

# IVANHOE MINES

NEW HORIZONS



**Over 20 years in Africa**

# 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 Kamo-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 Kamo-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.

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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 Kamo-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 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.

Building futures  
for our stakeholders,  
*today,*  
in Southern Africa's  
storied mineral fields

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### KAMOA-KAKULA

Copper  
39.6%-owned  
Democratic Republic  
of Congo's Central  
African Copperbelt

### PLATREEF

Platinum-group elements  
& gold-nickel-copper  
64%-owned  
South Africa's  
Bushveld Complex

### KIPUSHI

Zinc-copper  
68%-owned  
D.R. Congo's  
Copperbelt

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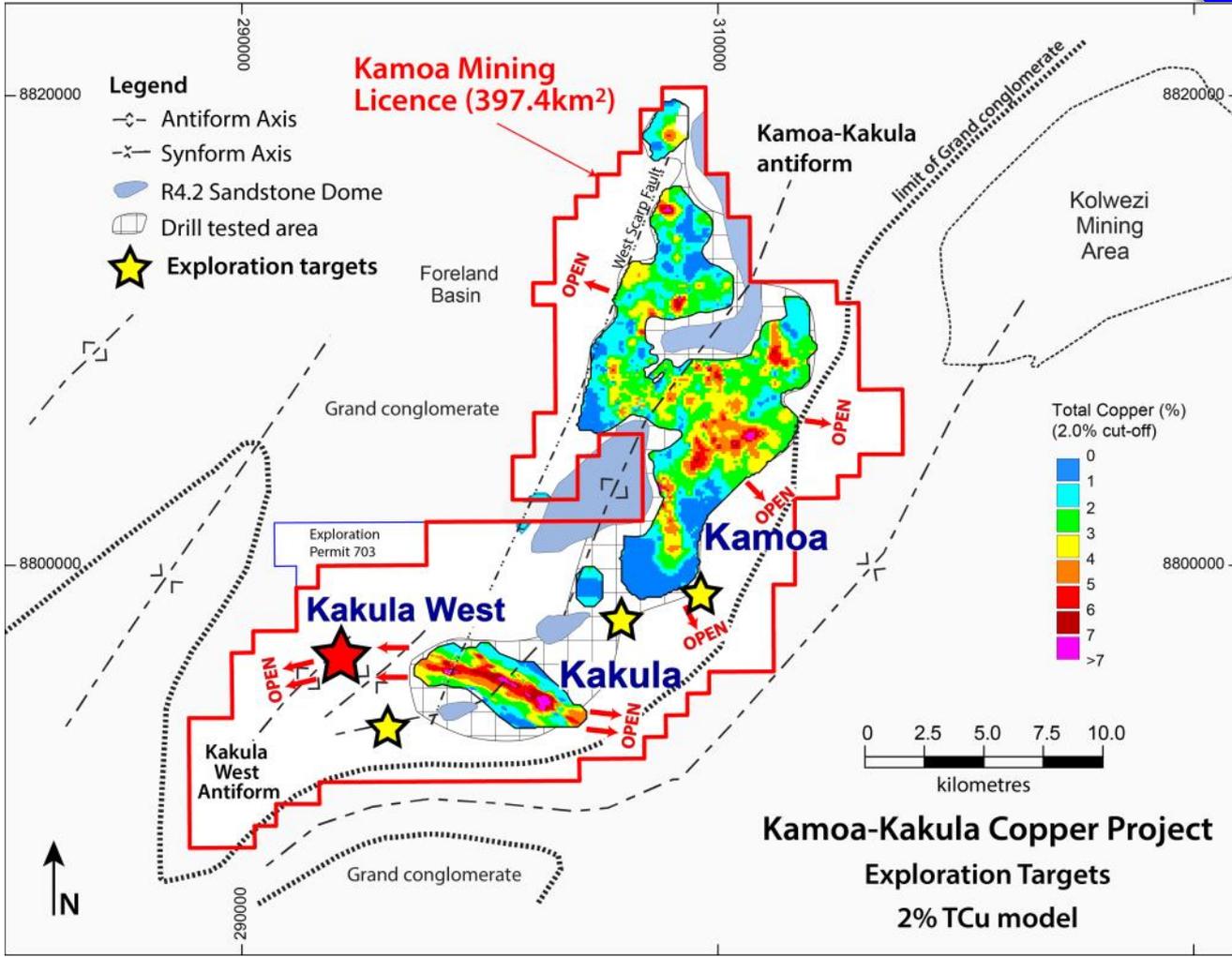
# Kamo a Mine Development & Kakula Discovery

Democratic Republic of Congo

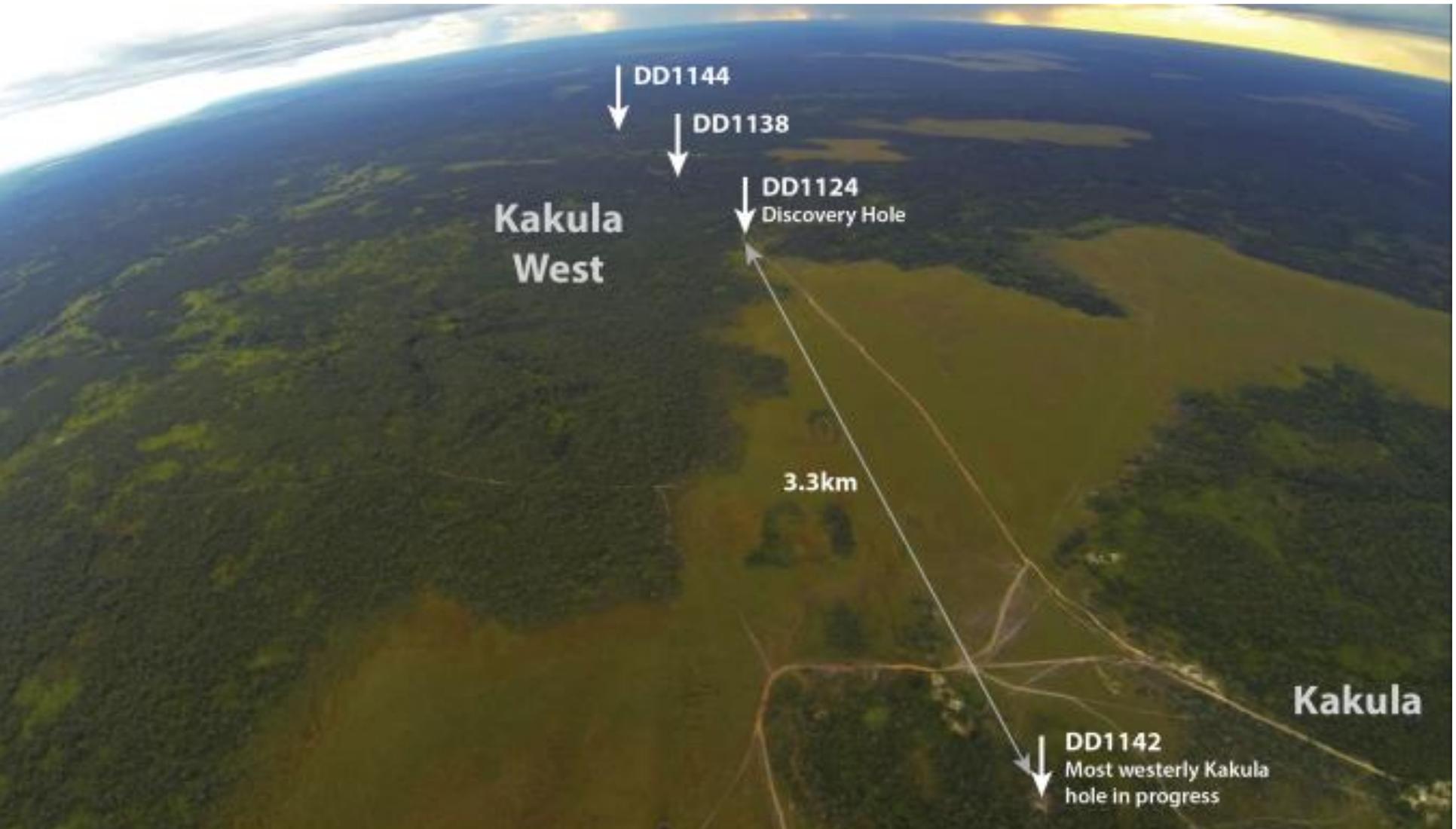


# Kakula & Kakula West – re-writing the Kamoa Story

- **Kakula** is substantially richer, thicker and more consistent than other mineralization found elsewhere on the Kamoa Project.
- **Kakula West** is a new high-grade extension of Kakula.
- **15 rigs drilling** at Kakula, Kakula West and other targets on mining licence.
- **Potential to find another Kakula.**

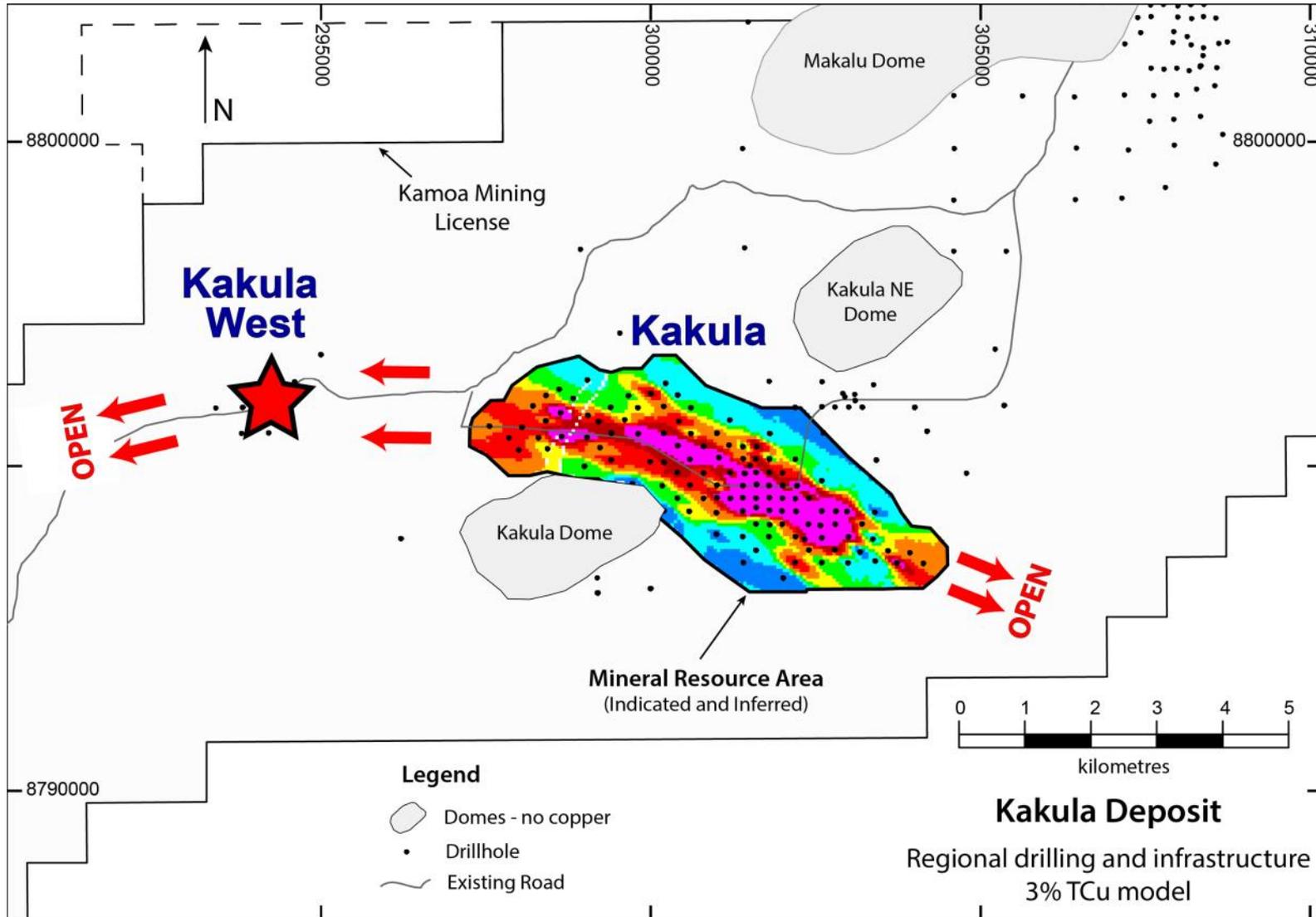


# View to west, showing locations of discovery hole DD1124 at **Kakula West** and the two 400-metre step-out holes, DD1138 and DD1144



# The Kakula mineralized system is more than 12 kilometres long and is still open in both directions

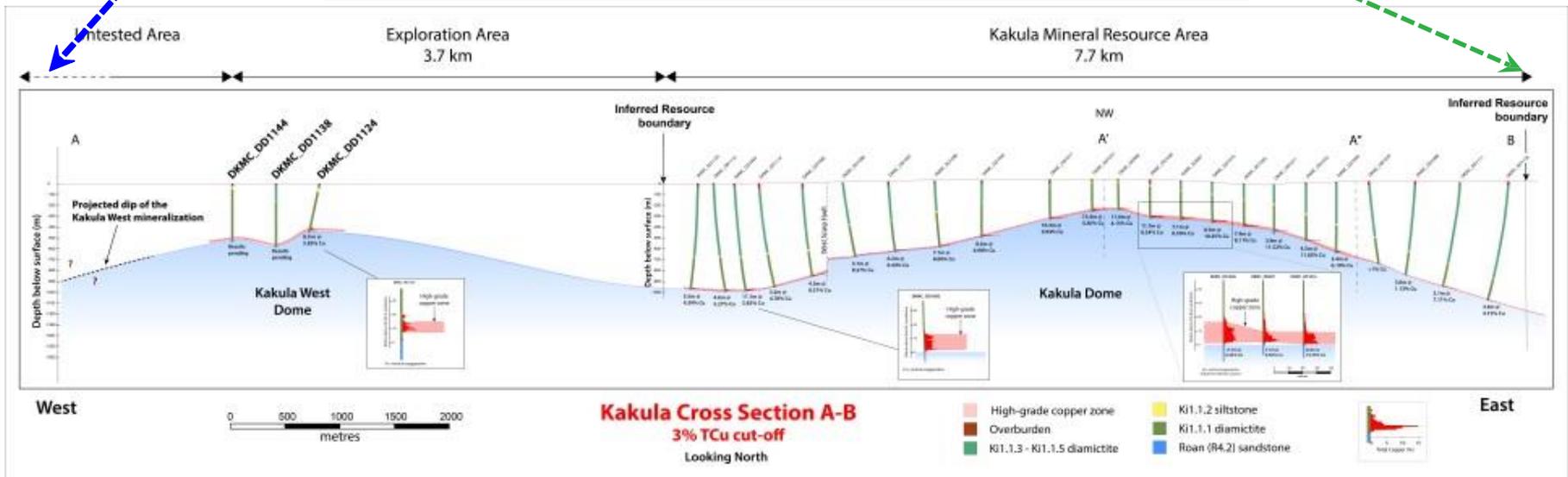
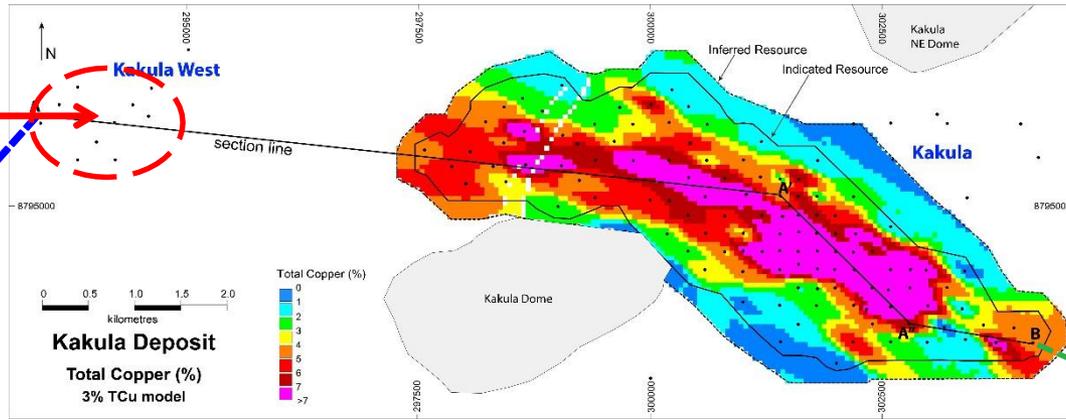
KAMOA-  
KAKULA



# Extent of Kakula / Kakula West Discovery

KAMOA-KAKULA

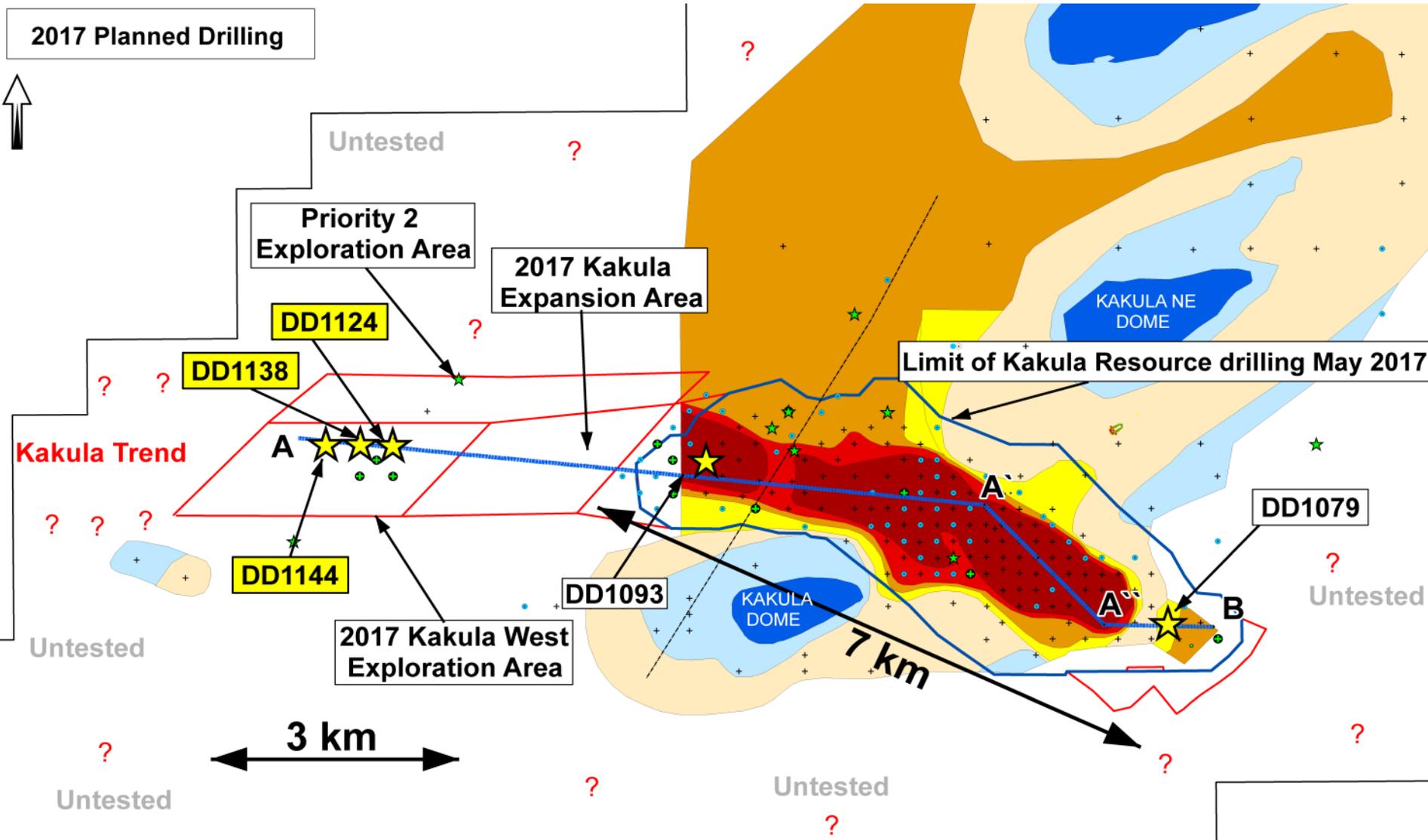
2017 drilling at Kakula West



Kakula West discovery extends known mineralization to more than 12 km, and **remains open.**

IVANHOE

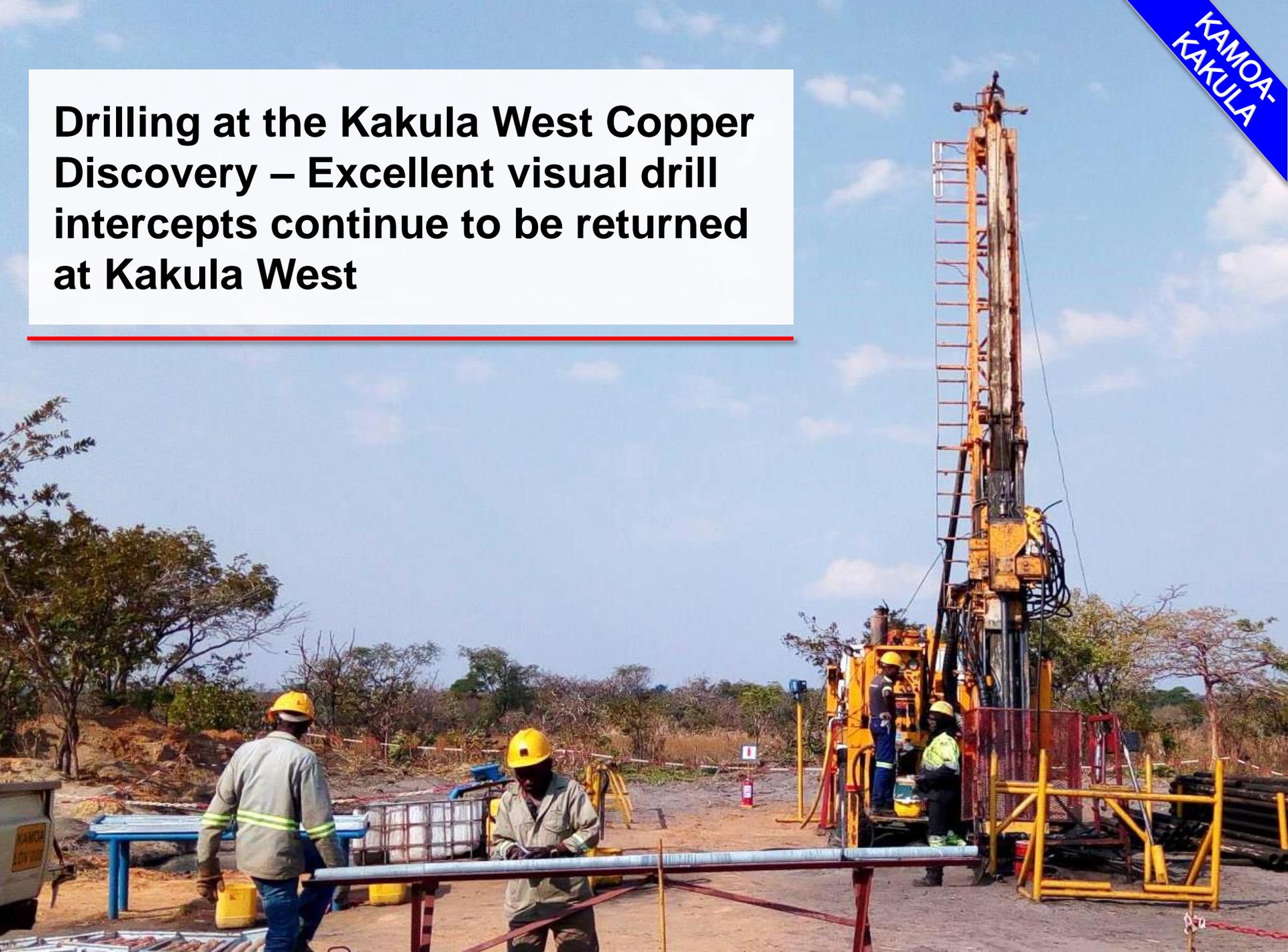
# Discovery holes at Kakula West, more than 3 kms away from the May 2017 Kakula Resource boundary



**Drilling at the Kakula West Copper  
Discovery – Excellent visual drill  
intercepts continue to be returned  
at Kakula West**

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**KAMOA-  
KAKULA**



## Massive chalcocite in a recent drill hole from Kakula West

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Results show a rapidly growing area of shallow copper mineralization characterized by finely disseminated chalcocite in siltstone and maroon diamictite. The style and overall geometry of mineralization are typical of the high-grade Kakula trend to the east.



# +12% copper in hole DD1041

Massive chalcocite

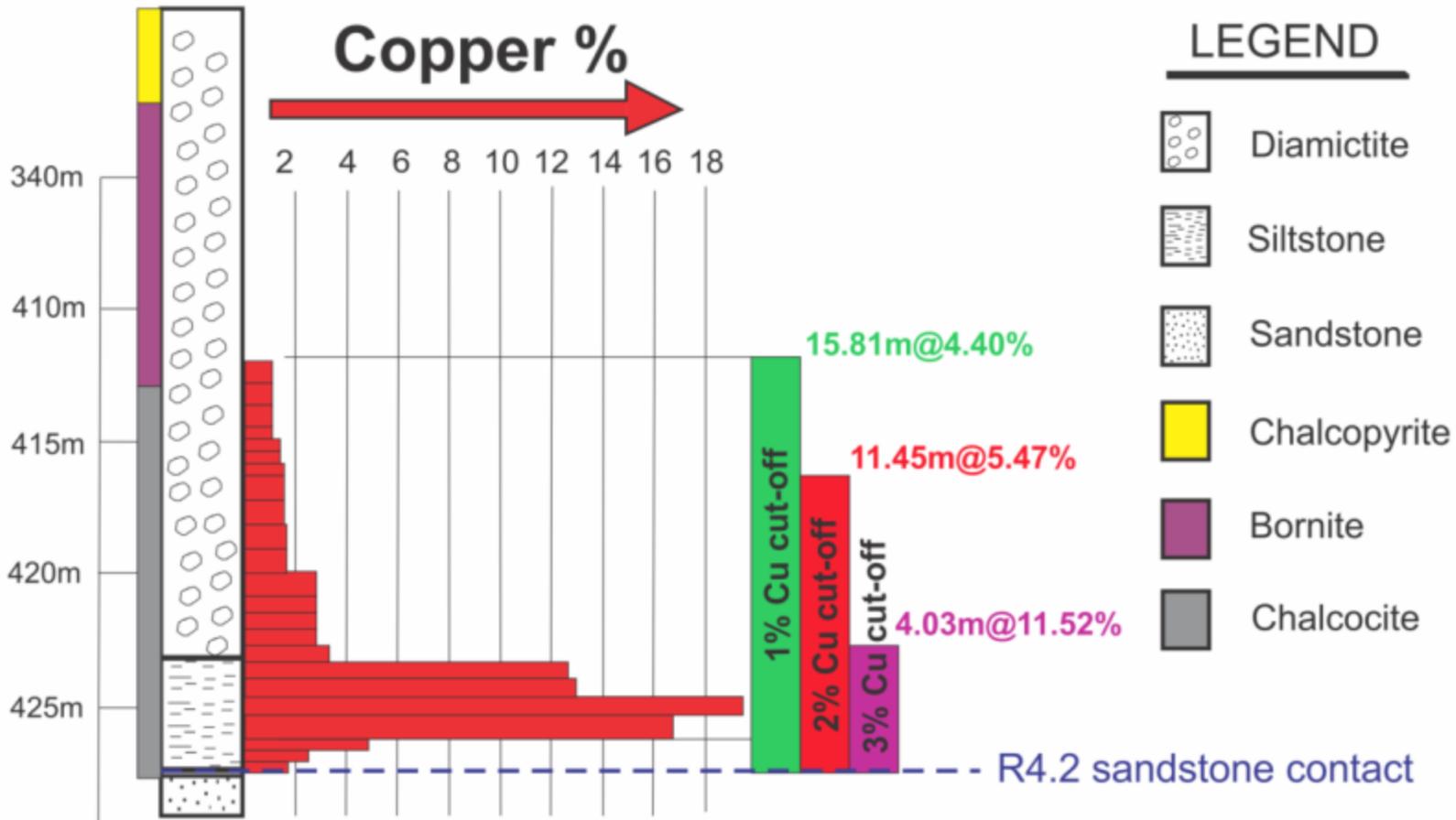
Disseminated  
massive  
chalcocite



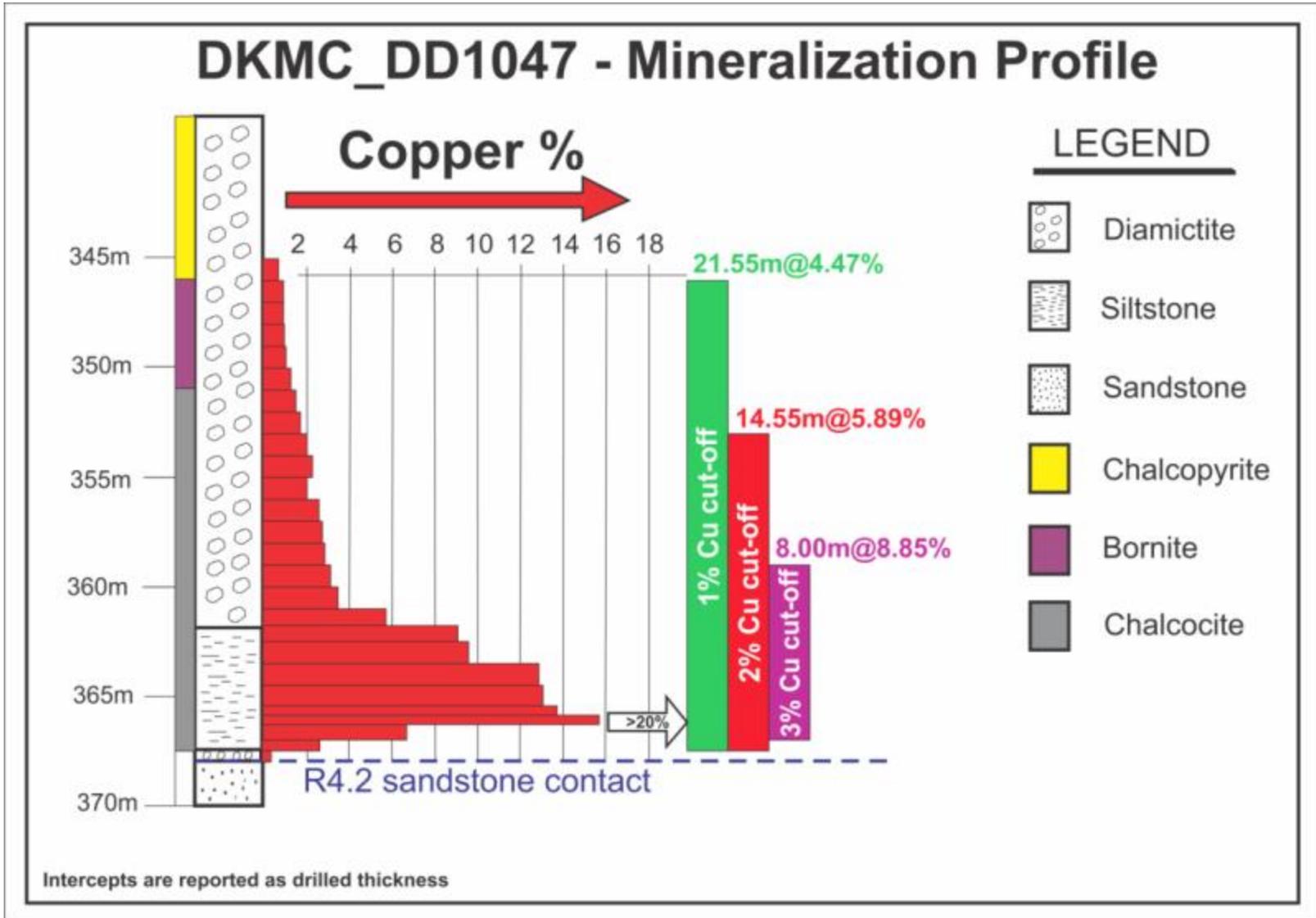
# Kakula – bottom-loaded, high-grade copper is consistent at higher cutoffs

KAMOA-KAKULA

## DKMC\_DD1011 - Mineralization Profile



# Kakula – bottom-loaded, high-grade copper is consistent at higher cutoffs



# May 17, 2017: Updated Mineral Resource estimate for the high-grade Kakula Discovery

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- Kakula's Indicated Resources total **349 million tonnes** at a grade of **3.23% copper**, containing **24.9 billion pounds** of copper at a 1% copper cut-off. At a 3% copper cut-off, Indicated Resources total **116 million tonnes** at **6.09% copper**, containing **15.6 billion pounds** of copper.
- The combined Kamoia-Kakula Indicated Mineral Resources now total **approximately 1.0 billion tonnes** grading **3.02% copper**, containing **66.3 billion pounds** of copper, at a 1.4% copper cut-off.
- Kamoia-Kakula also has Inferred Mineral Resources of **191 million tonnes** grading **2.37% copper** and containing **10.0 billion pounds** of copper, at a 1.4% copper cut-off.

**Kamoia-Kakula now ranks among the five largest copper deposits in the world, and is the largest copper discovery ever made on the African continent.**

# Consolidated Mineral Resource Statement, Kamoa-Kakula Project – May 16, 2017, 1% copper cut-off over an approximate minimum thickness of 3 metres

Deposit	Category	Tonnes (millions)	Area (Sq. km)	Copper Grade	True Thickness (metres-m)	Contained Copper (kTonnes)	Contained Copper (billion lbs)
Kamoa	Indicated	752	50.5	2.67%	5.2 (m)	20,110	44.3
	Inferred	185	16.8	2.08%	3.8 (m)	3,840	8.5
Kakula	Indicated	349	9.8	3.23%	12.0m	11,281	24.9
	Inferred	59	3.0	2.26%	6.4m	1,338	3.0
Total Kamoa Project	Indicated	1101	60.3	2.85%	6.3m	31,391	69.2
	Inferred	244	19.8	2.12%	4.3m	5,178	11.5

Notes to accompany Kamoa Project Mineral Resource Table:

- 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 RM of Society of Mining, Metallurgy and Exploration (SME), who are the Qualified Persons for the Mineral Resource estimate. The effective date of the estimate is May 16, 2017. Mineral Resources are estimated using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves.
- Mineral Resources are estimated assuming underground mining methods, a copper price of US\$3.30/lb (Kamoa) and US\$3.00/lb (Kakula Deposit), a cut-off of 1% total copper, an approximate minimum thickness of 3 m, and that concentrates will be produced and sent to a smelter.
- 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.

# 2016 Kakula PEA – alternate development scenarios

KAMOA-KAKULA

Mine	Kakula	Kakula + Kansoko
Annual mining rate	4 million tonnes	4 + 4 million tonnes <sup>(1)</sup>
Average head grade; first 10 years	6.90% copper	5.81% copper
Annual copper production first 10 years	216,000 tonnes	292,000 tonnes
Mine-site cash cost first 10 years	\$0.37/lb copper	\$0.42/lb copper
Initial capex	\$1.0 billion	\$1.0 billion
NPV <sub>8</sub> @ \$3.00/lb Copper	\$3.7 billion <sup>(2)</sup>	\$4.7 billion <sup>(2)</sup>
Internal rate of return @ \$3.00/lb copper	38% <sup>(3)</sup>	34.6% <sup>(3)</sup>
Payback period @ \$3.00/lb copper	2.3 years <sup>(3)</sup>	3.5 years <sup>(3)</sup>

All in US dollars, unless otherwise indicated

The Kakula 2016 PEA is preliminary in nature and includes an economic analysis that is based, in part, on Inferred Mineral Resources. Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would allow them to be categorized as Mineral Reserves, and there is no certainty that the results will be realized. Mineral Resources do not have demonstrated economic viability and are not Mineral Reserves.

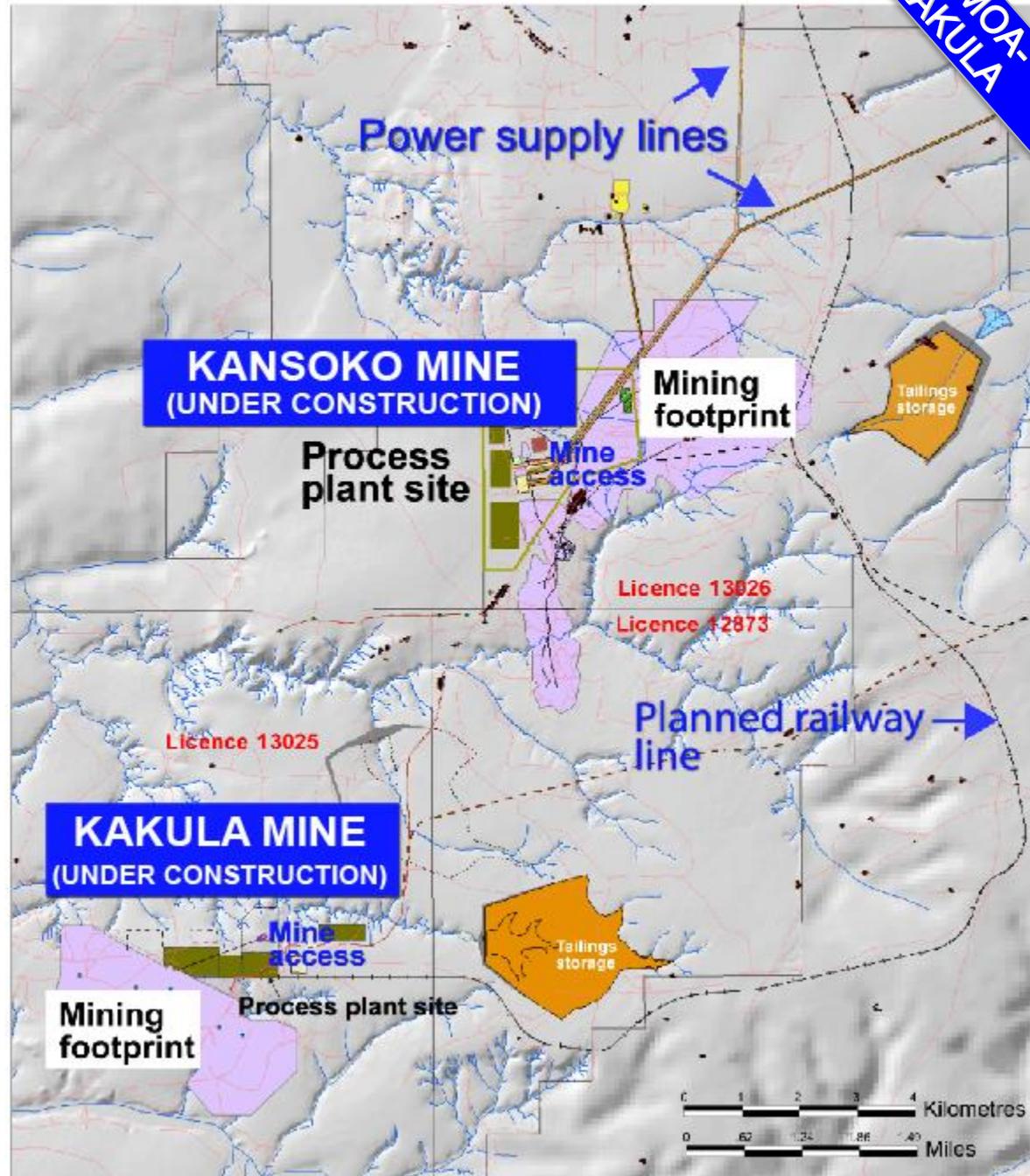
1. Two-stage development of both Kakula and Kamoia deposits.
2. After-tax NPV, discounted at 8%, assuming a long-term copper price of US\$3.00/lb.
3. After tax.

# Planned Kakula 2016 PEA development and infrastructure for Kakula and Kansoko mines

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## PROPOSED MINE SITES

KAMOA-KAKULA



## 2017 PEA – two six-million-tonne-per-year mines

- A new PEA is being worked on based on the May 2017 Kakula Mineral Resource estimate.
- Kakula – mine capacity of approximately **6 Mtpa**.
- Kansoko Mine – mine capacity of approximately **6 Mtpa**.
- Kamo-a-Kakula development plans will be reassessed and amended as the project advances.
- Kakula West – new resource estimate expected before year end, which could result in a potential new mining area.

# First blast at the Kakula box cut

KAMOA-KAKULA



# Box cut construction underway at Kakula to provide access to the bonanza-grade deposit

KAMOA-KAKULA



# Kansoko Mine box cut and surface facilities

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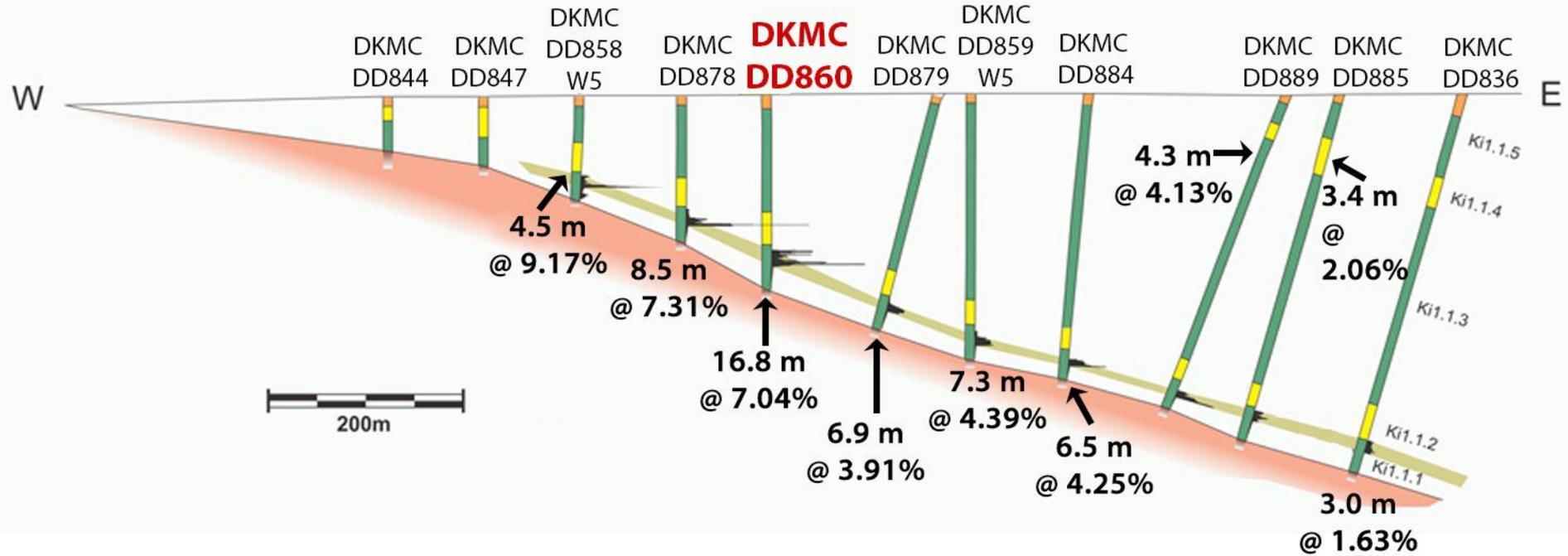
KAMOJA-KAKULA



# Kansoko Sud section line looking north, showing 1.5% copper cut-off composites

KAMOA-KAKULA

(Looking North)



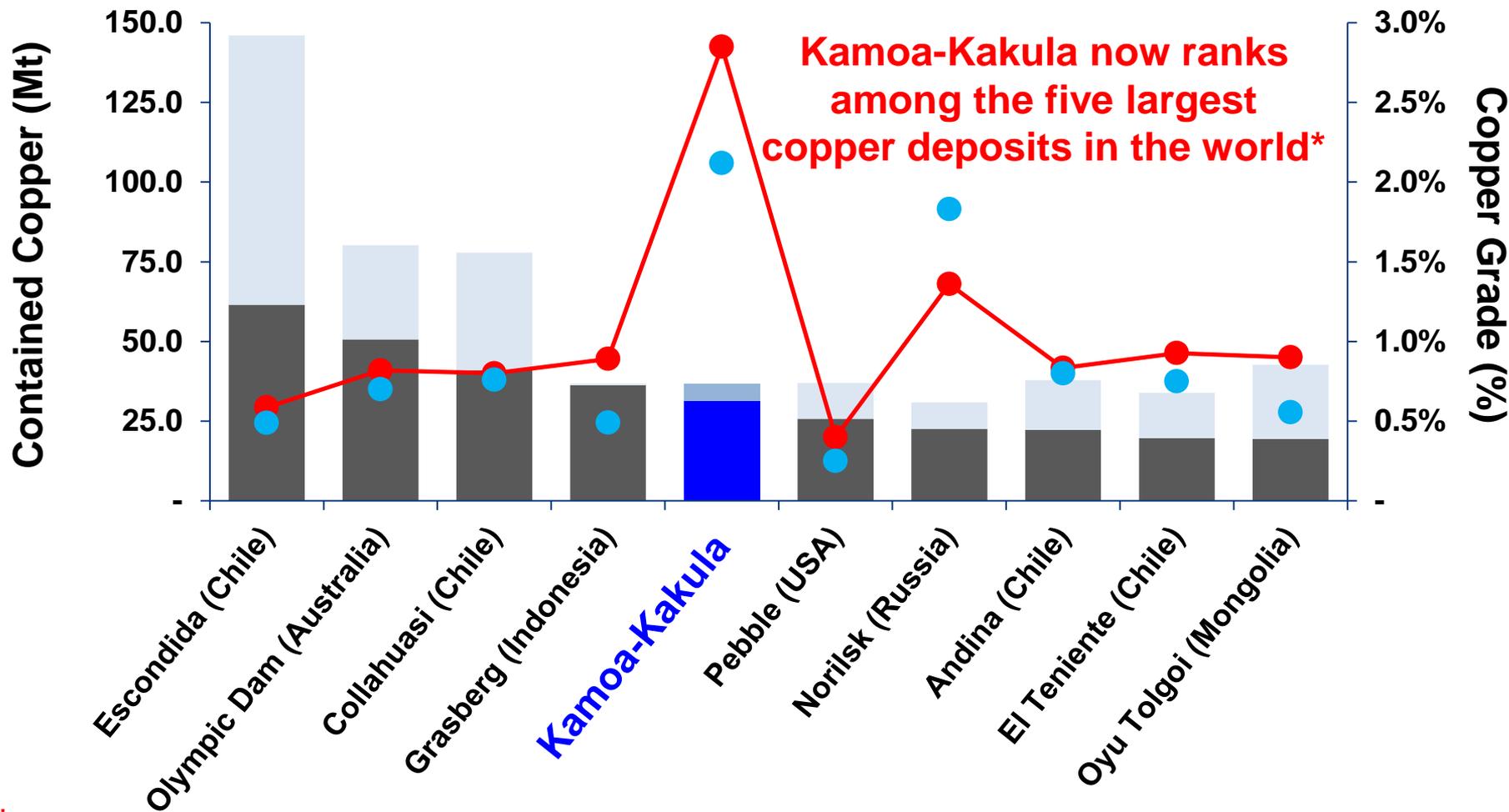
# Jumbo drill in operation in the Kansoko Mine declines

KAMOA-KAKULA



# Among the world's largest copper deposits by contained copper, Kamo-Kakula has the highest copper grades by a wide margin

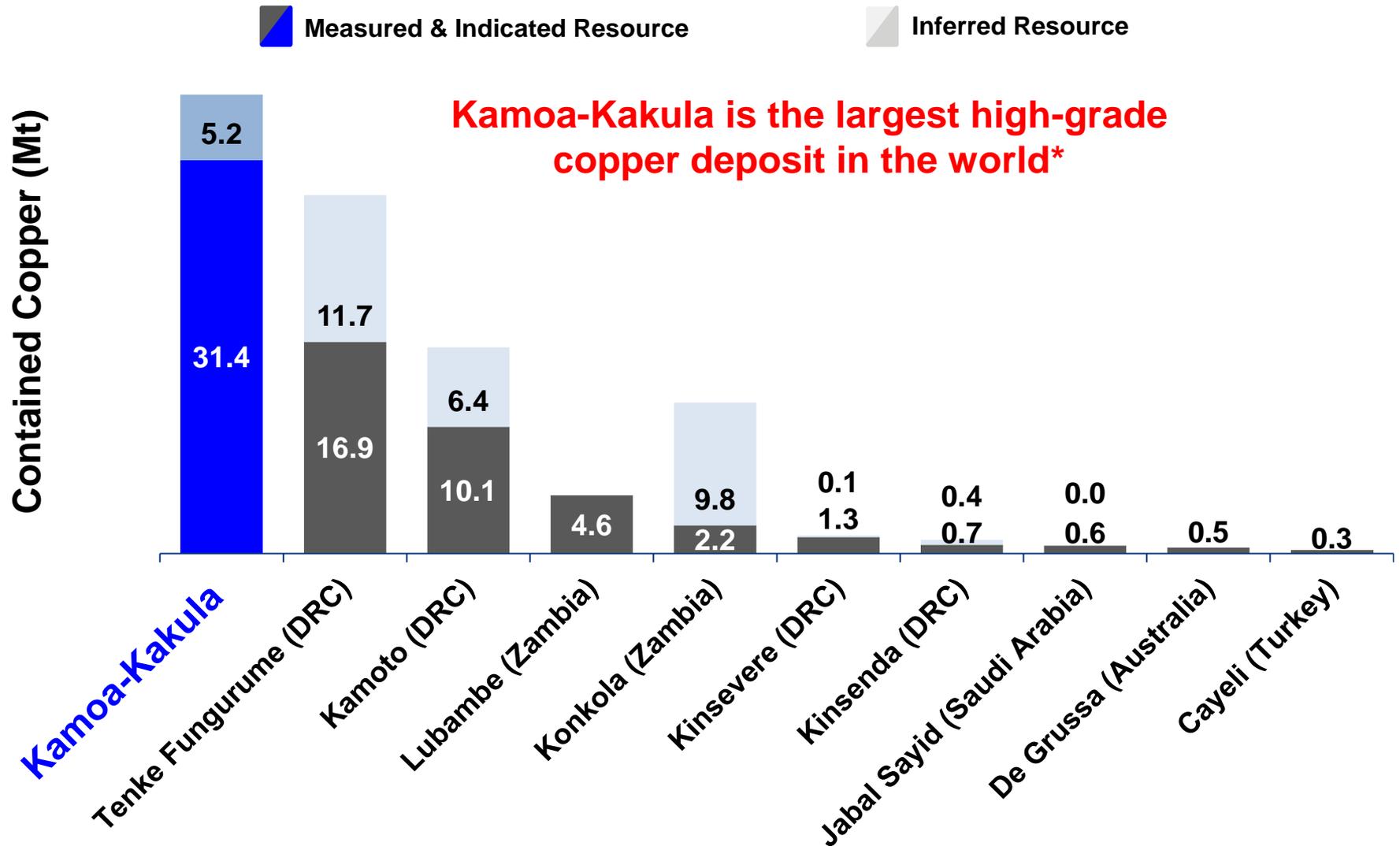
■ Measured & Indicated Resource and Grade
 ● Inferred Resource and Grade



\* Source: Wood Mackenzie

Note: Selected based on contained copper (Measured & Indicated Mineral Resources, inclusive of Mineral Reserves, and Inferred Mineral Resources), ranked on contained copper in Measured and Indicated resources (2017)

# World's largest high-grade (above 2.5% copper) copper deposits



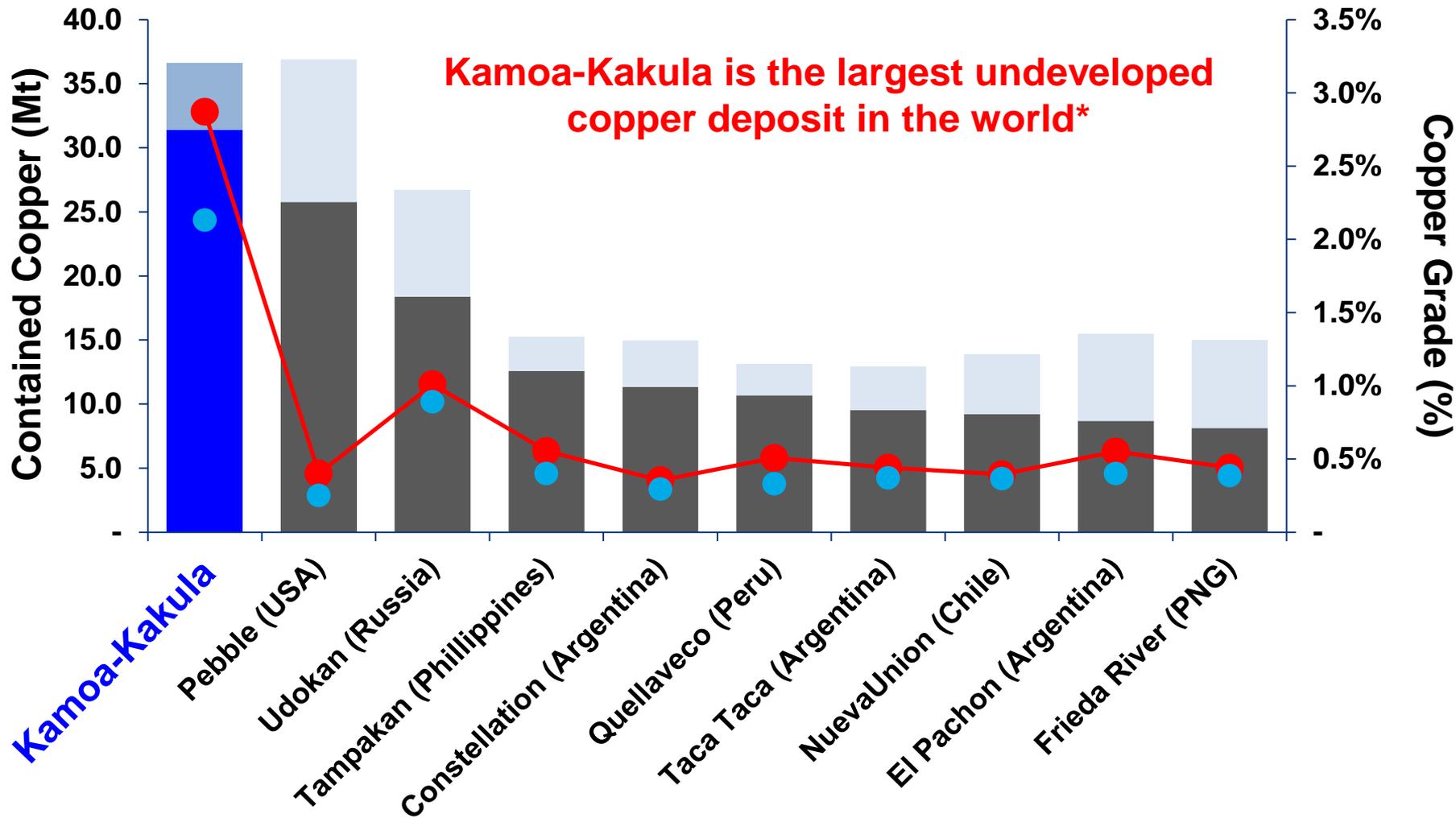
Source: Wood Mackenzie

\*Note: Contained copper in high-grade deposits (Measured & Indicated Mineral Resources, inclusive of Mineral Reserves, and Inferred Mineral Resources) with grades above 2.5% copper (2017)

# World's largest undeveloped copper deposits

**KAMOA-KAKULA**

● Measured & Indicated Resource and Grade
 ■ Inferred Resource and Grade



\* Source: Wood Mackenzie

Note: Contained copper in undeveloped deposits (Measured and Indicated Resources, inclusive of Mineral Reserves, and Inferred Resources) ranked by contained copper in Measured and Indicated Resources (2017).

# Kakula Phase 1 Mine & Kansoko Mine concentrate and metal production for the first 20 years

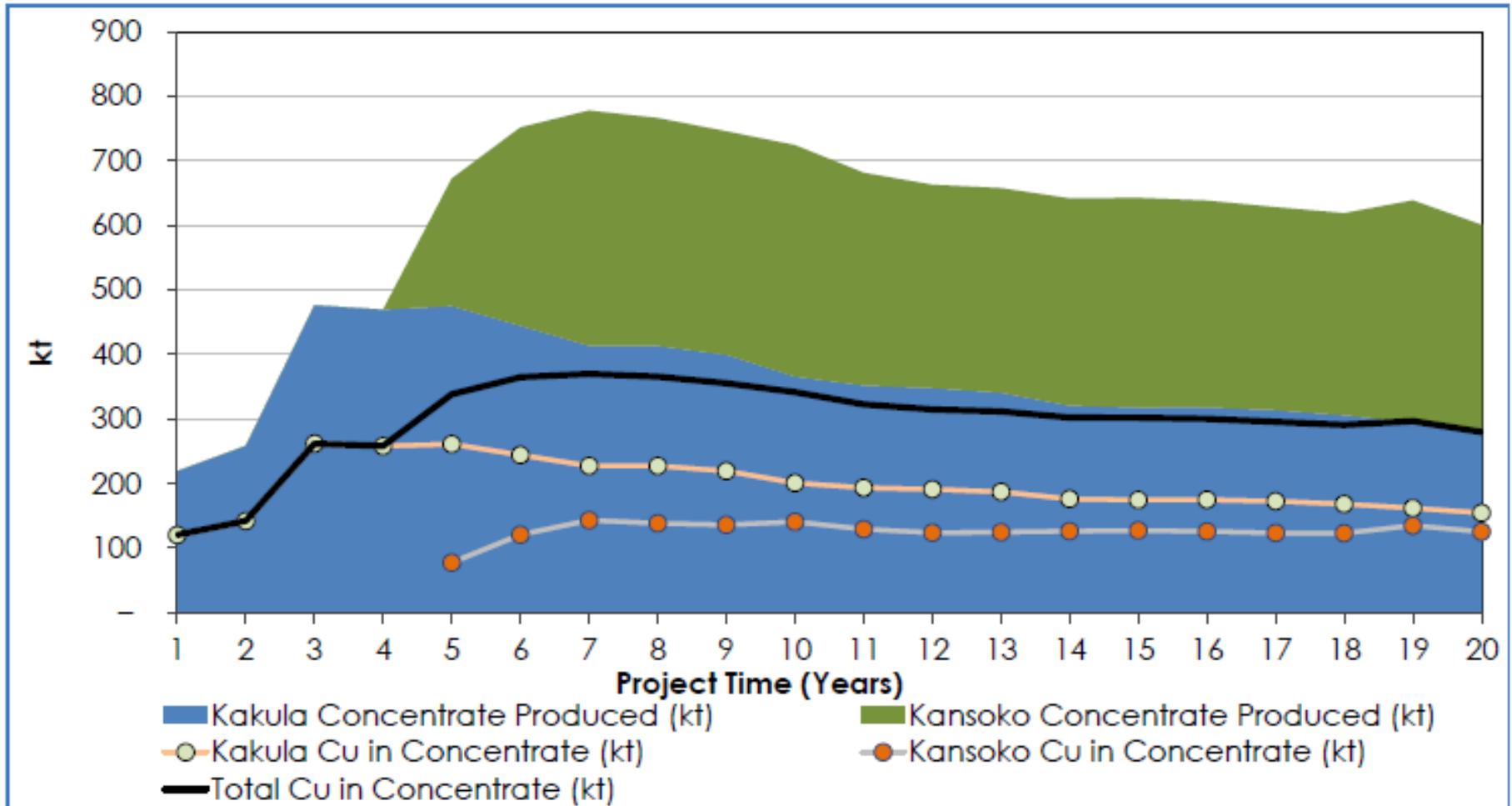


Figure by OreWin 2016.

# December 8, 2015: Zijin Mining acquired 49.5% stake in Kamoia Project for US\$412 million

KAMOA-KAKULA



- Zijin has committed to use its best efforts to arrange or procure project financing for 65% of the capital required to develop the first phase of the Kamoia Project, to be detailed in the ongoing feasibility study.

# Mwadingusha hydroelectric power station

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- Mwadingusha is the first of three hydroelectric power plants in the DRC that Ivanhoe plans to upgrade to secure a supply of **clean, sustainable electricity for the development of Kamo**a.
- The supply of the initial 11 MW of electricity to the grid commenced in September 2016.
- The three plants, once fully reconditioned, could produce a **combined 200 MW for the grid, more than sufficient to launch copper production at Kamo**a.



# 120kV power line at the Kamoia Project

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KAMOIA-KAKULA



# Future power to feed Kamoia and Kipushi

KAMOIA-KAKULA

The future Inga III dam is projected to produce 4,800 megawatts of power, most of which will be routed via Kolwezi to supply mines in the DRC and South Africa (2,500 megawatts).

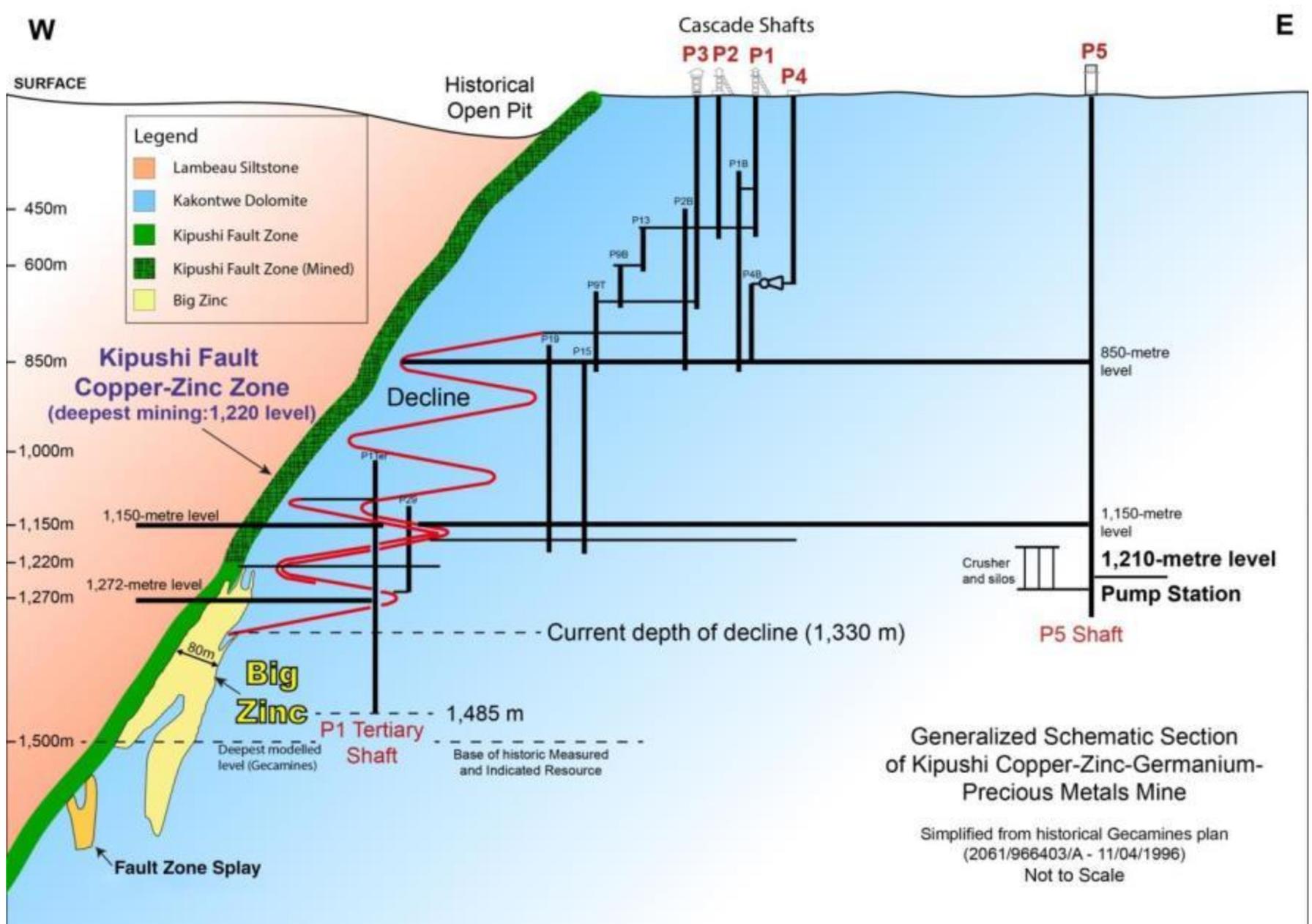




# Kipushi Mine Exploration and Upgrading

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.

# Independent Mineral Resource Estimate, 23 January 2016

KIPUSHI

## Kipushi Zinc-Rich Mineral Resource at 7% Zinc Cut-Off Grade

Zone	Category	Tonnes (Millions)	Zn %	Cu%	Pb%	Ag g/t	Co ppm	Ge g/t
Big Zinc	Measured	3.59	38.39	0.67	0.36	18	17	54
	Indicated	6.60	32.99	0.63	1.29	20	14	50
	Inferred	0.98	36.96	0.79	0.14	7	16	62
Southern Zinc Zone	Indicated	0.00	-	-	-	-	-	-
	Inferred	0.89	18.70	1.61	1.70	13	15	43
Total	Measured	<b>3.59</b>	<b>38.39</b>	<b>0.67</b>	<b>0.36</b>	<b>18</b>	<b>17</b>	<b>54</b>
	Indicated	<b>6.60</b>	<b>32.99</b>	<b>0.63</b>	<b>1.29</b>	<b>20</b>	<b>14</b>	<b>50</b>
	<b>Measured &amp; Indicated</b>	<b>10.18</b>	<b>34.89</b>	<b>0.65</b>	<b>0.96</b>	<b>19</b>	<b>15</b>	<b>51</b>
	Inferred	<b>1.87</b>	<b>28.24</b>	<b>1.18</b>	<b>0.88</b>	<b>10</b>	<b>15</b>	<b>53</b>

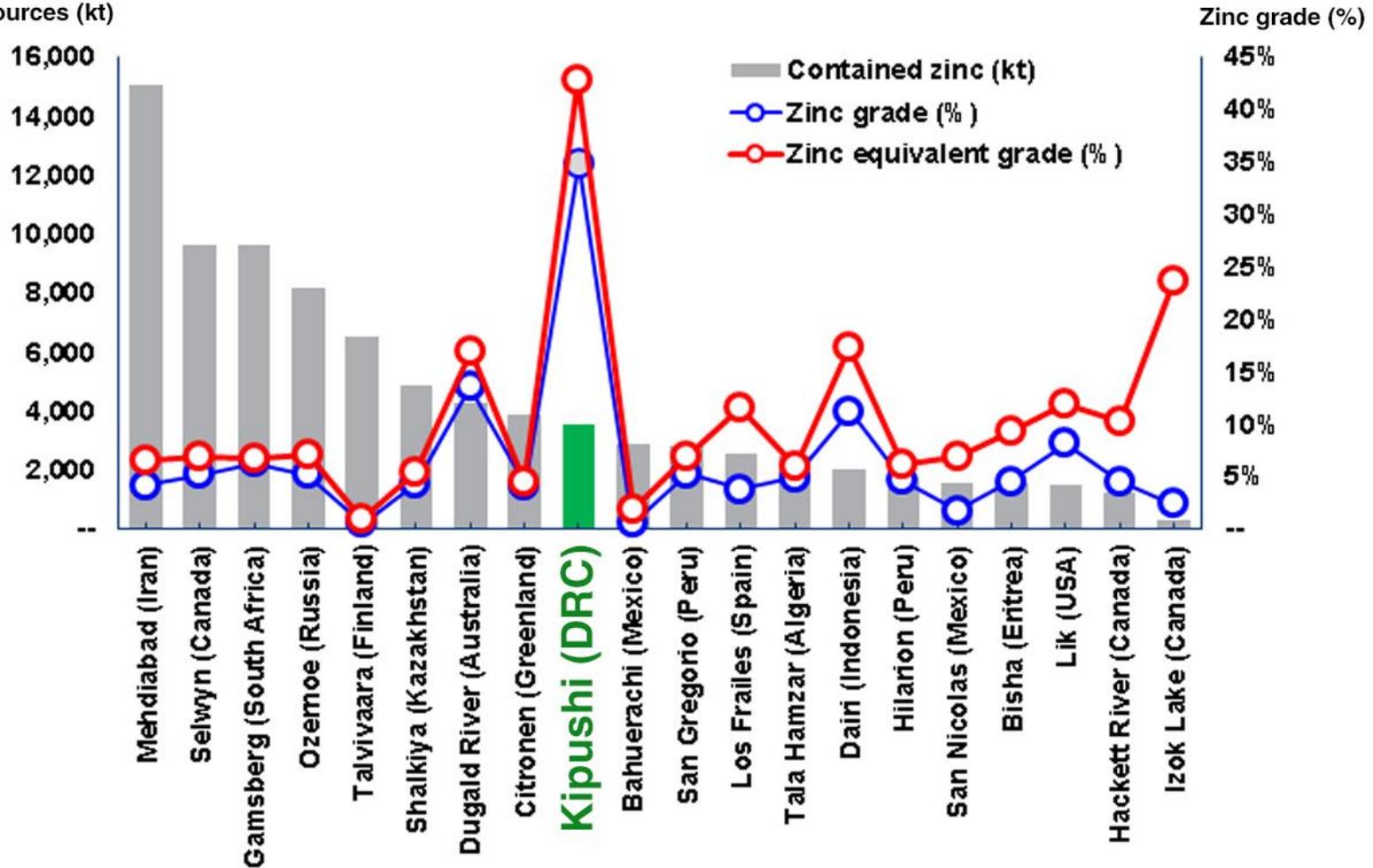
### Notes:

1. All tabulated data has been rounded and as a result minor computational errors may occur.
2. Mineral Resources which are not Mineral Reserves have no demonstrated economic viability.
3. The Mineral Resource is reported as the total in-situ Mineral Resource.
4. Metal quantities are reported in multiples of Troy Ounces or Avoirdupois Pounds.
5. The cut-off grade calculation was based on the following assumptions: zinc price of 1.02 USD/lb, mining cost of 50 USD/tonne, processing cost of 10 USD/tonne, G&A and holding cost of 10 USD/tonne, transport of 55% Zn concentrate at 375 USD/tonne, 90% zinc recovery and 85% payable zinc.

The Mineral Resource estimate was prepared by Mr. J. C. Witley (BSc Hons, MSc (Eng)) of the MSA Group. Mr. Witley is a member in good standing with the South African Council for Natural Scientific Professions (SACNASP) and has the appropriate relevant qualifications and experience to be considered an independent Qualified Person under the terms of National Instrument 43-101.

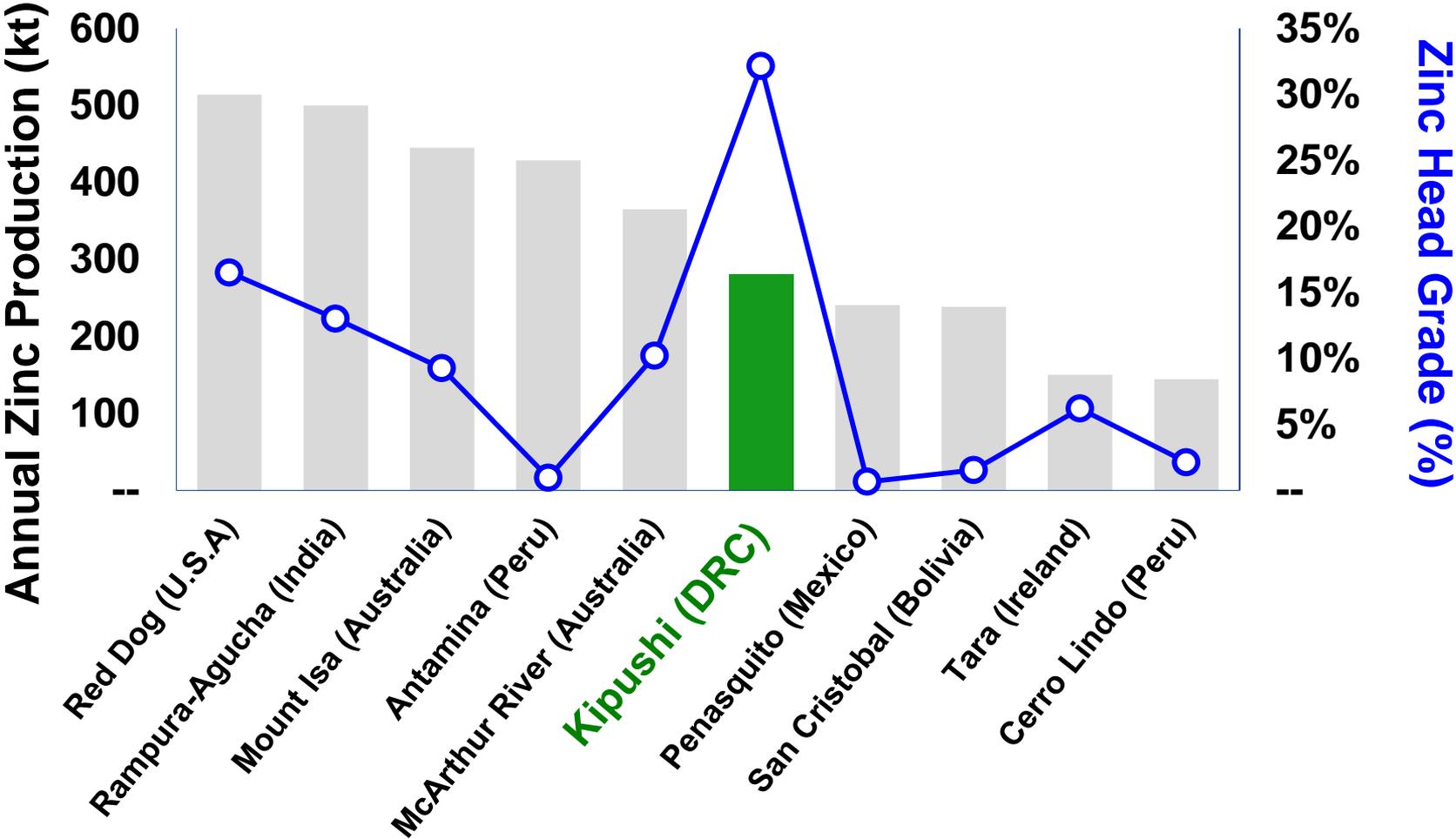
# Top 20 zinc projects by contained zinc

Contained zinc in Measured & Indicated Resources (kt)



Source: Wood Mackenzie. Note: All tonnes and metal grades of individual metals used in the equivalency calculation of the above mentioned projects (except for Kipushi) are based on public disclosure and have been compiled by Wood Mackenzie. All metal grades have been converted by Wood Mackenzie to a zinc equivalent grade at price assumptions of US\$1.01/lb zinc, US\$2.86/lb copper, US\$0.91/lb lead, US\$12.37/lb cobalt, US\$1,201/oz gold, US\$17/oz silver and US\$2,000/kg germanium.

# World's major zinc mines, showing estimated annual zinc production and zinc head grades



Source: Wood Mackenzie. World's major zinc mines defined as the world's 10 largest zinc mines ranked by forecasted production by 2018. Note: Independent research by Wood Mackenzie concludes that at the forecast production and head grade, the Kipushi Project could be expected to rank among the world's 10 largest zinc mines. Wood Mackenzie compared the Kipushi Project's life-of-mine average annual zinc production and zinc head grade of 281,000 tonnes and 32%, respectively, against production and zinc head grade forecasts for 2018.

# 2016 Kipushi PEA

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Steady-state mining rate

1.1 million tonnes/year

Average head grades

**32.2% zinc and 5.4% copper**

Zinc concentrate production

530,000 tonnes/year @ 53% zinc

Total cash costs (after credits)

\$0.54/lb zinc

Initial capex

\$409 million

After-tax NPV<sub>8</sub> @ \$1.01/lb zinc

\$533 million <sup>(1)</sup>

After-tax NPV<sub>8</sub> @ \$1.25/lb zinc

**\$1.03 billion <sup>(1)</sup>**

Internal rate of return @ \$1.25/lb zinc

**30.9% <sup>(2)</sup>**

Payback period @ \$1.25/lb zinc

**2.2 years <sup>(1)</sup>**

All in US dollars, unless otherwise indicated. The Kipushi 2016 PEA is preliminary in nature and includes an economic analysis that is based, in part, on Inferred Mineral Resources. There is no certainty that the PEA results will be realized.

1. Assuming a long-term copper price of US\$3.00/lb and a long-term zinc price of US\$1.01/lb and US\$1.25/lb, respectively.
2. After tax.

# Zinc mine pro-rata c1 cash cost

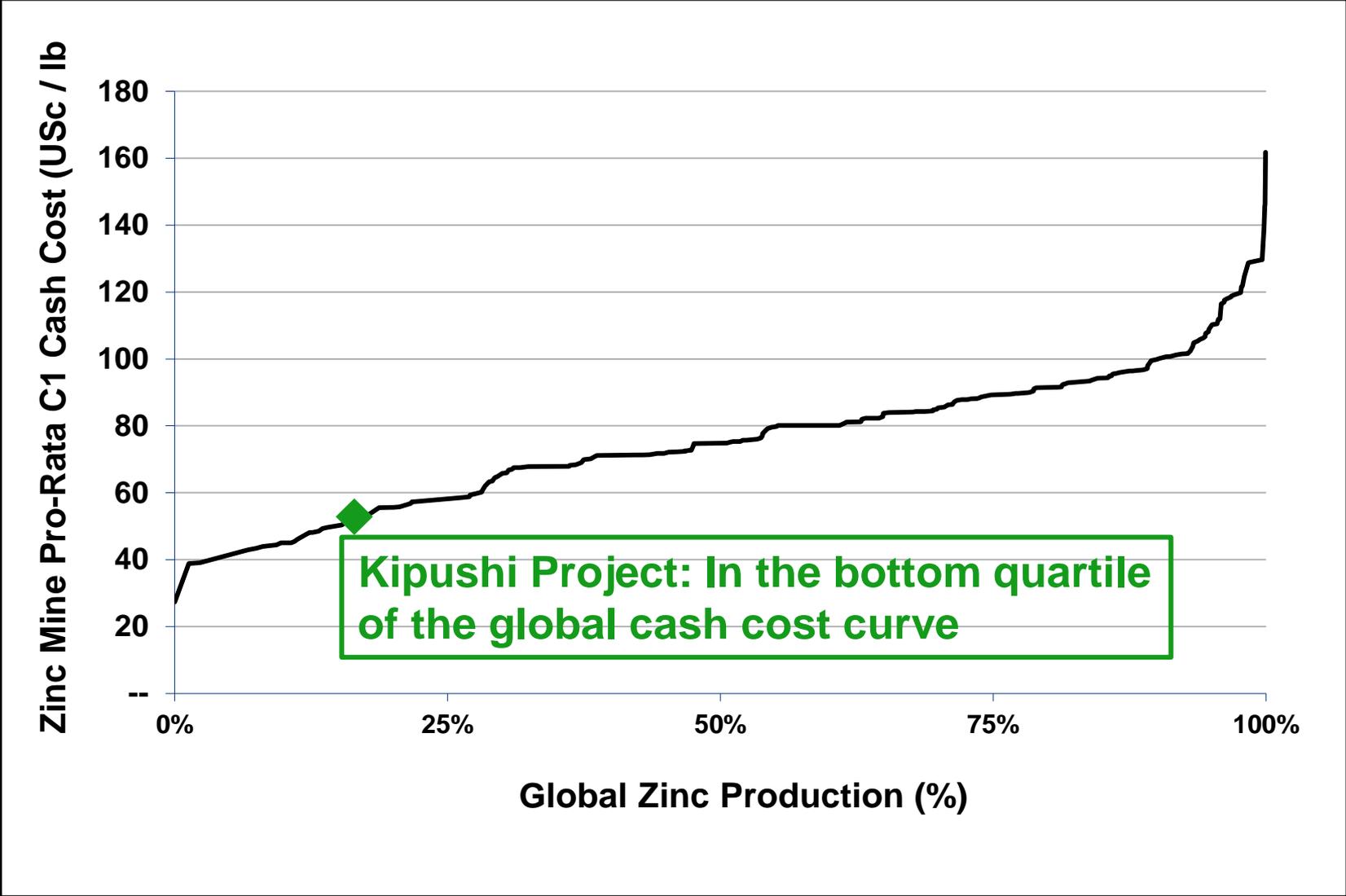


Figure based on data from Wood Mackenzie, April 2016. Note: Represents C1 pro-rata cash costs which reflect the direct cash costs of producing paid metal incorporating mining, processing and offsite realization costs, having made appropriate allowance for the co-product revenue streams. Source: Wood Mackenzie (based on public disclosure and information gathered in the process of routine research. The Kipushi 2016 PEA has not been reviewed by Wood Mackenzie).

# Capital intensity for zinc projects

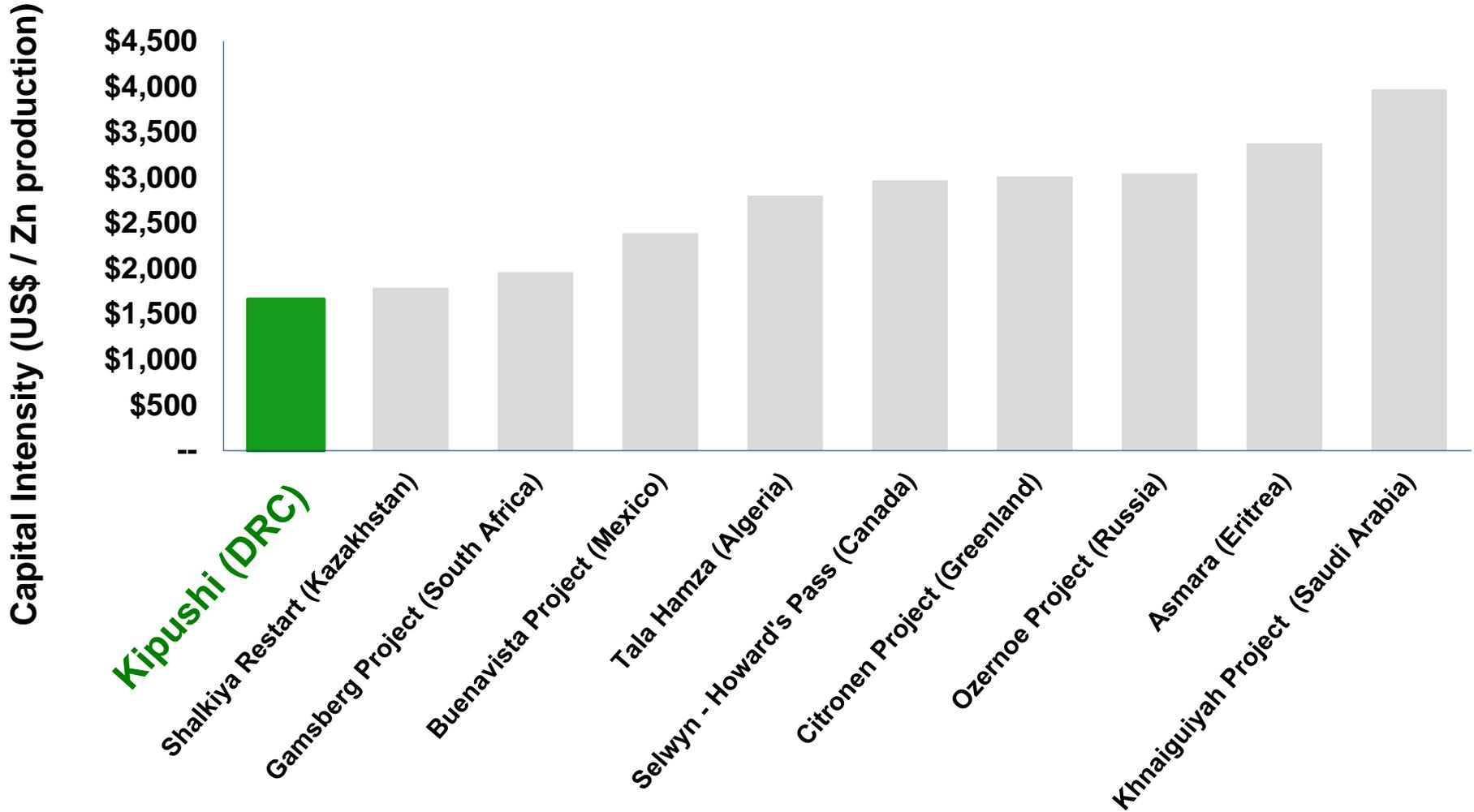
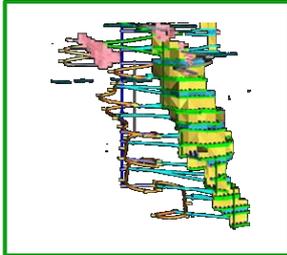


Figure based on data from Wood Mackenzie, April 2016. Note: All greenfield development projects classified as “probable” and “base case” by Wood Mackenzie. Source: Wood Mackenzie (based on public disclosure and information gathered in the process of routine research. The Kipushi Conceptual Mine Redevelopment Plan has not been reviewed by Wood Mackenzie).

# Kipushi Mine to Market Overview

KIPUSHI

## 1 Resource



Sulphide replacement orebodies with zones of zinc-rich mineralization adjacent to zones of copper-rich mineralization

**10.2Mt M&I Resources at 34.9% Zn**

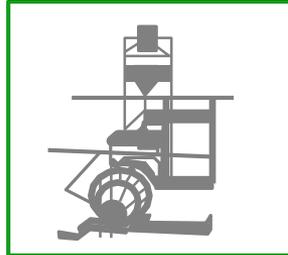
## 2 Mining



Sublevel Open Stopping, Pillar Retreat and Cut and Fill methods

**1.1Mtpa mined at head grade of 32.2%**

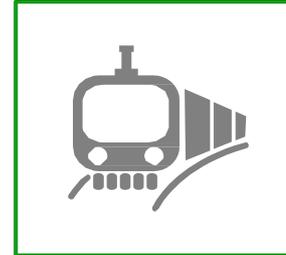
## 3 Processing



DMS plant, including crushing, screening, HLS and spirals to produce a high-grade zinc concentrate

**530ktpa concentrate at Zn grade of 53%**

## 4 Transport



Rail from Kipushi Mine site to Durban (via Ndola), then shipped from port of Durban

**Transportation cost: \$250/t from mine to China**

## 5 China



Zinc concentrate exported to Shanghai (or other major port)

**281ktpa zinc metal delivered to market at \$0.54/lb<sup>(1)</sup> cash cost**

Notes:

1 Life-of-mine average cash cost after copper credits (before credits: \$0.56/lb Zn).

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# Upgraded supports for Shaft 5 pump columns at the 1,200-metre-level pump station

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KIPUSHI



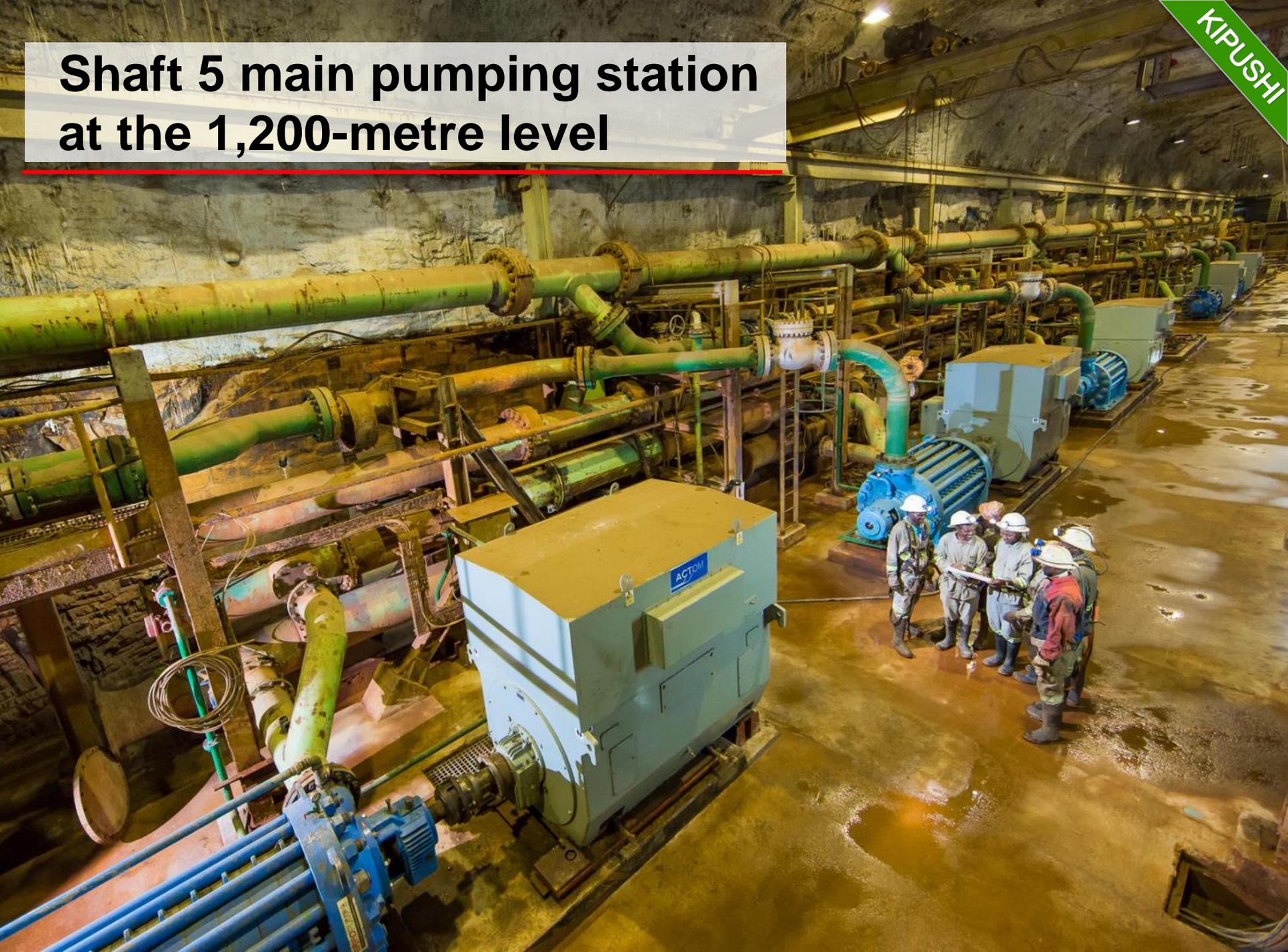
# A Grifo pump that has been upgraded and recommissioned at the Kipushi Zinc-Copper Mine's Shaft 5 pumping station

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

KIPUSHI



# New rollers being installed on the 1,150-metre-level ore conveyor belt as part of the upgrading at the historic, high-grade Kipushi zinc-copper-lead-germanium mine

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# Shaft 5 hoisting winder



# World's best drill hole?

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

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**The Fionet program to improve malaria diagnostics and treatment expanded to 300 Deki Readers installed in 252 medical service providers in Haut-Katanga and Lualaba provinces in Southern DRC, which host Ivanhoe's Kipushi and Kamoia-Kakula projects.**

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**IVANHOEMINES**  
NEW HORIZONS

# Platreef Discovery & Mine Development

South Africa



# Platreef's Shaft 1 head gear

PLATREEF



IVANHOE

**July 2017 – A site visit by members of the five institutions appointed to arrange debt financing for Platreef. Expressions of interest received for approximately US\$900 million.**

**PLATREEF**



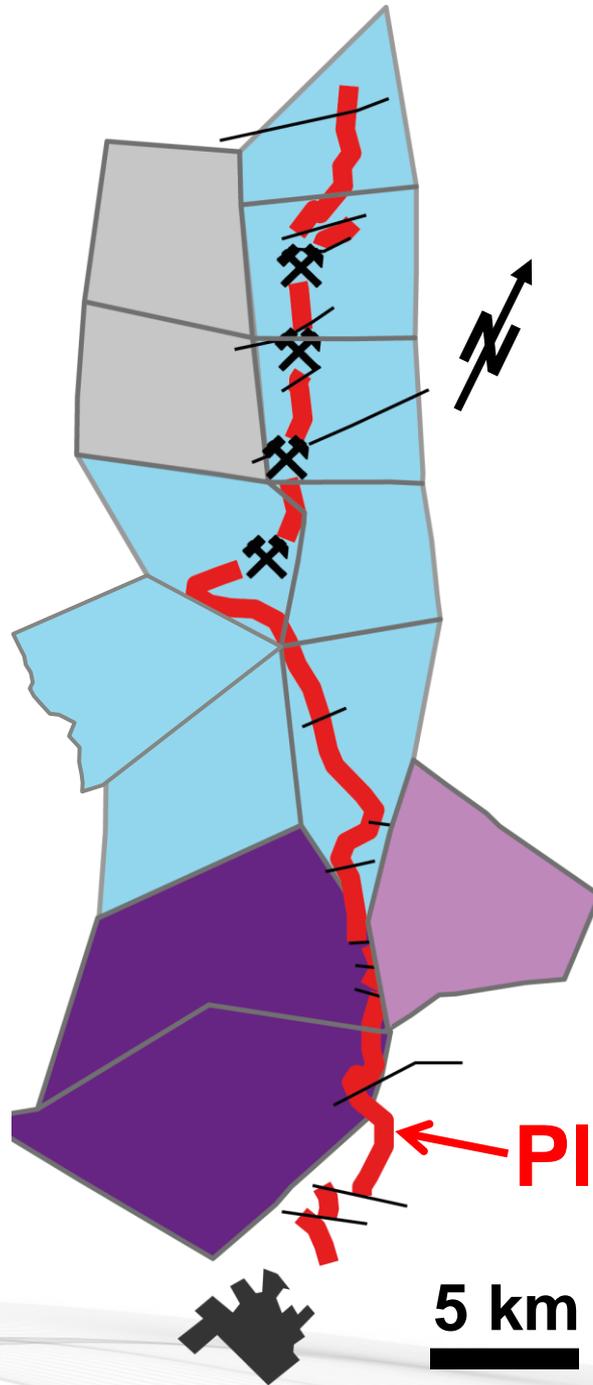
**IVANHOE**

**April 2017:** Ivanhoe announces start of surface construction for Shaft 2, which will be Platreef's main production shaft with a hoisting capacity of six million tonnes a year.

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

### Key

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



Turfspruit  
Macalacaskop

Platreef

5 km

## Platreef licences on Northern Limb

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

# May 2016: **42 million oz. of PGMs** in Indicated plus **58 million oz. of PGMs** in Inferred Resources

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- Indicated Mineral Resources contain an estimated **42.0 million oz. of PGMs plus gold – a gain of 45% –** with an extra **52.8 million ounces** in Inferred Resources, at the base case cut-off grade of 2 g/t.
- Indicated Mineral Resources contain an estimated **58.8 million oz. of PGMs plus gold**, plus an estimated additional **94.3 million ounces** in Inferred Resources, at 1 g/t cut-off grade.
- Amec Foster Wheeler has defined four targets for further exploration totalling between **245 – 410** million tonnes in areas that are contiguous with the current Mineral Resource areas.
- In addition, there are approximately **48 km<sup>2</sup>** of unexplored ground beyond these exploration target areas on the property under which the prospective stratigraphy is projected to lie.

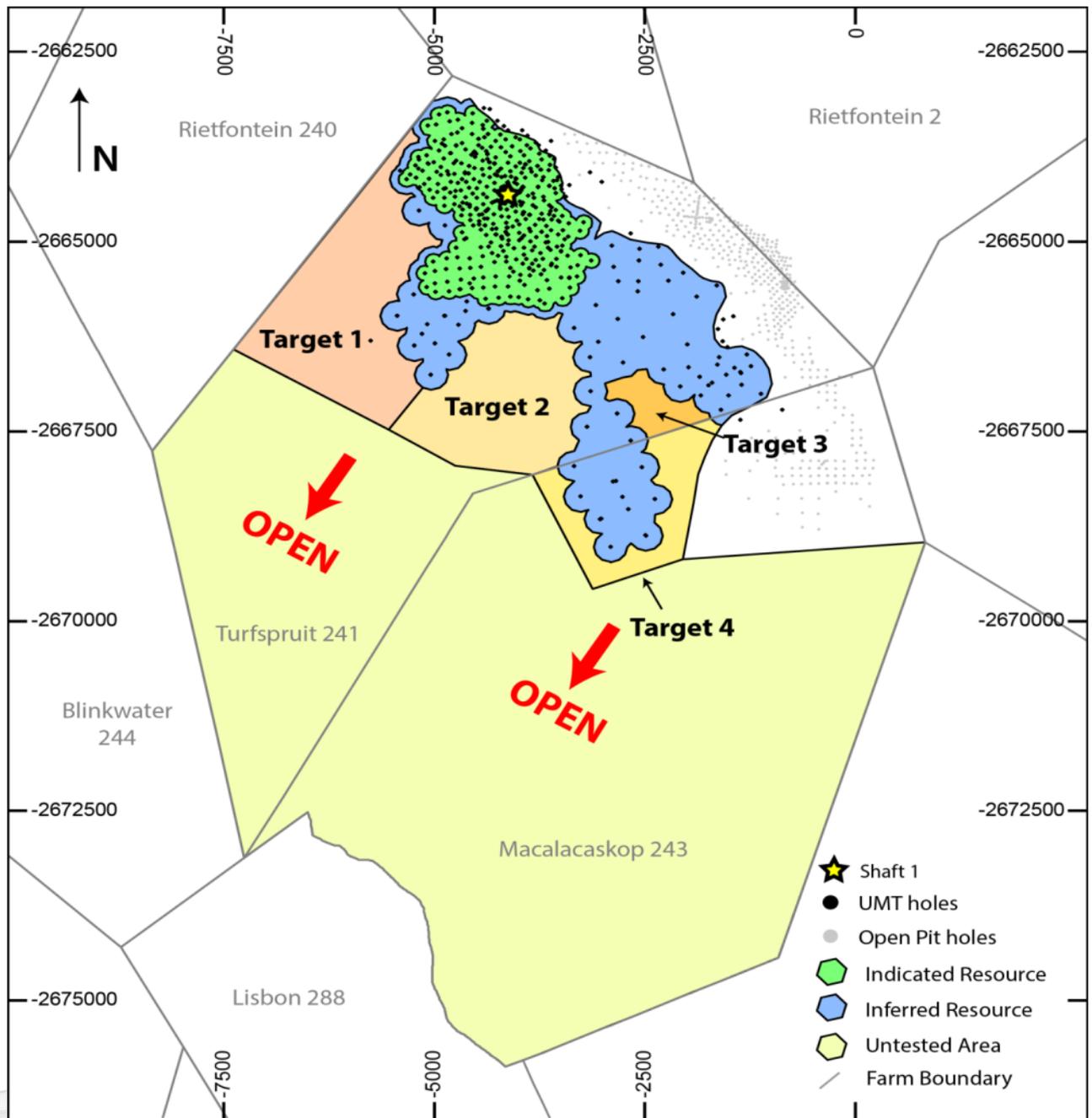
# May 2016 resource update

- Potential for safe, mechanized mining and substantial by-product credits.
- Significant exploration upside; open along strike for several km.

Platreef 43-101-Compliant Mineral Resource, April 22, 2016 @ 2 g/t 3PE+Au cut-off

Tonnage (Mt)	3PE+Au (g/t)	Nickel %	Copper %	Contained Metal		
				3PE+Au (Moz)	Nickel (M lbs)	Copper (M lbs)
<b>Indicated Resource</b>						
<b>346</b>	<b>3.8</b>	<b>0.32</b>	<b>0.16</b>	<b>42.0</b>	<b>2,438</b>	<b>1,226</b>
<b>Inferred Resource</b>						
<b>506</b>	<b>3.2</b>	<b>0.31</b>	<b>0.16</b>	<b>52.8</b>	<b>3,440</b>	<b>1,775</b>

Note: Mineral Resources estimated assuming underground selective mining methods. 3PE+Au = (Pt+Pd+Au+Rh). Nominal cut-off criteria for 2 g/t grade shell is minimum 3 metres.

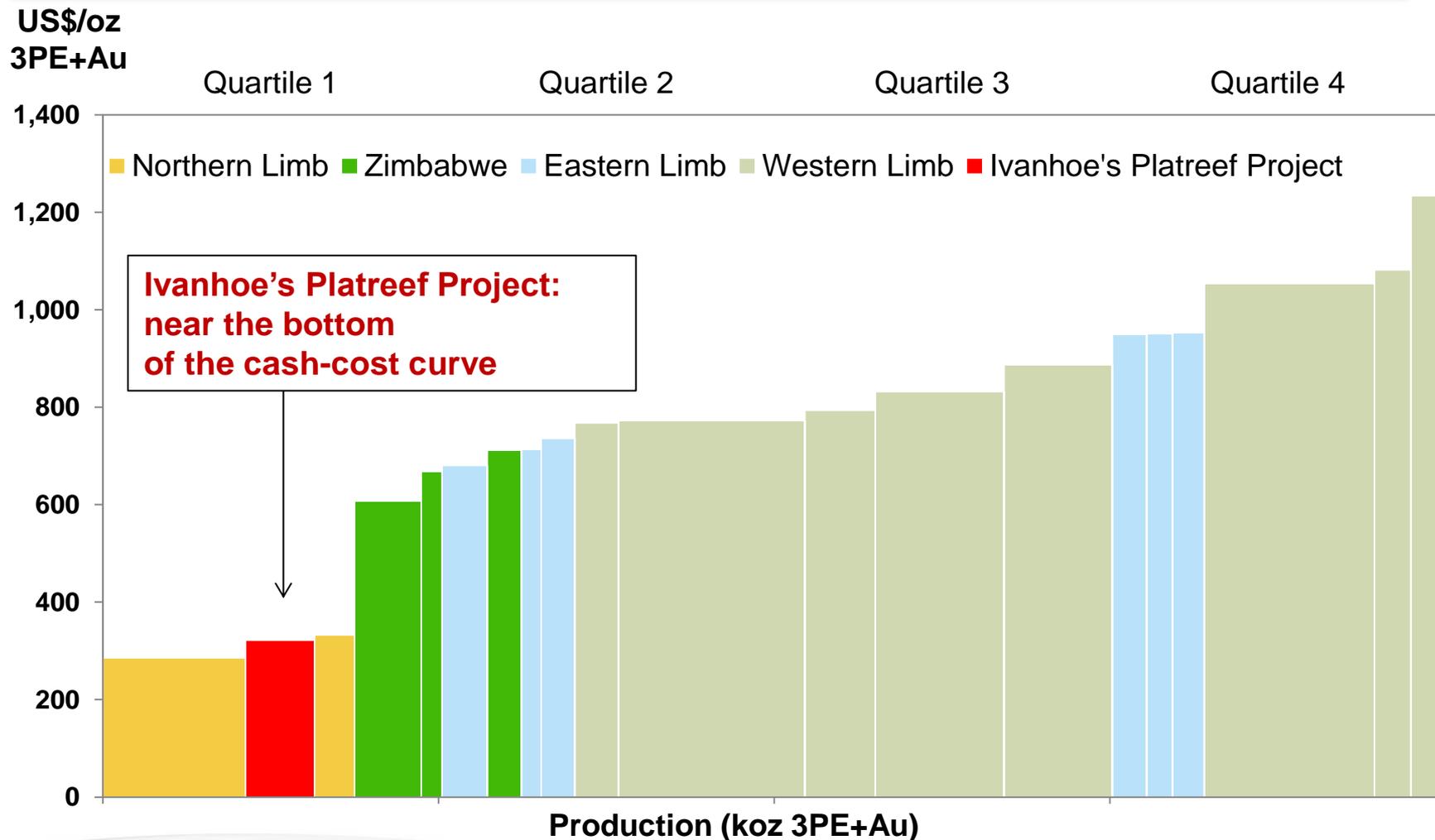


Open to expansion to the south and west, beyond the area of the current Indicated Resources (in green) and Inferred Resources (in blue).

Four target areas contain an estimated **245 – 410** million tonnes.

Approximately 48km<sup>2</sup> of unexplored ground beyond these exploration target areas.

# Platreef's potential US\$322 per 3PE+Au ounce (net of base-metal by-products) ranks near the bottom of the world's cash-cost curve



Source: SFA (Oxford) 2015. Data for Platreef Project and Waterberg are based on each project's reported PFS and PEA parameters respectively, and are not representative of SFA's view.

**Platreef's Shaft 1 will provide early development access into the Flatreef Deposit and will be utilized to fast-track the production during the first phase of the project**

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# Sinking platform in operation at Shaft 1

PLATREEF



**Shaft 1 is expected to reach its projected, final depth of 980 metres below surface in 2018.**

IVANHOE

# Flatreef: Merensky Grades at Platreef Widths

## Typical Merensky Reef, Western Limb



## Drill hole UMT378



1091.63m



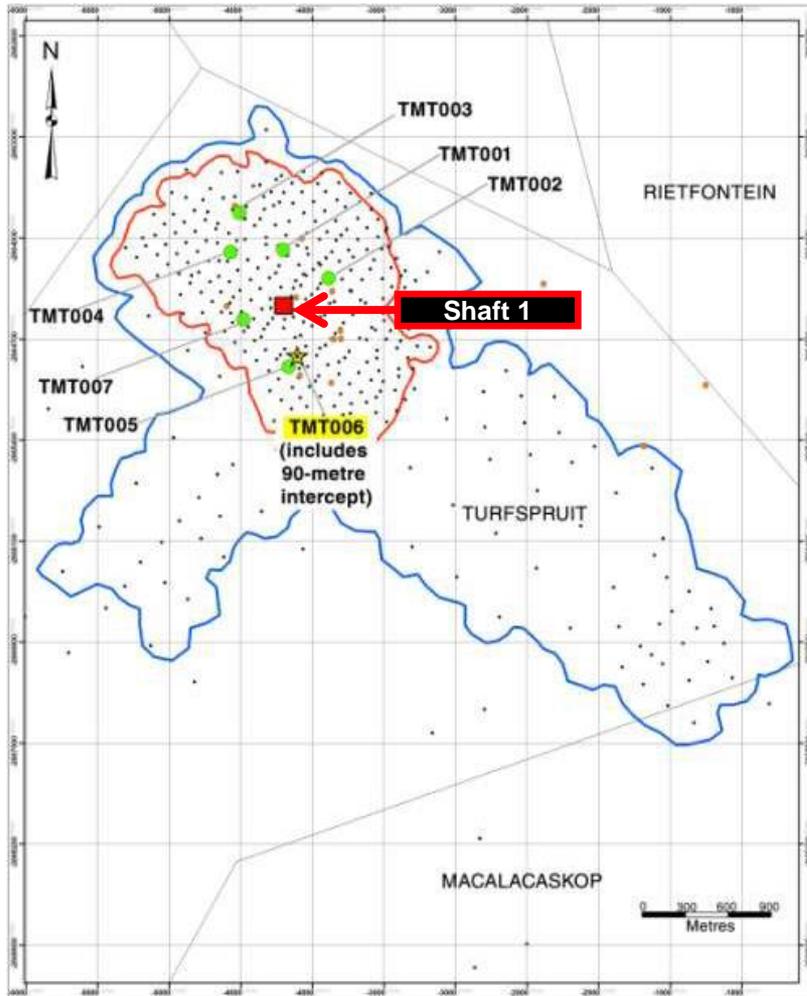
1117.00m

	Merensky Reef	Flatreef <sup>(1)</sup>
Grade	4 - 10 g/t 3PE	3.8 g/t 4PE
True thickness	~ 0.4 – 1.5 m	19 m
Grade - thickness (m-g/t)	< 5 - 15	85.6

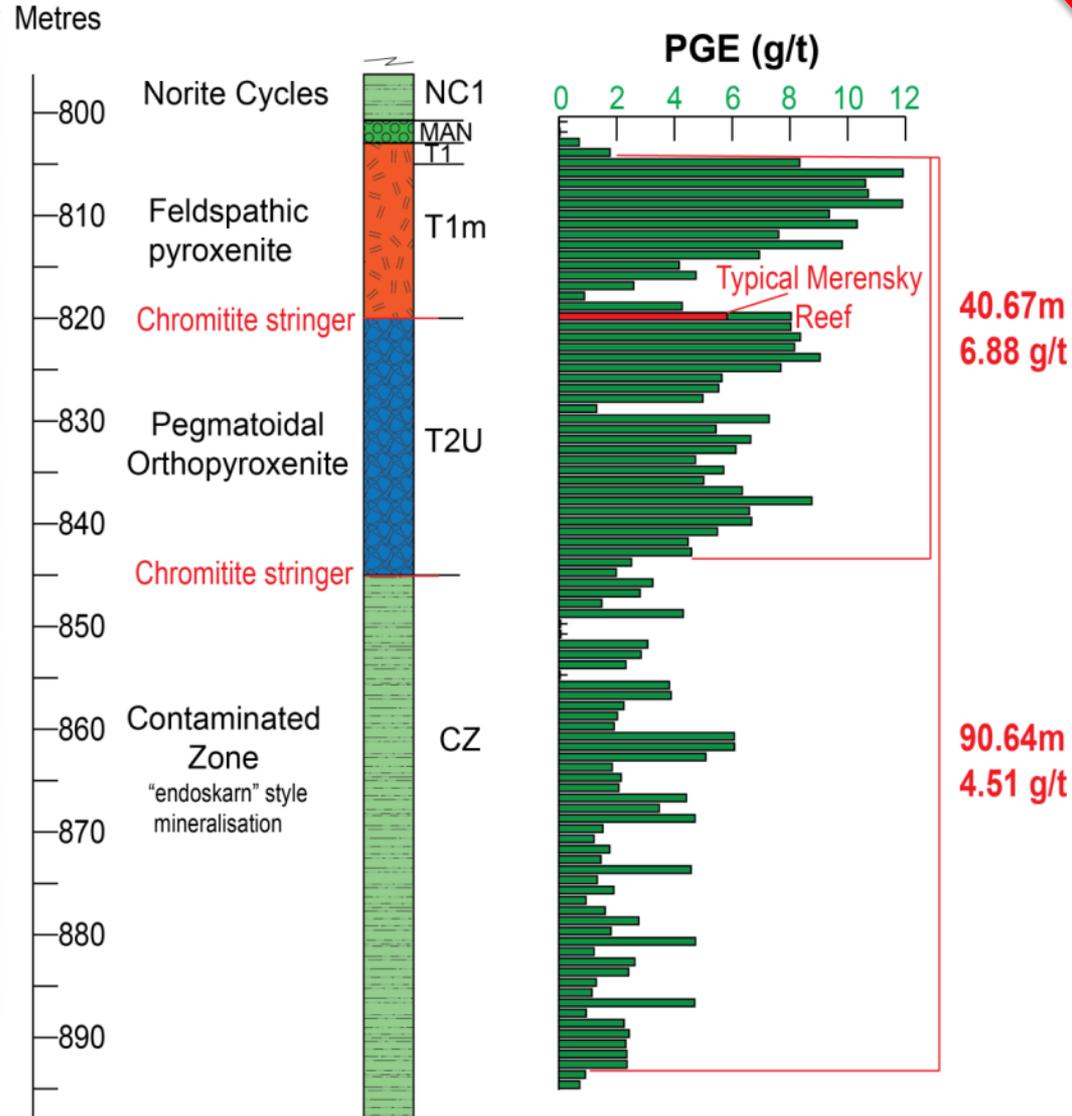
**25-metre intercept @ 9.90 g/t 4PE, 0.45% Ni & 0.22% Cu grade thickness 248 m-g/t**

(1) Indicated Mineral Resource, cumulative TCU only, Based on a 2g/t 4PE (Pt + Pd + Rh + Au) cut-off, T2MZ Thickness and TCU grade used. m-g/t calculated from all data.

# Drill hole TMT006 – lithology and grade profile



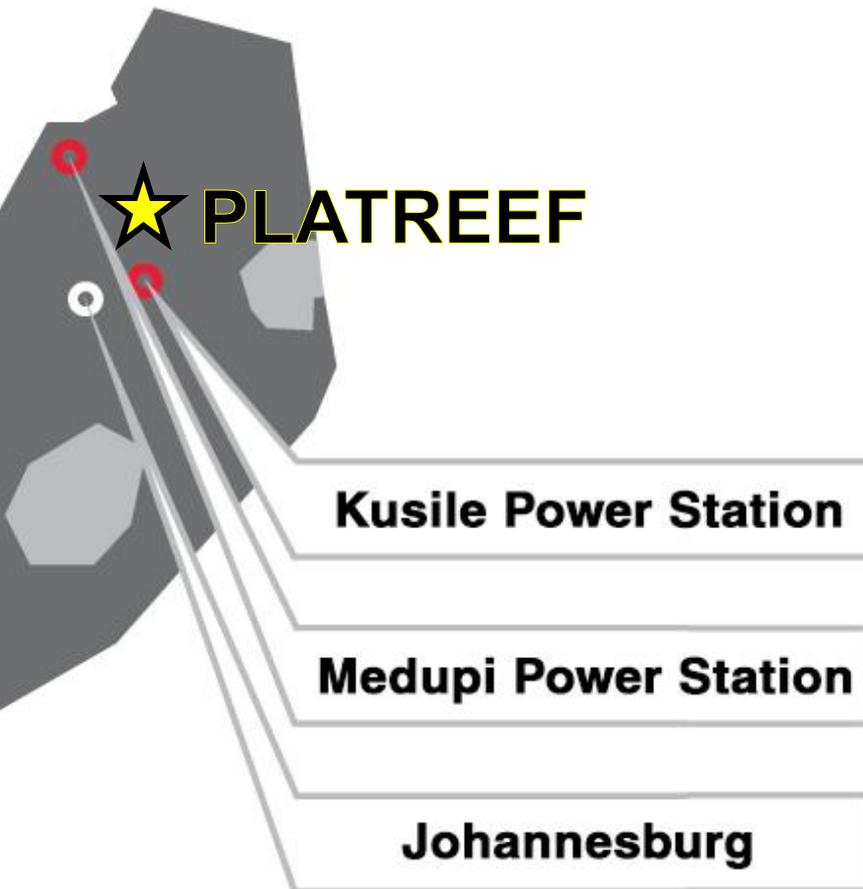
- LEGEND**
- Indicated Resource outline
  - ★ Metallurgical drill hole (special interest)
  - Metallurgical drill hole
  - Inferred Resource outline
  - Licence boundary



# Bulk power from Eskom, South Africa's state utility

Medupi power station started generating power in March 2015; expected to be fully operational by 2020, providing 4,800 MW of power to national grid.

Kusile started generating power in Dec 2016; expected to provide a total of 4,800 MW of power by 2022.



# Flatreef mining method: long-hole stopping

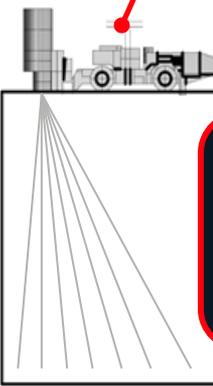
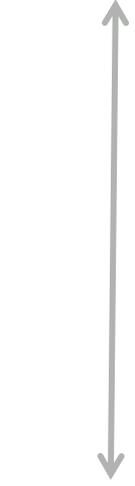
PLATREEF

**Highly mechanized mining**

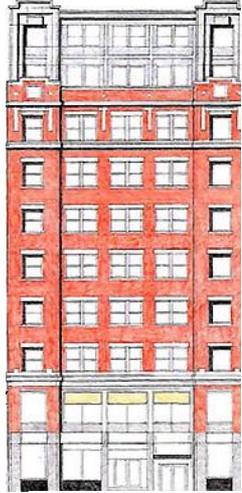


**Safe working conditions**

Blast-hole drifts



**The Flatreef Deposit average thickness of 24 metres = 8 storeys**



Mucking drifts



**Highly skilled operators**

# International Miningengineer

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**SOUTH AFRICAN**  
sector

**AUTOMATION**, a central feature of the 'smart mining' trend aiming to deliver new levels of efficiency, safety and value, is part of the operational DNA being designed for Ivanhoe's **Kamoa Copper Project** in the DRC and **Platreef Platinum Project** in South Africa.

**IVANHOE**

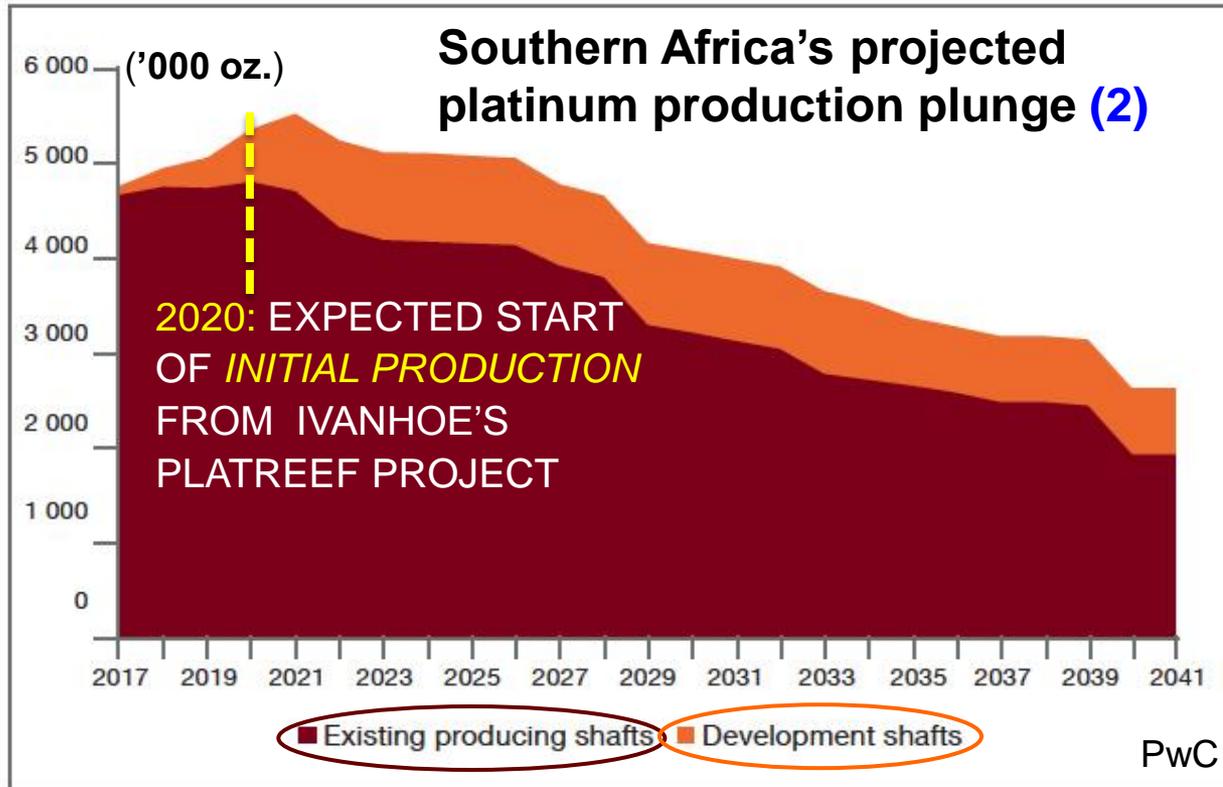
# Independent Consultants

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**Leading independent consultants have, and will continue to prepare IVN's technical reports, including the economics (such as the NPV, IRR, and peak funding figures in this presentation).**

# 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.



Thank you.

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NEW HORIZONS