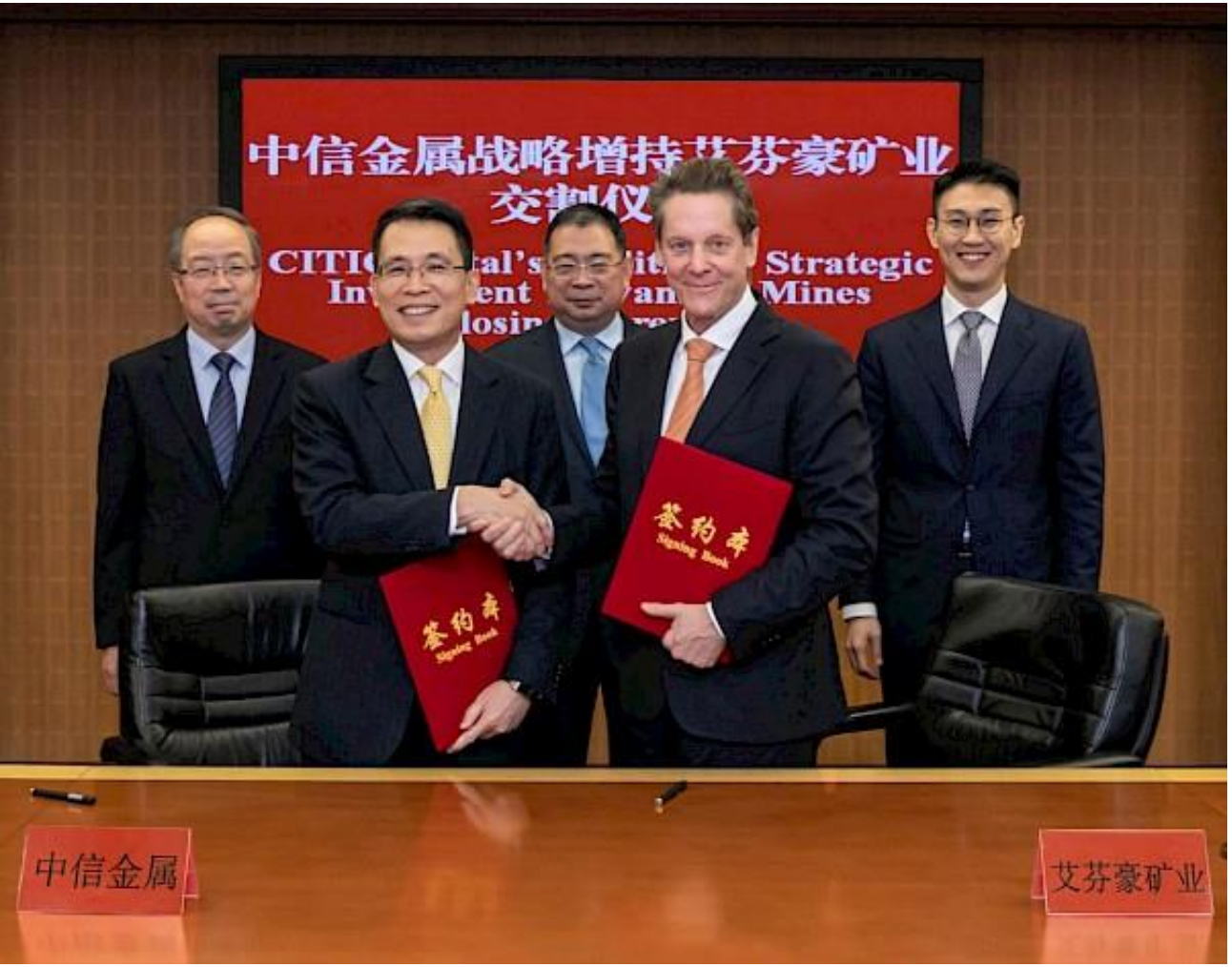
IVANHOE MINES

NEW HORIZONS

- **Over 20** years in Southern Africa.
- **3** advanced, unique projects.
- Positioned to realize urbanization's resource opportunities with minerals to help build a better world.



August 16, 2019: Ivanhoe Mines completes strategic equity investment of C$612 million (US$459 million) from China-based CITIC Metal, bringing CITIC's investment in Ivanhoe to more than US$1 billion.

Additional C$67 million (US$50 million) received from Zijin Mining through the exercise of its anti-dilution rights.

Ivanhoe now positioned to fully fund its share of capital costs to bring the Kakula Copper Mine to commercial production.

KAMOA-KAKULA
Exploration & mine development

Democratic Republic of Congo

Our world's best copper discovery

Hole DD1571, which intersected 18.0% copper over 18.86 metres

IVANHOE MINES

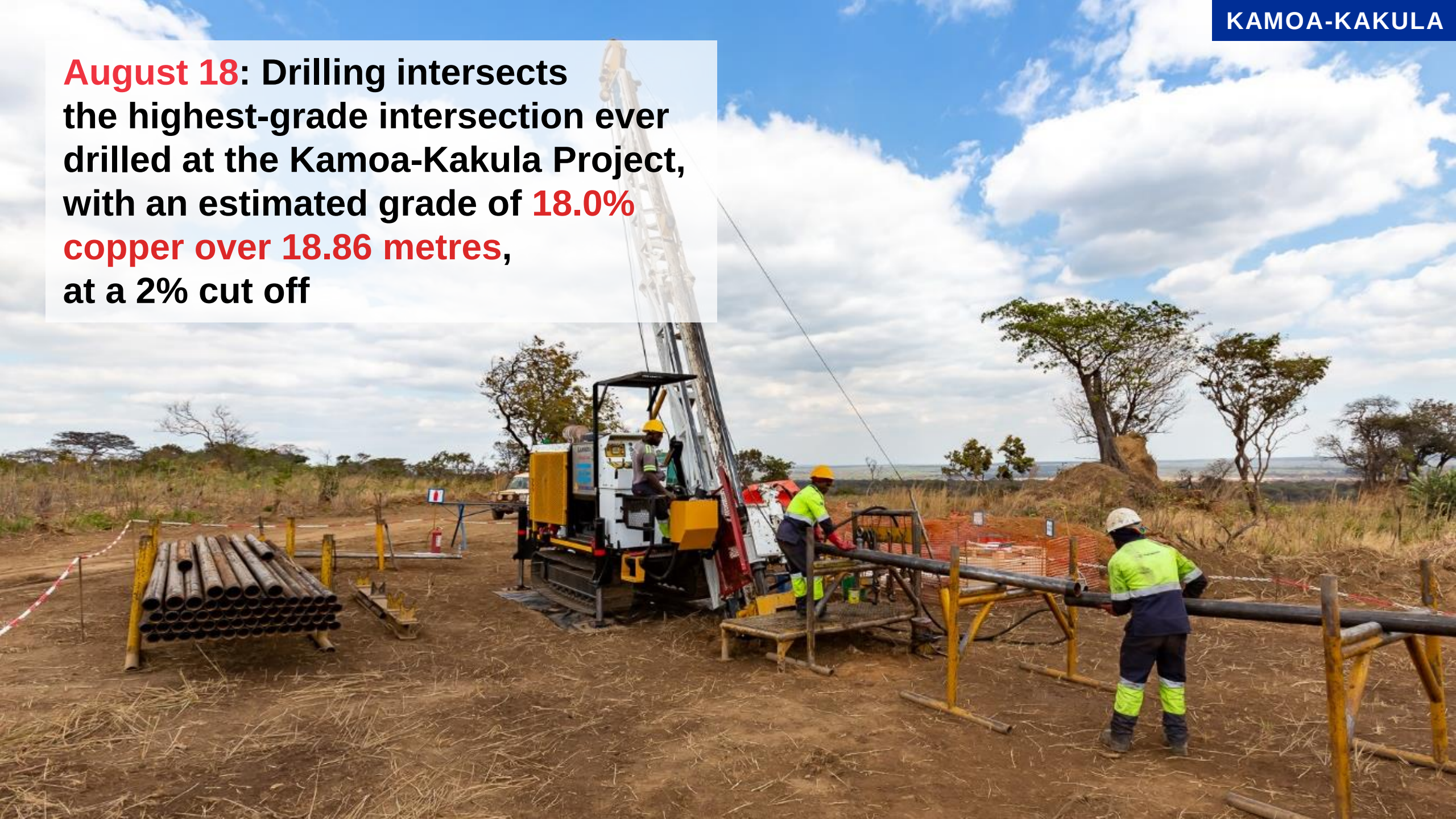
The Kakula Mine's first stage will average 6.8% copper over the first 5 years, with mine-site cash costs of US$0.43/lb copper

Independent pre-feasibility study (PFS) for the Kakula copper mine announced on February 6, 2019

The stage one, 6 Mtpa operation at Kakula, with estimated development capital of US$1.1 billion, yields an after-tax NPV8% of US$5.4 billion and an IRR of 47% over a 25-year mine life

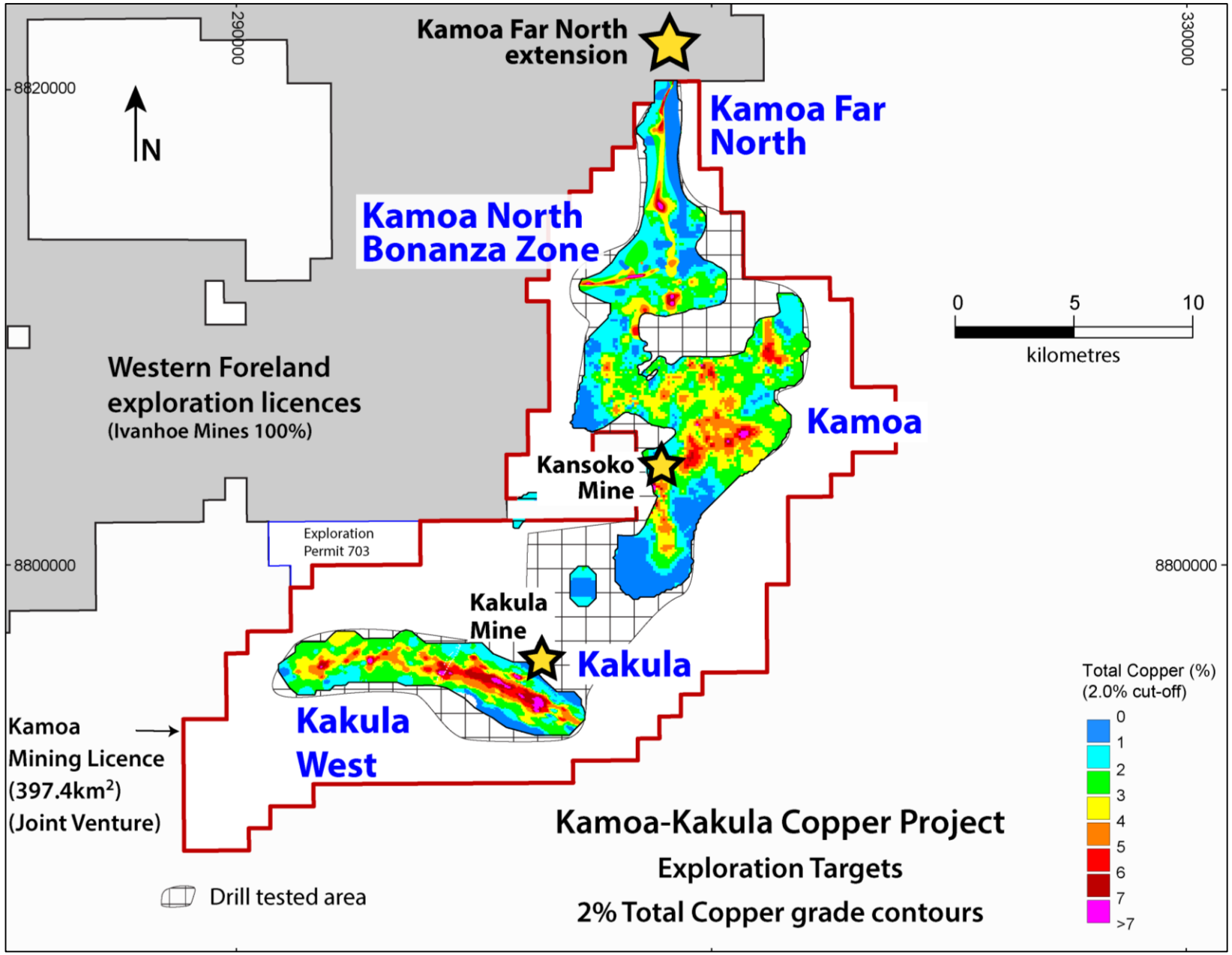
The PEA envisions the staged mine expansions and smelter will be funded from internal cash flows and yields an after-tax NPV8% of US$10.0 billion and an IRR of 41%

Once the expanded PEA production rate of 18 Mtpa is achieved, Kamoa-Kakula is projected to become the world's second largest copper mine, with peak annual production of more than 700,000 tonnes of copper

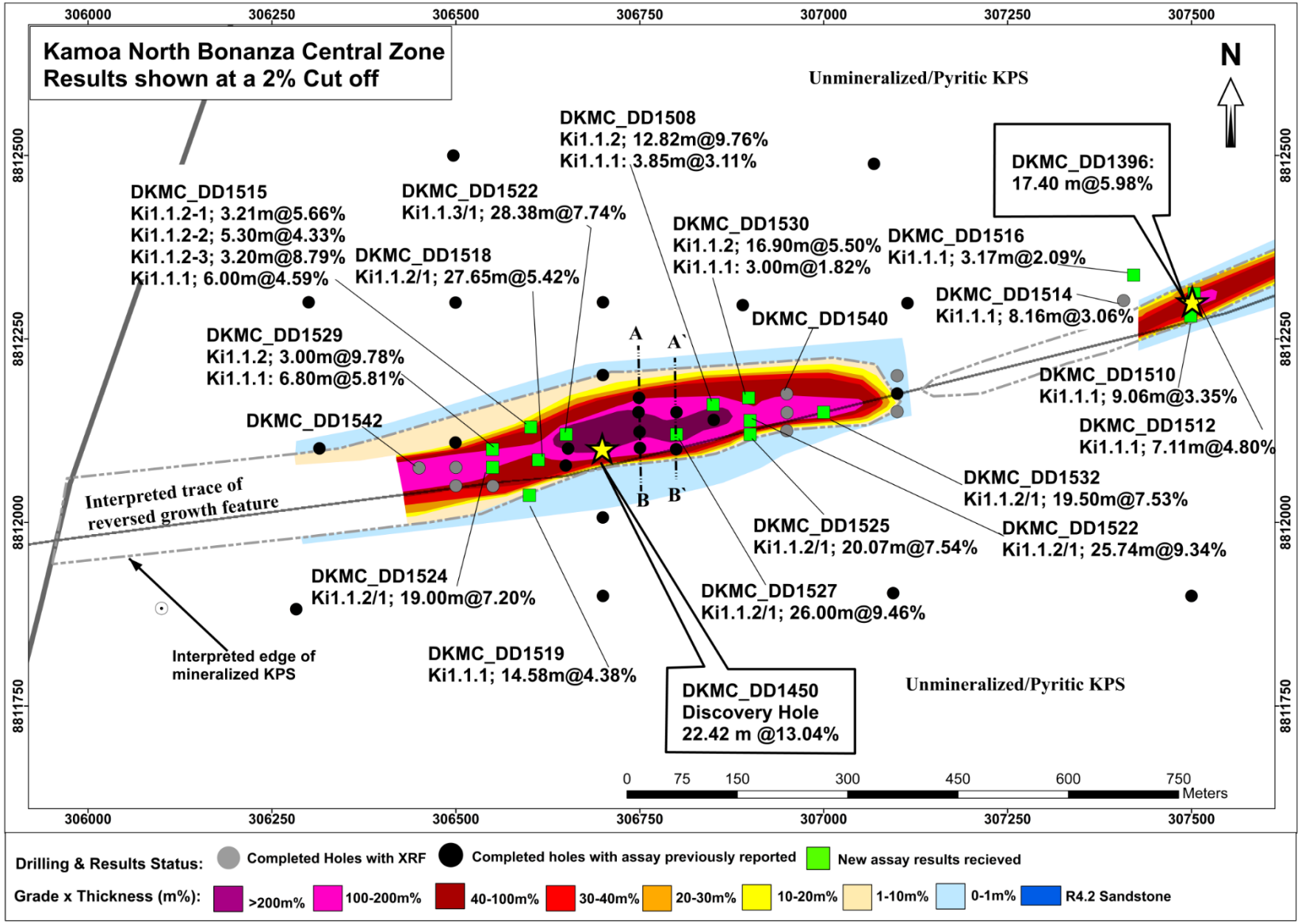


August 18: Drilling intersects the highest-grade intersection ever drilled at the Kamoa-Kakula Project, with an estimated grade of 18.0% copper over 18.86 metres, at a 2% cut off

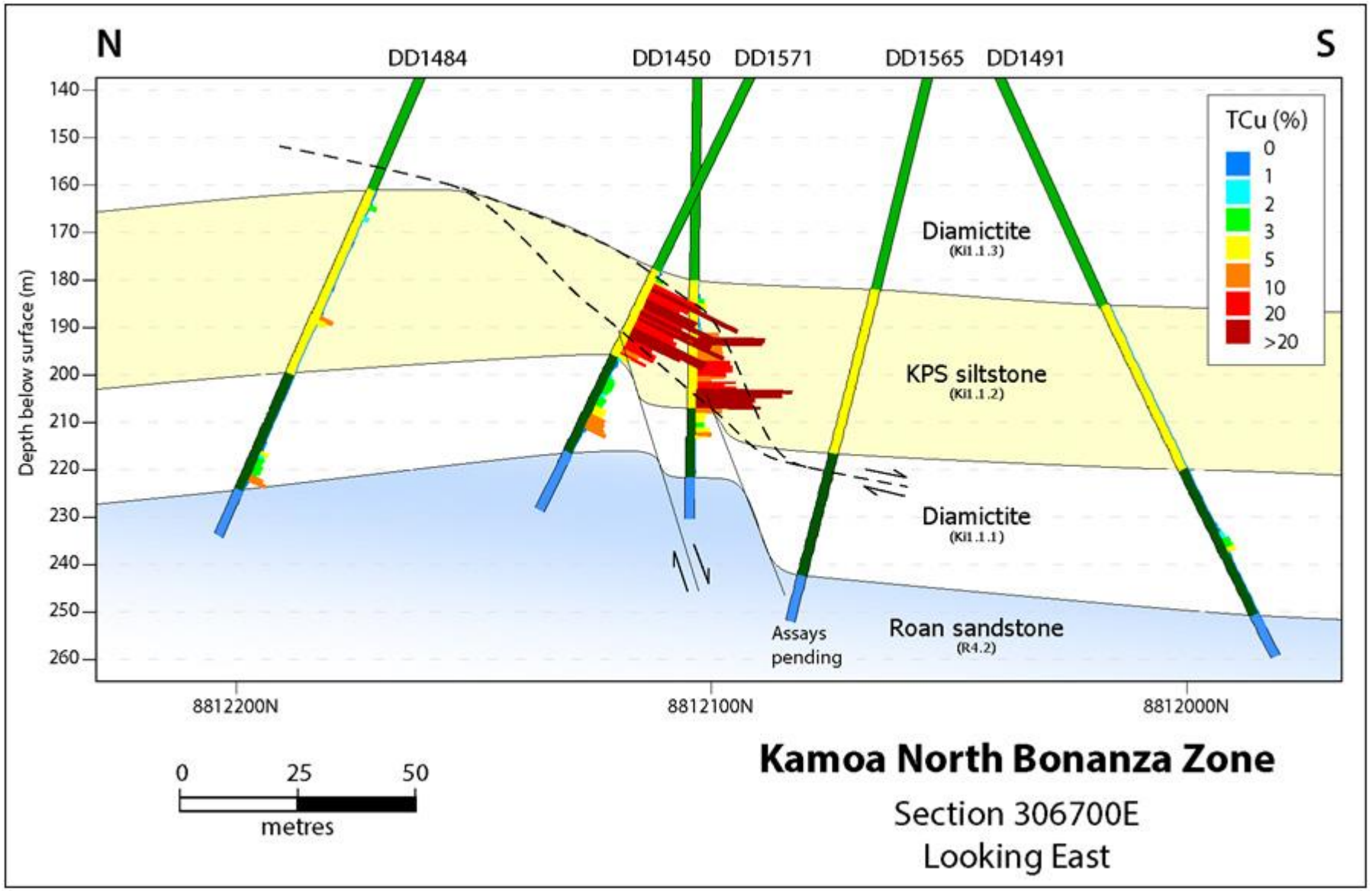
Kamoa North – two new high-grade corridors trending onto Ivanhoe's 100%-owned ground



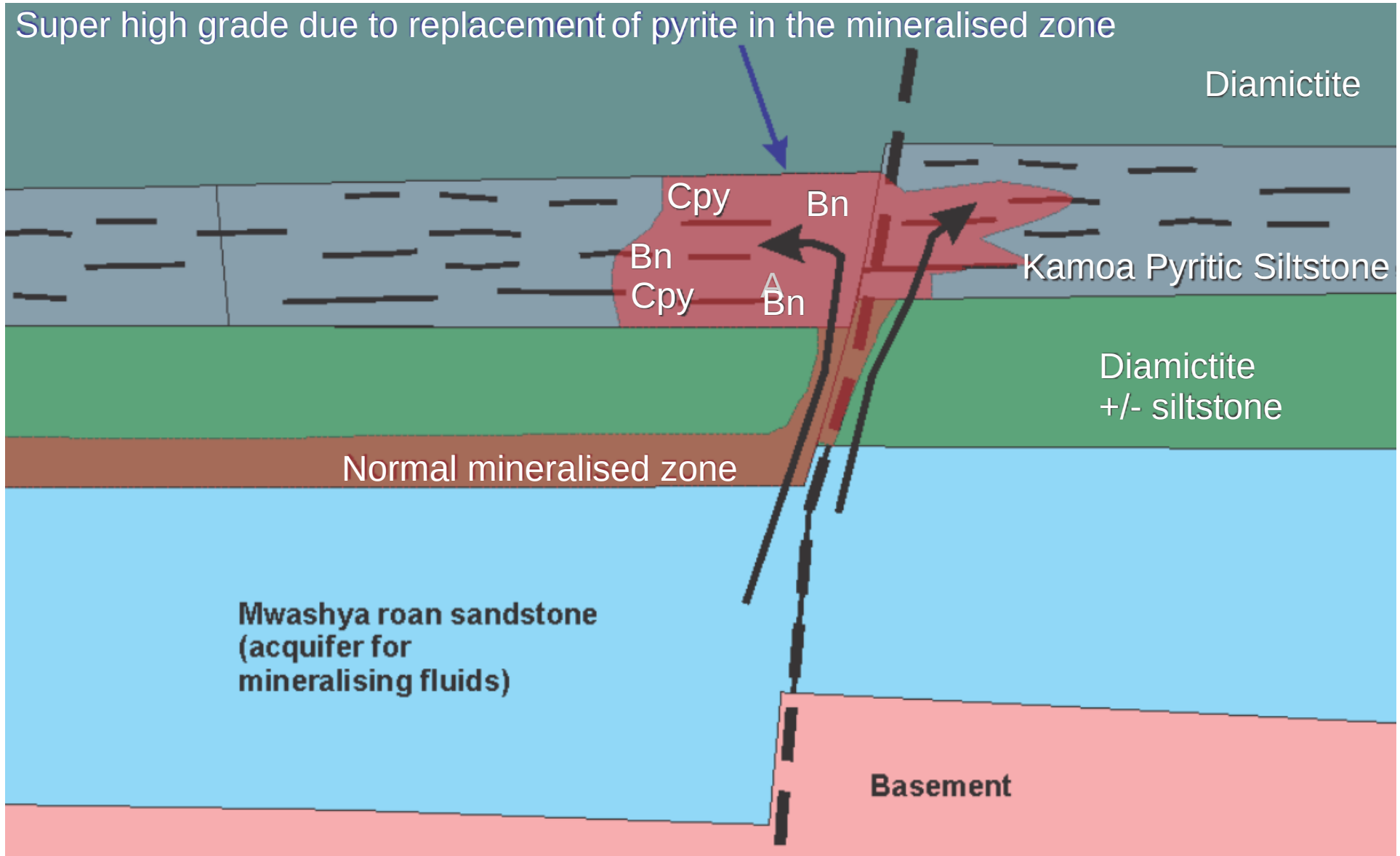
Plan view of Kamoa North Bonanza Zone drill-holes and interpreted high-grade corridor



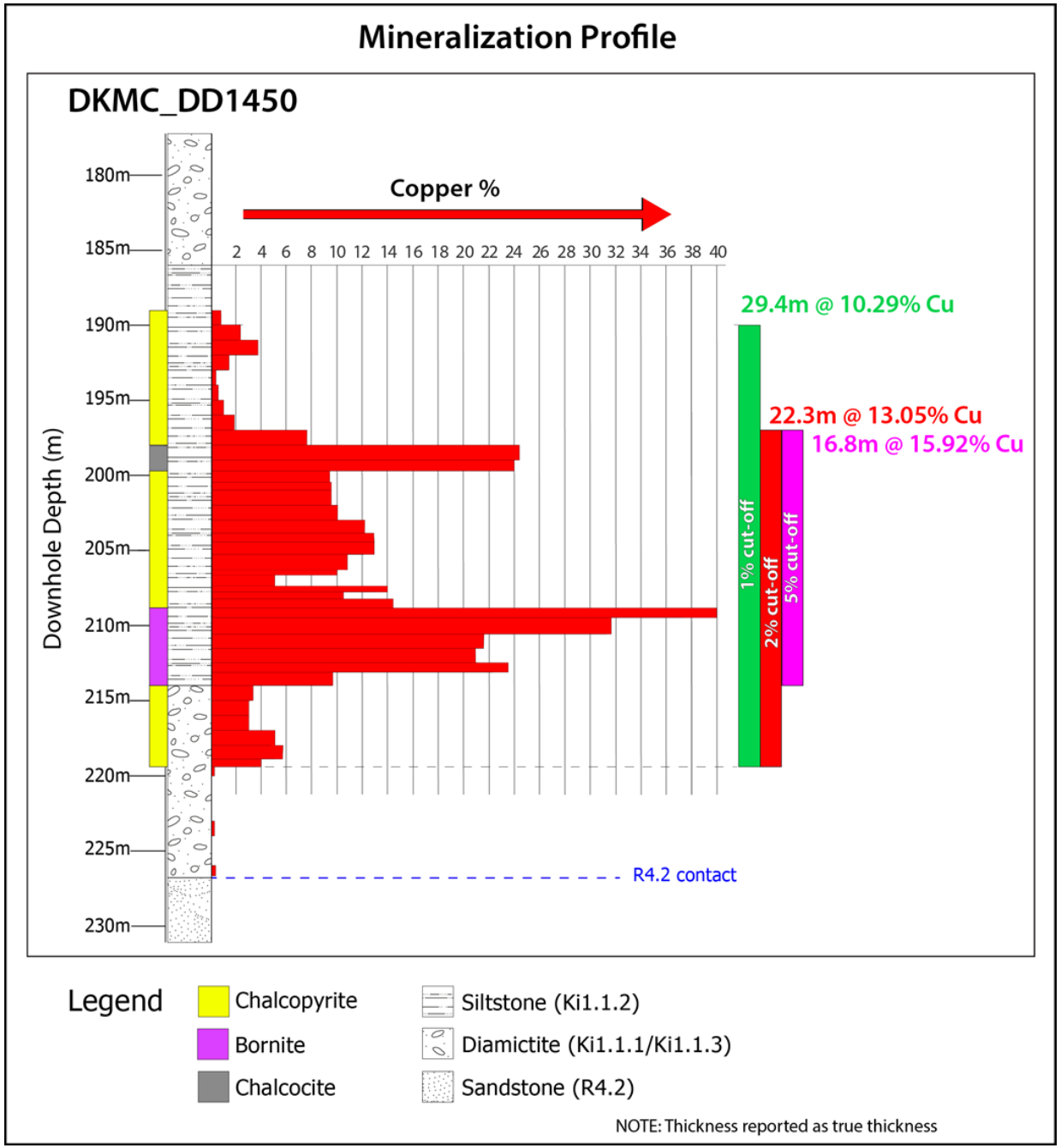
North-south section view through the Kamoa North Bonanza Zone



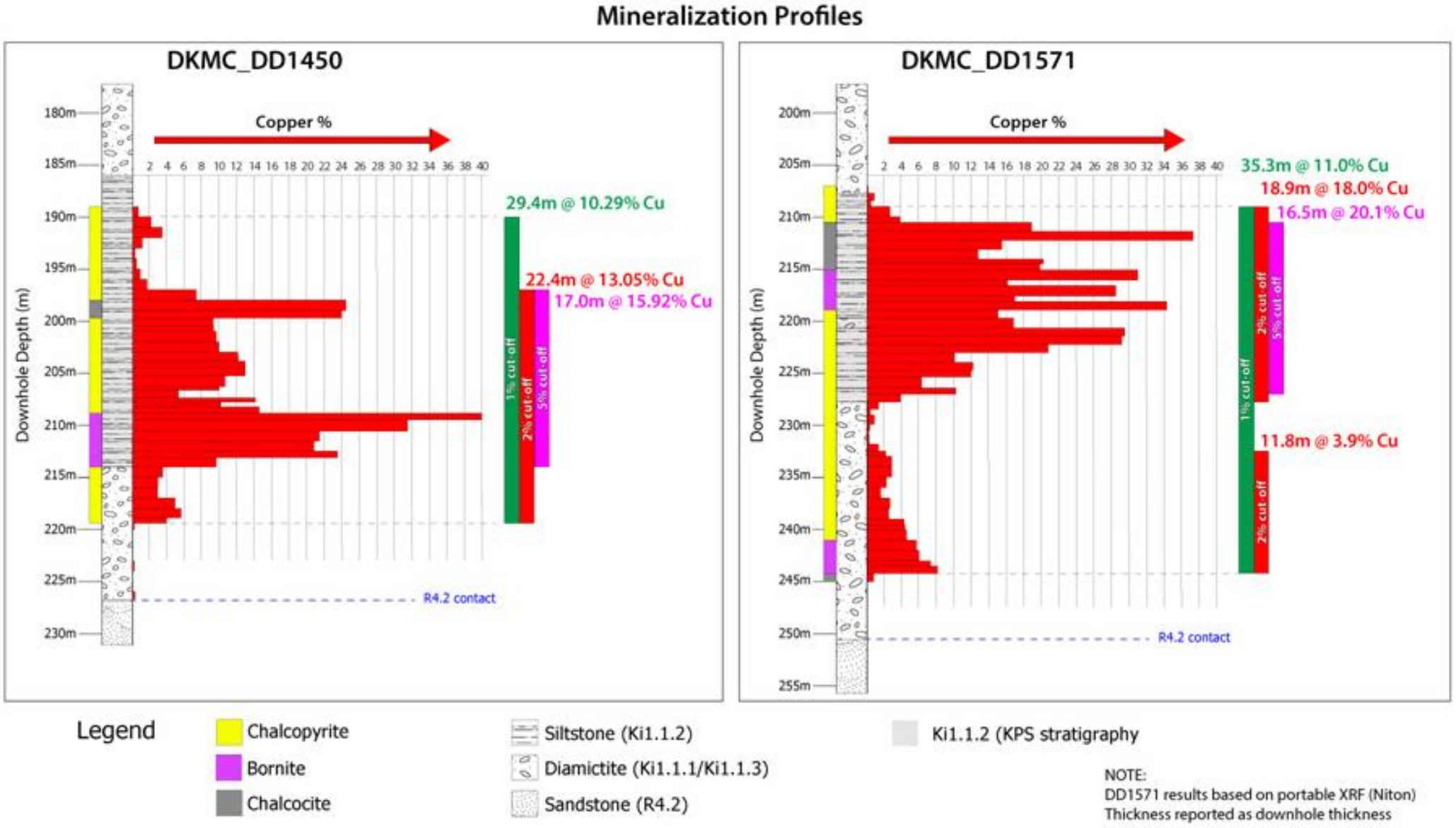
Schematic on how the copper replaced pyrite in the KPS bonanza copper zone in DD1450



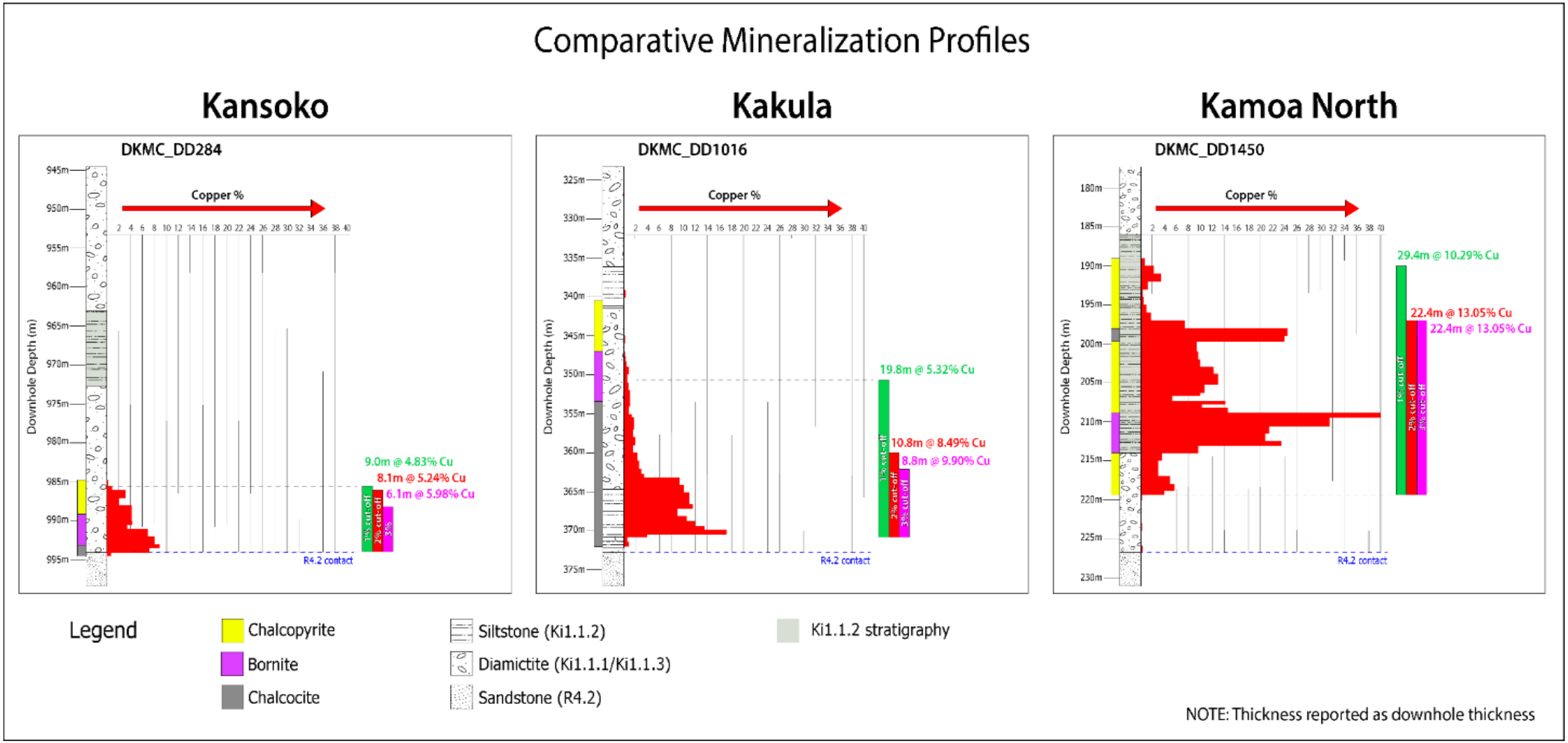
Kamoa North DD1450: 22.3 metres of 13.05% copper in shallow, flat-lying discovery hole



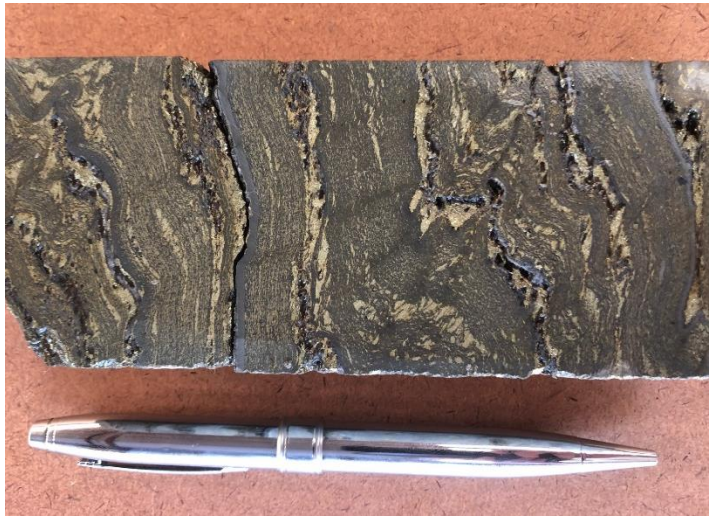
Mineralization profiles of recent holes across the Kamoa North Bonanza Zone



Comparative grade profiles from Kansoko, Kakula and Kamoa North discoveries



Core from the Kamoa North Bonanza Zone



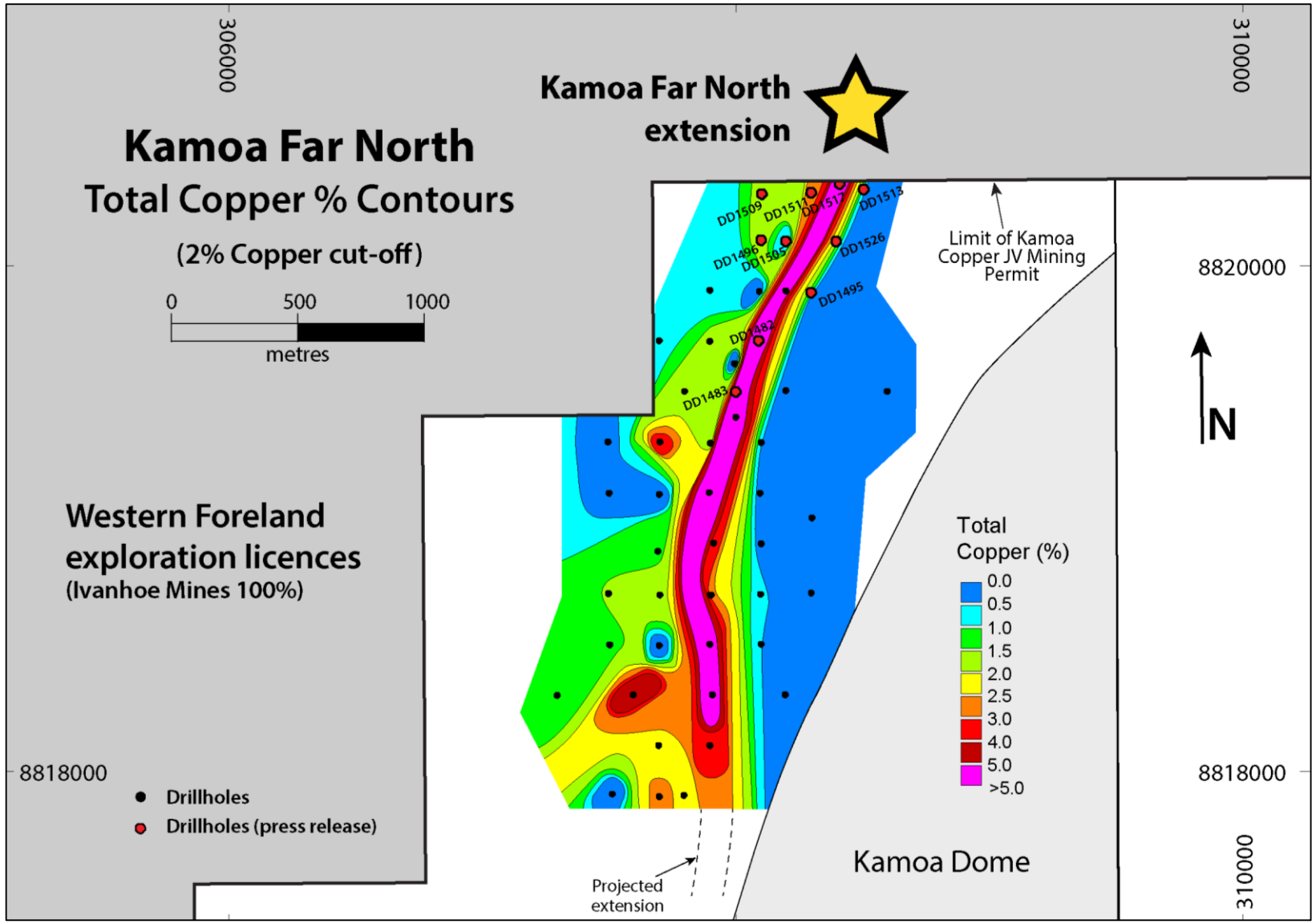
DD1520 sample from a downhole depth of 197 metres, containing predominantly massive chalcocite, bornite and some copper oxide (CuO).

The grade of the sample is 46% copper.

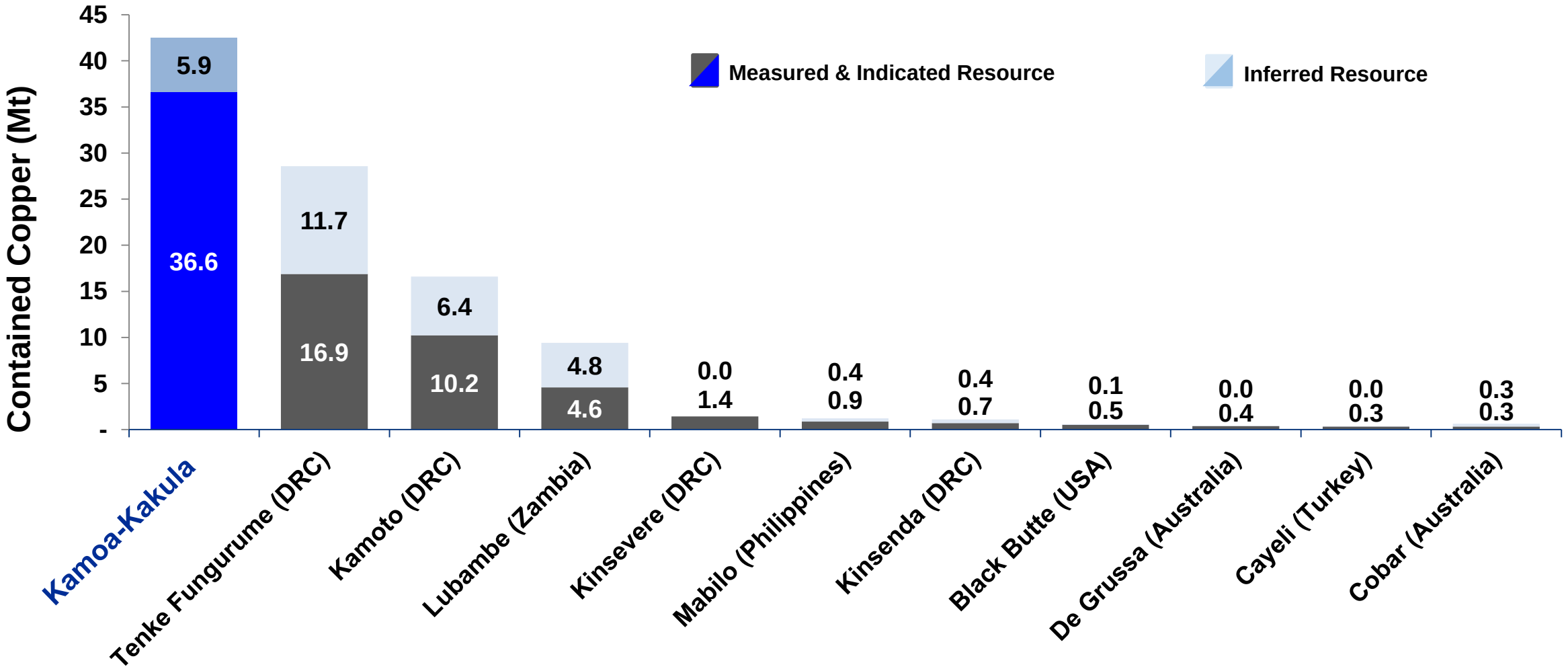
DD1522 sample from a downhole depth of 212.1 metres, containing finely disseminated bornite (Cu5FeS4).

The grade of the sample is 29.3% copper.

Drilling extends 10-km Kamoa Far North discovery on to Ivanhoe's 100%-owned Western Foreland exploration licences



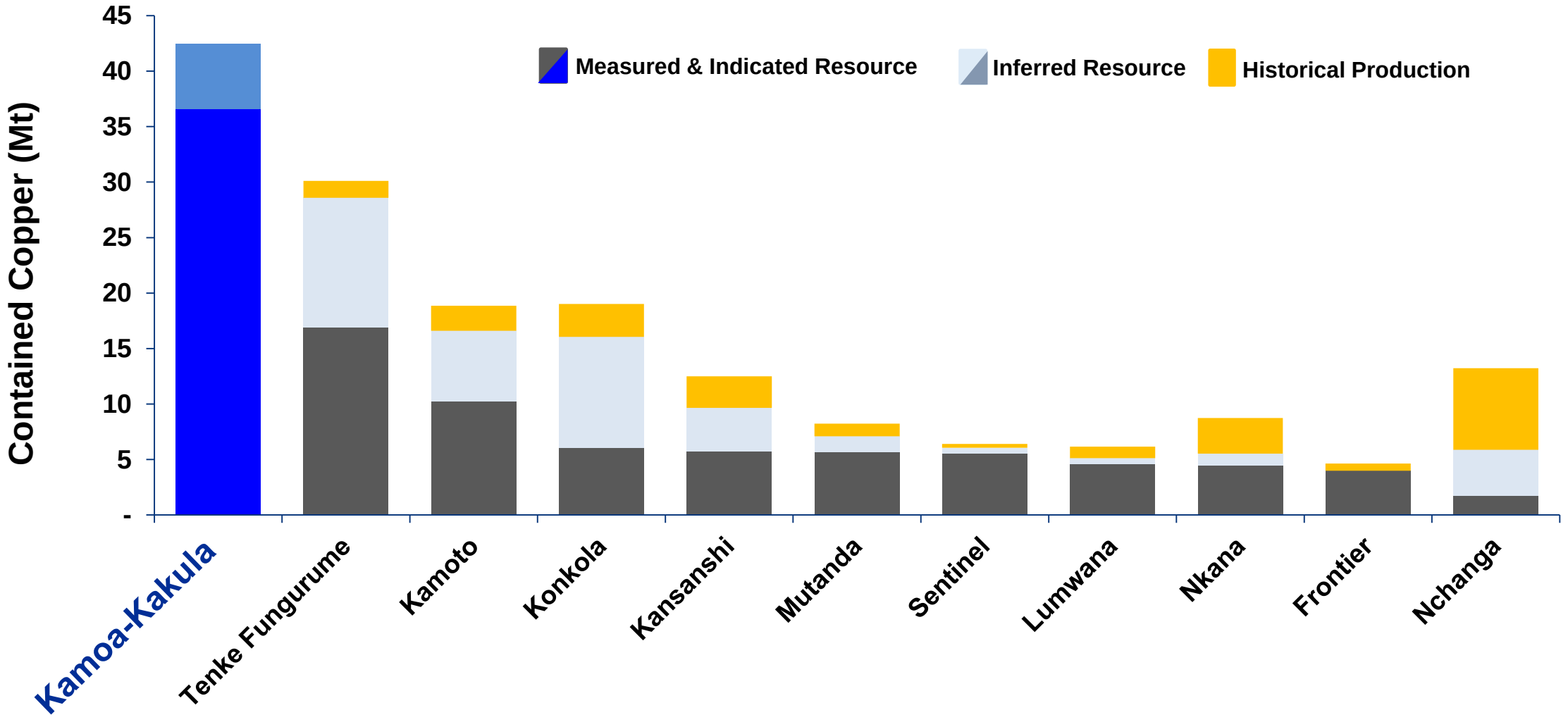
Kamoa-Kakula is the largest high-grade copper deposit in the world



Source: Wood Mackenzie

*Note: Contained copper in high-grade deposits (Measured & Indicated Resources, inclusive of Mineral Reserves, and Inferred Resources), with grades above 2.5% copper.

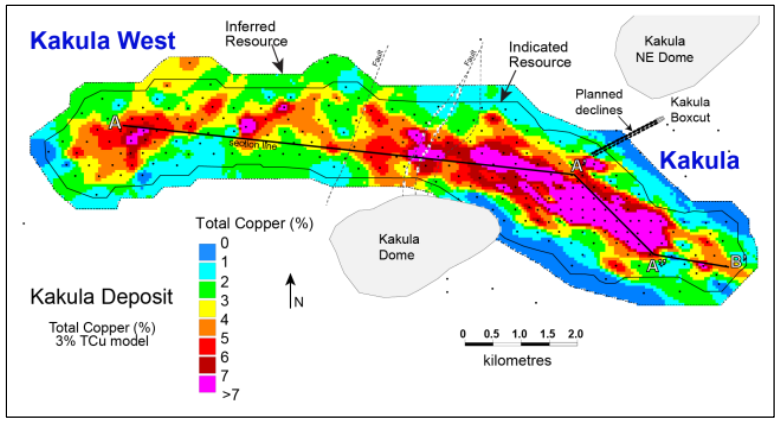
Kamoa-Kakula is the largest copper discovery ever made on the African continent

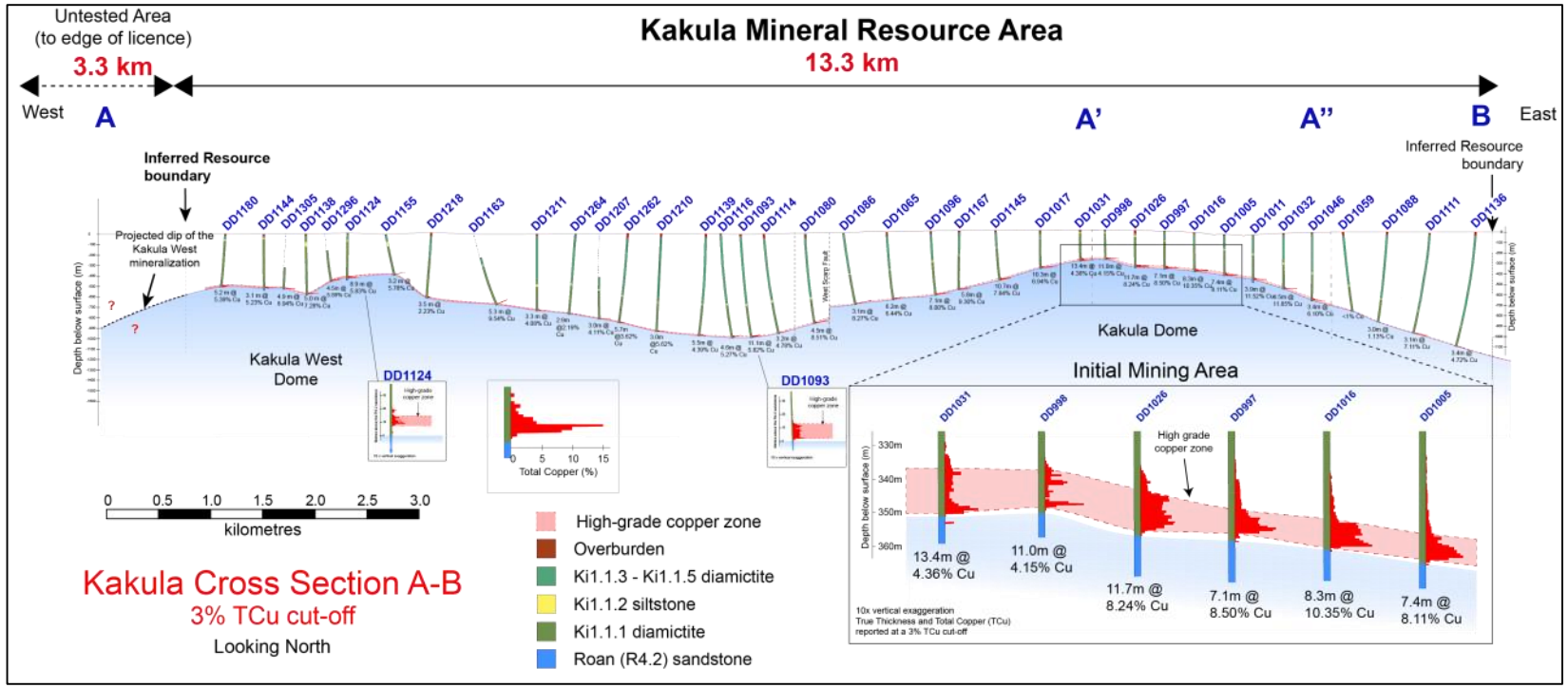


Source: Wood Mackenzie and USGS

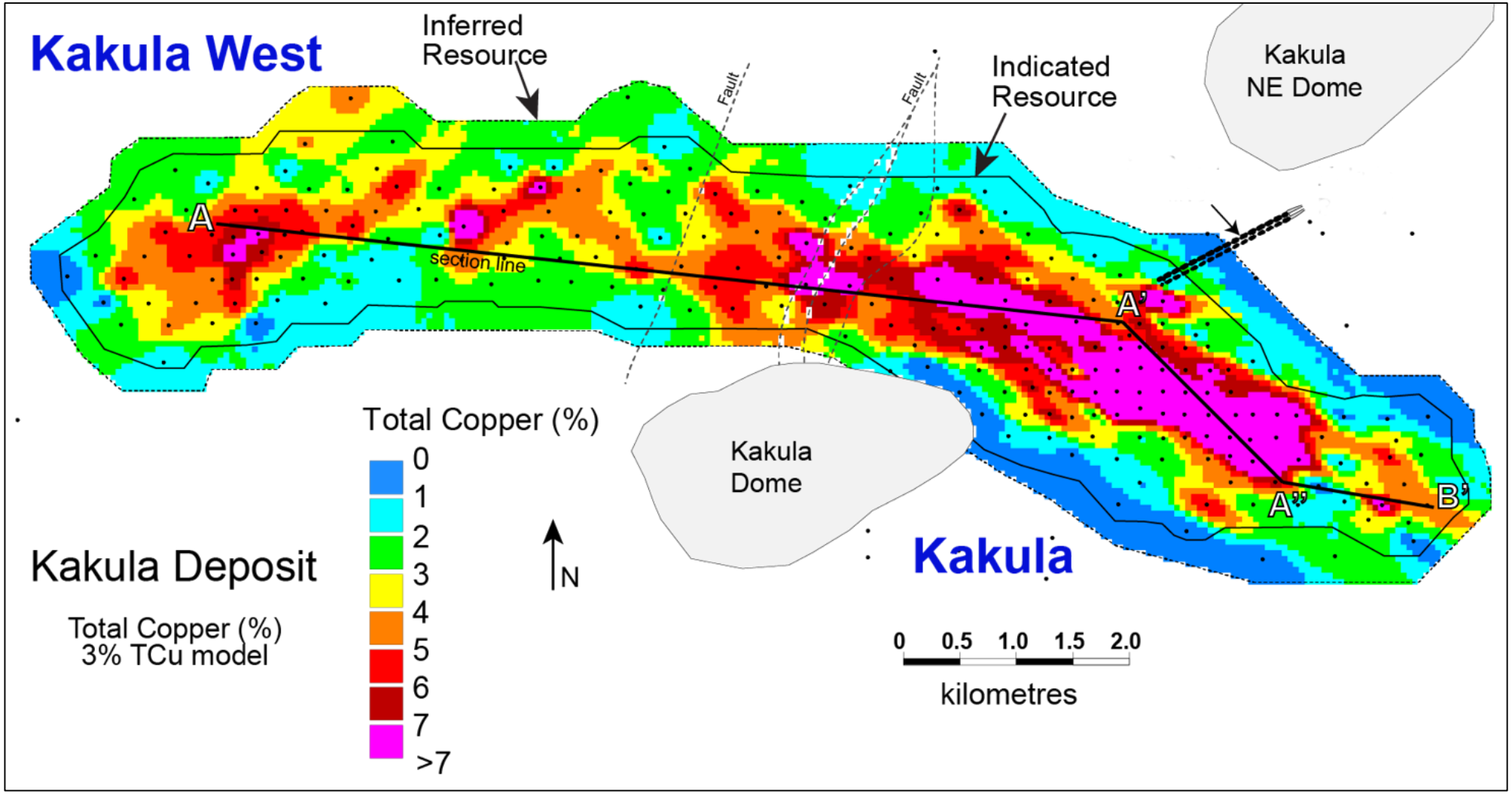
Extent of Kakula / Kakula West Discovery

Kakula West discovery extends known mineralization to more than 13 km – and remains open.

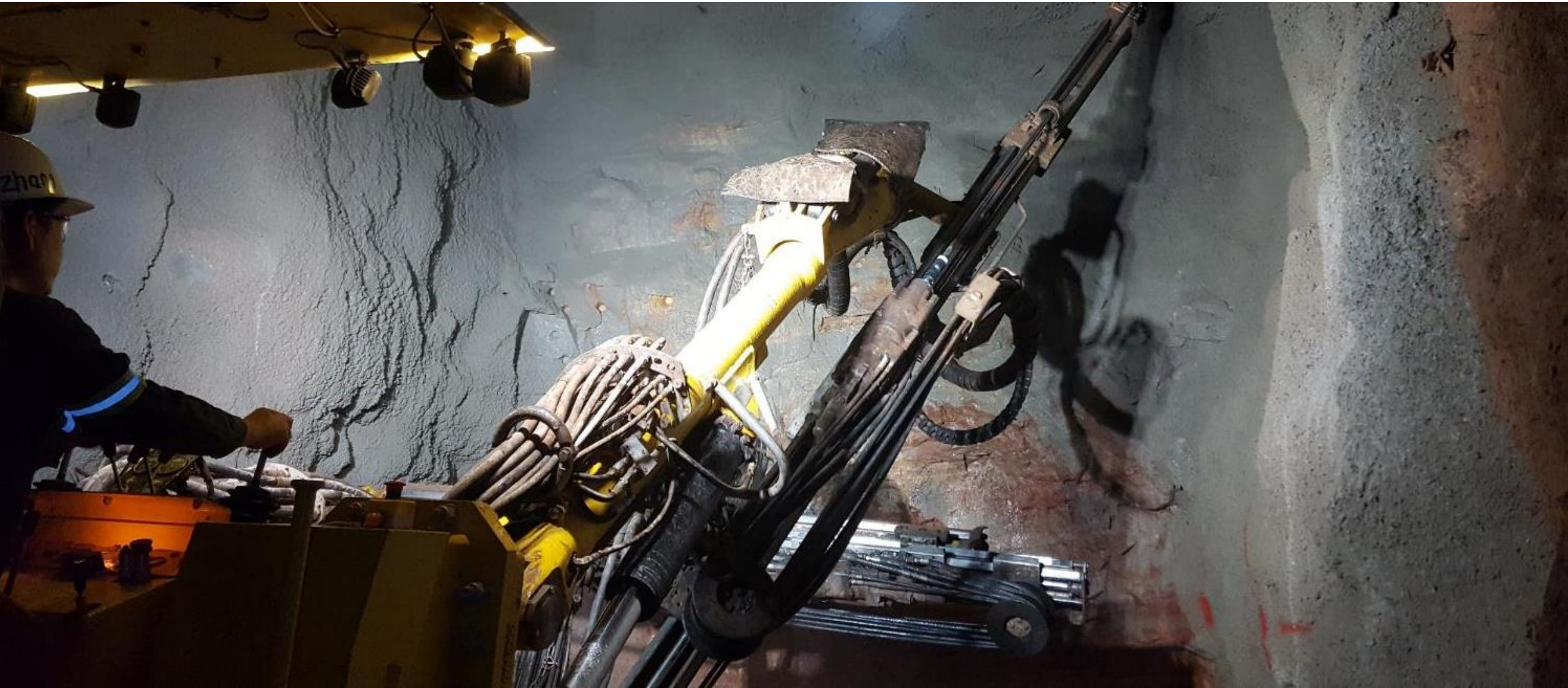




Kakula and Kakula West discovery areas showing grades of Indicated and Inferred Mineral Resource blocks at a 3% copper cut-off



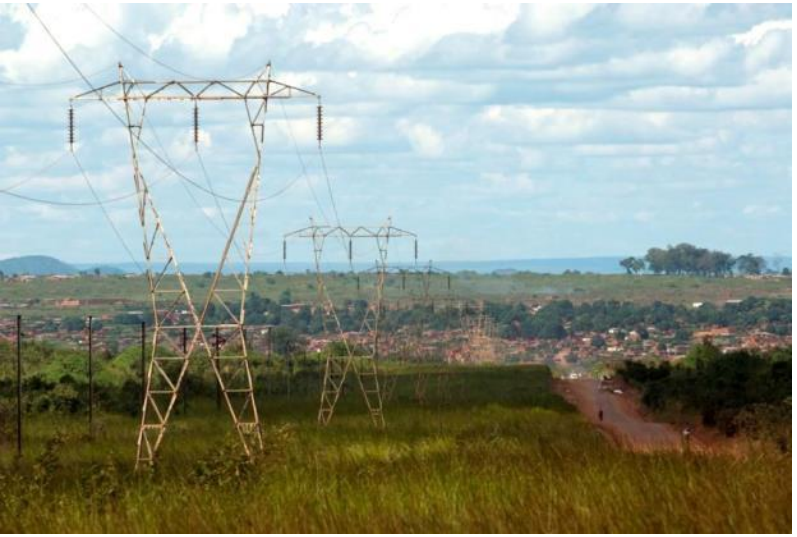
July 2019: Underground development at Kakula approaching 10% copper!



Construction continues at Kakula for an electrical substation for the decline conveyor system

Ongoing construction of the new 34-kilometre highway directly linking the Kamoa-Kakula Copper Project to the Kolwezi airport, located southeast of the city of Kolwezi. The new highway is expected to be fully operational by the end of 2019.

DRC regional infrastructure



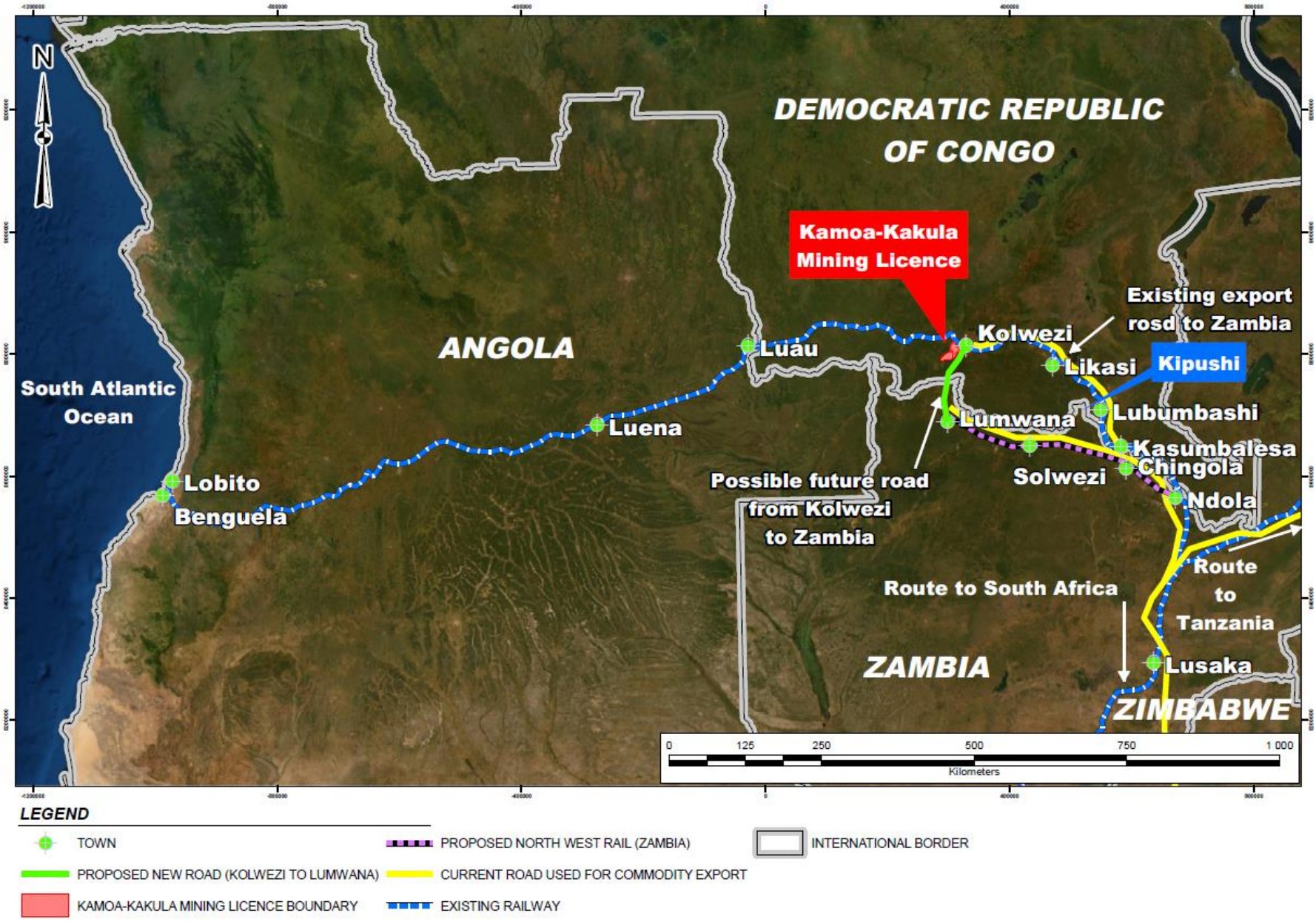
Power line supplying Kolwezi

Nzilo 1 hydroelectric power plant

Mwadingusha dam

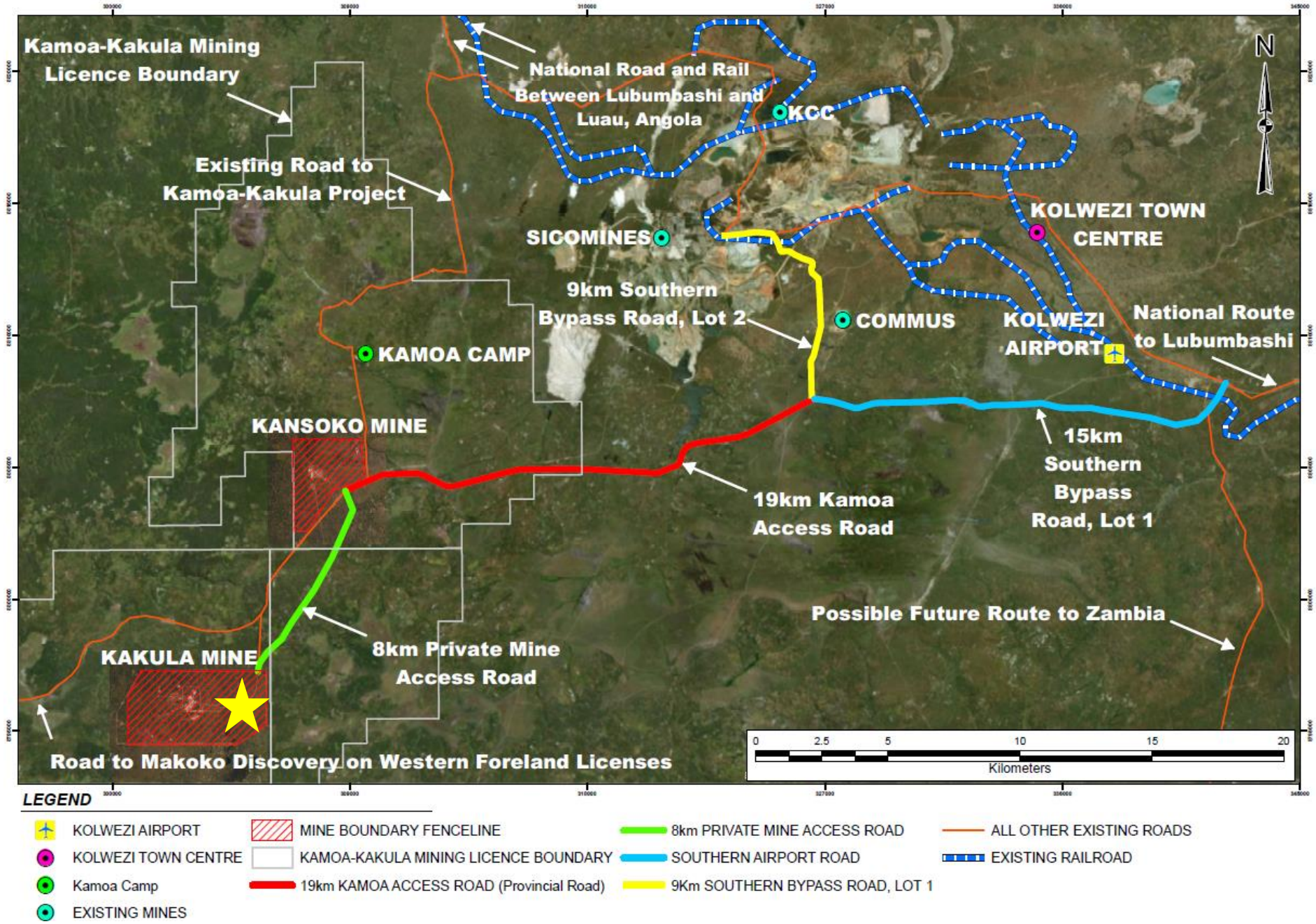
- DRC power lines are 10 km (6 miles) from Kamoa.
- Agreement with government to upgrade three existing hydroelectric power plants – Koni, Mwadingusha and Nzilo 1.

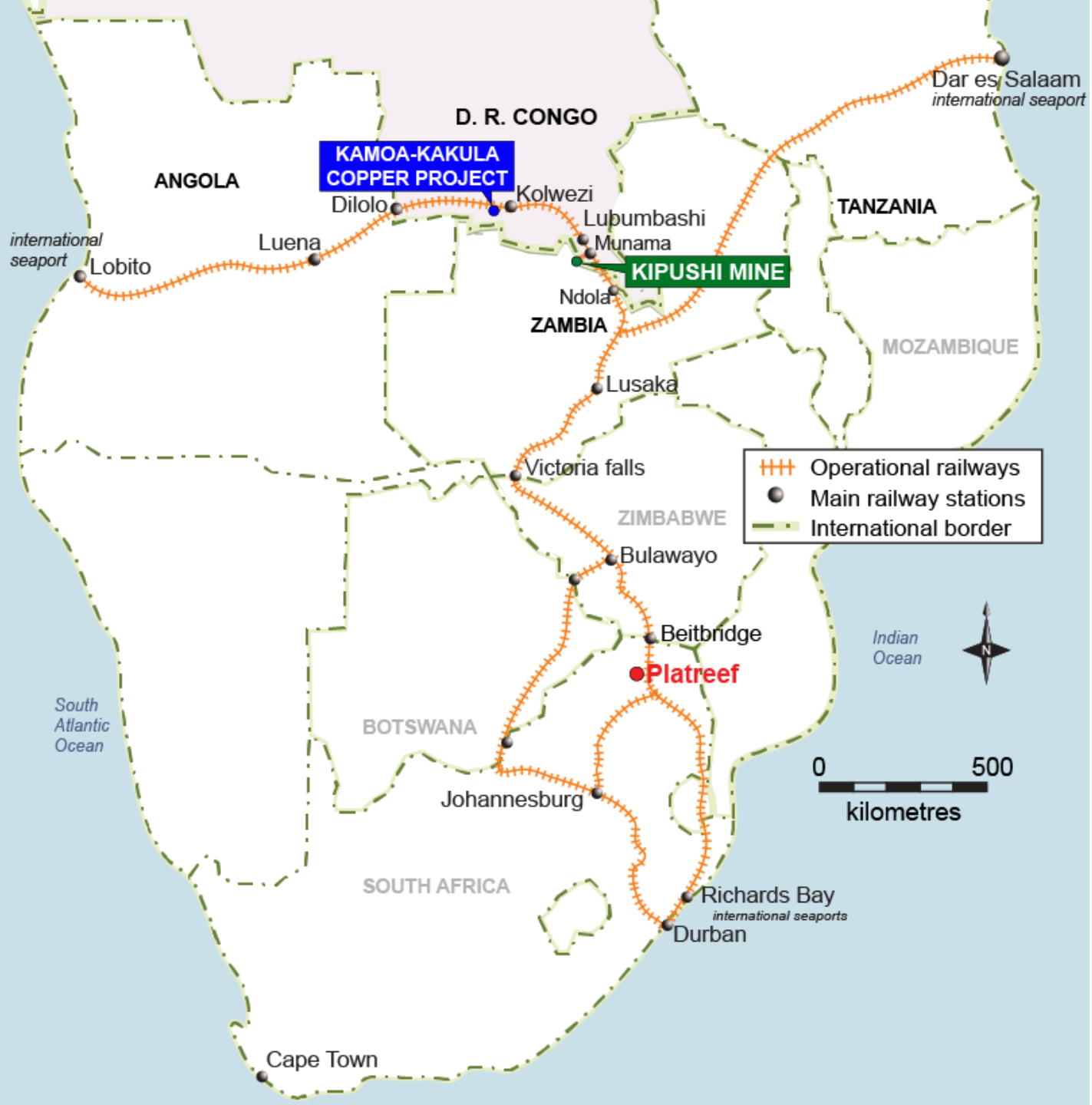
Operational railway linking DRC mines with Angola's Atlantic port of Lobito



Sources: Railwaysafrica.com, enr.com, Stratfor & Grindrod

Map showing road linking the Kamoa-Kakula Project to Kolwezi airport, and planned road to Solwezi, Zambia





National railways linking DRC mines with international seaports

KAMOA-KAKULA

Farmers at a local community maize field – an initiative of the Kamoa-Kakula Sustainable Livelihoods Project

A new secondary school has been built in Kaponda, a small village near the Kamoa-Kakula Project, as part of the project's community relations program. Classes will begin soon at another school nearing completion at Muvunda village.

Western Foreland

A drill rig in action on the Makoko exploration area on a portion of Ivanhoe's 100%-owned Western Foreland licences. Makoko is approximately 20 kilometres west of the Kakula copper discovery.

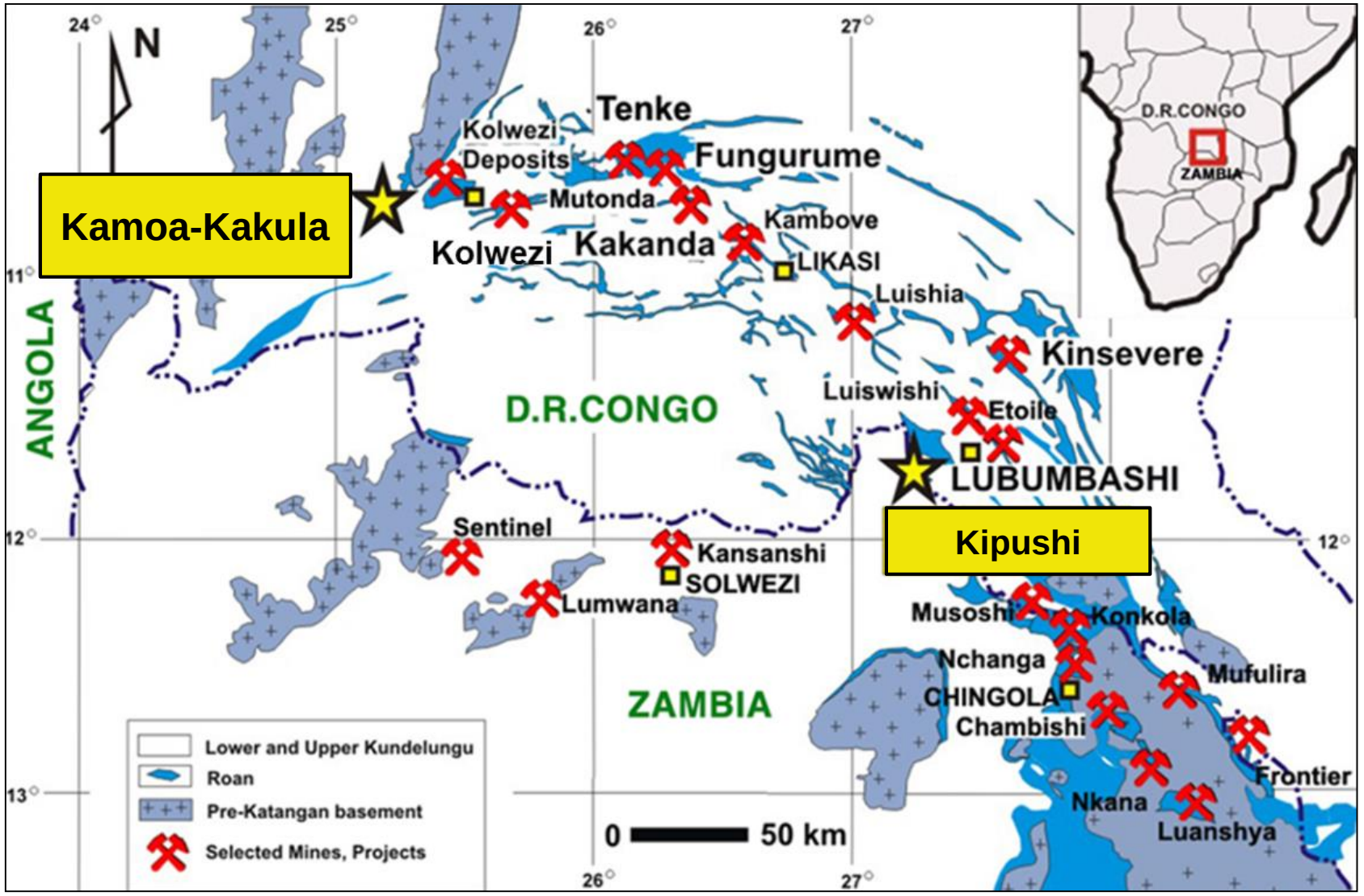
Ongoing exploration drilling on other targets identified in the Western Foreland area to test for high-grade copper

KIPUSHI
Mine development & upgrading for a new era

Democratic Republic of Congo

IVANHOE MINES

Kipushi: world's highest grade zinc-copper-silver-germanium mine in southeast DRC on the Zambian border



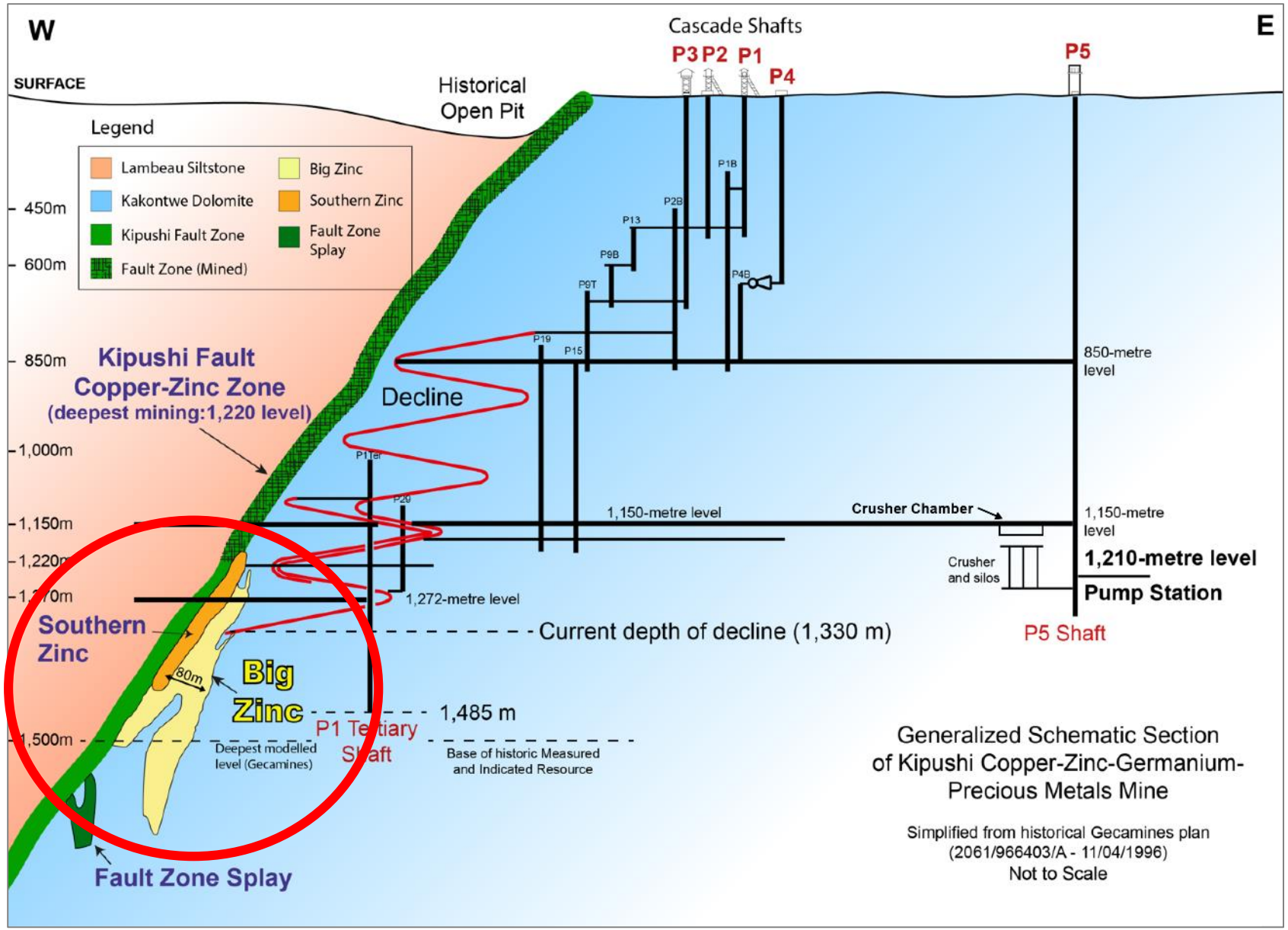
The birth of a spectacularly high-grade mine

1928

In 1924, Kipushi began mining 18% copper from a surface open pit, before transitioning to Africa's richest underground copper, zinc and germanium mine. Mining continued until 1993.

December 13, 2017: Ivanhoe announced a pre-feasibility study for the rebirth of the historic Kipushi zinc-copper-silver-germanium mine

The planned return to production would establish Kipushi as the world's highest-grade major zinc mine.



- **+35% Big Zinc (circled in red): READY TO MINE…**

New lighting installed at 1,200-metre level

Control room operators at Kipushi’s Shaft 5

Upgraded 1,150-metre-level ore conveyor belt at the historic, high-grade Kipushi zinc-copper-lead-germanium mine

A scooptram loader and haul truck, part of the fleet of new underground mining equipment

KIPUSHI

Shaft 5 main pumping station at the 1,200-metre level

KIPUSHI

Fully-operational Shaft 5 rock-hoisting winder

Community adult literacy program at Kipushi, sponsored by Ivanhoe Mines and implemented in partnership with AlfaCongo

Members of Kipushi’s geology team at the drill core shed

Core from hole KPU040 showing massive copper sulphides with high silver values

Core from hole KPU008 in the Serie Recurrente zone – 11 metres of 17% copper and 89.6 g/t silver

World’s best drill hole?

Our geology team holding hands and showing Big Zinc intersection of 44.8% zinc over 340 metres

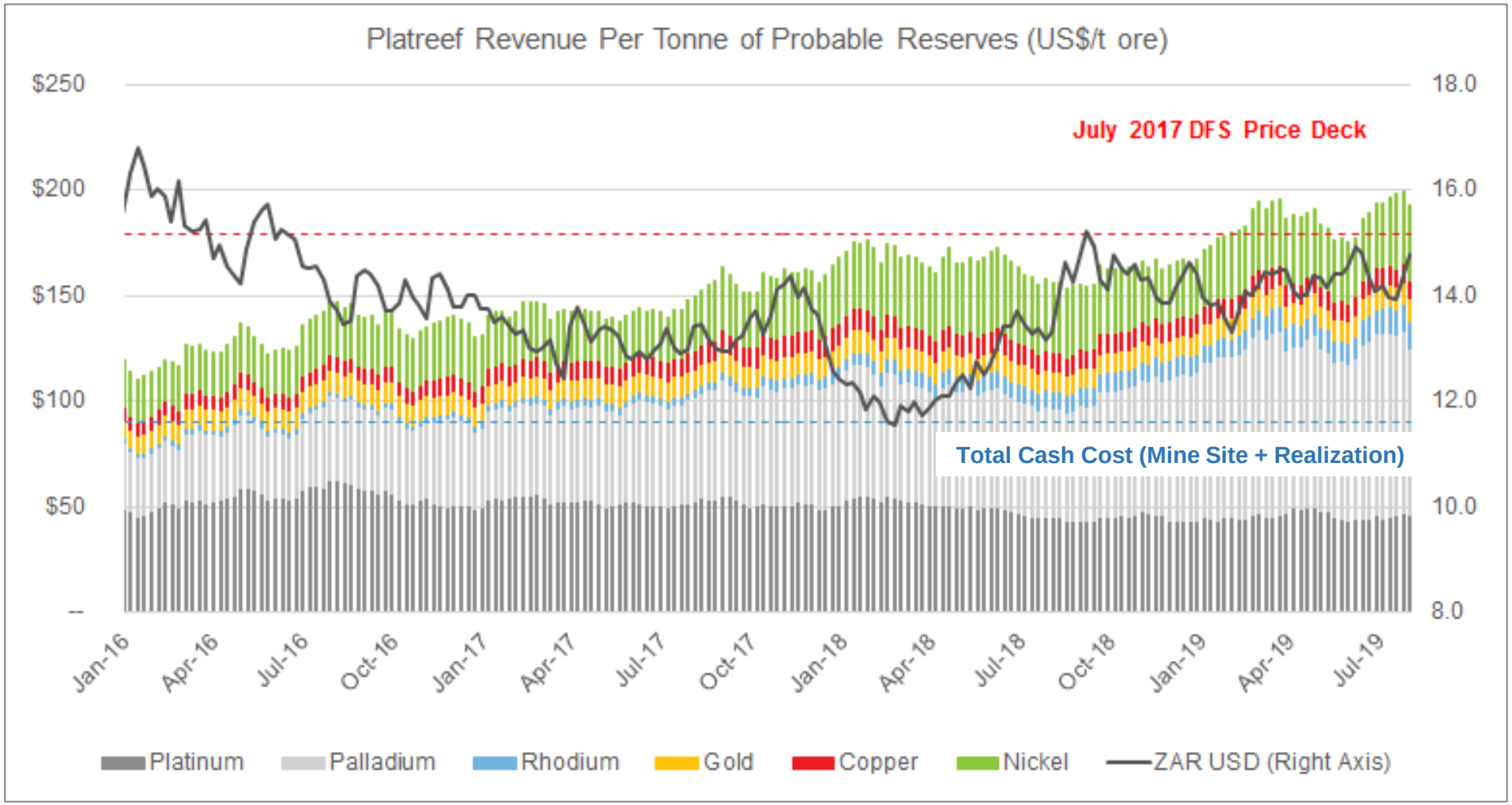
PLATREEF

Discovery & mine development

South Africa

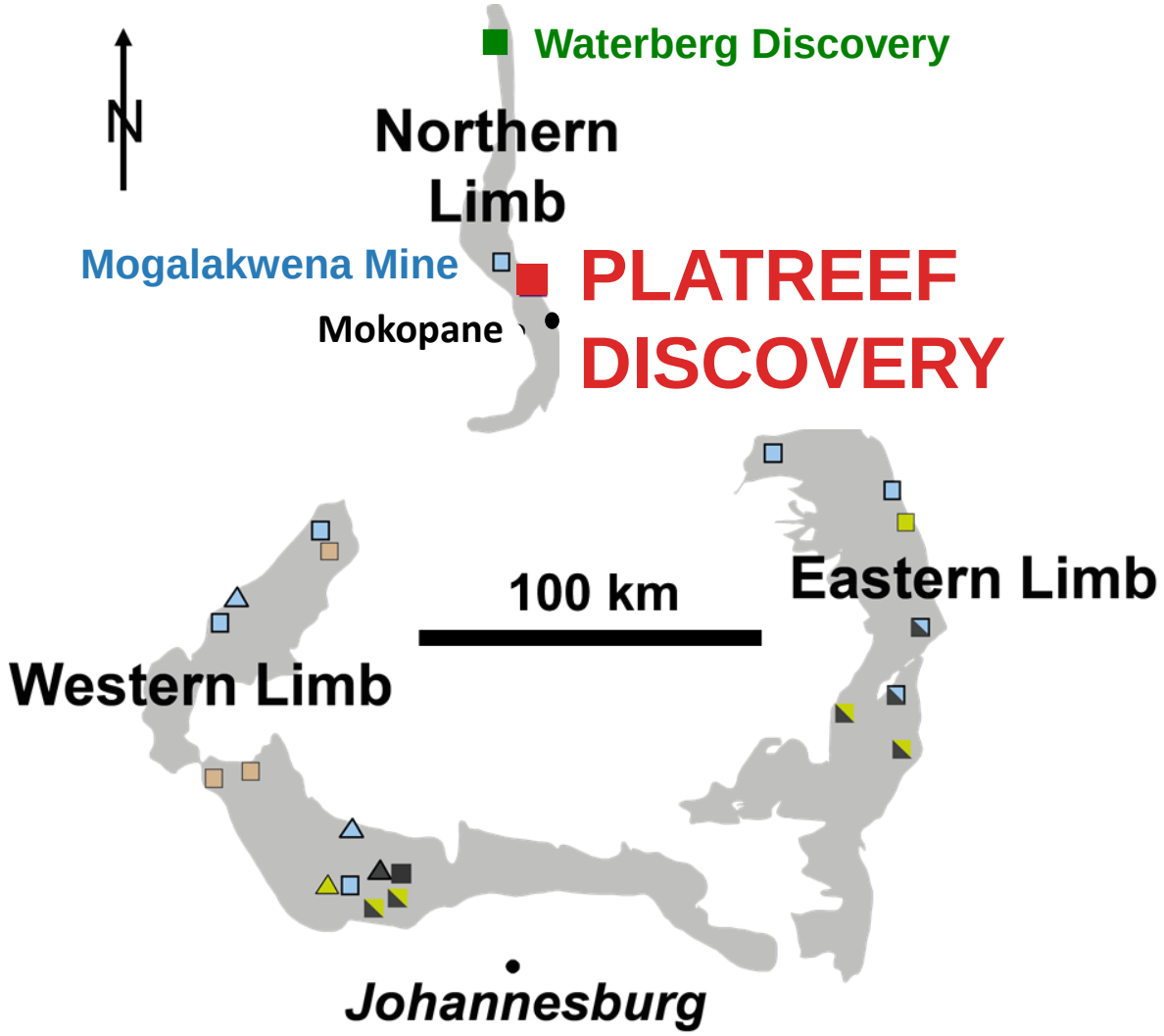
IVANHOE MINES

Revenue per tonne of ore at the Platreef Project now at 3-year high



Source: Bloomberg. Based on historical weekly commodity prices at the end of each week.

The Bushveld Complex produces ~70% of global platinum



"The opening up of the Northern Limb may be the most significant change in the economics of any commodity since the introduction of bulk mining techniques of the USA's copper porphyries in the 1920s."

750-metre, 850-metre and 950-metre stations on Shaft 1 will provide access to the high-grade Flatreef orebody

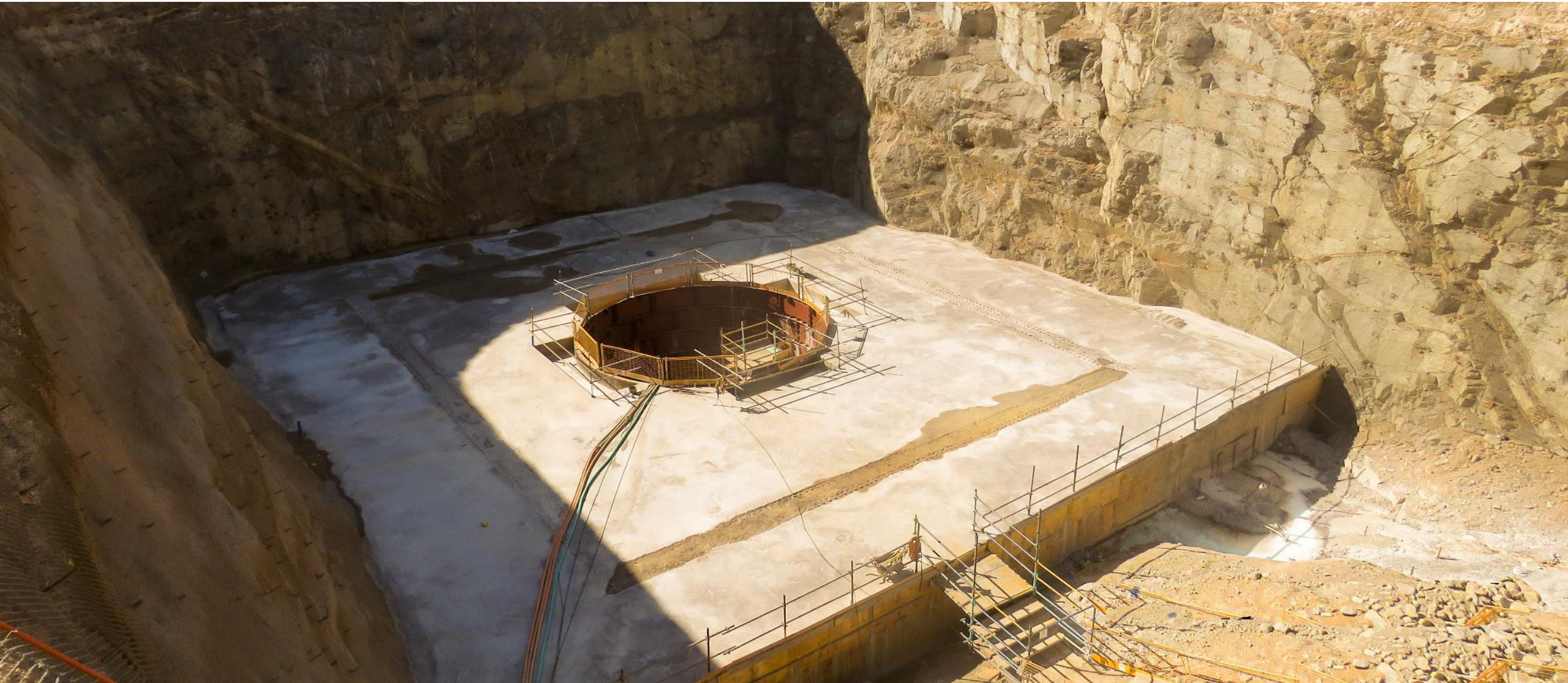
September 26, 2018: First underground mining intersection of the Platreef mineralized belt on the Northern Limb of South Africa's Bushveld Complex

The first ore from the underground mine development was delivered to a surface stockpile for metallurgical sampling.

Platreef's Shaft 2 box cut, with the 11.5-metre shaft ring set-up for the 10-metre internal diameter shaft

PLATREEF

Construction of the Shaft 2 headframe foundation was successfully completed in July 2019

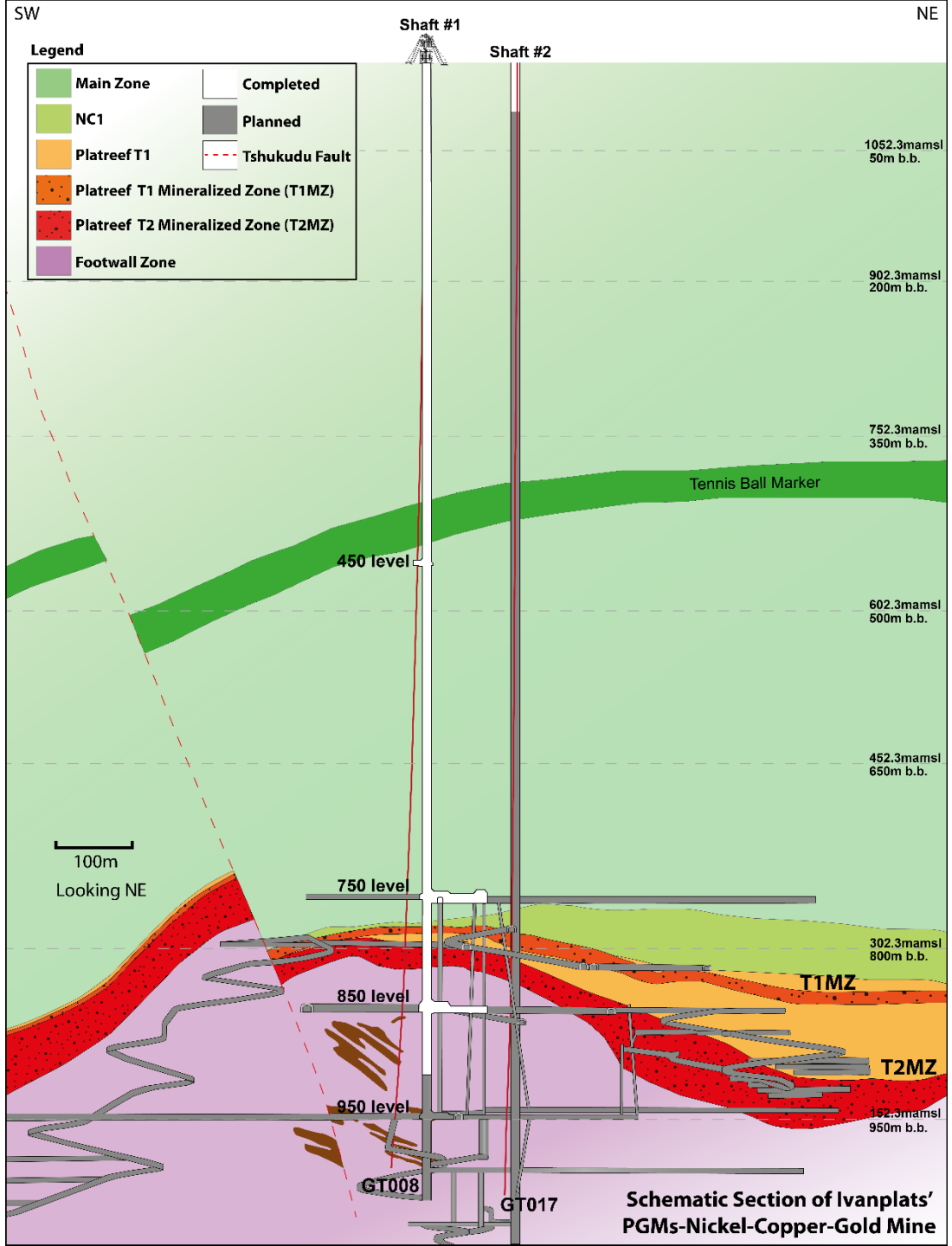


Testing the ventilation at Shaft 1's 750-metre-level station. The shaft bottom currently is more than 900 metres below surface and completion of the shaft to a depth of 982 metres below surface is planned for early 2020.

PLATREEF SHAFT 2

LARGEST HOISTING CAPACITY PRODUCTION SHAFT IN THE PRECIOUS METALS INDUSTRY

Illustration shows two cut-away perspectives of Shaft 2’s 103-metre-tall concrete headframe and internal permanent hoisting facilities.

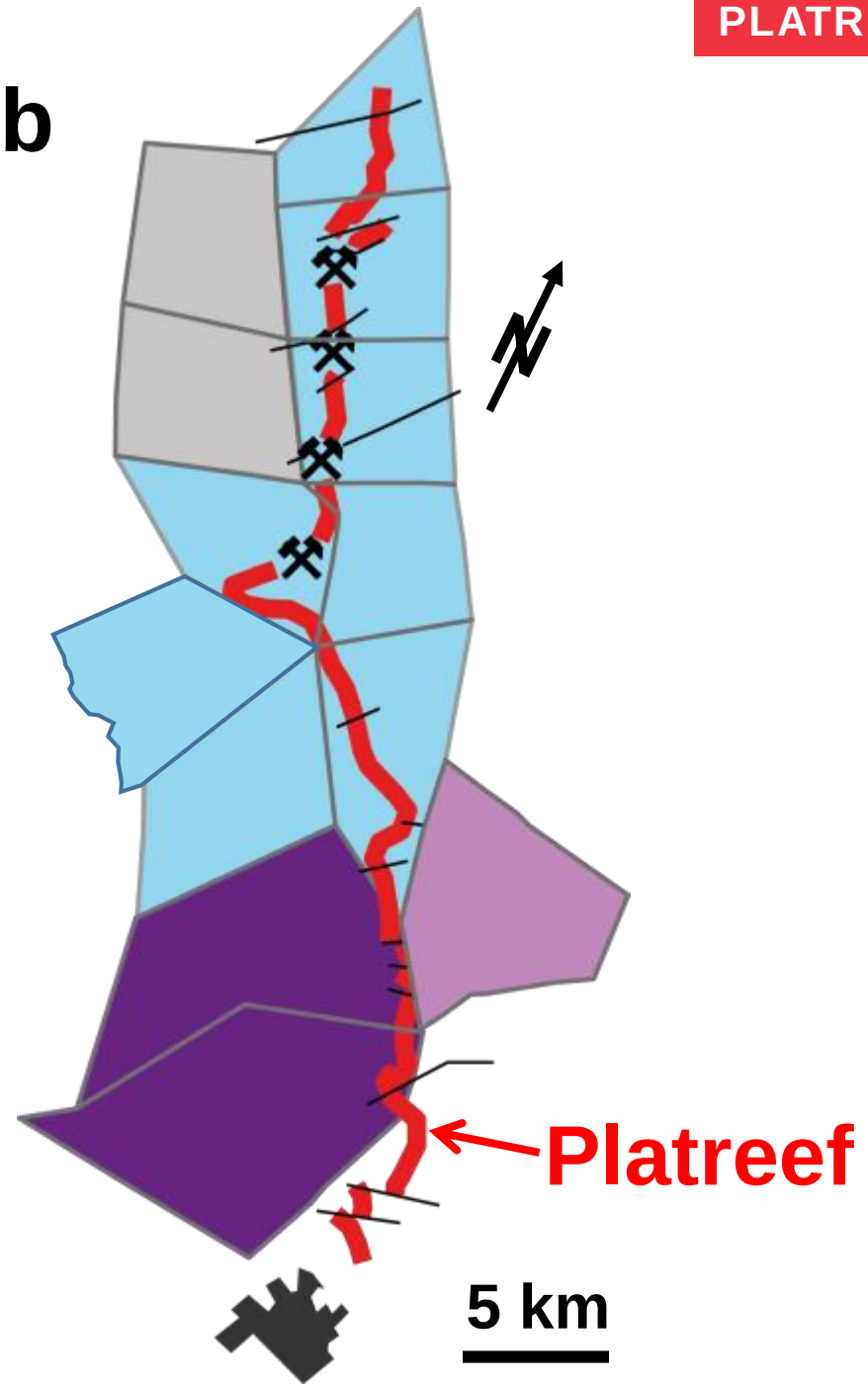


Schematic section of the Platreef Mine

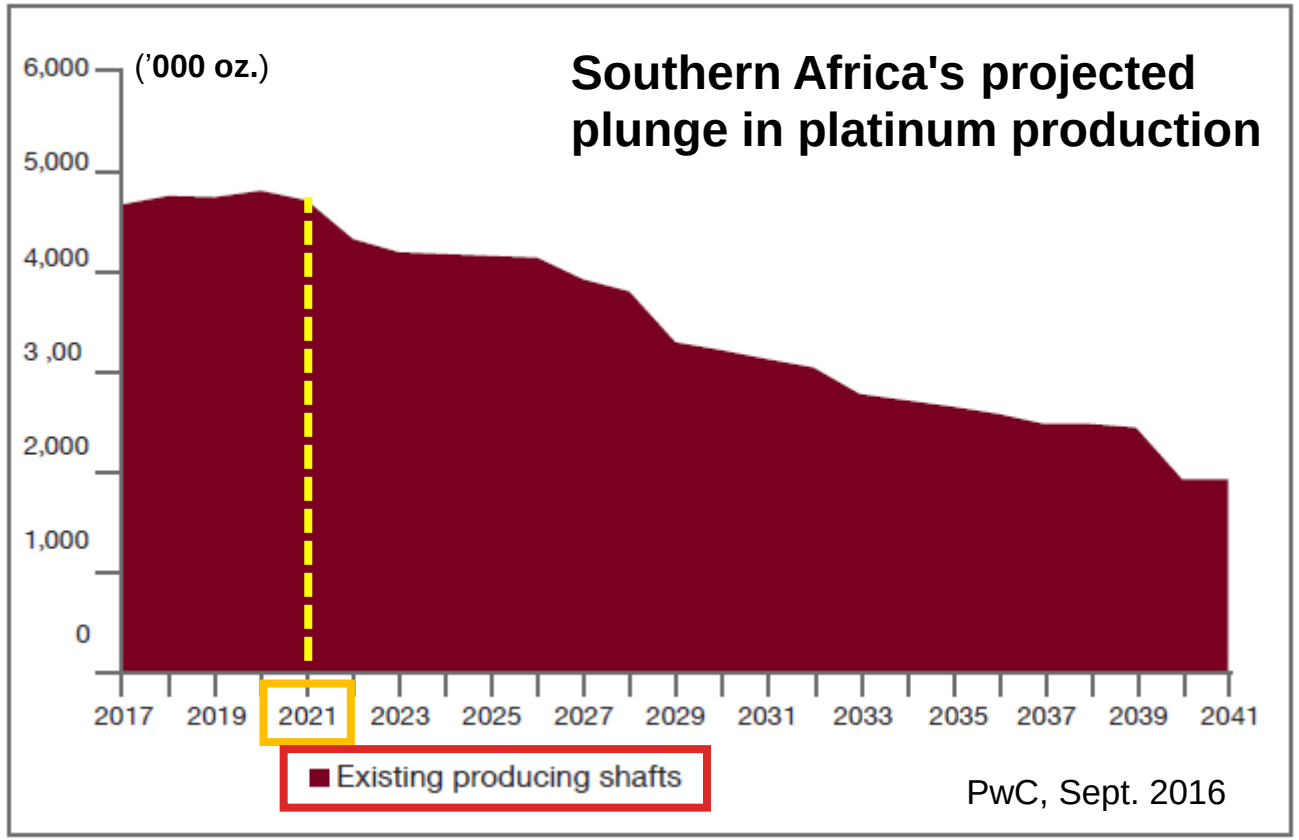
Platreef licences on Northern Limb

- Platreef horizon dips west.
- Platreef PGE-Au-Ni-Cu mineralization has thicknesses up to hundreds of metres.

Key
Platreef
Amplats' Mines
Ivanhoe Mines
Ivanhoe Mines JV
City
Anglo Platinum
Lonmin
Fault
Property Boundary

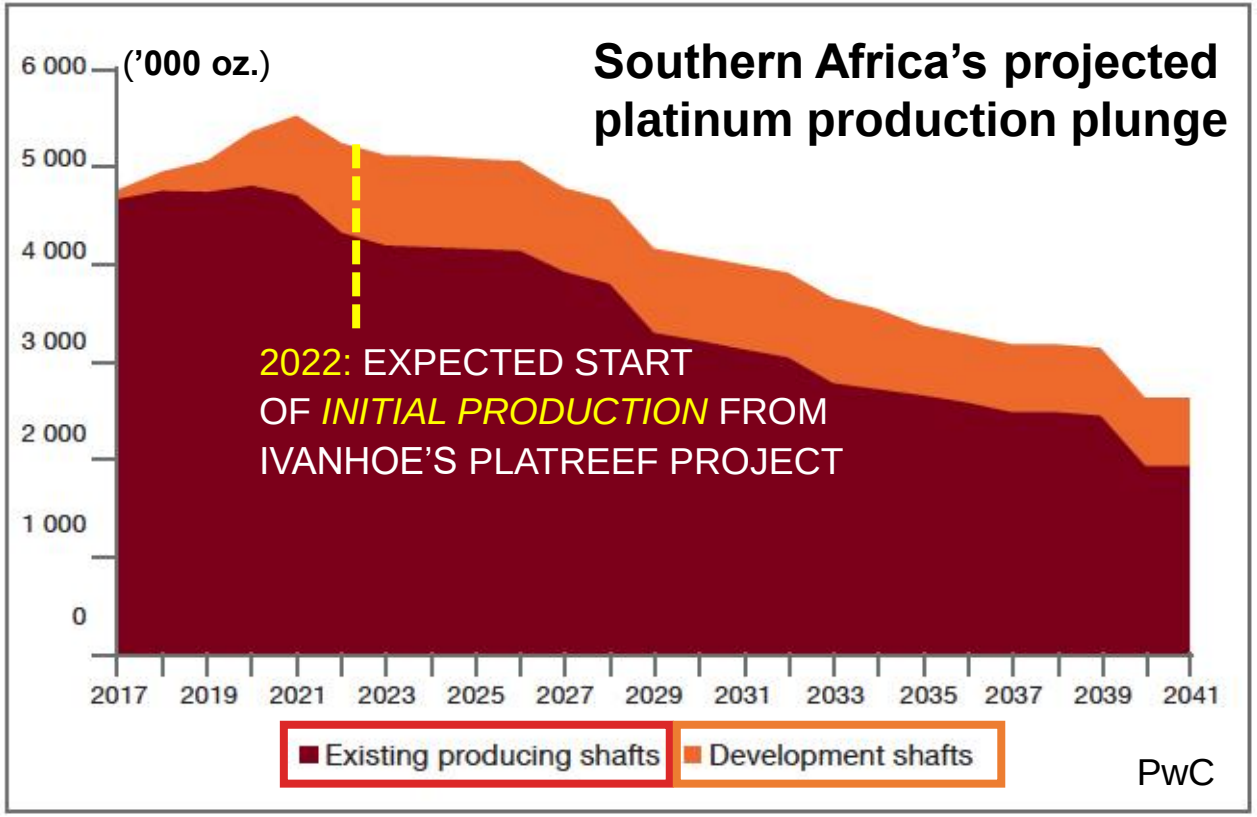


The looming platinum “supply cliff” for Southern Africa’s existing producing mines



- Existing shafts alone will barely maintain current production to 2021.
- Then, closures of mined-out shafts will help trigger a long production decline – and higher prices.
- **Filling such a supply-demand gap holds challenges and opportunities.**

Even new production now under development likely to provide only short-lived lift in platinum output



Source: *"Platinum on a knife-edge"*, PwC, September 2016

- Ivanhoe's Platreef is among new projects whose ramp-up outputs will slightly lift regional supply until 2021 – when the decline will resume.
- Projected 2021 peak output of 5.5 million ounces, even plus global supply, still will be below the average demand, net of recycling, of the past 3 years.

Thank You

IVANHOE MINES
NEW HORIZONS