

Sustaining our urbanizing planet. New roles for vital 'green metals'.

Imagine: 8 billion of us – in just 4 more years!



Sprott Natural Resource Symposium

ROBERT FRIEDLAND
Executive Co-Chairman

IVANHOE MINES
NEW HORIZONS

Forward-looking statements & Qualified Person

Certain statements in presentation constitute “forward-looking statements” or “forward-looking information” within the meaning of applicable securities laws, including, without limitation, the timing and results of: (i) statements regarding the ongoing development and exploration work at the Kamo-Kakula Project, including drilling, decline development, and feasibility, pre-feasibility (PFS) and preliminary economic assessment (PEA) studies; (ii) statements regarding the ongoing development work, including shaft sinking, and the feasibility study at the Platreef Project; and (iii) statements regarding ongoing upgrading and development work and the pre-feasibility study at the Kipushi Project. As well, the results of the PFS and PEA of the Kamo-Kakula Project, the feasibility study of the Platreef Project and the PFS of the Kipushi Project constitute forward-looking information, and include future estimates of internal rates of return, net present value, future production, estimates of cash cost, proposed mining plans and methods, mine life estimates, cash flow forecasts, metal recoveries, and estimates of capital and operating costs.

Such statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Ivanhoe, its mineral projects, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as “may”, “would”, “could”, “will”, “intend”, “expect”, “believe”, “plan”, “anticipate”, “estimate”, “scheduled”, “forecast”, “predict” and other similar terminology, or state that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved. These statements reflect Ivanhoe’s current expectations regarding future events, performance and results and speak only as of the date of this presentation.

In making such statements, Ivanhoe has made assumptions regarding, among other things: the accuracy of the estimation of mineral resources; that exploration activities and studies will provide results that support anticipated development and extraction activities; that studies of estimated mine life and production rates at the Kamo-Kakula, Kipushi and Platreef projects will provide results that support anticipated development and extraction activities; that Ivanhoe will be able to obtain additional financing on satisfactory terms; that infrastructure anticipated to be developed or operated by third parties, including electrical generation and transmission capacity, will be developed and/or operated as currently anticipated; that laws, rules and regulations are fairly and impartially observed and enforced; that the market prices for relevant commodities remain at levels that justify development and/or operation; that Ivanhoe will be able to successfully negotiate land access with holders of surface rights; and that war, civil strife and/or insurrection do not impact Ivanhoe’s exploration activities or development plans.

Although the forward-looking statements or information contained in this presentation are based upon what management of Ivanhoe believes are reasonable assumptions, Ivanhoe cannot assure investors that actual results will be consistent with these forward-looking statements. They should not be read as guarantees of future performance or results. A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements, including, but not limited to, the factors discussed under “Risk Factors” in Ivanhoe’s most recent Annual Information Form.

These forward-looking statements are made as of the date of this presentation and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, Ivanhoe does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this presentation. Ivanhoe’s actual results could differ materially from those anticipated in these forward-looking statements.

This presentation also contains references to estimates of Mineral Resources. The estimation of Mineral Resources is inherently uncertain and involves subjective judgments about many relevant factors. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The accuracy of any such estimates is a function of the quantity and quality of available data, and of the assumptions made and judgments used in engineering and geological interpretation (including estimated future production from the company’s projects, the anticipated tonnages and grades that will be mined and the estimated level of recovery that will be realized), which may prove to be unreliable and depend, to a certain extent, upon the analysis of drilling results and statistical inferences that ultimately may prove to be inaccurate. Mineral Resource estimates may have to be re-estimated based on: (i) fluctuations in copper, nickel, platinum-group elements (PGE), gold or other mineral prices; (ii) results of drilling, (iii) metallurgical testing and other studies; (iv) proposed mining operations, including dilution; (v) the evaluation of mine plans subsequent to the date of any estimates; and (vi) the possible failure to receive required permits, approvals and licences.

Disclosures of a scientific or technical nature in this presentation have been reviewed and approved by Stephen Torr, who is considered, by virtue of his education, experience and professional association, a Qualified Person under the terms of NI 43-101. Ivanhoe has prepared a NI 43-101 technical report for each of the Kamo-Kakula Project, the Platreef Project and the Kipushi Project, which are available under the company’s SEDAR profile at www.sedar.com. These technical reports include relevant information regarding the effective date and the assumptions, parameters and methods of the mineral resource estimates on the Kamo-Kakula Project, Kipushi Project and Platreef Project cited in this presentation, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this presentation in respect of the Kamo-Kakula Project, Platreef Project and Kipushi Project.

Year-to-date price change (Jan 1 to July 30, 2019)

Ivanhoe Mines (IVN:TSX)	+76.79%
Rhodium (Rd spot)	+45.93%
Nickel (Ni LME 3mth)	+34.24%
Palladium (Pd NYM)	+29.47%
Gold (Au spot)	+11.57%
Platinum (Pt spot)	+9.51%
Silver (Ag spot)	+6.91%
Copper (Cu CMX)	+1.81%
Zinc (Zn Shanghai)	+1.03%
Cobalt (Co LME 3 mth)	-52.72%
Vanadium (V China Pentoxide Flake)	-54.79%

A culmination of more than 15 years of a long-lasting friendship with CITIC

“We are confident that the CITIC Metal Group has the experience, financial resources – and a shared commitment to our objectives – to greatly assist us as we advance our projects to production.”



In April 2003, **Robert Friedland**, Chairman of Ivanhoe Mines, and **Wang Jun** (left), Chairman of CITIC Group, announced the formation of a strategic alliance in mineral exploration, development and production.

On August 16, CITIC Metal will close second investment since the last Sprott Conference, totalling ~US\$1 billion at a +35% premium to market.



Left to right: **Peter Zhou** (Vice President, Ivanhoe Mines), **Yufeng "Miles" Sun** (President, CITIC Metal Group, Co-Chairman, Ivanhoe Mines), **Robert Friedland** (Executive Co-Chairman, Ivanhoe Mines) and **Manfu Ma** (Vice President, CITIC Metal Group).

URBANIZATION:

Resources and technologies for one of the greatest social and economic transformations in human history.

An aerial photograph of the Beijing skyline at dusk. The CITIC Tower (China Zun) is the central focus, a tall, slender skyscraper with a distinctive hourglass shape. It is surrounded by other modern high-rise buildings and lower residential structures. The sky is a mix of blue and orange, indicating the time is either early morning or late afternoon. A red arrow points from the text box to the CITIC Tower.

108-storey-high CITIC Tower (China Zun), Beijing's tallest building

The
Economist

AUGUST 12TH-18TH 2017

Fire and fury over North Korea

The Fed's runners and riders

Was Google right to sack him?

Competitive punning: game of groans

Roadkill

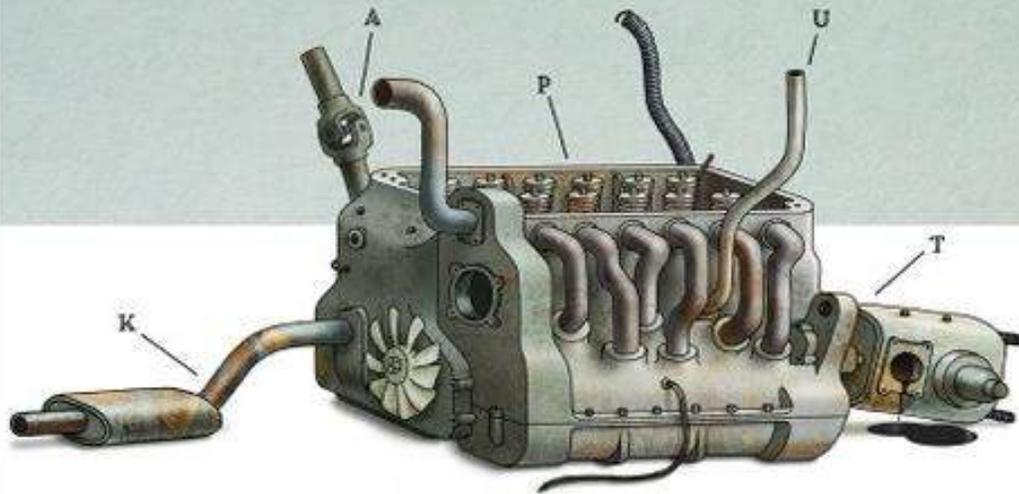


Fig.1 The Internal Combustion Engine

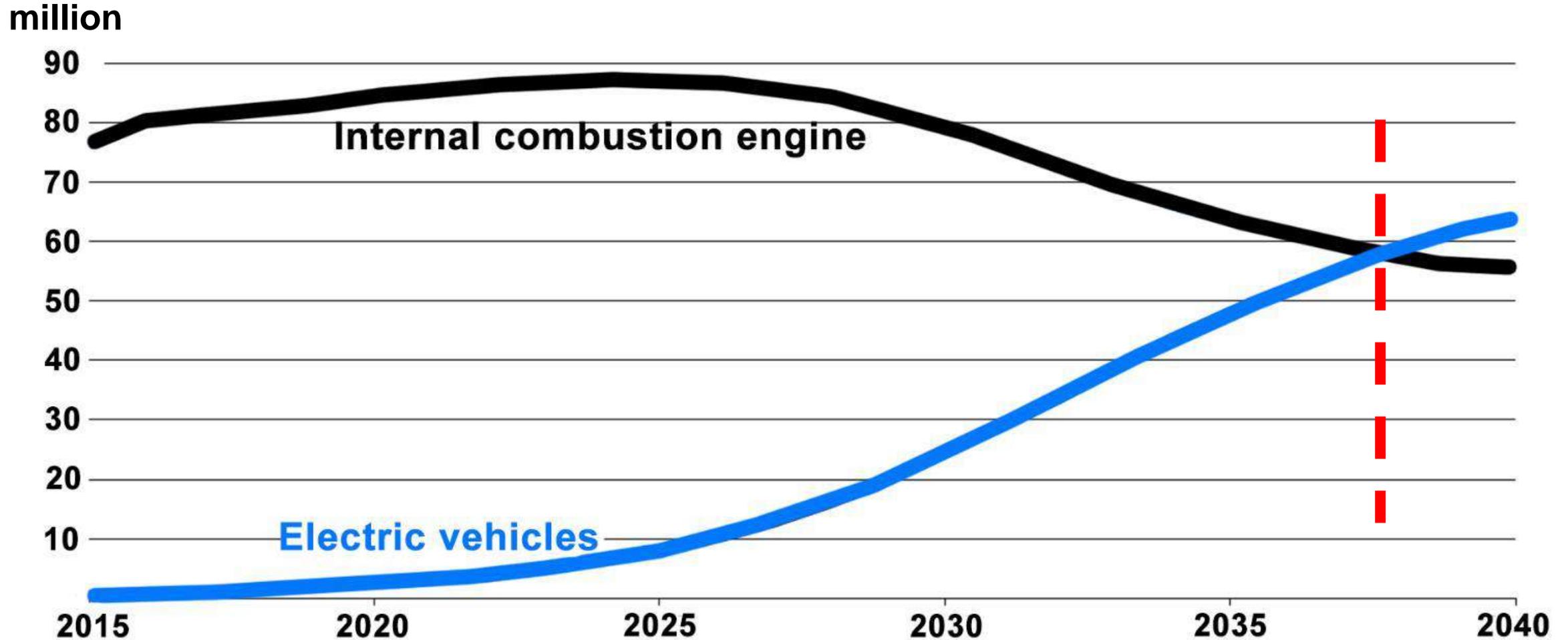


The death of the internal combustion engine

“It had a good run.
But the end is in sight
for the machine
that changed the world.”

– The Economist

Electric-vehicle sales projected to overtake internal-combustion-engined sales by 2038

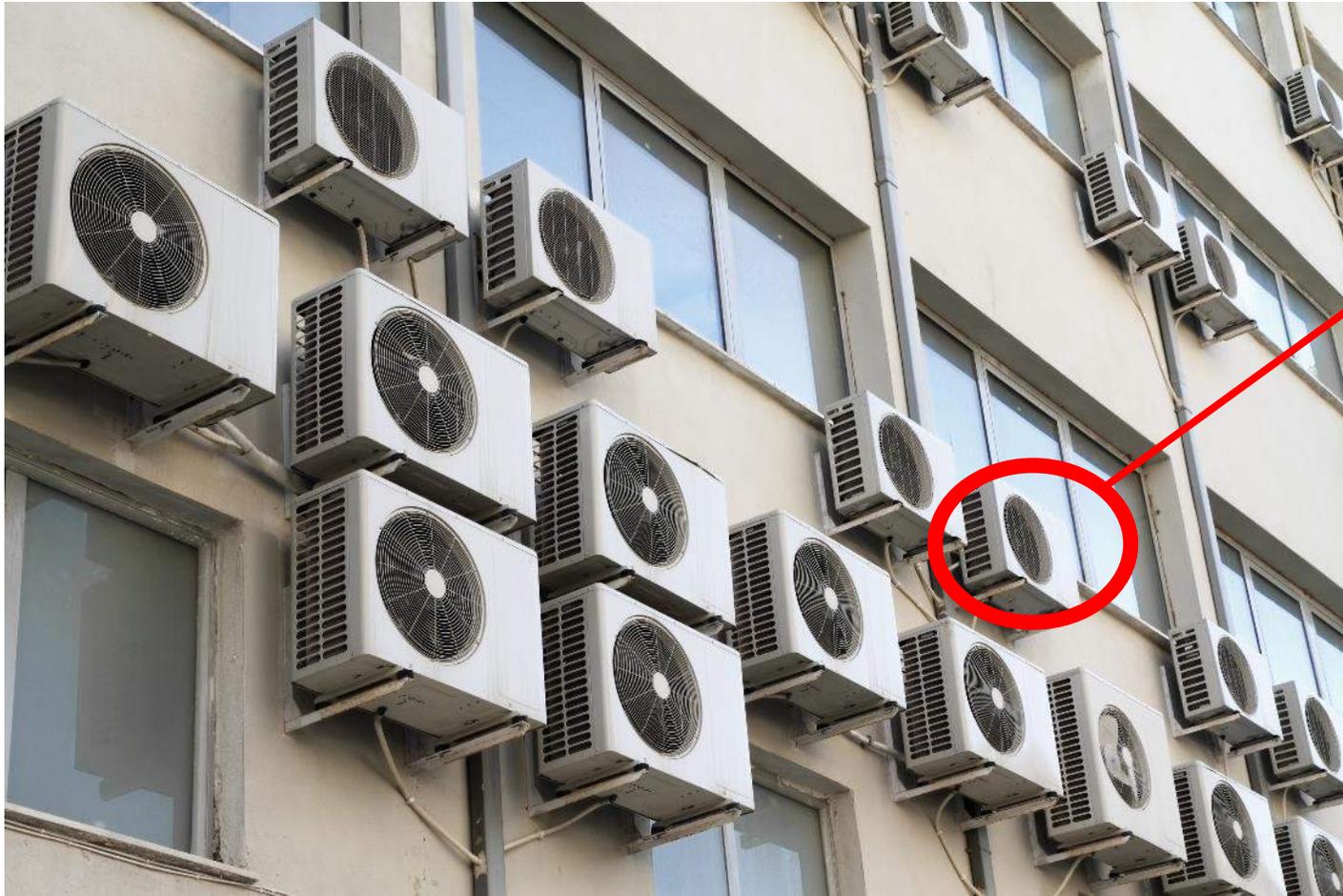


**Jaguar E-Type Zero – world’s “most beautiful”
electric car – to hit the road in 2020**



Global surge coming in air-conditioning: Keeping cool will heat demand for copper

- Worldwide demand for air conditioning is expected to **triple over the next 30 years**.
– International Energy Agency
- Demand for copper to grow with increase in air-conditioning units and power grid expansions.

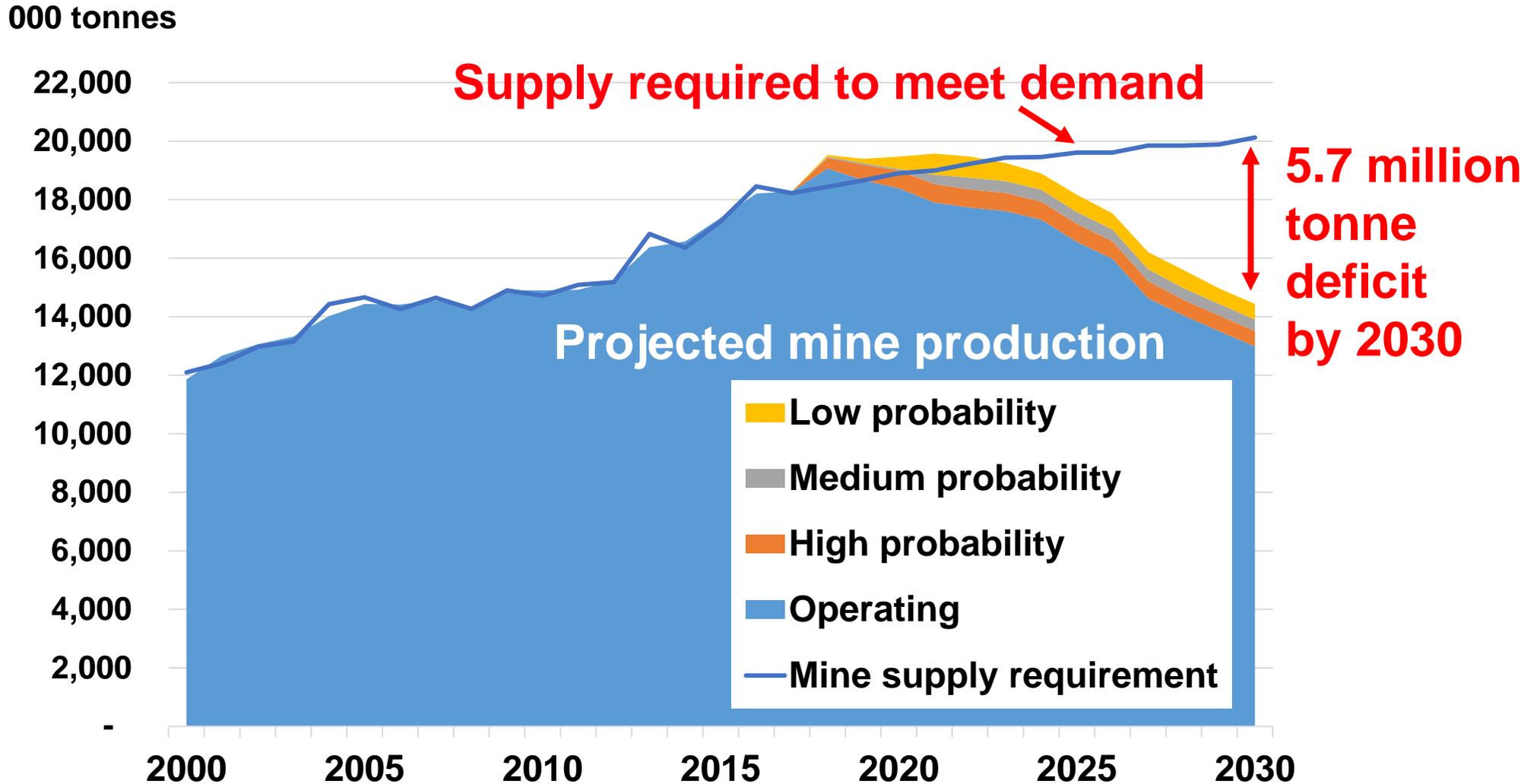


52 pounds of copper
in average unit.

8 billion cooling units
projected to be in use
worldwide by 2050, up from
3.4 billion in 2016.

China, India & Indonesia to
account for half of major global
increase in electricity demand.

Not enough copper is being discovered to meet future projected demand



Platinum-group metals key to healthier air, hydrogen's potential

Palladium-platinum-rhodium required in catalytic converters to control harmful emissions in exhausts from vehicles and factories.

A stack of fuel cells powering a small car contains approximately 30 grams (about one ounce) of platinum.

THE ONLY EXHAUST IS H₂O



Fuel-cell power unit in Honda Clarity

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.



KAMOA-KAKULA

Exploration & mine development

Democratic Republic of Congo

Our world's best copper discovery
Hole DD1450, which intersected **22.3 metres of 13.05% copper**



IVANHOEMINES

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**



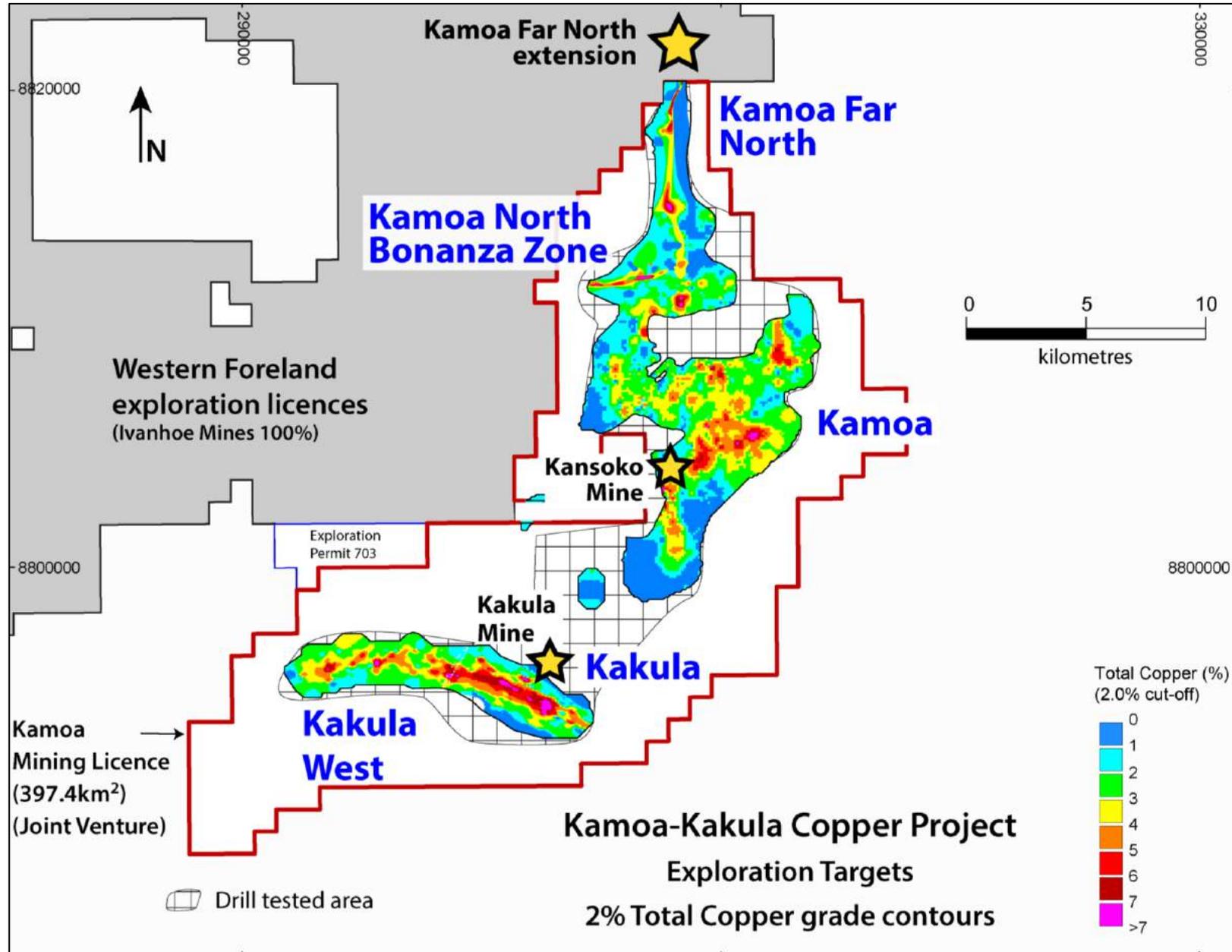
July 29, 2019: Drilling extends strike length of the shallow, thick copper discovery at the **Kamoa North Bonanza Zone** to at least 550 metres, with an implied strike length of at least 2.7 kilometres

New assays return copper grades up to **13.80% over 15.50 metres** in the central discovery area

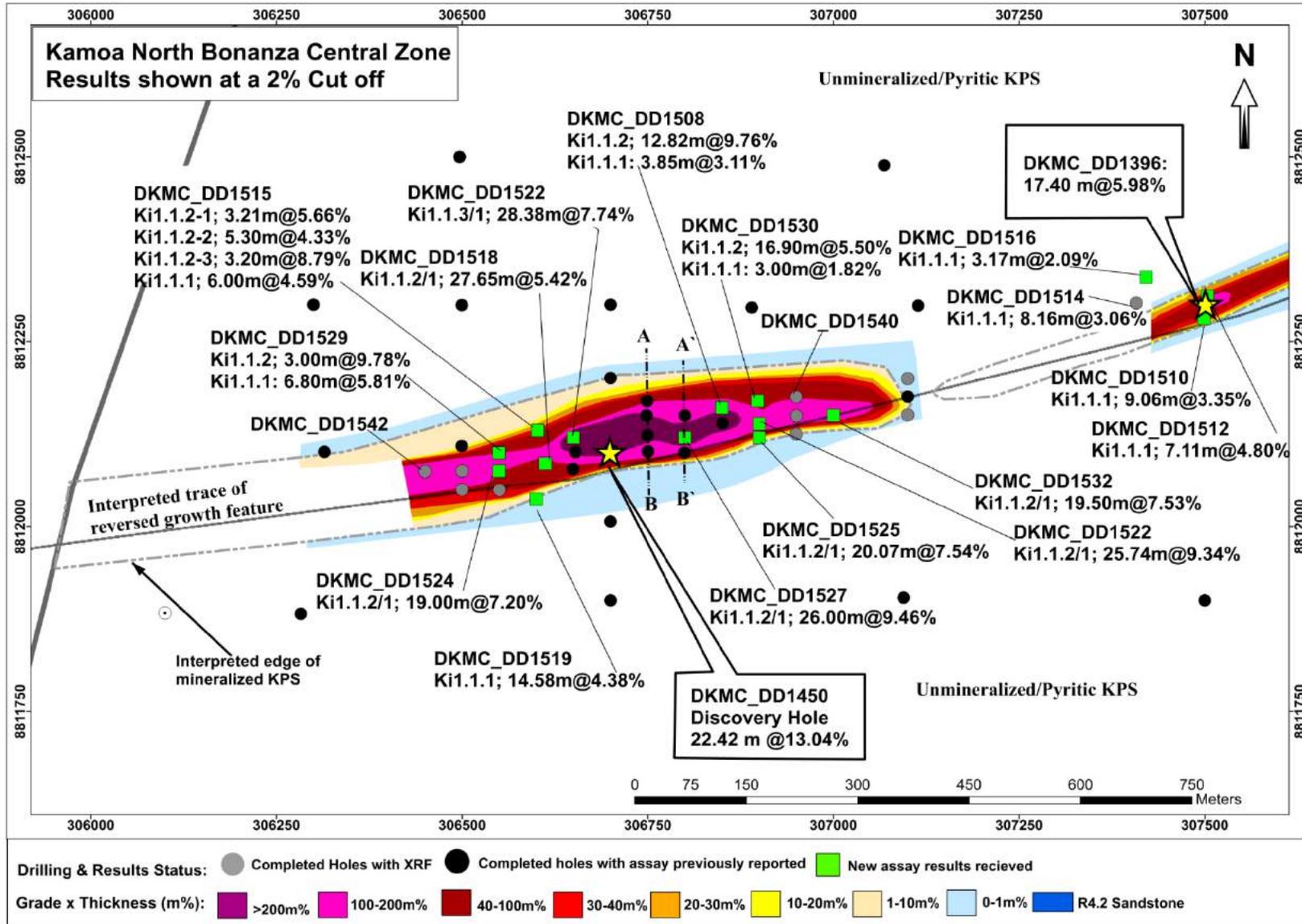
Six rigs now drilling at Kamoa North to extend the discovery's strike length and fast track a resource estimate



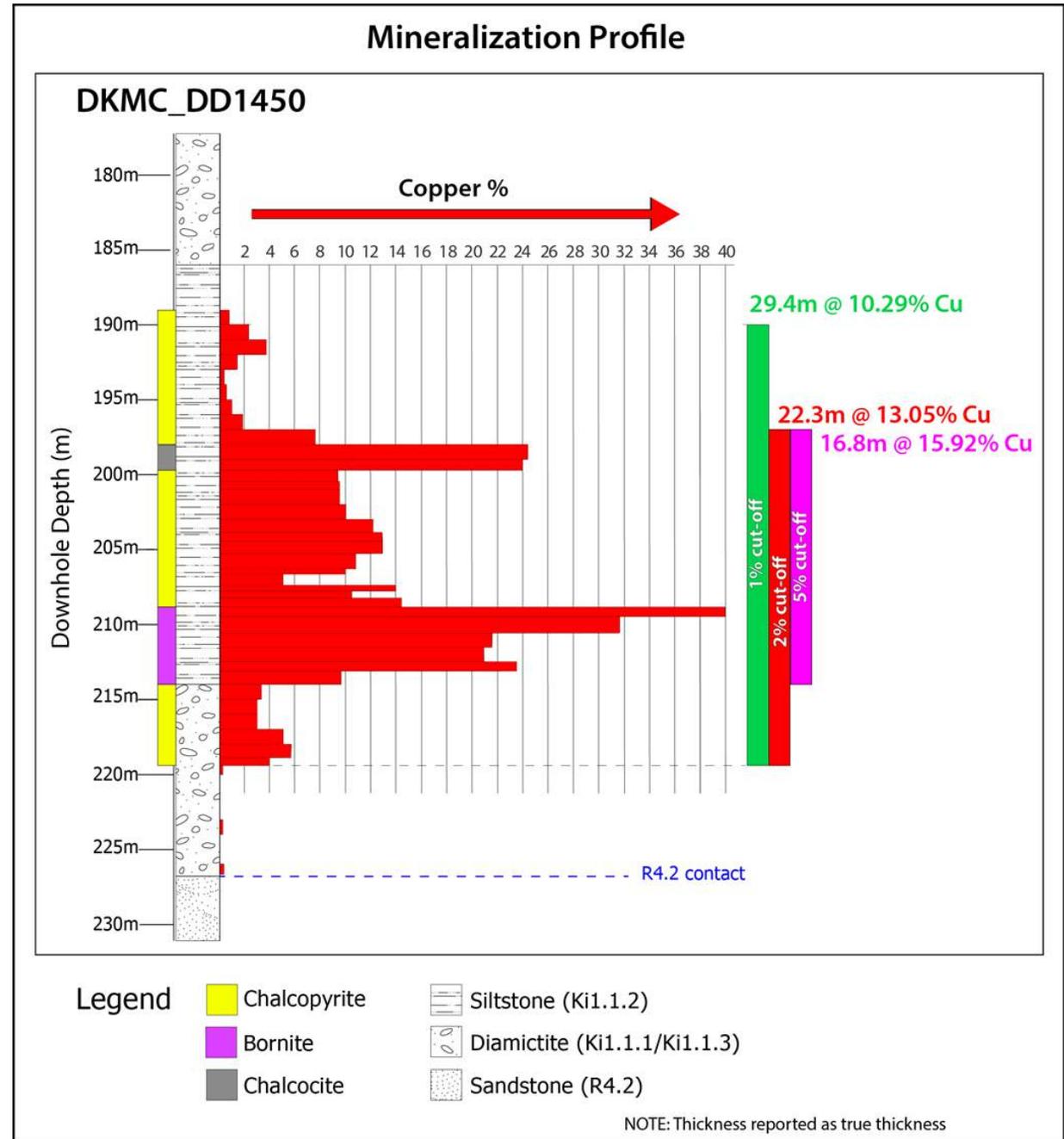
**Kamoa North –
two new high-grade
corridors trending
onto Ivanhoe’s
100%-owned ground**



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

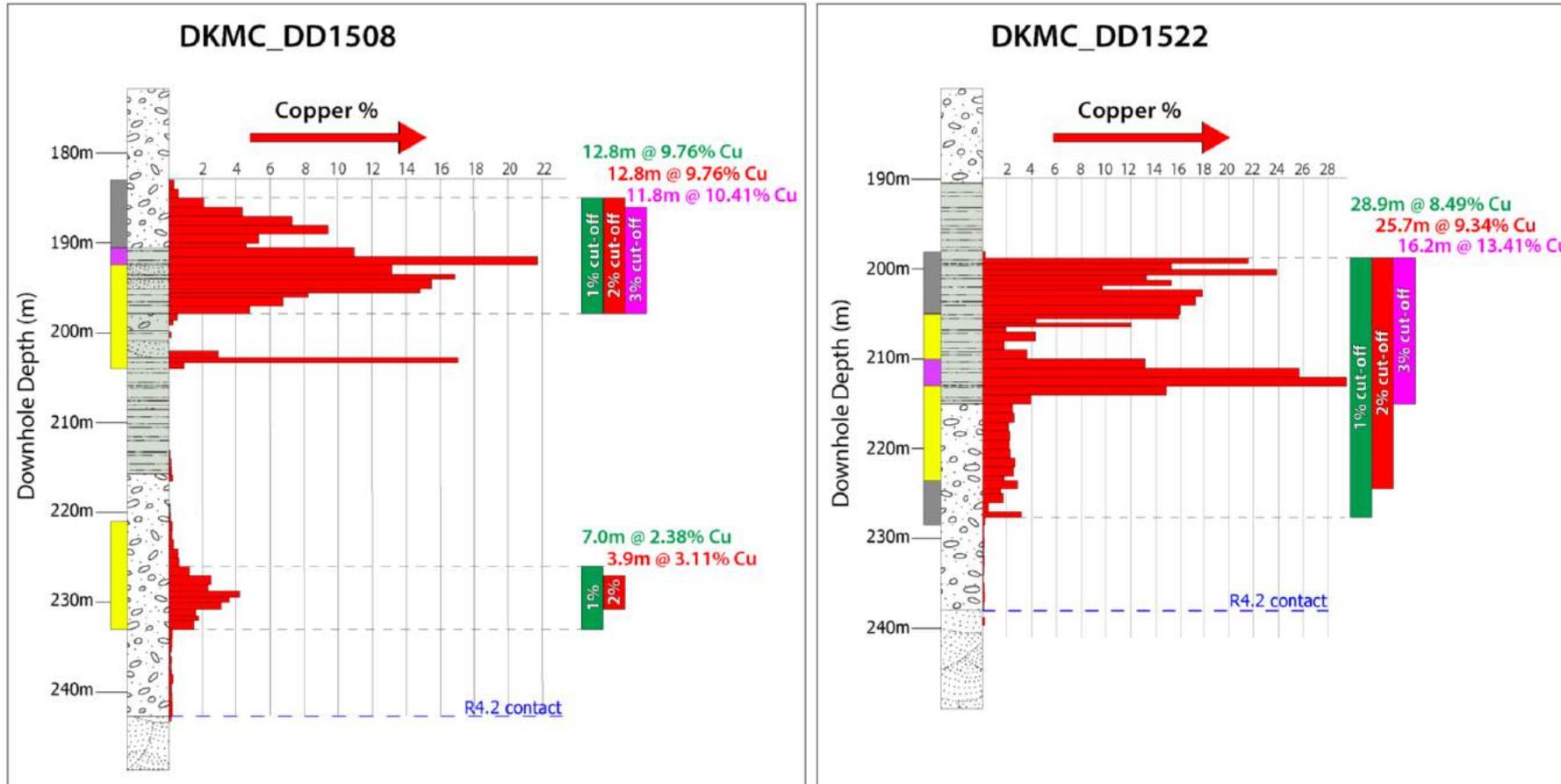


**Kamoa North DD1450:
22.3 metres of 13.05%
copper in shallow,
flat-lying discovery hole**



Mineralization profiles of recent holes across the Kamoia North Bonanza Zone

Mineralization Profiles



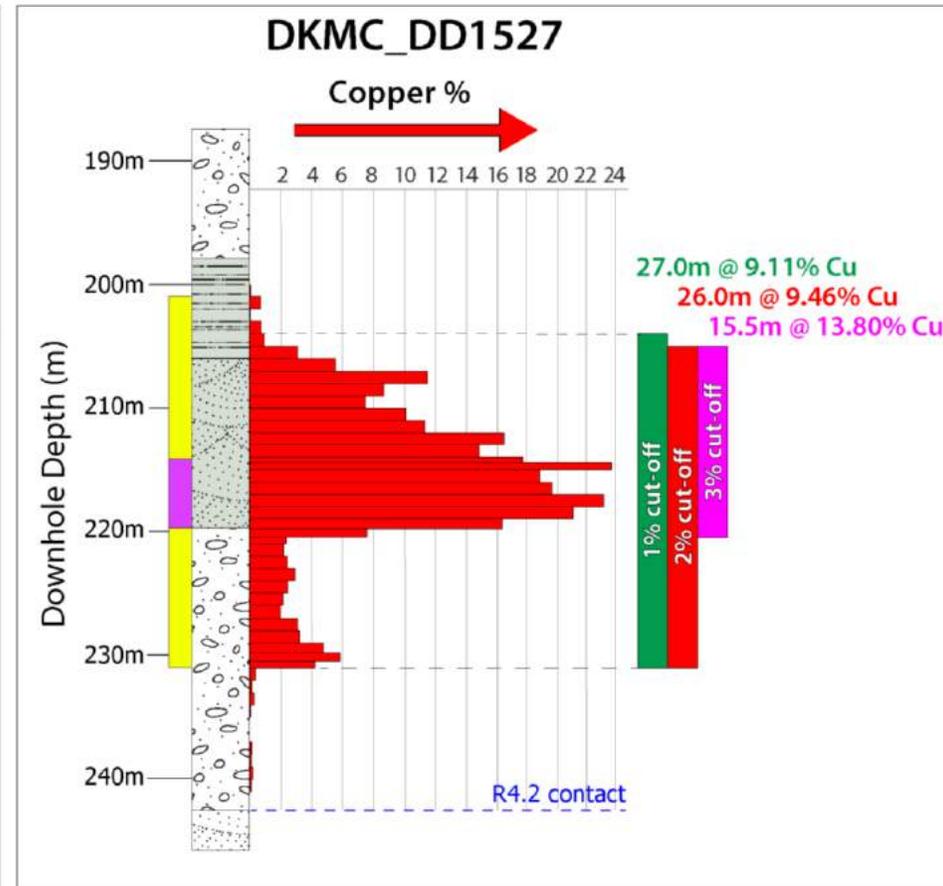
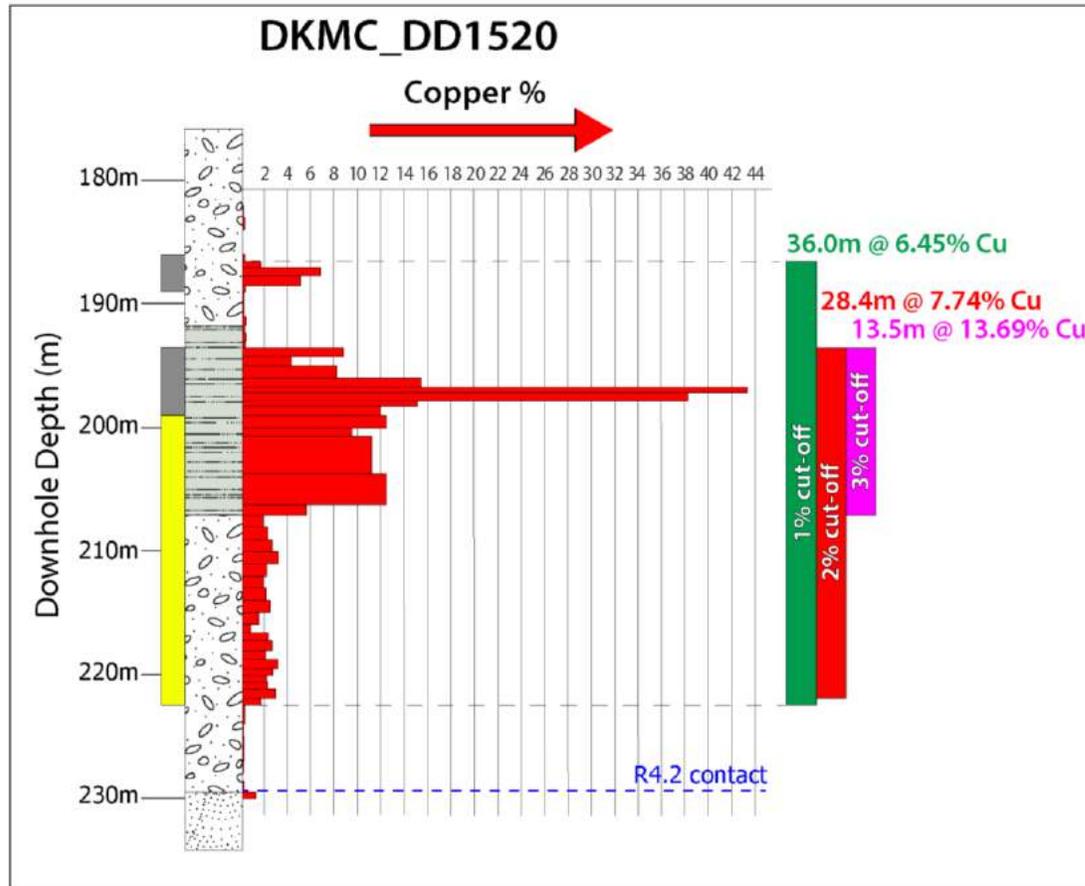
Legend

- Chalcopyrite
- Bornite
- Chalcocite
- Siltstone
- Diamictite
- Sandstone
- Ki1.1.2 (KPS) stratigraphy

NOTE: Thickness reported as downhole thickness

Mineralization profiles of recent holes across the Kamoa North Bonanza Zone

Mineralization Profiles



Legend

- Chalcopyrite
- Bornite
- Chalcocite

- Siltstone
- Diamictite
- Sandstone

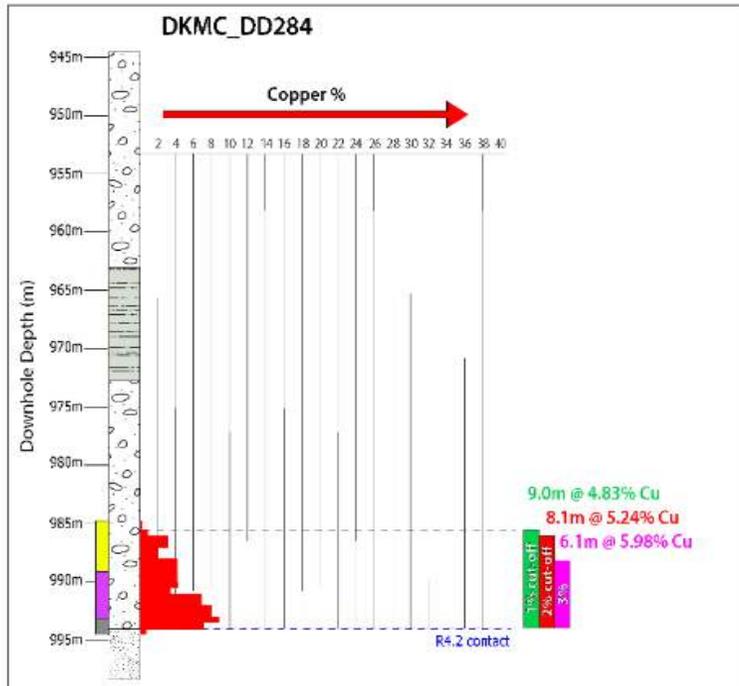
- Ki1.1.2 (KPS) stratigraphy

NOTE: Thickness reported as downhole thickness

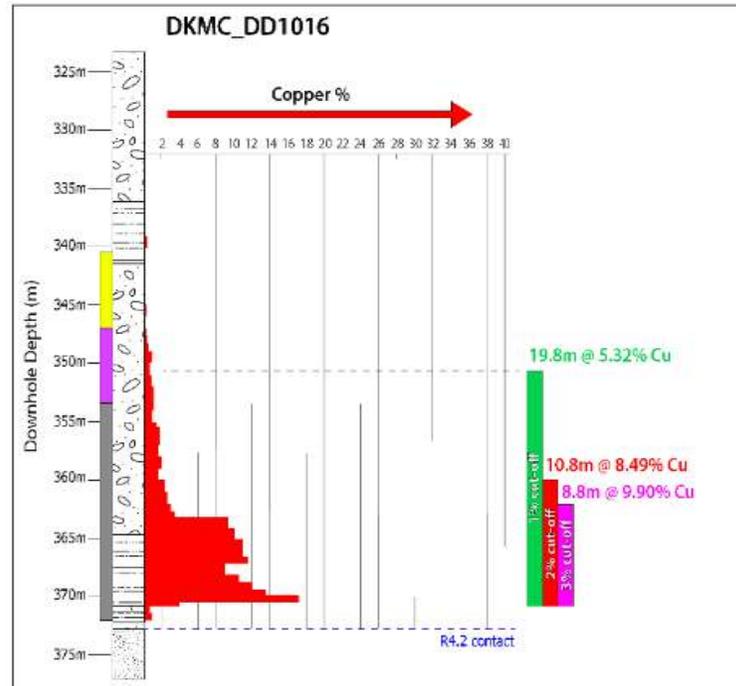
Comparative grade profiles from Kansoko, Kakula and Kamoa North discoveries

Comparative Mineralization Profiles

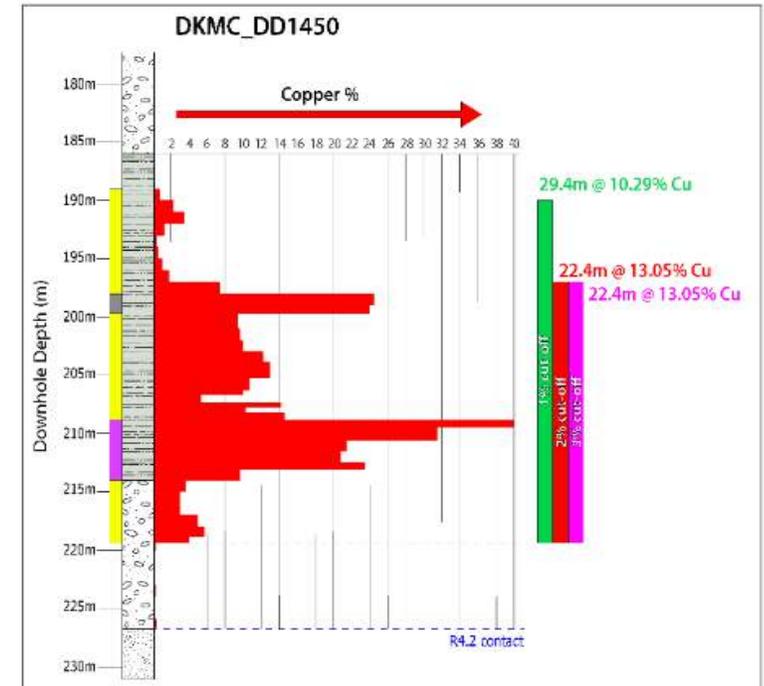
Kansoko



Kakula



Kamoa North



Legend

- Chalcopyrite
- Bornite
- Chalcocite

- Siltstone (Ki1.1.2)
- Diamictite (Ki1.1.1/Ki1.1.3)
- Sandstone (R4.2)

- Ki1.1.2 stratigraphy

NOTE: Thickness reported as downhole thickness

Core from the Kamoia North Bonanza Zone



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

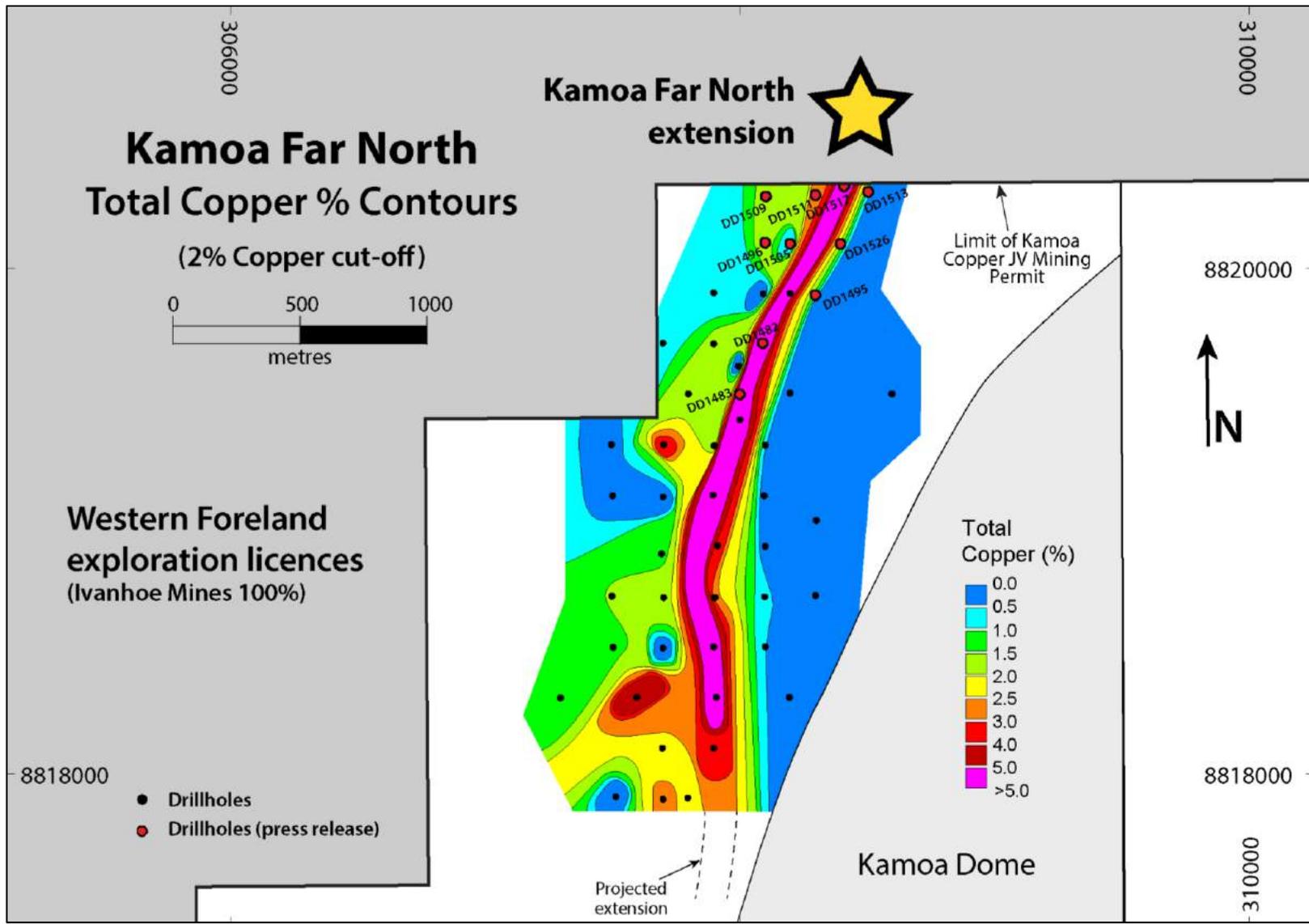
The grade of the sample is 46% copper.



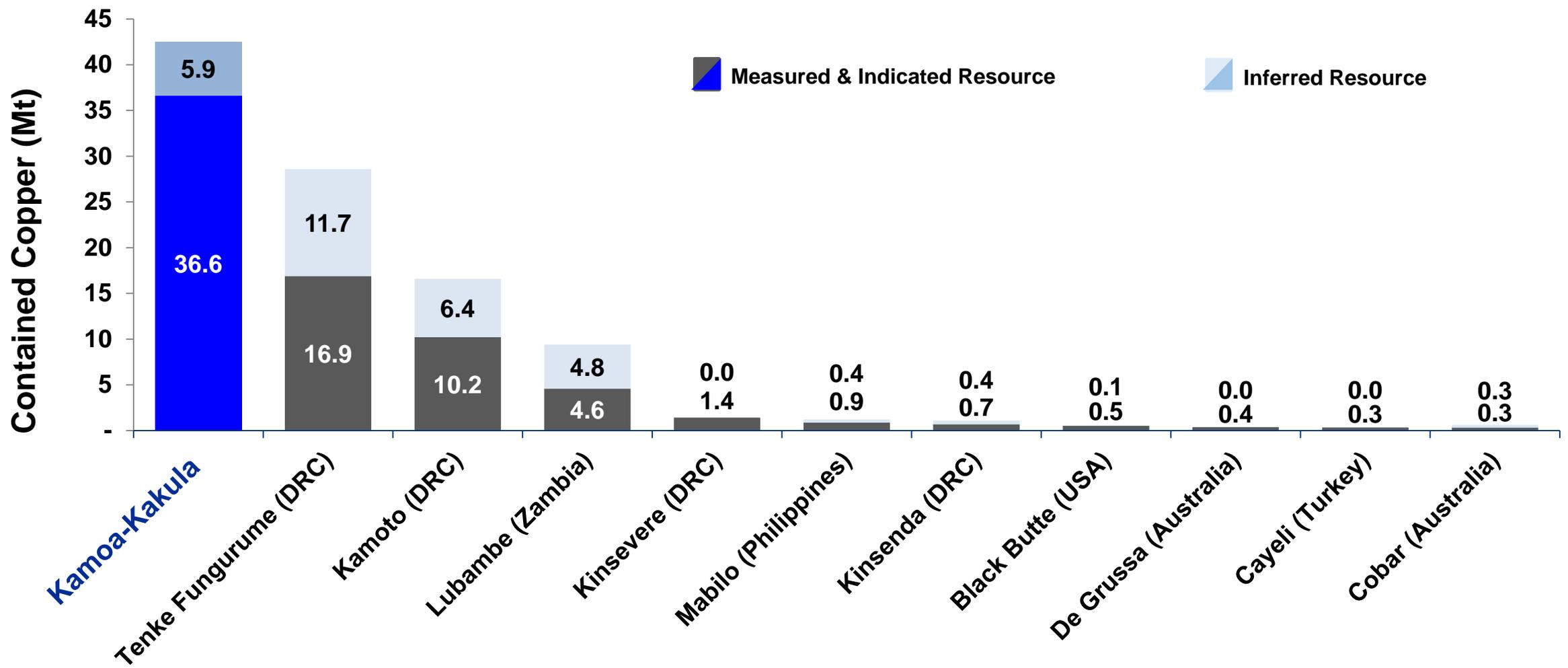
DD1522 sample from a downhole depth of 212.1 metres, containing finely disseminated bornite (Cu₅FeS₄).

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**



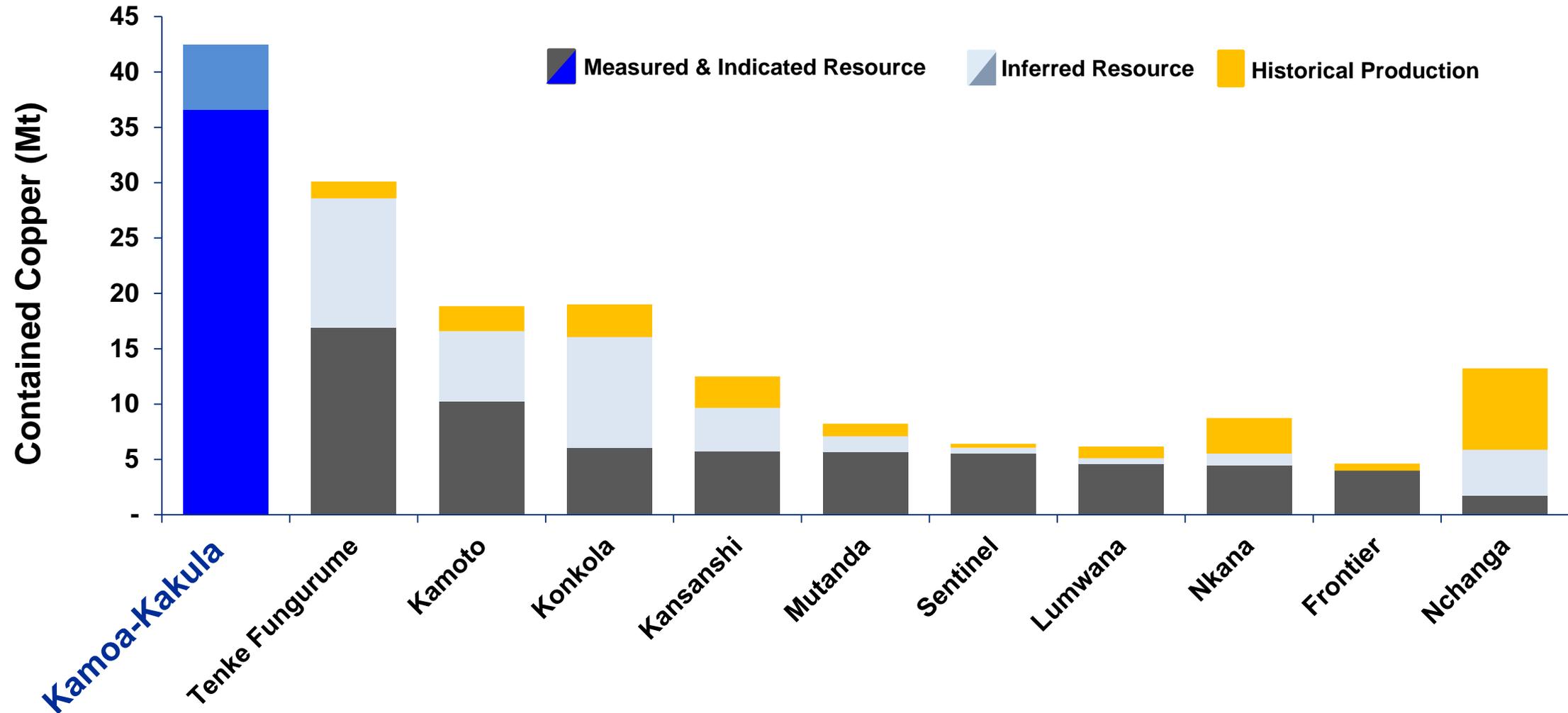
Kamoa-Kakula is the largest high-grade copper deposit in the world



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

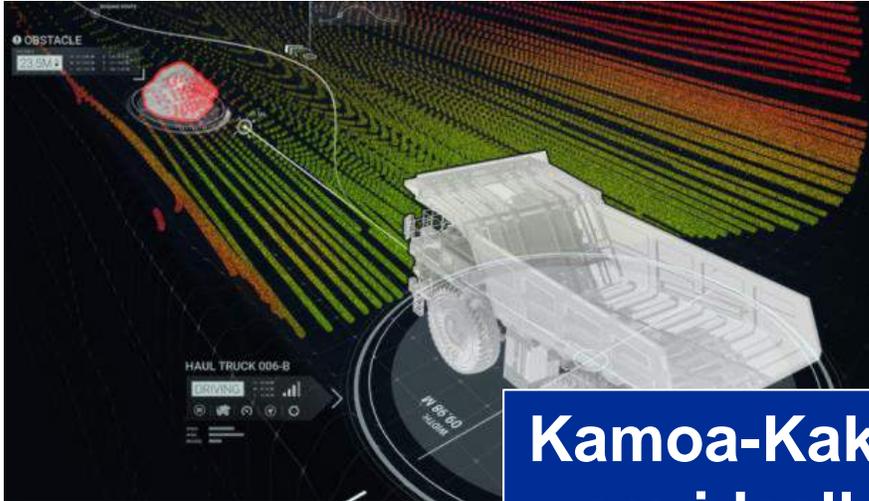


Source: Wood Mackenzie and USGS

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.



Automation is the future of underground mining

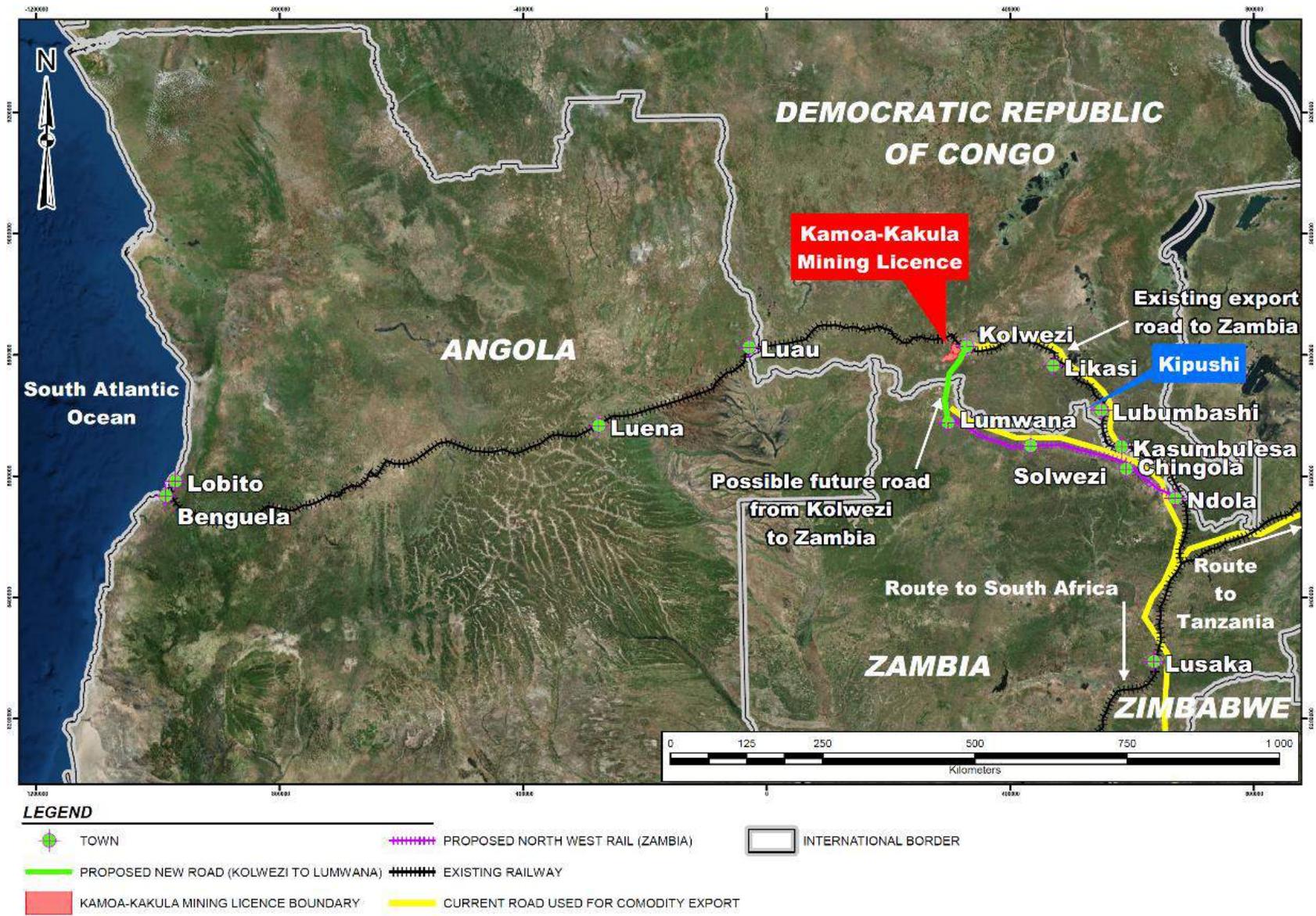


**Kamoa-Kakula deposits
are ideally suited for
autonomous mining**

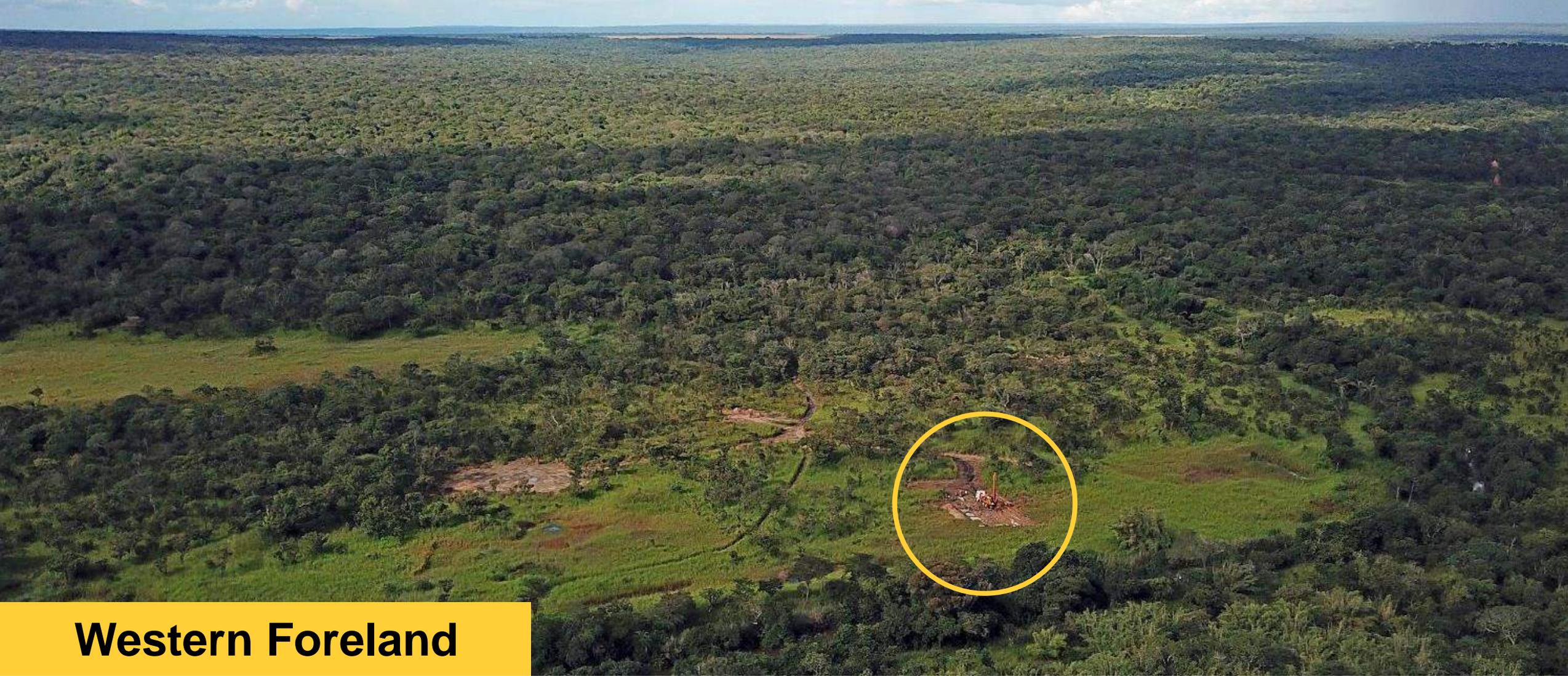


Industry is developing self-driving haulage trucks that receive remote commands from a central control room and can detect, and avoid, obstacles that may appear.

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



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



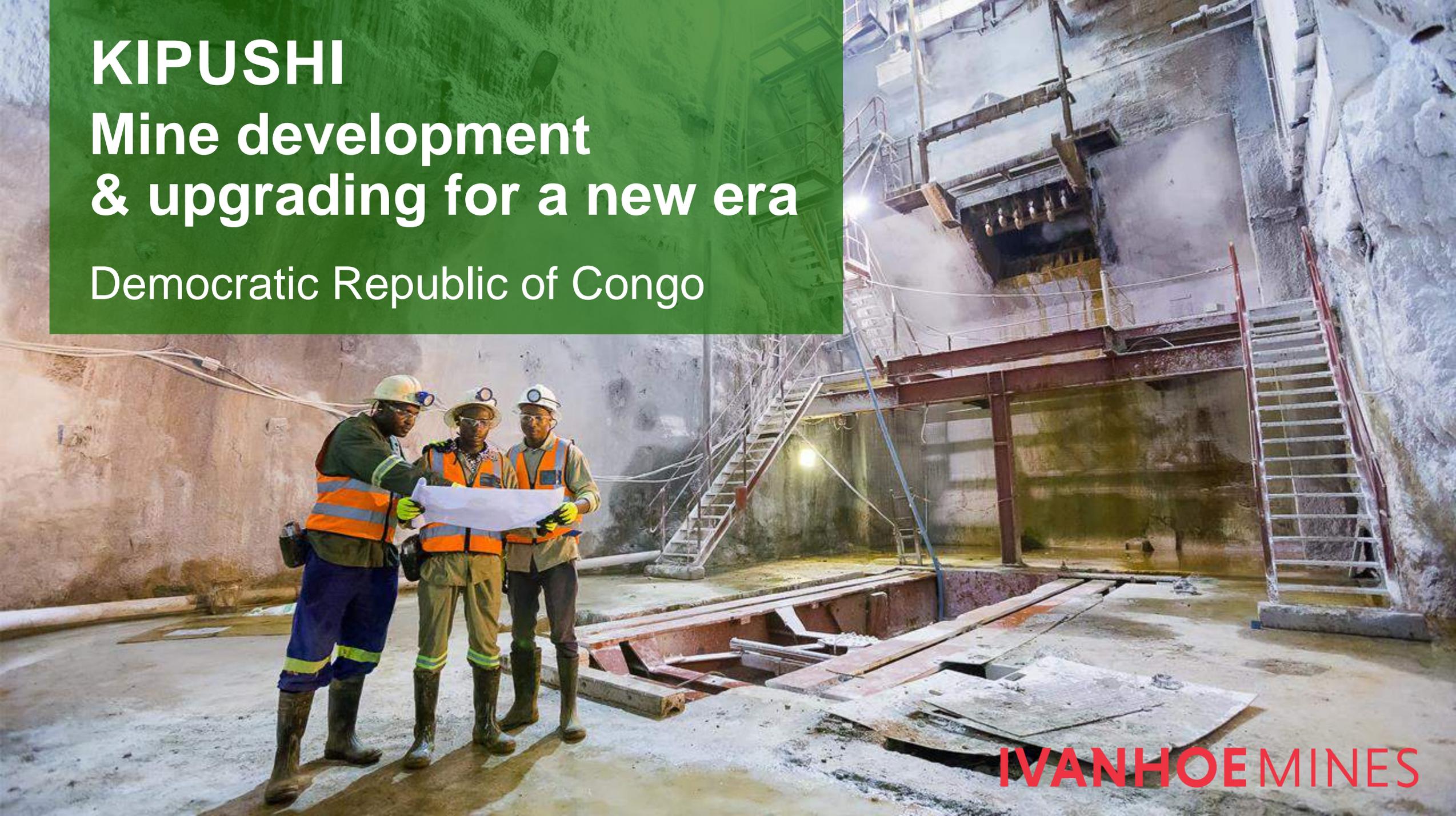
Western Foreland

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.

KIPUSHI

Mine development & upgrading for a new era

Democratic Republic of Congo



IVANHOE MINES

The birth of a spectacularly high-grade mine

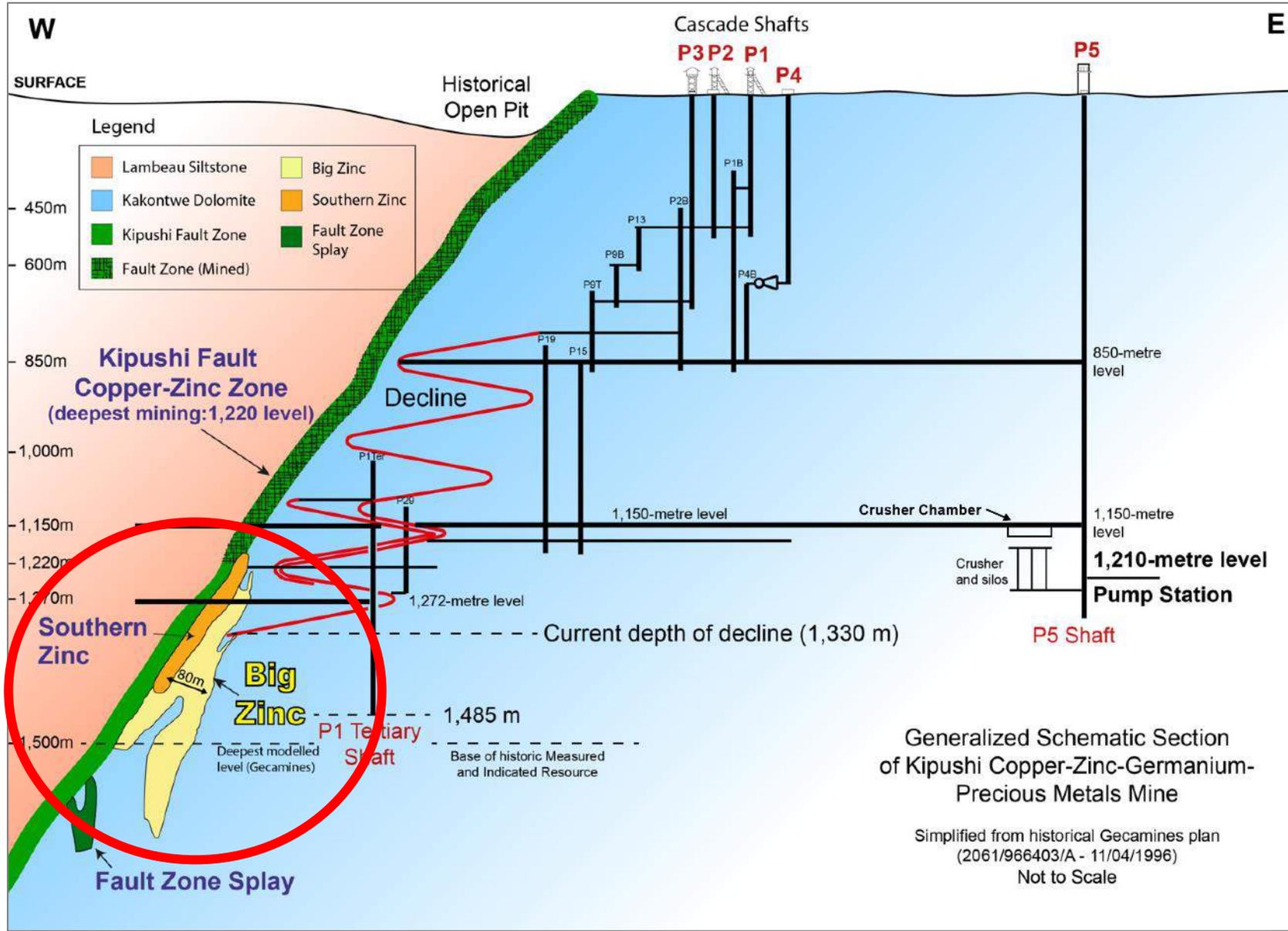


In 1924, Kipushi began mining 18% copper from a surface open pit, before transitioning to Africa's richest underground copper, zinc and germanium mine. Mining continued until 1993.

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

A photograph of a worker in a brown jacket and white hard hat operating machinery in a mine tunnel. The worker is positioned in the center-left of the frame, looking down at a piece of equipment. The machinery is primarily blue and green, with a large orange handwheel. The background shows the rough, brown rock walls of the mine tunnel, illuminated by overhead lights. The scene is industrial and focused on the worker's task.

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...**

Generalized Schematic Section of Kipushi Copper-Zinc-Germanium-Precious Metals Mine
Simplified from historical Gecamines plan (2061/966403/A - 11/04/1996)
Not to Scale

New lighting installed at 1,200-metre level



An aerial photograph of a large-scale mining operation. The central focus is a massive, deep open-pit mine with terraced, reddish-brown earth walls. To the left of the mine, there is a tall, complex metal structure, likely a headframe or part of a hoisting system. Surrounding the mine are various industrial buildings, some with corrugated metal roofs, and a large paved area with several white trucks parked. The background shows a flat, arid landscape under a clear sky.

PLATREEF

Discovery & mine development

South Africa

IVANHOEMINES

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

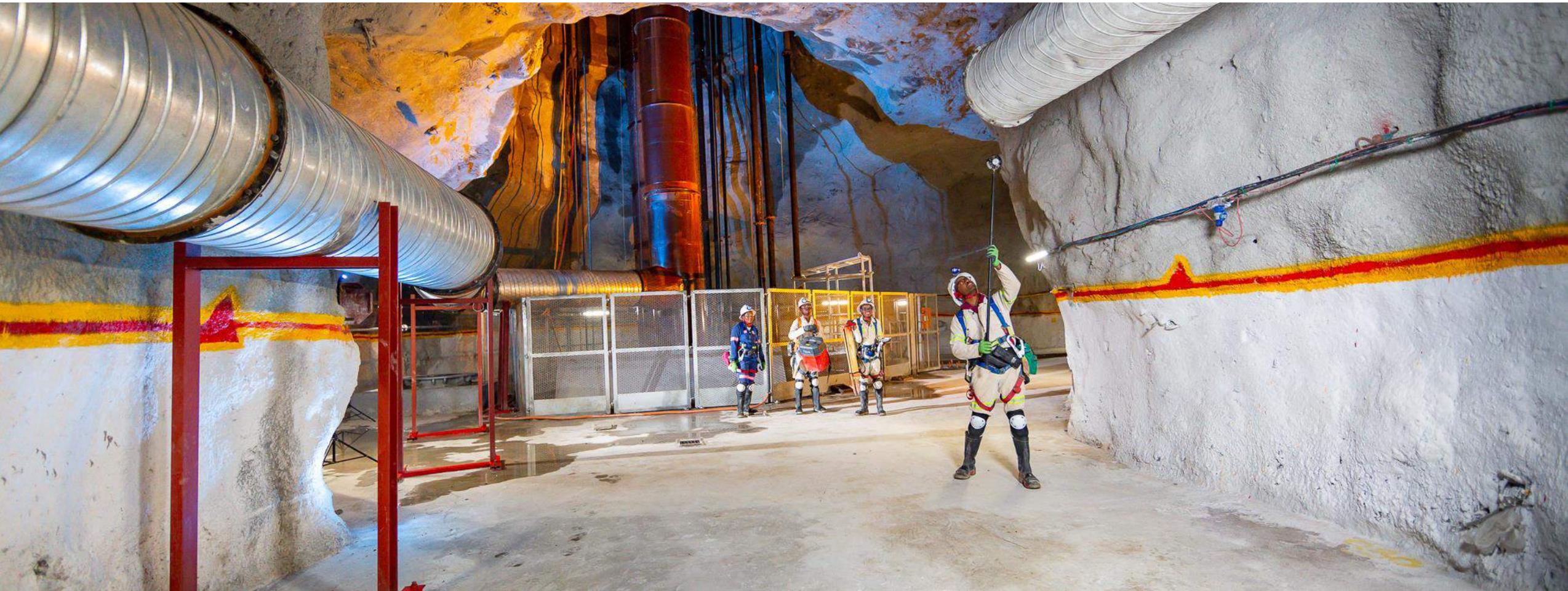
The first ore from the underground mine development was delivered to a surface stockpile for metallurgical sampling.



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



**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.**

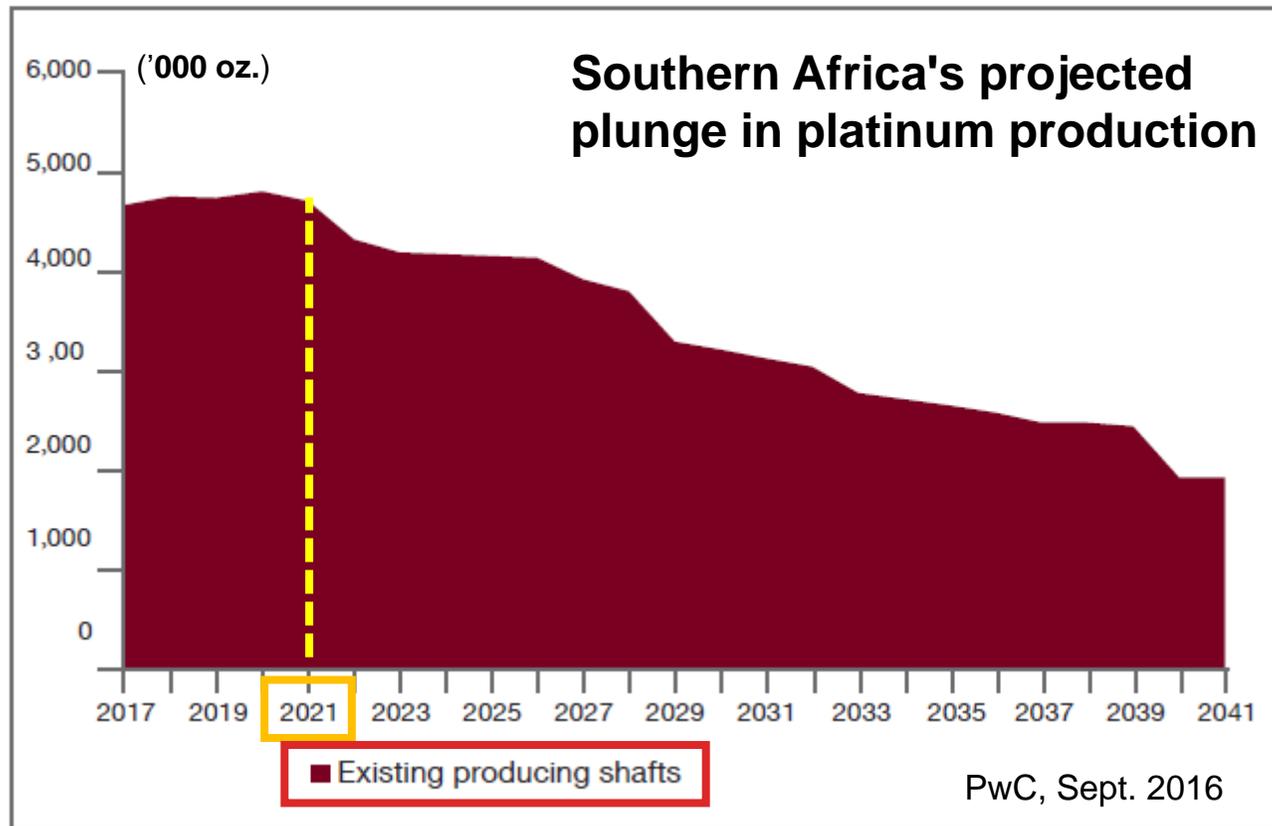


July 31, 2017: Definitive feasibility study issued for Platreef Project

- First phase envisages annual throughput rate of four million tonnes of ore per year, producing 476,000 ounces of platinum, palladium, rhodium and gold (3PE+Au), plus 33 million pounds of nickel and copper.
- Projected to be Africa's lowest-cost producer of 3PE+Au, with a cash cost of US\$351 per ounce of 3PE+Au.

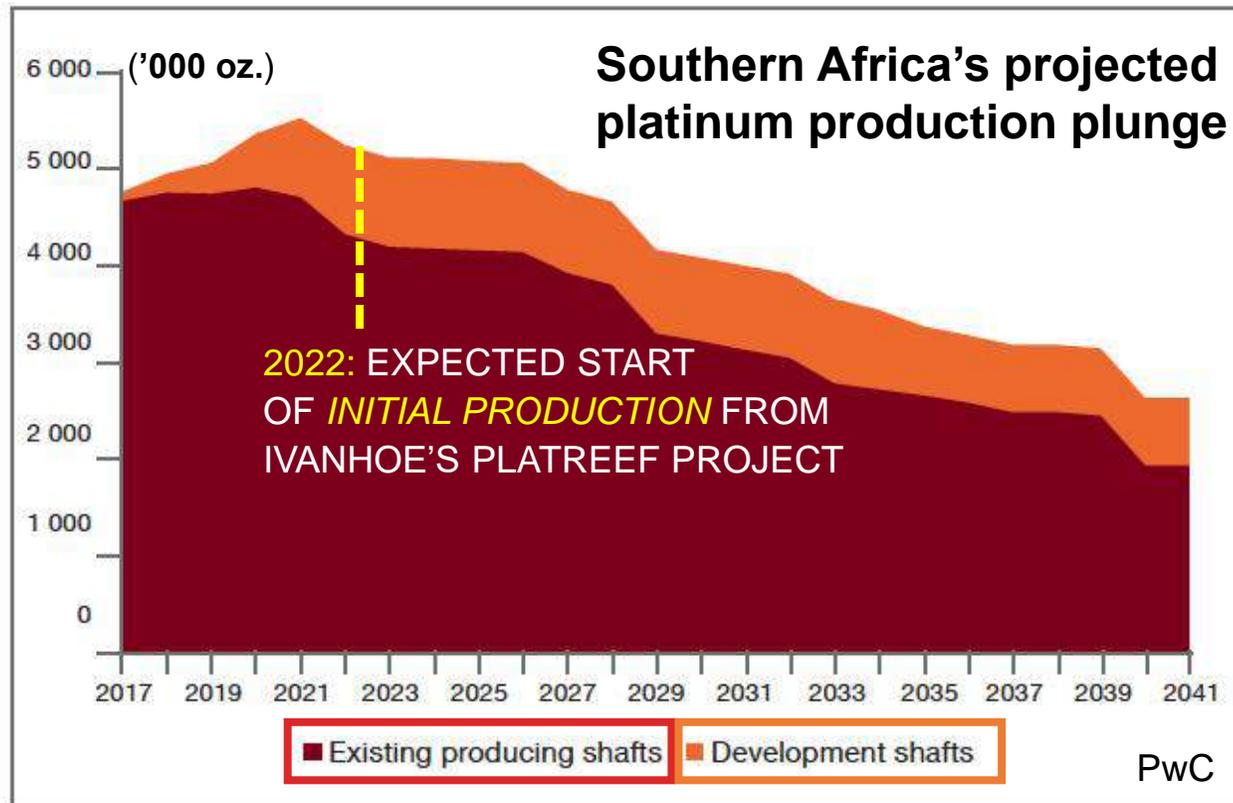


The looming platinum “supply cliff” for Southern Africa’s existing producing mines



- 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



- 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.

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



Thank You

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