization profile for drill hole DD1450 that was recently completed at the Kamoa North exploration area within the Kamoa-Kakula mining licence.

The hole intersected **13.05% copper over 22.3 metres** (true thickness), at a 2% copper cut-off grade, in a remarkably thick, flat-lying, ultra-high-grade deposit beginning at a depth of only 190 metres below surface.



Kamo-Kakula mining licence, showing drill hole DD1450, the Kamo North Exploration Area, the Kamo and Kakula mining areas, and the adjacent, 100%-owned Western Foreland exploration-licence area.



**Kamoa-Kakula**

Workers pouring concrete foundations for new housing units to accommodate construction workers and miners who will help build the Kakula Mine.



## Kamoa-Kakula

Construction has commenced on a new, 20-kilometre by-pass road linking the Kamoa-Kakula Project to the Kolwezi airport, located approximately six kilometres south of Kolwezi. When completed, this new road will significantly improve the transportation corridor between Kolwezi and Kamoa-Kakula.



## Kamoa-Kakula

Eco-livelihoods staff with pineapples harvested at the Kamoa-Kakula Project garden. Production and sale of the pineapples is one of the new, community socio-economic projects supported by the Kamoa Copper Sustainable Livelihoods Program, and helps to provide local community members with opportunities to earn additional income.



**Kamoa-Kakula**

Weeding of banana trees at the Kamoa-Kakula Project community garden. Bananas are an important source of vitamins and minerals for the local population.



## Kamoia-Kakula

Environmental testing of creek water near the Kamoia-Kakula Project. Ivanhoe Mines is focused on the responsible development of our three projects into state-of-the-art mines that operate within leading environmental standards and contribute to the development of local communities.



## Kamoa-Kakula

New canal liner installed by the Kamoa-Kakula Project team to deliver fresh water to the Kakula community fishponds. The fish-farming initiative teaches aquaculture skills to local community members, helps to enhance their nutrition, and provides them with opportunities to earn additional income.





**Kamoa-Kakula**

A local farmer receiving technical advice from a member of the Kamoa Copper Sustainable Livelihoods Program. The community farming initiative is another part of Kamoa-Kakula's program to support and expand food production in nearby communities.



## Western Foreland, DRC

An exploration rig drilling at the Makoko Discovery on Ivanhoe's 100%-owned Western Foreland licences. Makoko is the first of multiple, high-potential target areas identified by Ivanhoe's exploration team on the Western Foreland licences to be tested by drilling.



**Platreef, South Africa**

Members of Platreef's underground development team at Shaft 1's second mine-access station, 850 metres below surface.

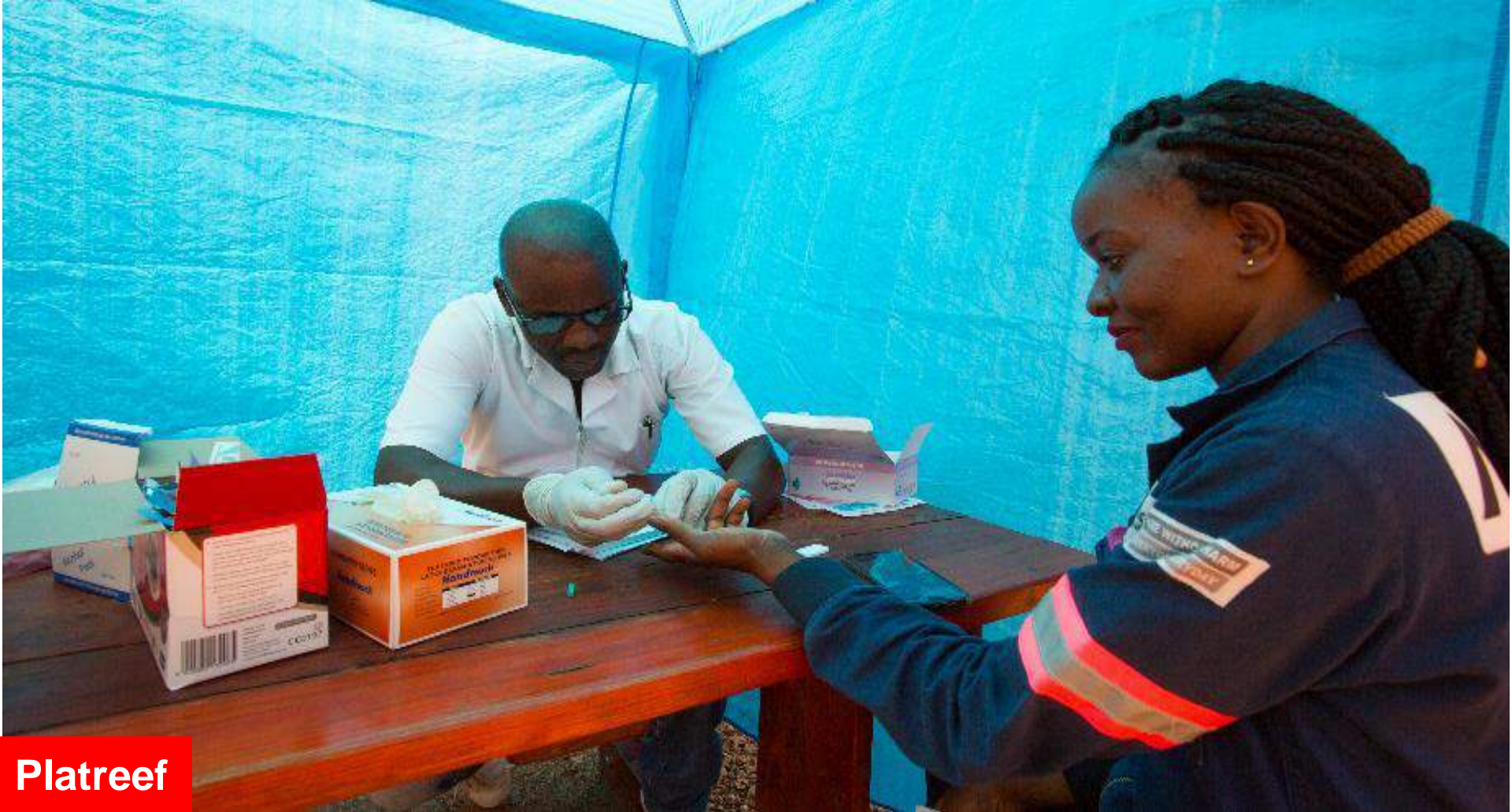


Underground mucking machine used to remove broken rock from the development of Shaft 1's 850-metre-level station.



**Platreef**

An engineer surveying the ongoing lateral development work at Shaft 1's 850-metre-level station.



A doctor testing a Platreef employee during the project's annual HIV Testing Day. Early testing can ensure access to effective treatment, if required.



**Platreef**

Earlier this month, members of the Platreef Project team celebrated another month worked without incurring a lost-time accident with the “safety bull” initiative, which rewards team members with a barbeque upon attaining specific safety milestones. The project now has recorded more than one million hours worked without a lost-time injury.



**Kipushi, DRC**

Workers drilling holes to install new electrical cables on Kipushi's 850-metre level.





## Kipushi

Final commissioning of Kipushi's underground rock crusher and feeders.



## Kipushi

Kipushi's newly paved ore-haulage road completed 1,150-metres below surface.



## Kipushi

Kico geologists examining high-grade sphalerite (zinc mineralization) at the face of the Big Zinc Deposit.



## Kipushi

Newly installed ventilation duct supplying fresh air to the mine-development team at the Big Zinc Deposit.



## Kipushi

Newly equipped first-aid room at the Kipushi Mine.



## Kipushi

Artisanal miners from the local Kipushi area receiving instruction to qualify as light-duty mechanics at Kipushi's new vocation training centre.



2019  
新年快乐  
Year of the Pig

**IVANHOEMINES**

wishes you a happy  
and prosperous Year of the Pig