



**IVANHOE MINES**  
NEW HORIZONS

April 11, 2018



# Forward-looking statements & Qualified Person

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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 Kamoa-Kakula Project, including drilling, decline development, and feasibility, pre-feasibility 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 prefeasibility study and PEA of the Kamoa-Kakula Project, the prefeasibility study of the Platreef Project and the PEA 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.

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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 compliant technical report for each of the Kamoa-Kakula Project, the Platreef Project and the Kipushi Project, which are available under the company’s SEDAR profile at [www.sedar.com](http://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 Kamoa-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 Kamoa-Kakula Project, Platreef Project and Kipushi Project.

Building futures for our stakeholders, *today,*  
*and writing new stories of epic discoveries*  
in Southern Africa's legendary mineral fields

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### KAMOA-KAKULA

Copper discoveries  
& mine development  
**Democratic Republic  
of Congo's Central  
African Copperbelt**

### PLATREEF

Platinum-group elements,  
gold, nickel & copper  
discovery & mine development  
**South Africa's  
Bushveld Complex**

### KIPUSHI

Zinc, copper, silver  
& germanium  
at upgraded, historic,  
high-grade mine  
**D.R. Congo's  
Copperbelt**

# April 10, 2018: Appointment of former South African President Kgalema Motlanthe as non-executive director

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Source: GCIS

*"Mr. Motlanthe is widely recognized as one of the African continent's wise men. We are honoured to be able to welcome to our board an individual with such respected credentials in the international community but also with substantial experience in the mining sector."*

**Robert Friedland**  
*Executive Chairman and Founder  
Ivanhoe Mines*



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# Platreef Discovery & Mine Development

South Africa





**April 8, 2018:**

Shaft 1 has reached a depth of more than **730 metres below surface**, more than 70% to the planned final depth of 980 metres, at Ivanhoe's Platreef platinum, palladium, rhodium, nickel, copper, and gold mine.

*Development work focused on initial production by early 2022.*



# Box-cut construction of Shaft 2



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

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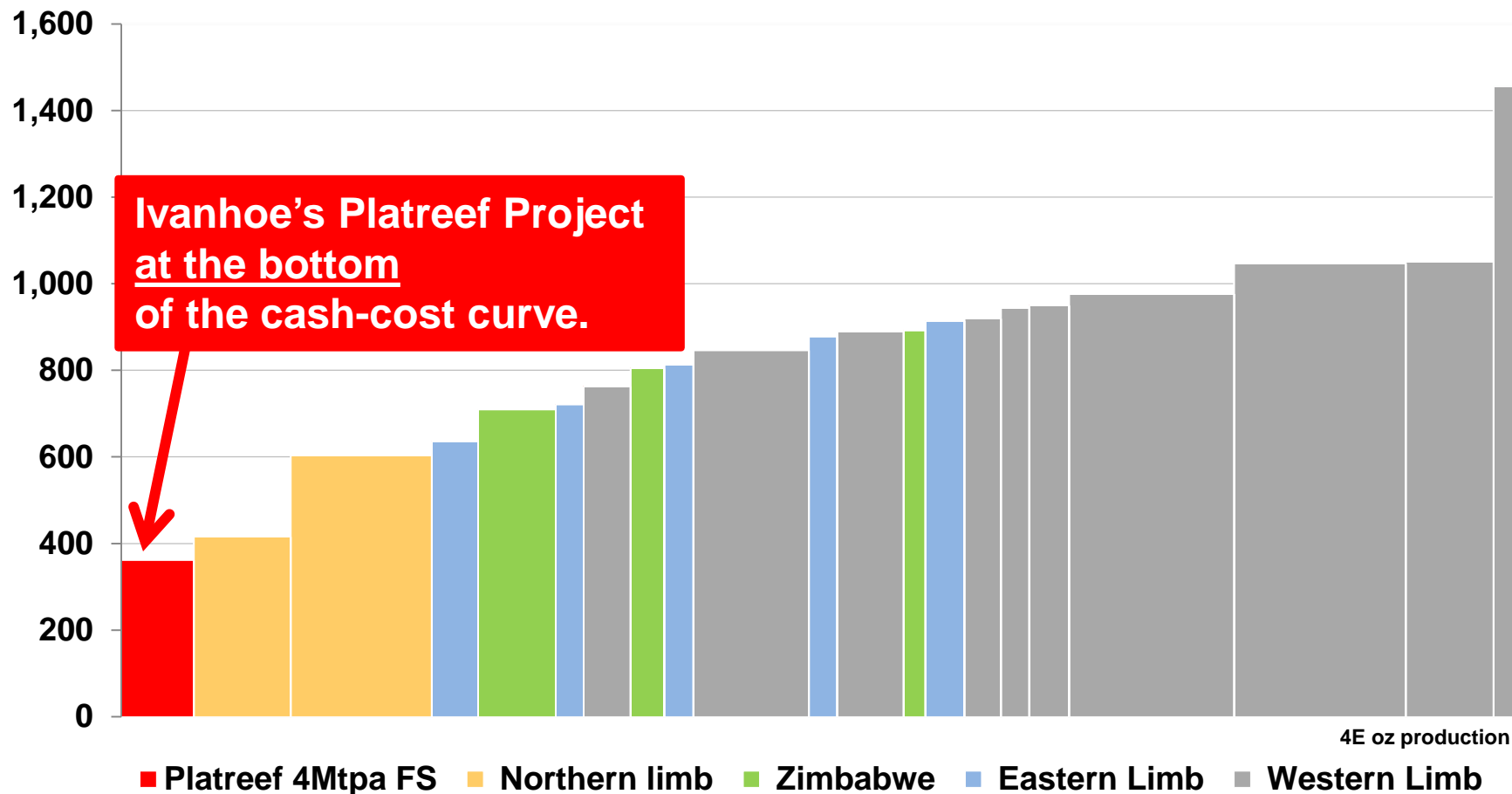
- First phase envisages annual throughput rate of 4Mtpa, producing 476,000 ounces of platinum, palladium, rhodium and gold, plus 33 million pounds of nickel and copper.
- Projected to be Africa's lowest-cost producer of PGMs, with a cash cost of US\$351 per ounce of 3PE+Au.





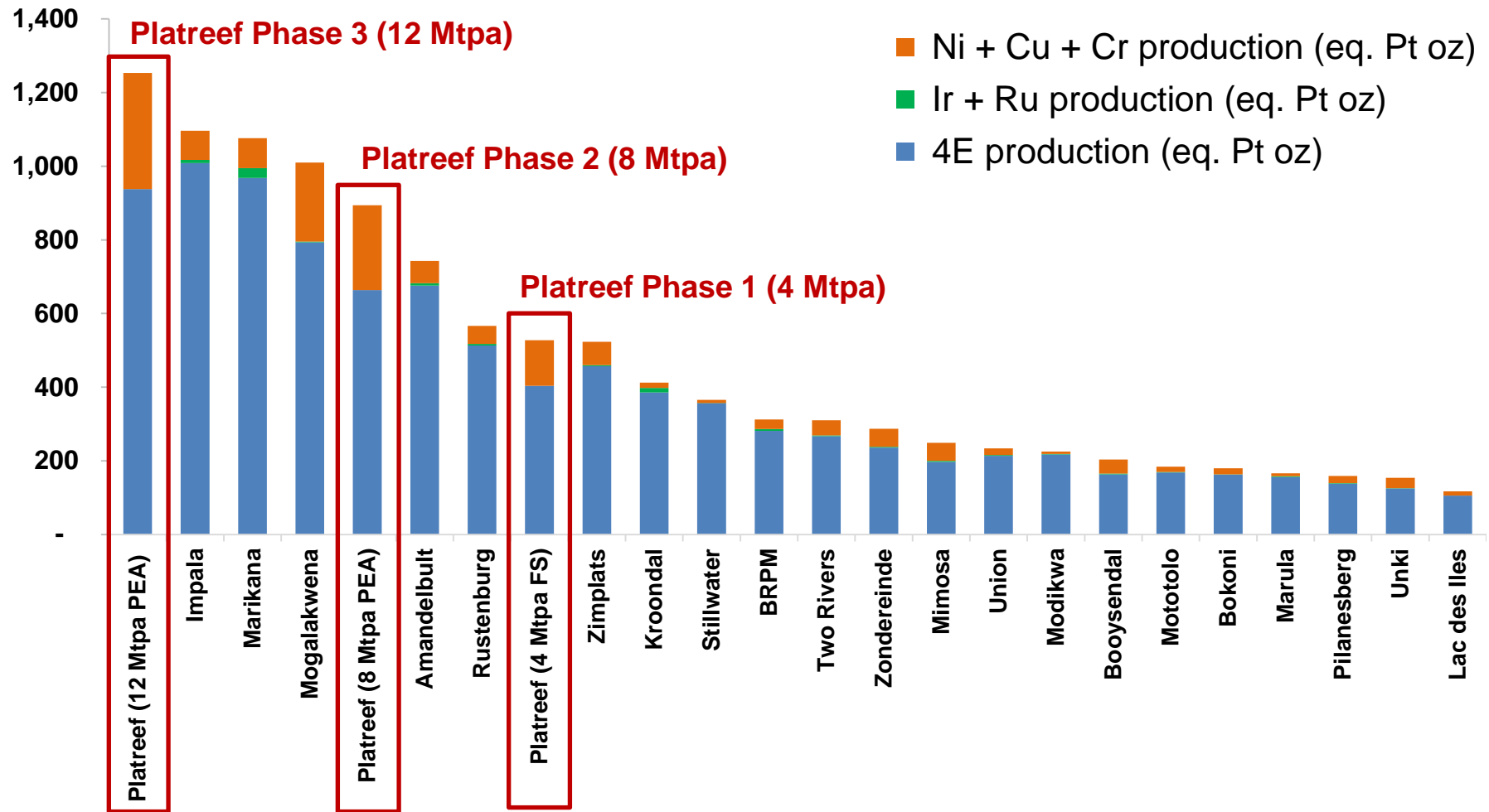
# Platreef's potential US\$351 per 3PE+Au ounce (net of base-metal by-products) at the bottom of the world's cash-cost curve

PLATREEF



Source: SFA (Oxford). Data for Platreef Project and Waterberg are based on each project's reported DFS and PFS parameters respectively, and are not representative of SFA's view.

# At 12 million tonnes/year, Platreef will be world's largest platinum-group metals mine



Source: Production estimates for projects other than Ivanhoe's Platreef Project have been prepared by SFA (Oxford). Production data for the Platreef Project (platinum, palladium, rhodium, gold, nickel and copper) is based on reported DFS and PEA data and is not representative of SFA's view. All metals have been converted by SFA (Oxford) to platinum equivalent ounces at price assumptions of US\$1,076/oz platinum, US\$761/oz palladium, US\$1,235/oz gold, US\$821/oz rhodium, US\$5.07/lb nickel and US\$2.42/lb copper. Note: As the figures are platinum-equivalent ounces of production they will not be equal to 3PE+Au production.



**Platreef Project Financing Progressing:** German, Swedish and Canadian government institutions appointed to arrange debt financing for Platreef. Expressions of interest received for approximately US\$900 million of a US\$1 billion finance package.

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PLATREEF





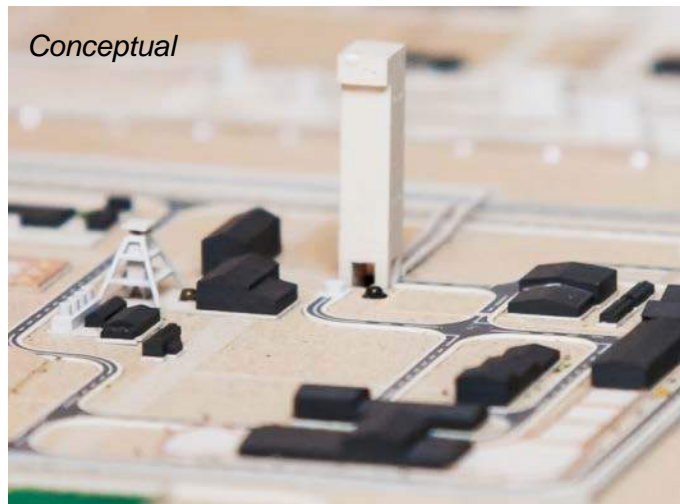
Illustration shows two perspectives of Shaft 2's 103-metre-tall concrete headgear and internal permanent hoisting facilities.



## Ivanhoe's Shaft 2

vs.

## Impala's Shaft 16



Purpose

Production shaft

Production shaft

Location

Northern Limb of Bushveld  
Complex

Western Limb of Bushveld  
Complex

Total depth

Approx. 1,100 metres

1,657 metres

Diameter

10 metres

10 metres

Hoisting capacity

6 million tonnes/year

2.7 million tonnes/year

Start of construction

2019

2004

Operation date

2021 est.

November 2014

# Platreef's B-BBEE deal is a top performer in South Africa's platinum sector

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**BEE partner's 26% ownership stake in Platreef Project is one of the broadest empowerment transactions ever done in South African mining.**

- **20%** held by a trust to benefit 20 local host communities, with estimated combined population of 150,000, in the vicinity of Platreef mine.
- **3%** held by a trust for Platreef's historically disadvantaged, non-managerial South African employees.
- **3%** held by a consortium of 187 local entrepreneurial companies and 333 individual shareholders.

**In 2017, Ivanplats reconfirmed its Level 3 status in its third verification assessment on a B-BBEE scorecard.**



# Ongoing Shaft 1 development by members of Platreef's shaft-sinking team

PLATREEF



**Shaft 1 is expected to reach its projected, final depth of 980 metres below surface in 2019**



# Removal of broken rock from shaft-sinking development

PLATREEF





# Flatreef mining method: long-hole stoping

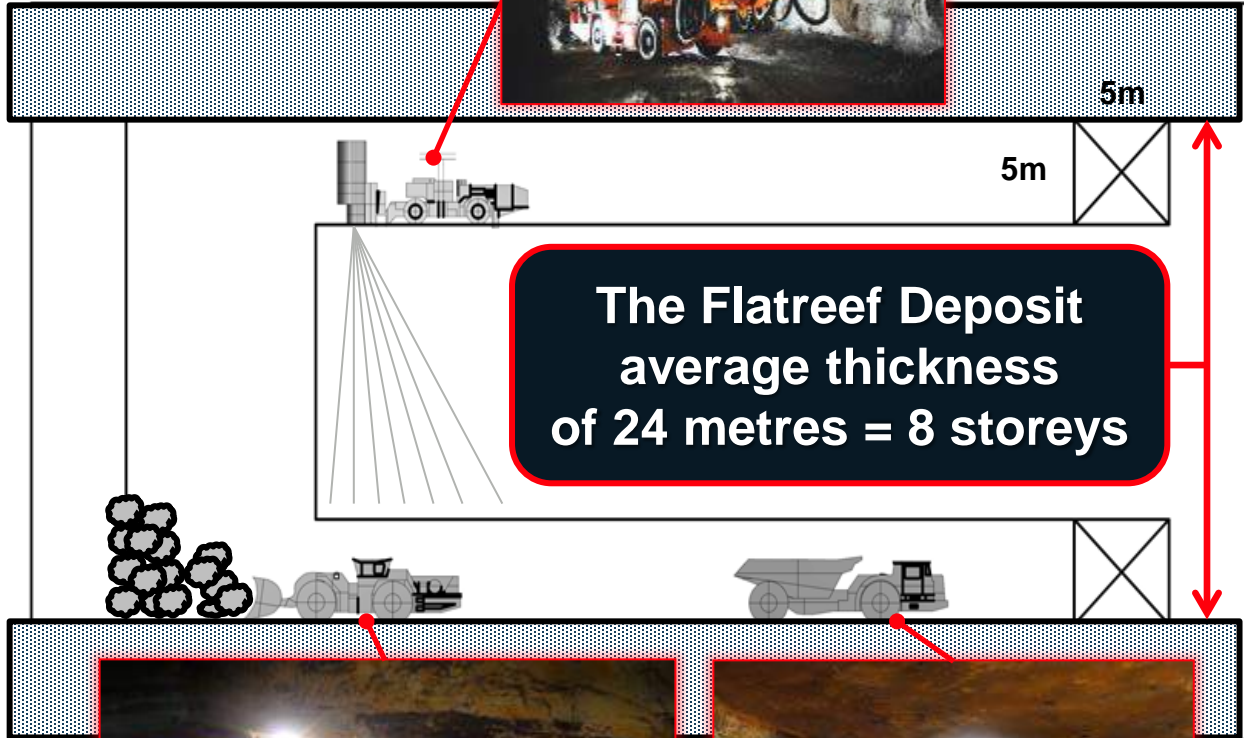
PLATREEF

**Highly mechanized mining**



**Safe working conditions**

Blast-hole drifts



**Highly skilled operators**



# The future of underground mining is automation

PLATREEF

**Ivanhoe's Platreef Platinum Project in South Africa is ideally suited for mechanized, autonomous mining.**

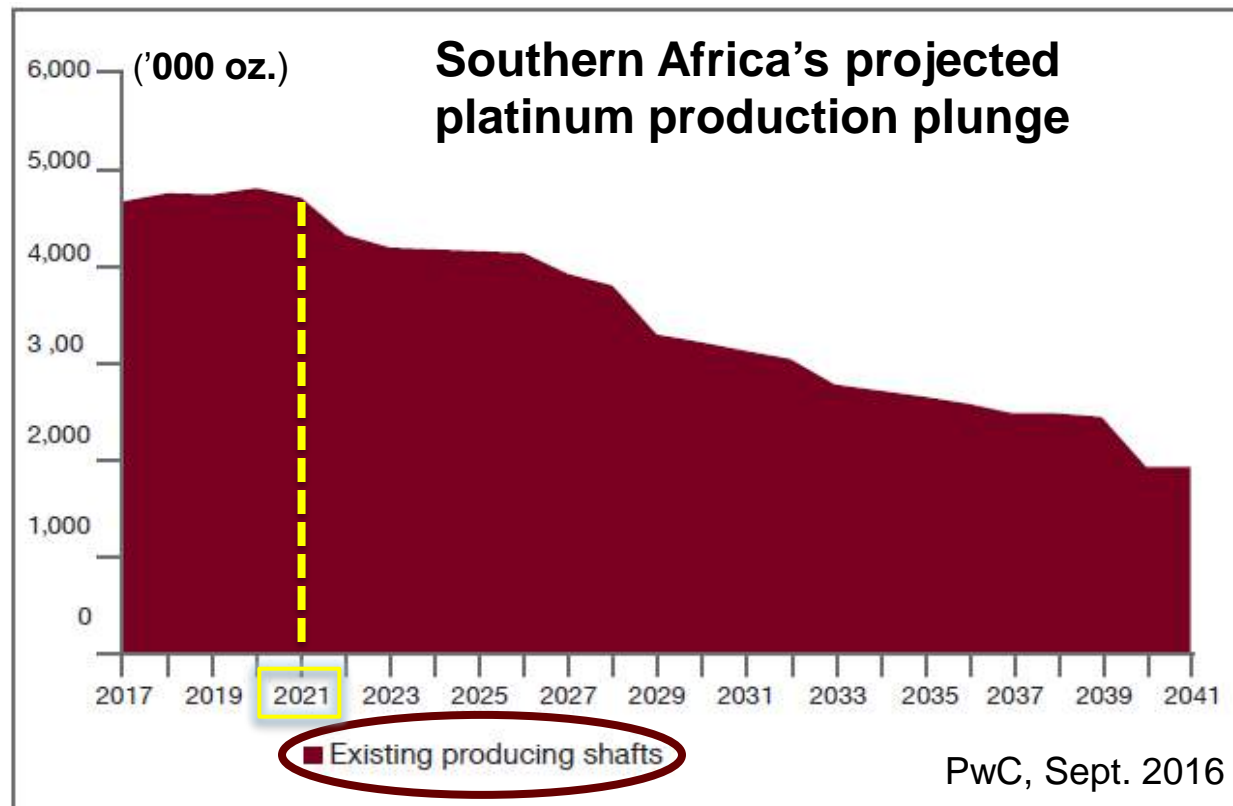


Source: ASI Robots

Illustration source: ABB Mining.

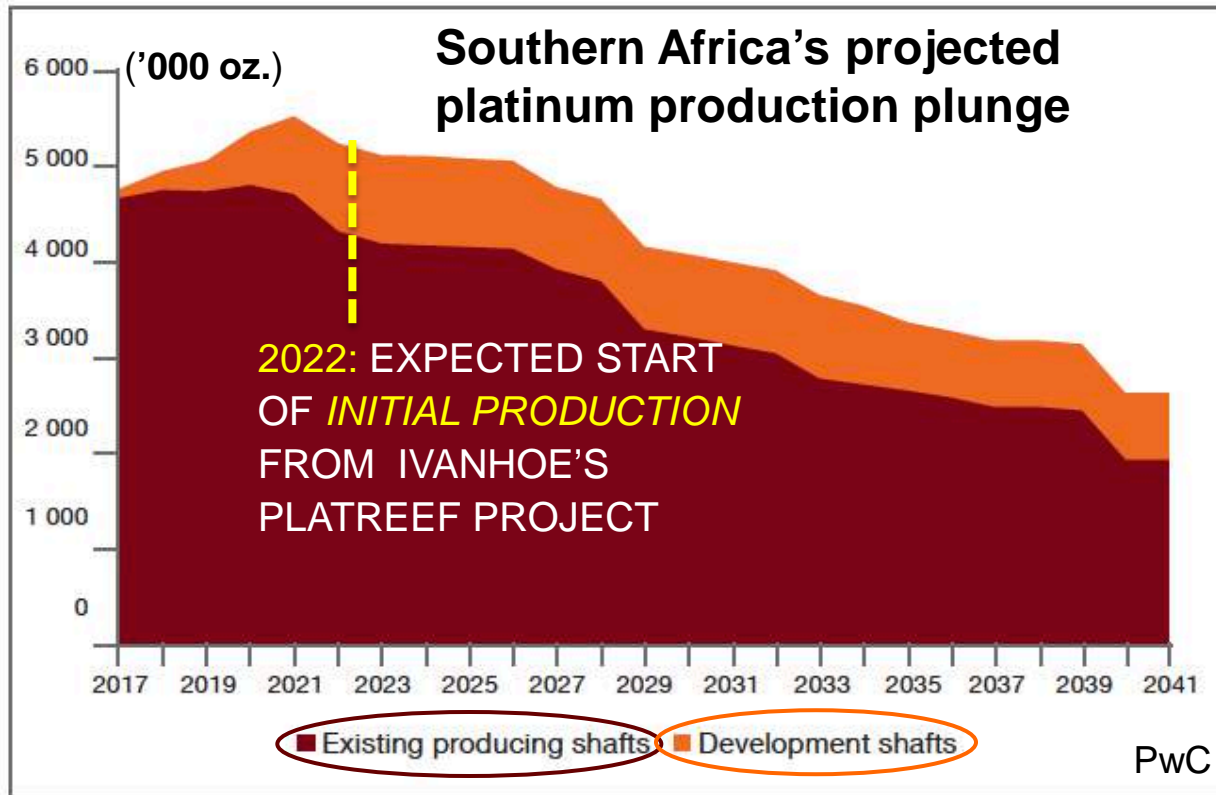
Source: MINEX Forum

# 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



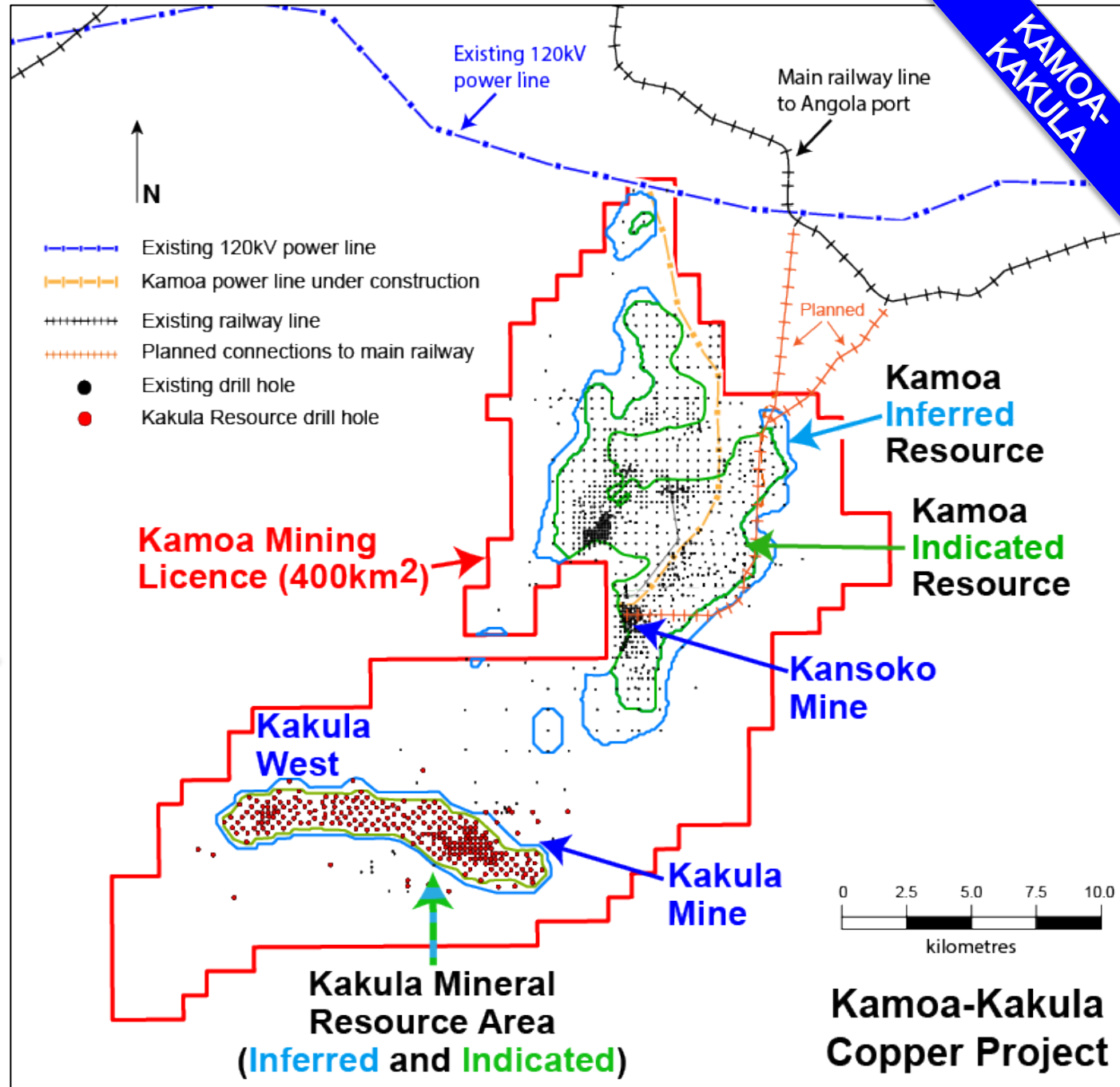
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# Kamoa Mine Development & Kakula Discovery

Democratic Republic of Congo



# Kamoa, Kakula and Kakula West Indicated and Inferred Mineral Resource areas, with existing power and rail infrastructure





**February 2018:** A new resource estimate establishes Kamoia-Kakula as the world's *fourth largest copper discovery.*

Copper grades at the two adjacent deposits are the highest, by a wide margin, of the world's top 10 copper deposits.

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KAMOA-  
KAKULA





# Indicated Mineral Resources, Kamoa-Kakula Project, February 2018

Category	Cut-off Grade (Cu%)	Tonnes (millions)	Area (Sq. km)	Copper Grade	Contained Copper (kTonnes)	Contained Copper (billion lbs)
Indicated	3.0	396	33.2	4.79%	19,000	41.8
Indicated	2.5	535	44.0	4.25%	22,800	50.2
Indicated	2.0	780	53.8	3.63%	28,300	62.4
Indicated	1.5	1030	62.8	3.17%	32,500	71.7
Indicated	1.0	1340	70.1	2.72%	36,600	80.7

## Notes:

Ivanhoe's Mineral Resources Manager, George Gilchrist, Professional Natural Scientist (Pr. Sci. Nat) with the South African Council for Natural Scientific Professions (SACNASP), estimated the Mineral Resources under the supervision of Dr. Harry Parker and Gordon Seibel, both Registered Members of the Society for Mining, Metallurgy and Exploration (SME), who are the Qualified Persons for the Mineral Resource estimate. The effective date of the estimate is February 23, 2018. Mineral Resources are estimated using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves. Mineral Resources at Kamoa are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. No Mineral Reserves are currently estimated at Kakula.

Mineral Resources at Kamoa are reported using a total copper (TCu) cut-off grade of 1% TCu and a minimum vertical thickness of 3 m. There are reasonable prospects for eventual economic extraction under assumptions of a copper price of US\$3.00/lb; employment of underground mechanized room-and-pillar and drift-and-fill mining methods; and that copper concentrates will be produced and sold to a smelter. Mining costs are assumed to be US\$27/t, and concentrator, tailings treatment, and general and administrative costs (G&A) are assumed to be US\$17/t. Metallurgical recovery for Kamoa is estimated to average 84%. At a 1% TCu cut-off grade, assumed net smelter returns for 100% of Mineral Resource blocks will cover concentrator, tailings treatment, and G&A costs.

Mineral Resources at Kakula are reported using a TCu cut-off grade of 1% TCu and an approximate minimum thickness of 3 m. There are reasonable prospects for eventual economic extraction under assumptions of a copper price of US\$3.00/lb, employment of underground, mechanized, room-and-pillar and drift-and-fill mining methods, and that copper concentrates will be produced and sold to a smelter. Mining costs are assumed to be US\$42/t and concentrator, tailings treatment, and G&A costs are assumed to be US\$18/t. Metallurgical recovery is assumed to average 85% at the average grade of the Mineral Resource. Ivanhoe is studying reducing mining costs using a controlled convergence room-and-pillar method. At a 1% TCu cut-off grade, assumed net smelter returns for 100% of Mineral Resource blocks will cover concentrator, tailings treatment and G&A costs.

Reported Mineral Resources contain no allowances for hangingwall or footwall contact boundary loss and dilution. No mining recovery has been applied.

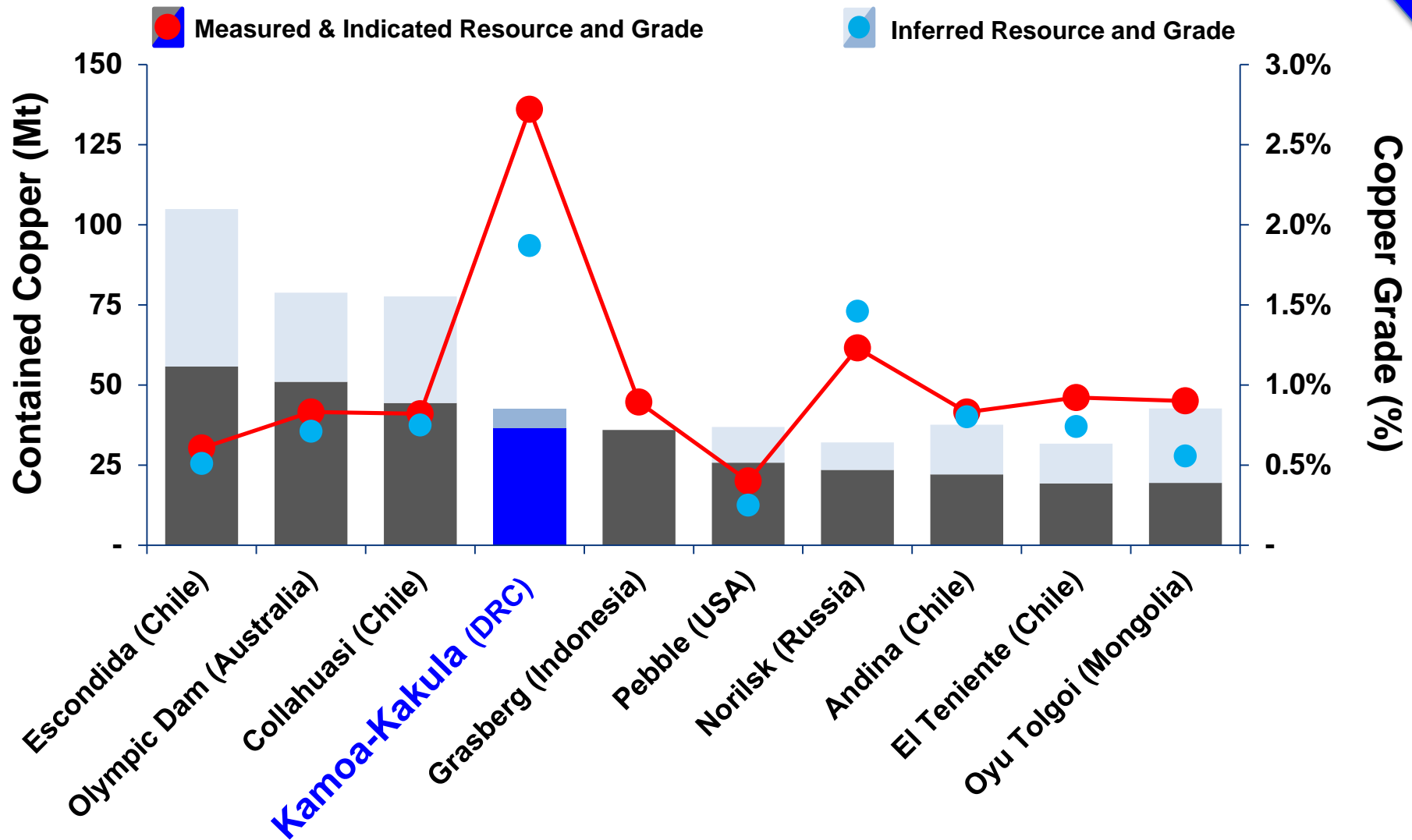
Tonnage and contained-copper tonnes are reported in metric units, contained-copper pounds are reported in imperial units and grades are reported as percentages.

Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.

Resources stated in Tables 1, 2 and 3 are not additive to this table.

# Among the world's largest copper deposits, Kamo-a-Kakula also has the highest copper grades

KAMOA-KAKULA

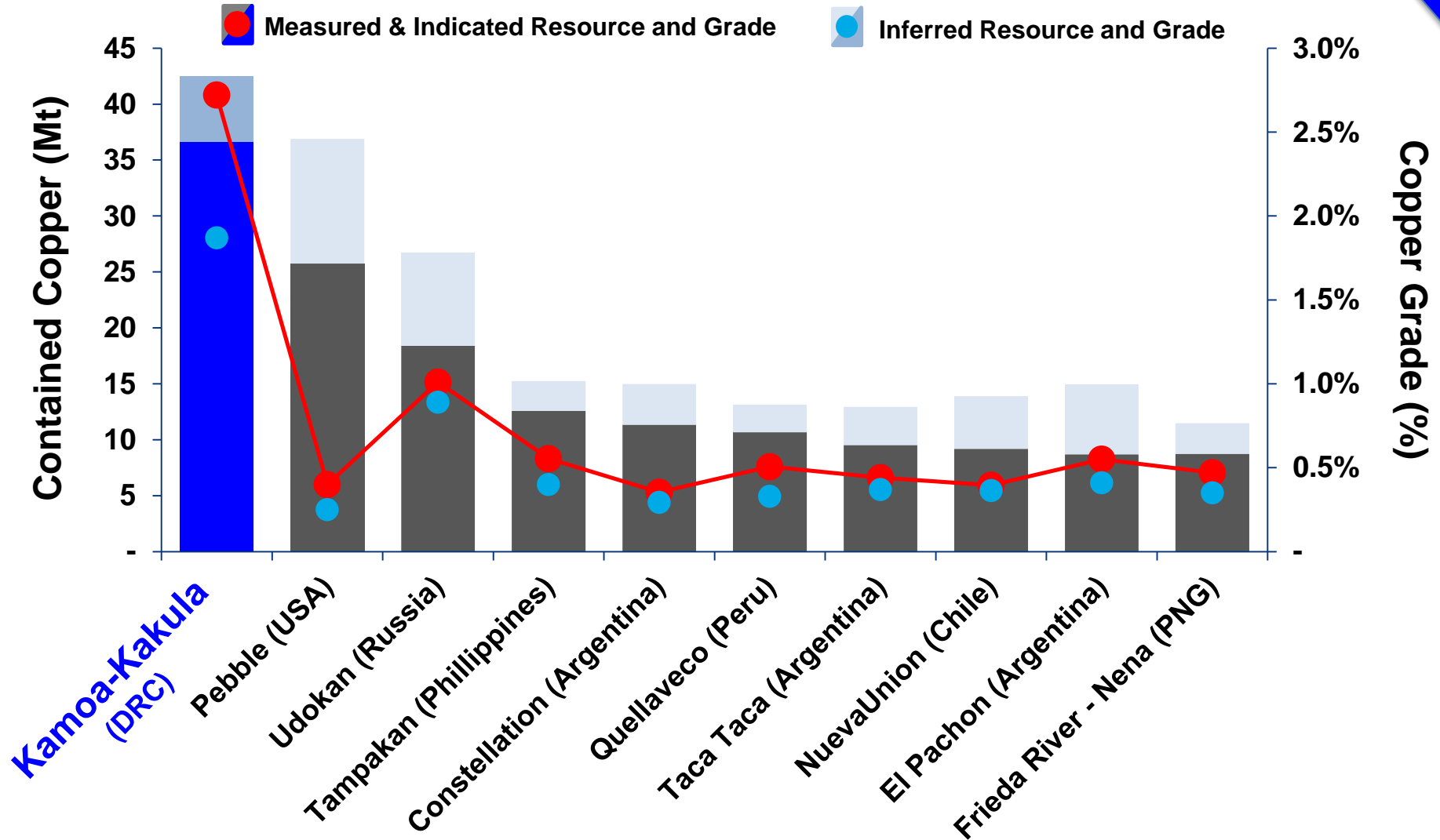


Source: Wood Mackenzie

\*Note: Selected based on contained copper (Measured & Indicated Resources, inclusive of Mineral Reserves, and Inferred Resources), ranked on contained copper in Measured & Indicated Resources.

# Kamoa-Kakula is the largest undeveloped copper deposit in the world

KAMOA-KAKULA



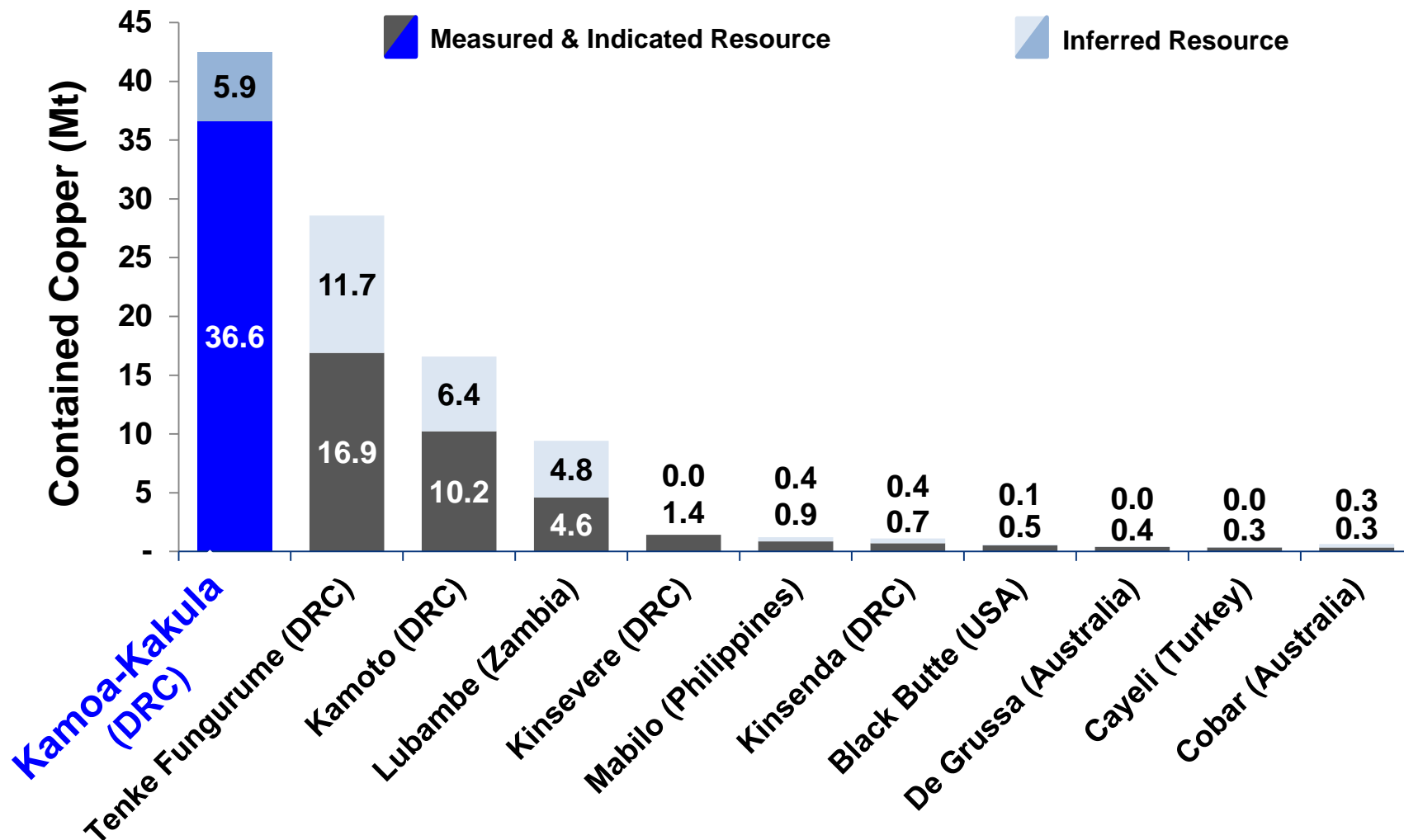
Source: Wood Mackenzie

\*Note: Contained copper in undeveloped deposits (Measured & Indicated Resources, inclusive of Mineral Reserves, and Inferred Resources), ranked on contained copper in Measured & Indicated Resources.



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

KAMOA-KAKULA

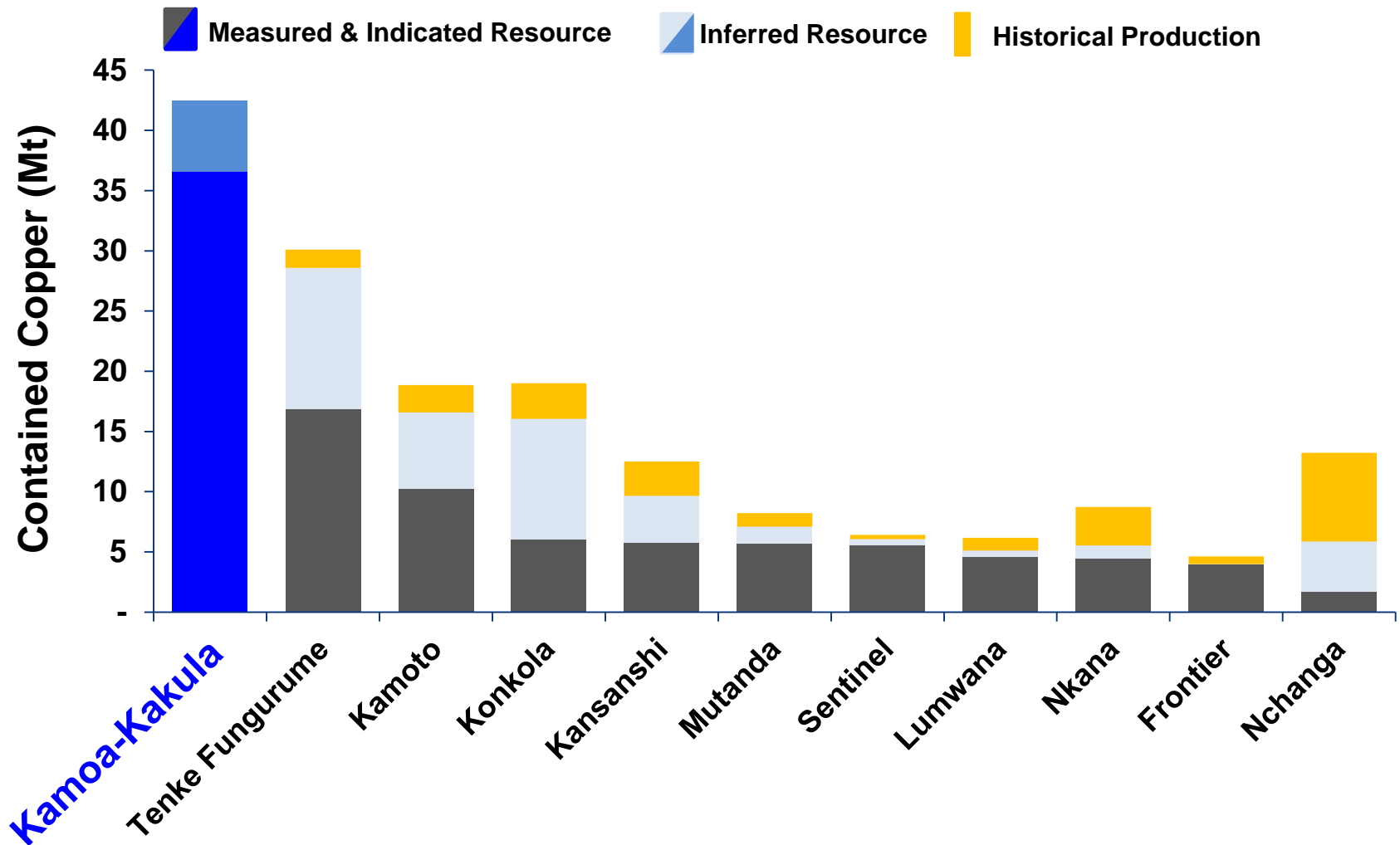


Source: Wood Mackenzie

\*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

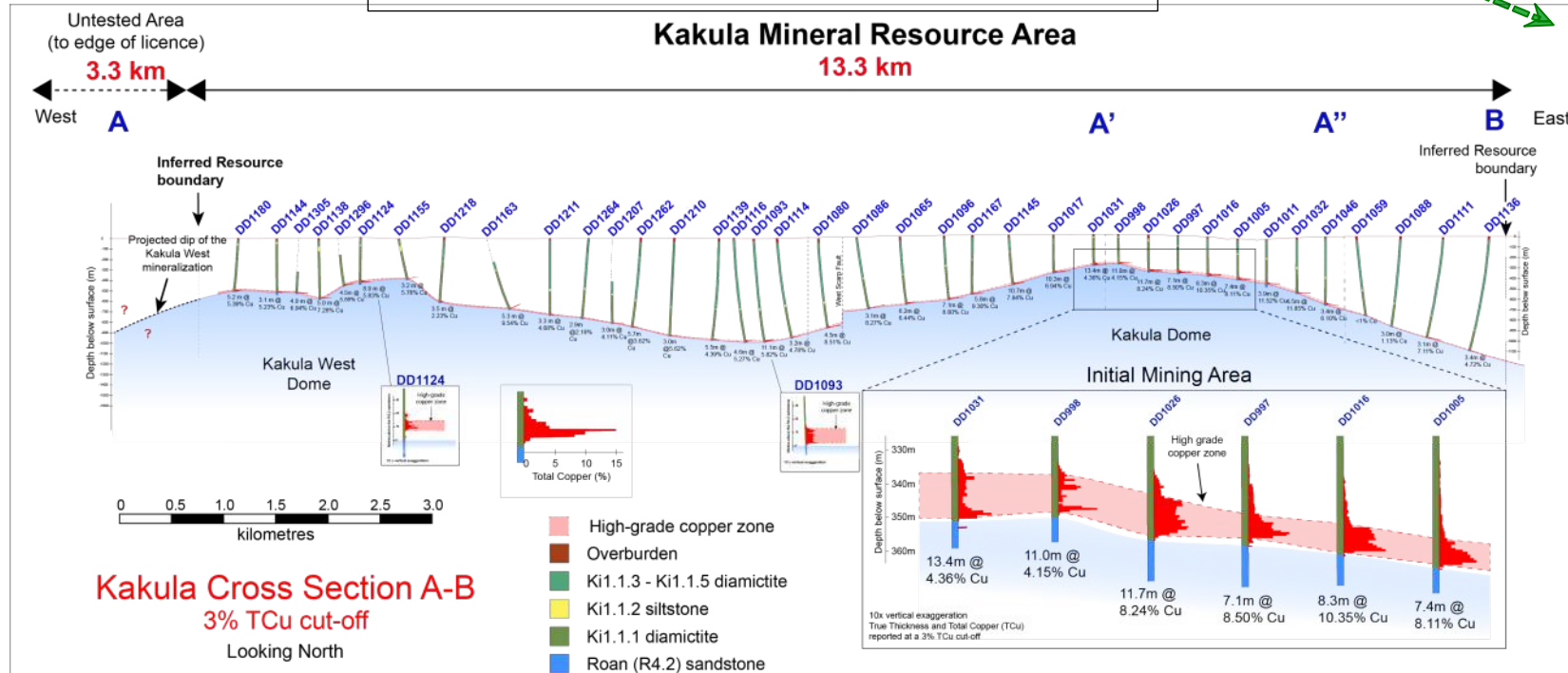
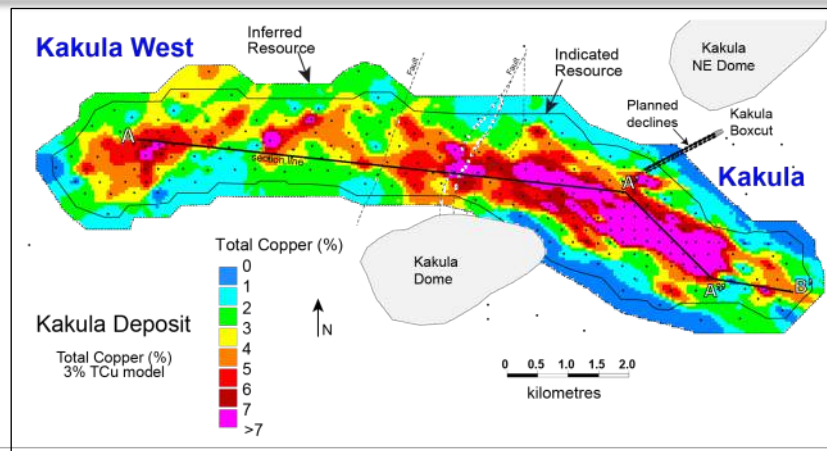
KAMOA-KAKULA



Source: Wood Mackenzie and USGS

# Extent of Kakula / Kakula West Discovery

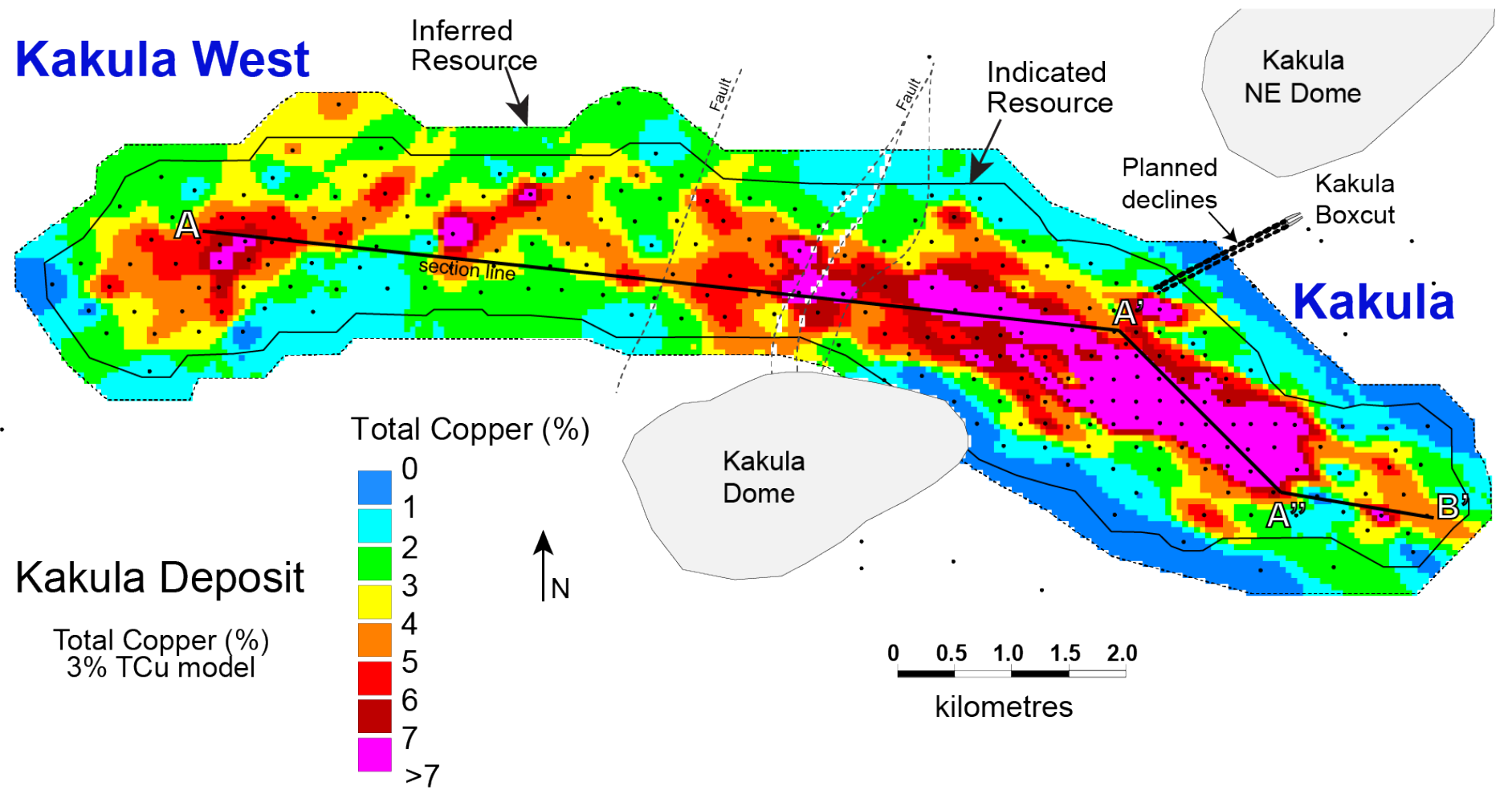
KAMOIA-KAKULA



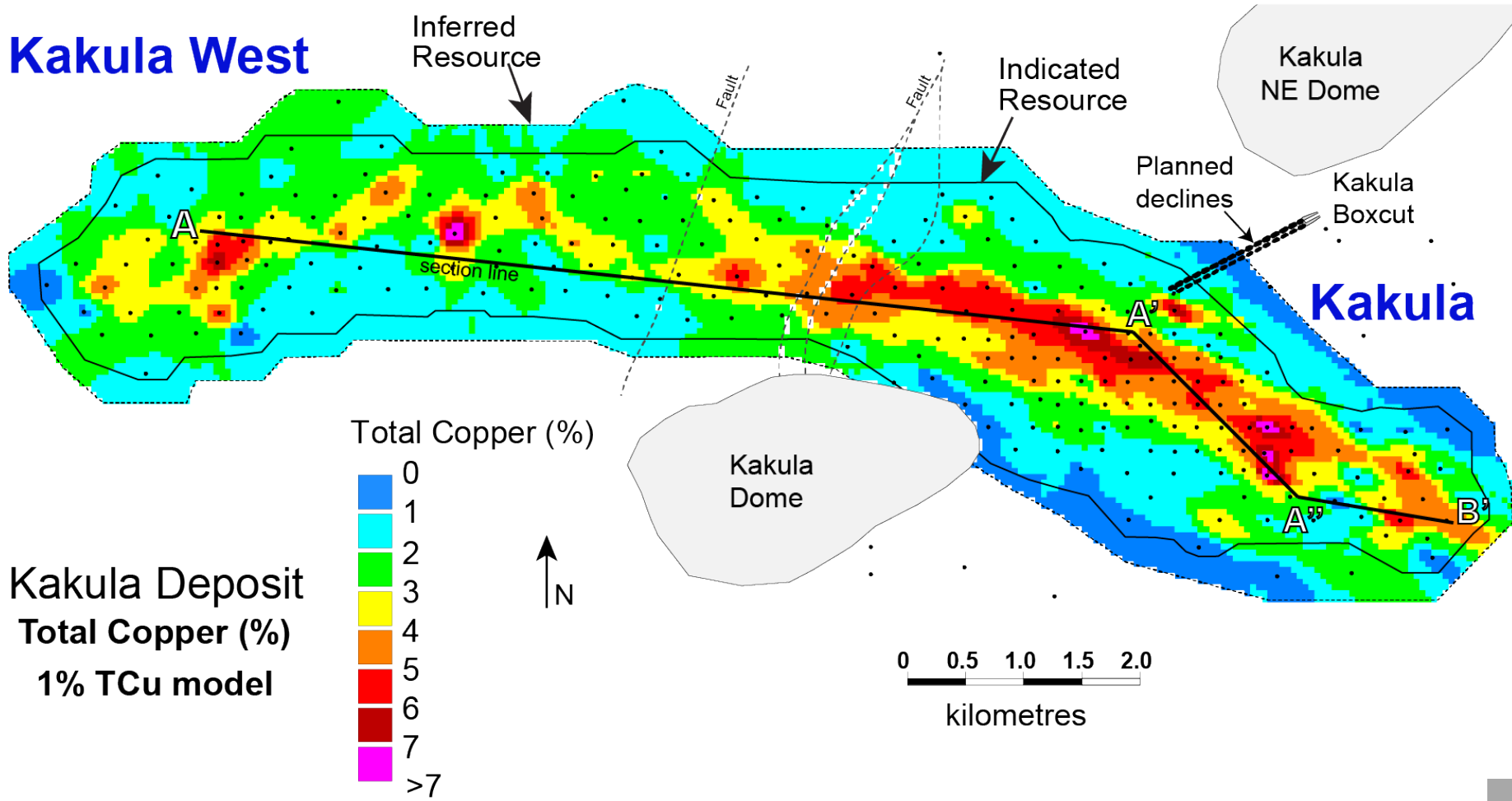
**Kakula West discovery extends known mineralization to more than 13 km, and remains open.**



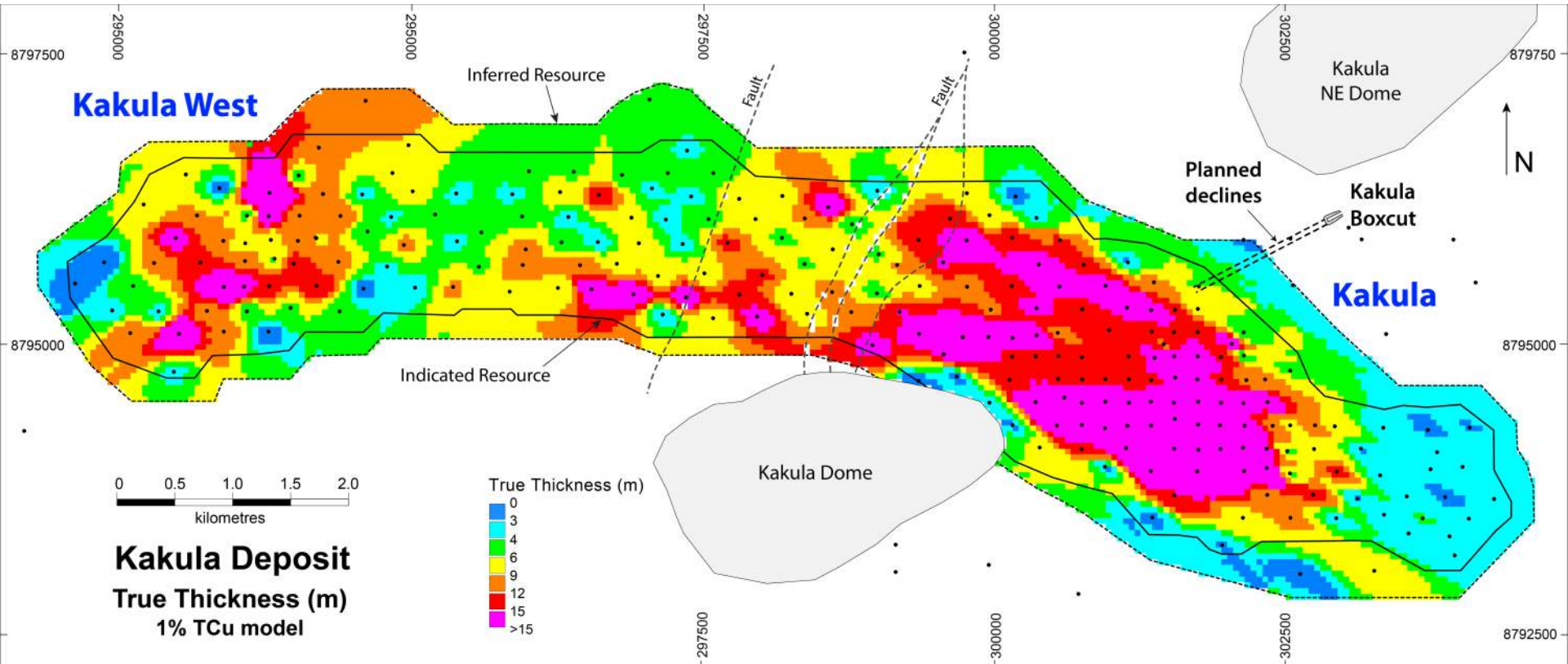
# Kakula and Kakula West discovery areas showing grades of Indicated and Inferred Mineral Resource blocks at a 3% copper cut-off



# Kakula and Kakula West discovery areas showing grade of Indicated and Inferred Mineral Resource blocks at a 1% copper cut-off

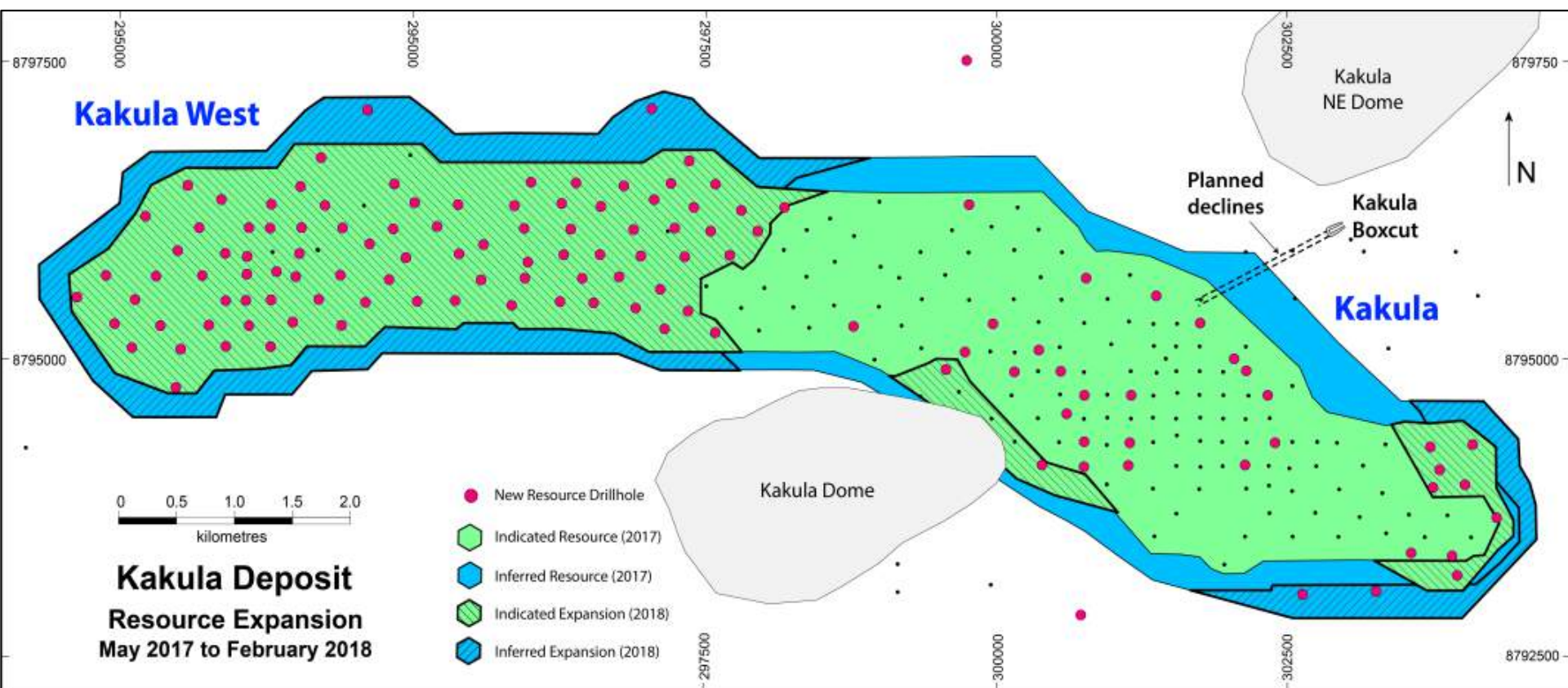


# Kakula and Kakula West discovery areas showing the thickness of Indicated and Inferred Mineral Resource blocks at a 1% copper cut-off





# Kakula and Kakula West discovery areas showing expansion of Indicated and Inferred Mineral Resources since May 2017



**Development options:**  
***Up to three six-million-***  
***tonne-per-year mines!***  
***That's 18 million tonnes***  
***per year!***

1. Kakula Mine – being fast tracked to production with capacity of **6 Mtpa**.
2. Kansoko Mine – development ready, also with capacity of **6 Mtpa**.
3. Kakula West and Kamoa North – potential additional mining areas.



***Kakula's  
underground  
roadway***



Underground development has advanced each of the service and conveyor declines almost **400 metres toward the mineralized zone**

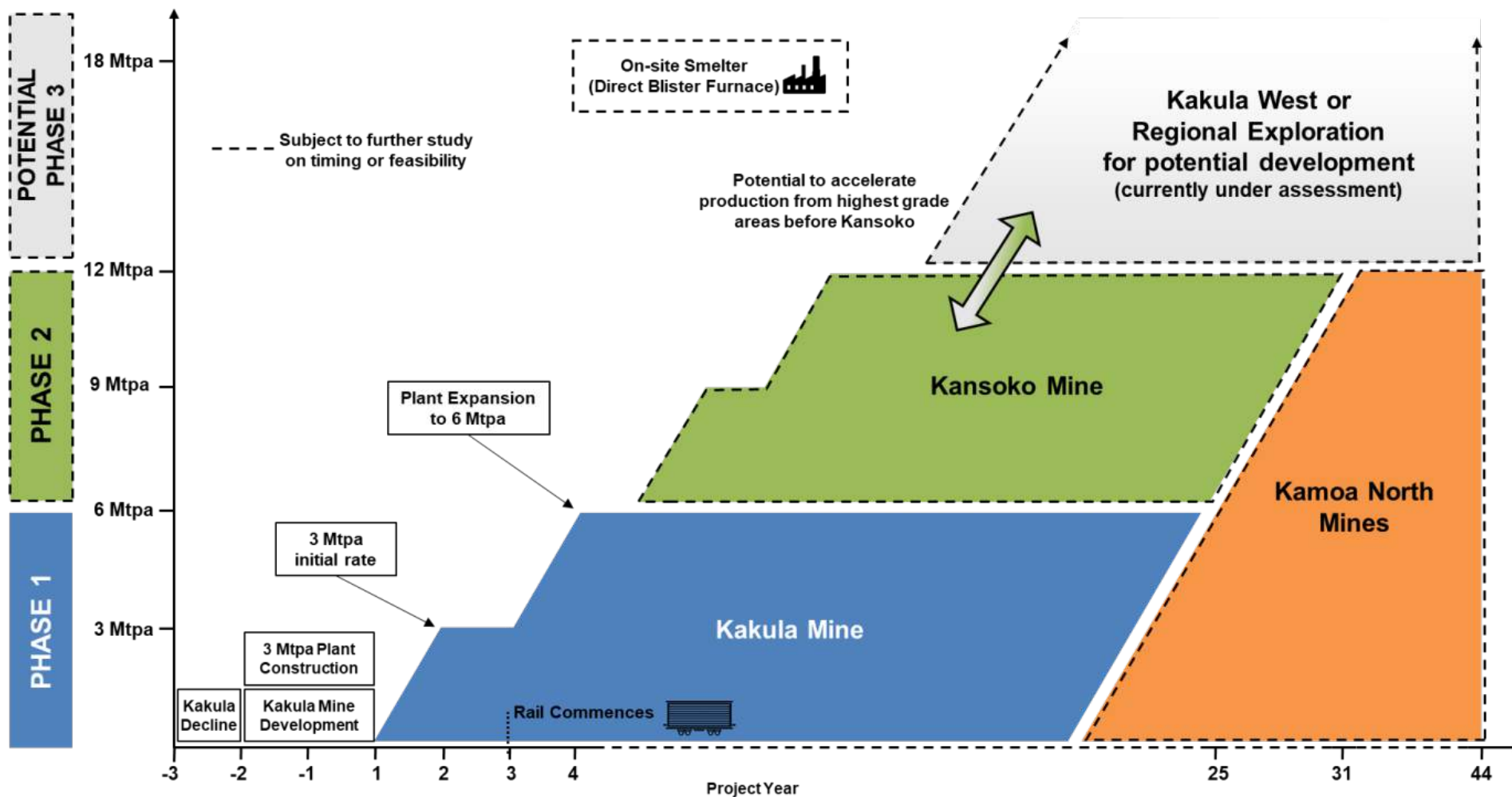
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KAMOA-KAKULA



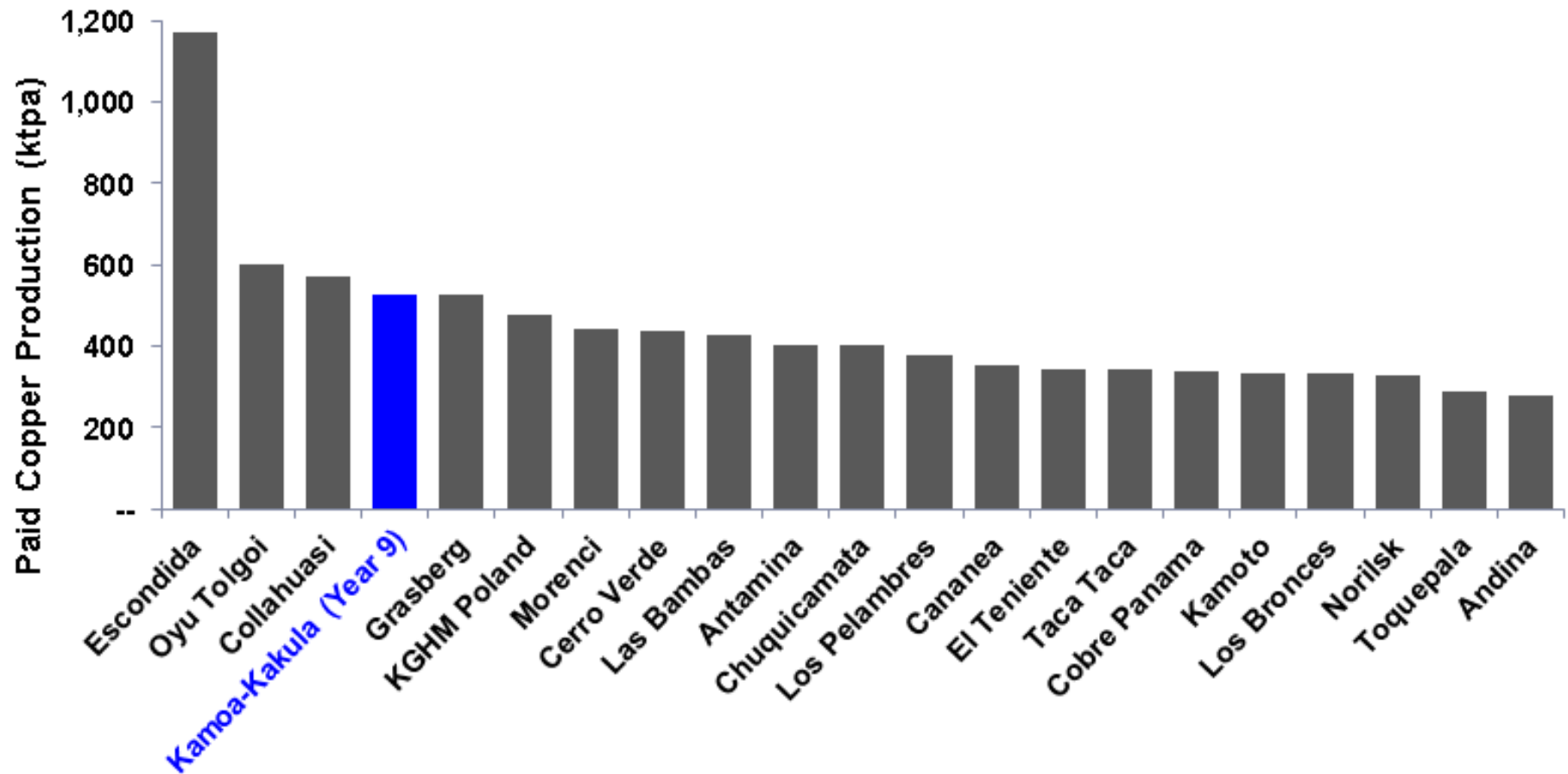


# Kamoa-Kakula PEA long-term development plan



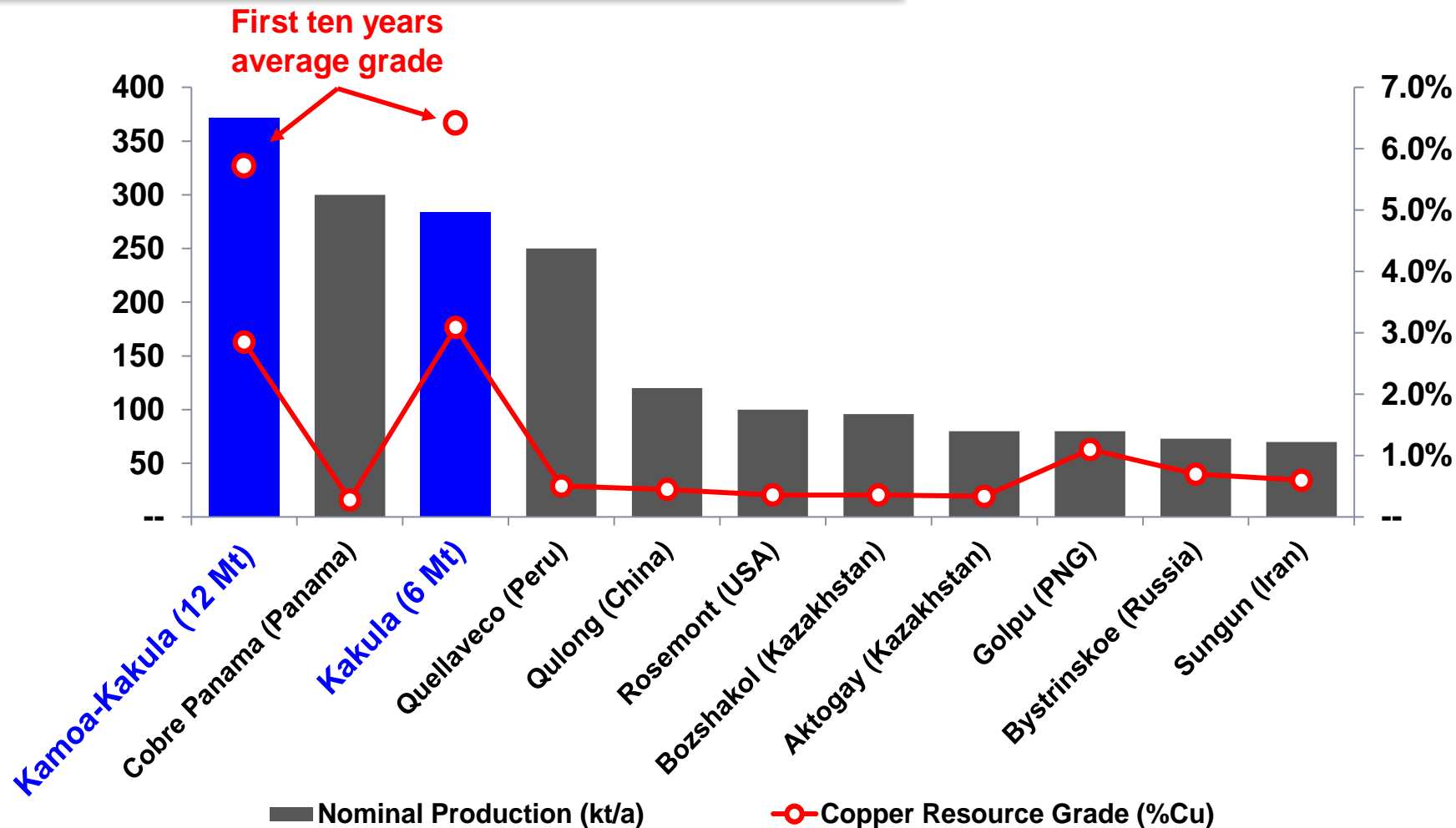
# 2025 Top 20 producing mines by paid copper production

KAMOA-KAKULA



Note: Kamoa-Kakula production based on projected peak copper production (which occurs in year nine) of the 12 Mtpa development plan for the Kamoa-Kakula Project as detailed in the Kakula 2017 PEA. Source: Wood Mackenzie (based on public disclosure, the Kakula 2017 PEA has not been reviewed by Wood Mackenzie).

# Top 10 largest new greenfield projects (Nominal production and head grade)



Note: Top 10 largest new greenfield copper projects defined as the 10 largest greenfield copper projects classified as “base case” or “probable” and ranked by nominal copper production (with Kamoakakula’s first ten years’ average annual production of copper in concentrate considered to be its nominal copper production). Source: Wood Mackenzie, USGS (based on public disclosure, the Kakula 2017 PEA has not been reviewed by Wood Mackenzie).



## Drilling at the Kakula West Copper Discovery

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# Excellent visual drill intercepts continue to be returned at Kakula West

KAMOA-  
KAKULA





# **The poultry project that supplies chickens and eggs to the Kamoa-Kakula Project – one of the initiatives of the Kamoa-Kakula Sustainable Livelihoods Project**

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KAMOA-KAKULA





# Lettuce being harvested from the livelihoods garden – one of the initiatives of the Kamoa-Kakula Sustainable Livelihoods Project

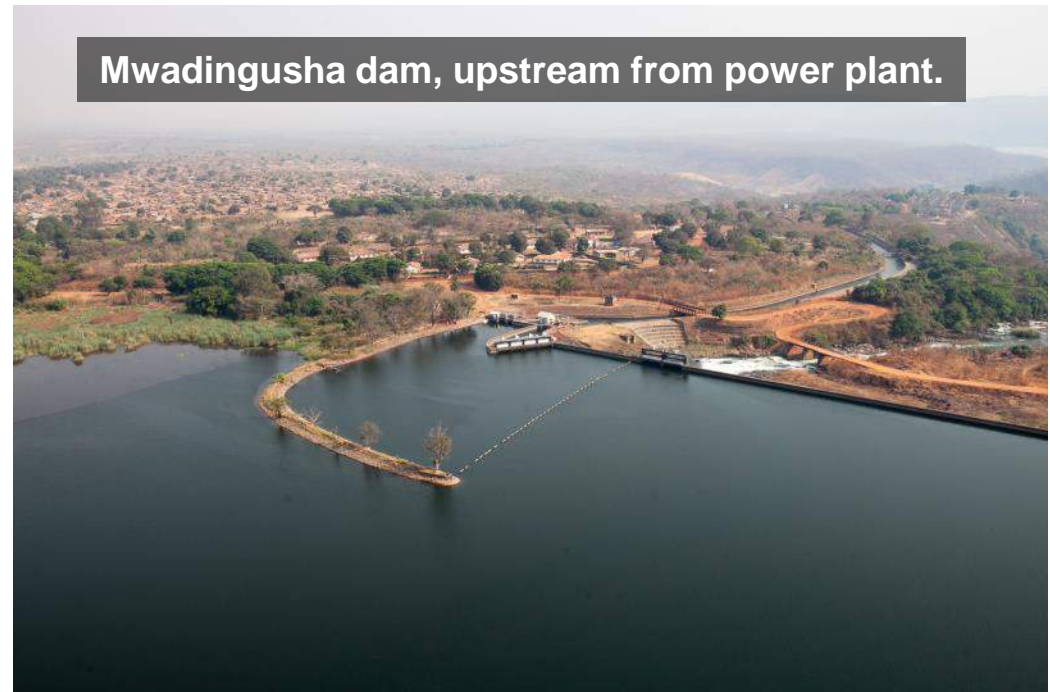
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KAMOA-  
KAKULA



# Mwadingusha hydroelectric power station

- Mwadingusha is the first of three hydroelectric power plants in the DRC that Ivanhoe and Zijin will upgrade to secure a supply of **clean, sustainable electricity for the development of Kamoa-Kakula.**
- Mwadingusha is now supplying 32 megawatts (MW) of electricity to the grid. The plant should be fully operational by the end of 2019 – restoring the plant to its installed capacity of approximately 71 MW.
- The three plants will have installed capacity of approximately **200 MW** of electricity for the national grid, which is expected to be more than sufficient for the Kamoa-Kakula Copper Project.



Mwadingusha dam, upstream from power plant.



# 120kV power line at the Kamoia-Kakula Project

KAMOA-KAKULA



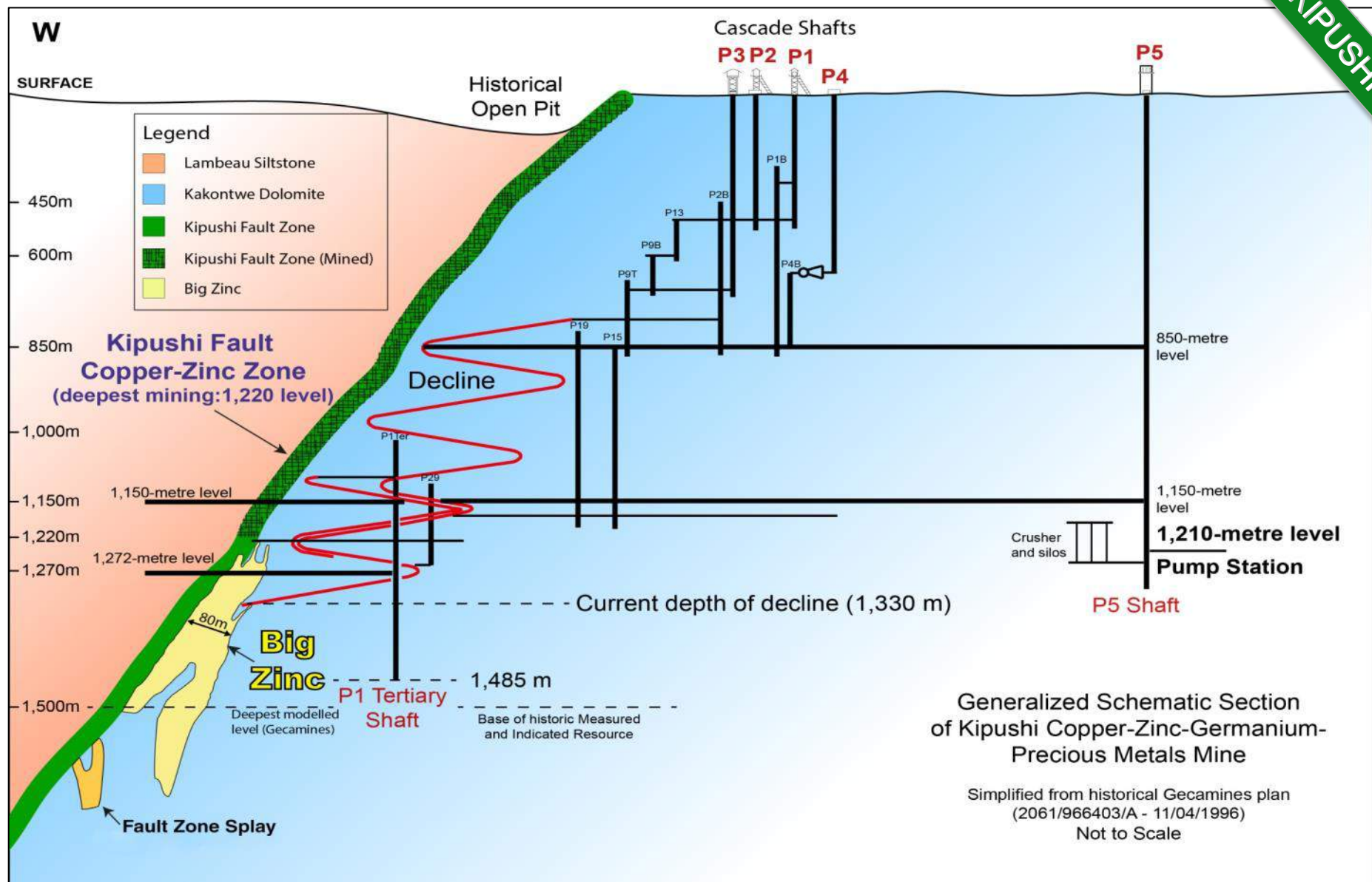




# Kipushi Mine Exploration and Upgrading

Democratic Republic  
of Congo

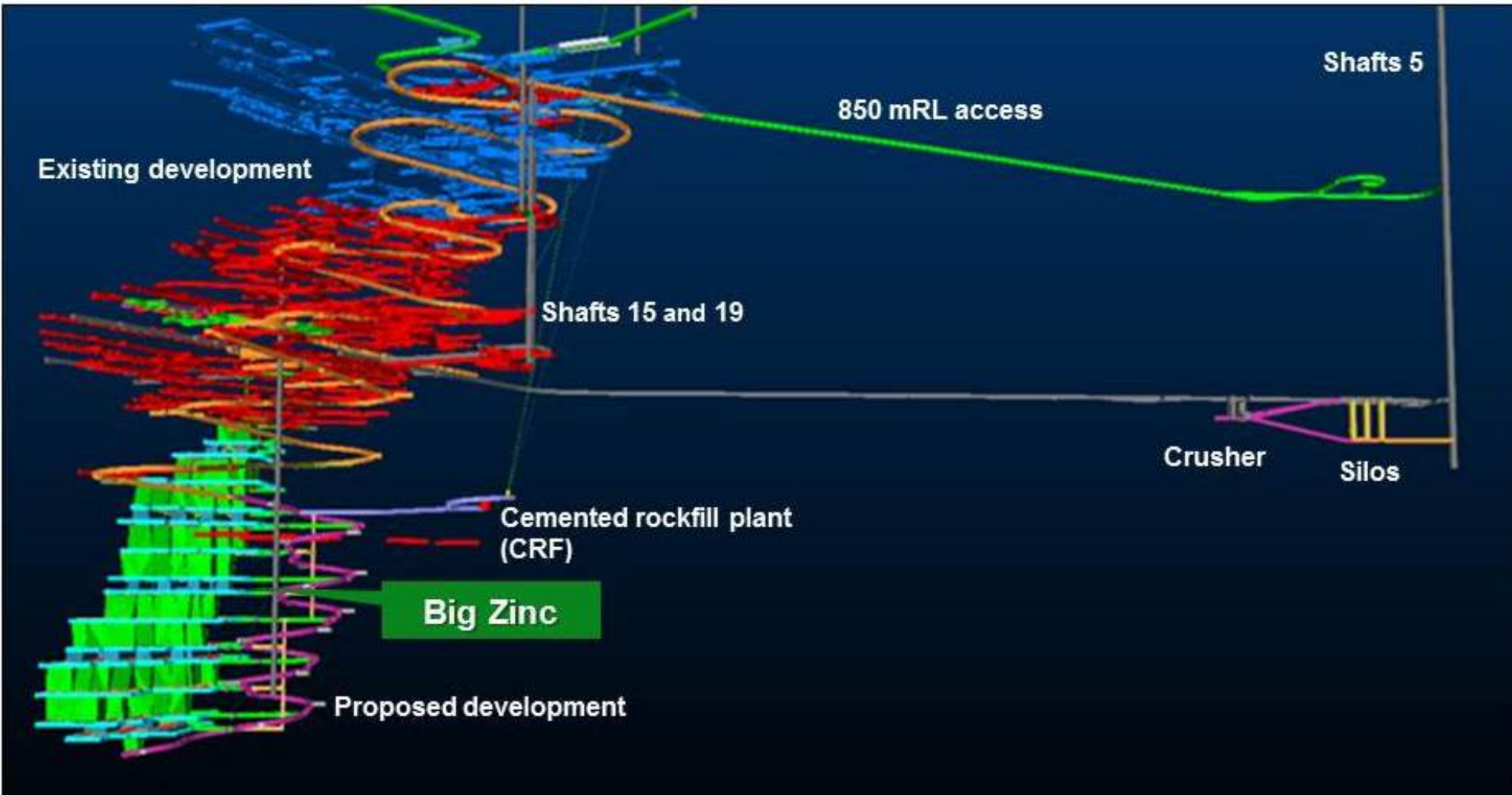
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- Kipushi Fault Zone was mined 1924-1993 to approx. 1,150-metre level.
- Big Zinc discovered prior to 1993 closure; never mined.



# Planned and existing development at Kipushi





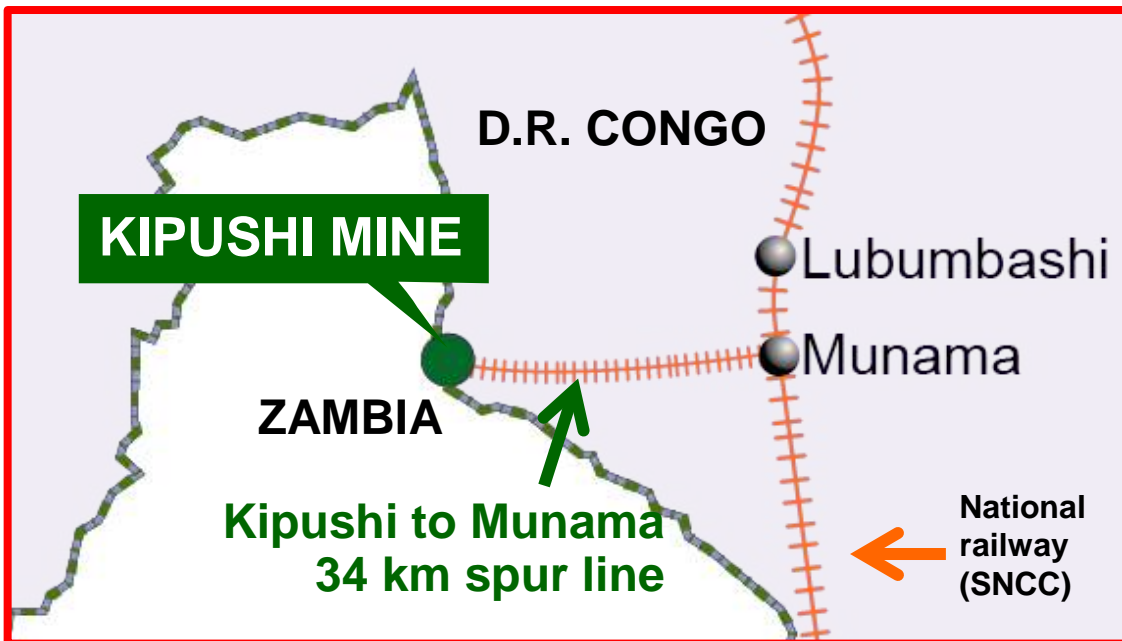
**December 13, 2017:** Ivanhoe announced  
a pre-feasibility study for the rebirth of the historic  
Kipushi zinc-copper-silver-germanium mine

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



**October 30, 2017:**  
Ivanhoe signed an MOU with DRC's state-owned railway company, **Société Nationale des Chemins de Fer du Congo (SNCC)** to rebuild the Kipushi-Munama spur line, which has been inactive since 2011.



**Representatives of SNCC and Ivanhoe's Kipushi team at Munama railway station.**





# Some human health benefits from zinc

**Zinc stopped cancer-cell growth in tests; research pursuing potential to block esophageal tumour cells.**

**Newsweek** Oct. 3, 2017

**Zinc lozenges may help colds go away 3 times faster.**

**TIME** May 16, 2017

**Shortage of zinc in the body can affect cardiovascular health.**

**UPI** April 18, 2017





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

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KIPUSHI





# Control room operator at Kipushi's Shaft 5

KIPUSHI





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

KIPUSHI





**Sponsored by Ivanhoe Mines and Zijin Mining, in collaboration with [Fio Corporation](#), of Toronto, and the DRC Ministry of Health, Know for Sure has equipped 252 health facilities with Deki Readers and trained more than 600 healthcare workers to effectively utilize the technology**

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## Putting people first

A representative of the *Know for Sure* initiative, holding a Deki Reader used to conduct rapid diagnostic testing for malaria, explains to children how to get access to testing for themselves and their parents.

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# Final upgrading work on Kipushi's new, underground ore-conveyor system

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KIPUSHI





Thank you.

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