IVANHOEMINES NEW HORIZONS



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 feasibility, pre-feasibility and PEA studies, at the Platreef Project; and (iii) statements regarding ongoing upgrading and development work and feasibility, pre-feasibility and PEA studies at the Kipushi Project. As well, the results of the pre-feasibility study and PEA of the Kamoa-Kakula Project, the feasibility study of the Platreef Project and the pre-feasibility study 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 Kamoa-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, zinc, 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. Mr. Torr is not independent of Ivanhoe within the meaning of NI 43-101. Information in this presentation is based upon, and certain information is extracted directly from, NI 43-101 compliant technical reports prepared by Ivanhoe 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. 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.





Ivanhoe Mines – 20 Years in Africa

Corporate Information TSX:IVN **Trading Symbols** OTCQX: IVPAF Common Shares: 1,018 million Shares. **Options &** Options: 19 million RSUs (1) Restricted Share Units: 3 million Cash \$574 million Position (2) Share Price (3) C\$3.34 Market Cap (3) \$2,537 million CITIC Metal 19.3% Robert Friedland 16.6% Major **Shareholders** Fidelity 12.1% Zijin Mining 9.7%

Key **Development project** Office KAMOA-**KAKULA** D.R. Congo 39.6%-owned Copper **KIPUSHI** D.R. Congo 68%-owned Zinc-copper **PLATREEF South Africa** 64%-owned PGE-goldnickel-copper

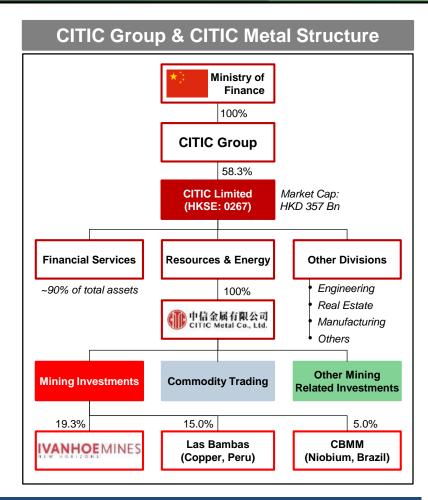
- As of March 26, 2019.
- Cash & cash equivalents as at December 31, 2018.
- As of May 14, 2019, using a \$:C\$ exchange rate of 1.35.

Investment Agreement with Ivanhoe Mines

- In April 2019, CITIC Metal announced a second investment in Ivanhoe Mines of C\$612 million at C\$3.98 per share (29% premium to last close)
- CITIC ownership interest to increase to 29.9% of Ivanhoe Mines upon closing
- Deal closing no later than September 7, 2019
- Zijin to exercise its anti-dilution rights, resulting in additional proceeds of C\$67million

About CITIC Group / CITIC Metal

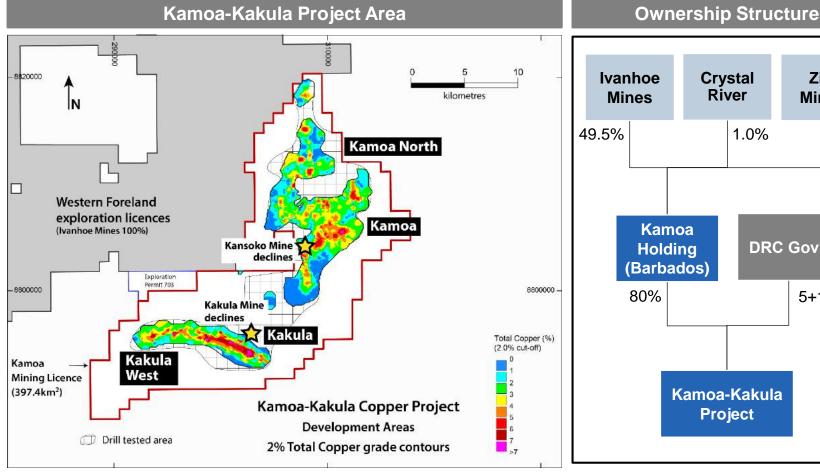
- CITIC Group was established in 1979 as an arm of the Ministry of Finance, to be a pioneer in China's economic reforms and transition to a market-led economy
- CITIC Metal is a subsidiary of HKSE-listed CITIC Limited, which has ~\$1 trillion total assets



Second major investment in a year by CITIC Metal at a premium to market will result in a cash balance of US\$1.0 billion to fast-track Kakula Phase 1 development and advance other projects



INTRODUCTION

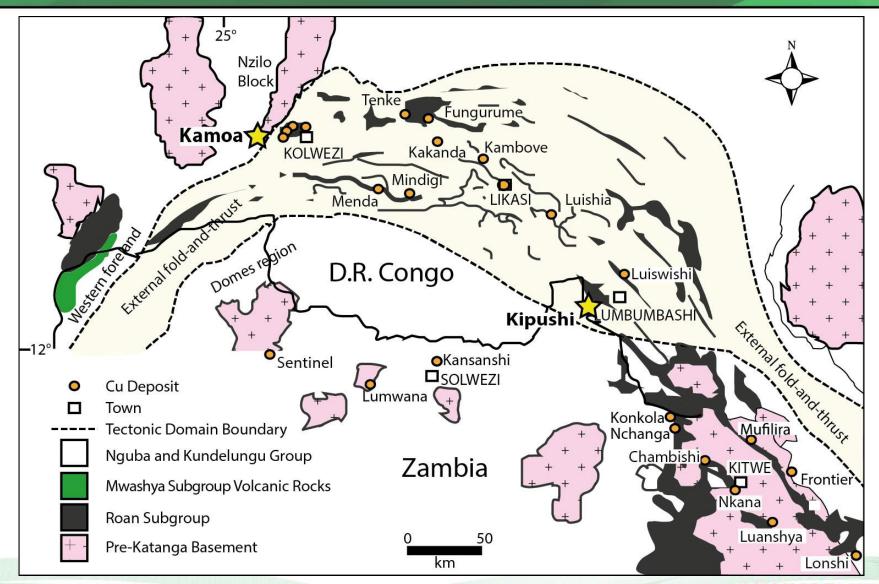


Zijin **Mining** 49.5% DRC Gov't $5+15\%^{(1)}$ Kamoa-Kakula

World's largest, undeveloped, high-grade copper discovery, with significant further potential from high-grade zones such as Kamoa North

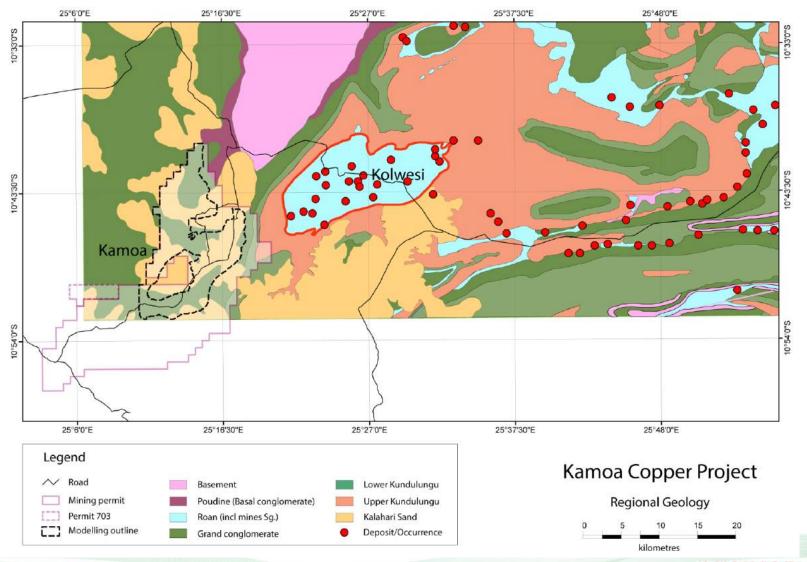
Notes:

^{5%} free carried interest plus 15% carried interest.

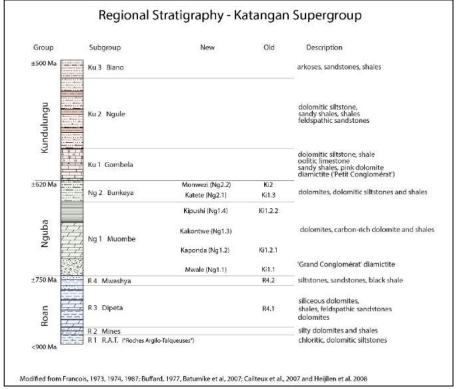


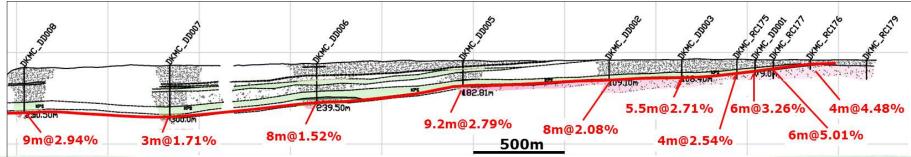
Kamoa-Kakula Regional Geology

GEOLOGY

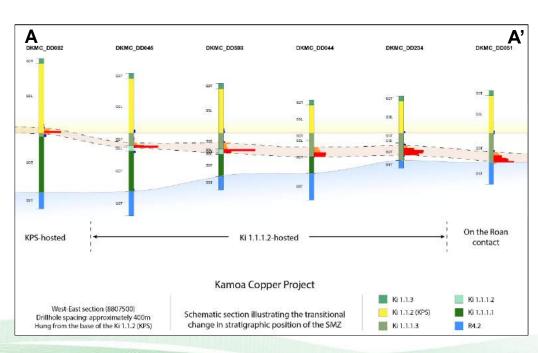


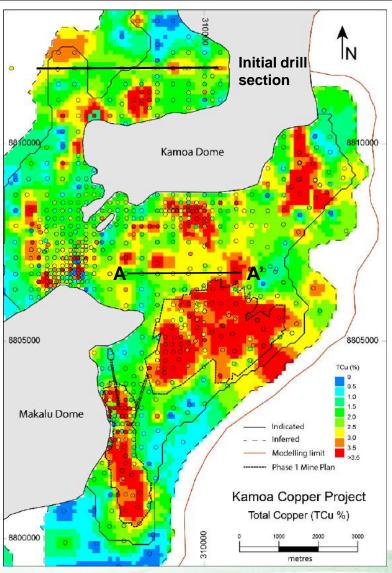
- First new major copperbelt discovery in decades
- The area was overlooked as the established exploration model rendered the area unprospective
 - No obvious surface copper
 - 'Incorrect' rock types





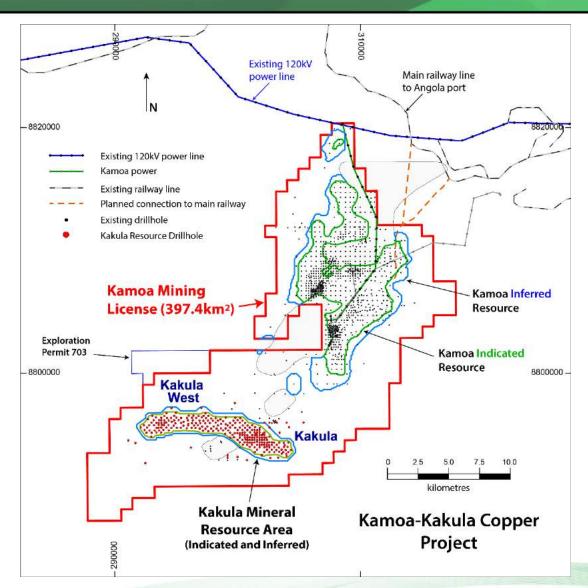
- Grade distributions at Kamoa are well understood
- Redox boundary occurs at the base of a diamictite subunit





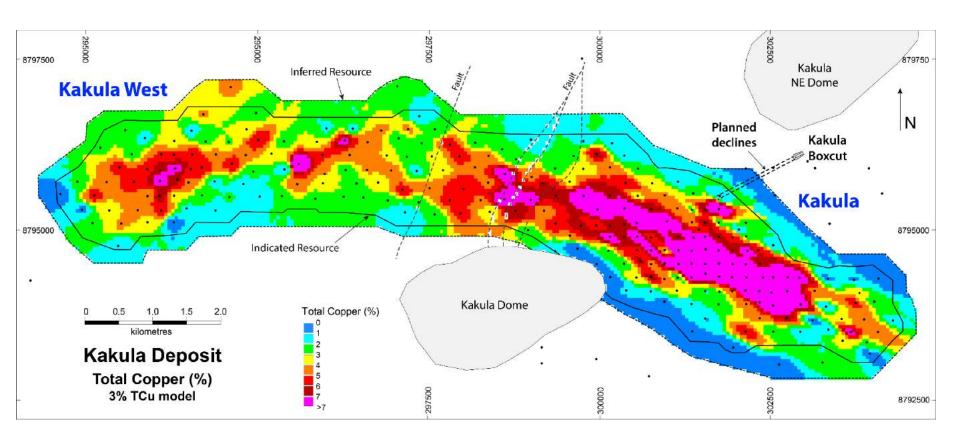
Kakula is Re-writing the Kamoa Story

- The Kakula Discovery is within the Kamoa Mining Licence, five km southwest of the currently defined Kamoa resource
- Kakula is substantially richer, thicker and more consistent than other mineralization found elsewhere on the Kamoa Project. It is a complete game changer in our planning for the development of Kamoa

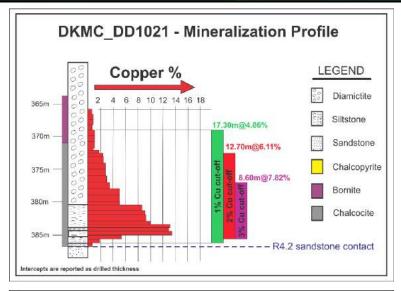


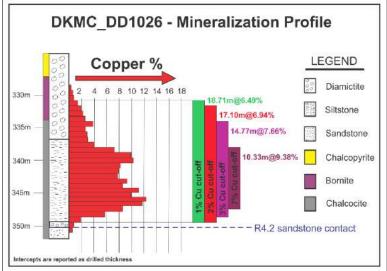
Kakula – Bottom-loaded, High-grade Copper is Consistent at Higher Cut-offs

KAMOA-KAKULA GEOLOGY



- Consistently bottom-loaded
- Chalcocite dominant
- Very high grade concentrated at the base, usually associated with a narrow siltstone
- Allows significant flexibility for mining
 - Narrow, high grade
 - Wider, high tonnage
- Mineralisation located from the Roan footwall contact
- Apparent shallow dip in area and competent rocks – very amenable to room and pillar mining

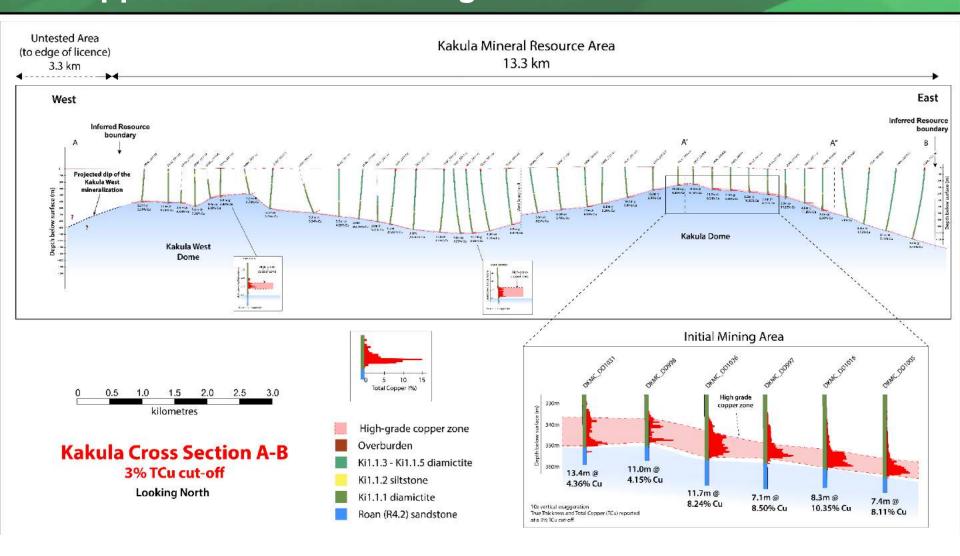




Kakula – Bottom-loaded, High-grade Copper is Consistent at Higher Cut-offs

KAMOA-KAKULA

GEOLOGY



Kamoa-Kakula Combined Resource Statement

GEOLOGY

Mineral Resource Statement, February 2018, 1% copper cut-off over minimum thickness of 3 metres

Deposit	Category	Tonnes (millions)	Area (sq. km)	Copper Grade	Vertical Thickness (m)	Contained Copper (kt)	Contained Copper (Bn lbs)
Kamoa	Indicated	759	50.7	2.57%	5.5	19,500	43.0
	Inferred	202	19.4	1.85%	3.8	3,740	8.2
Kakula	Indicated	628	21.5	2.72%	10.5	17,100	37.6
	Inferred	114	5.9	1.59%	6.9	1,810	4.0
Kamoa- Kakula Project	Indicated	1,387	72.2	2.64%	6.9	36,600	80.6
	Inferred	316	25.3	1.76%	4.5	5,550	12.2

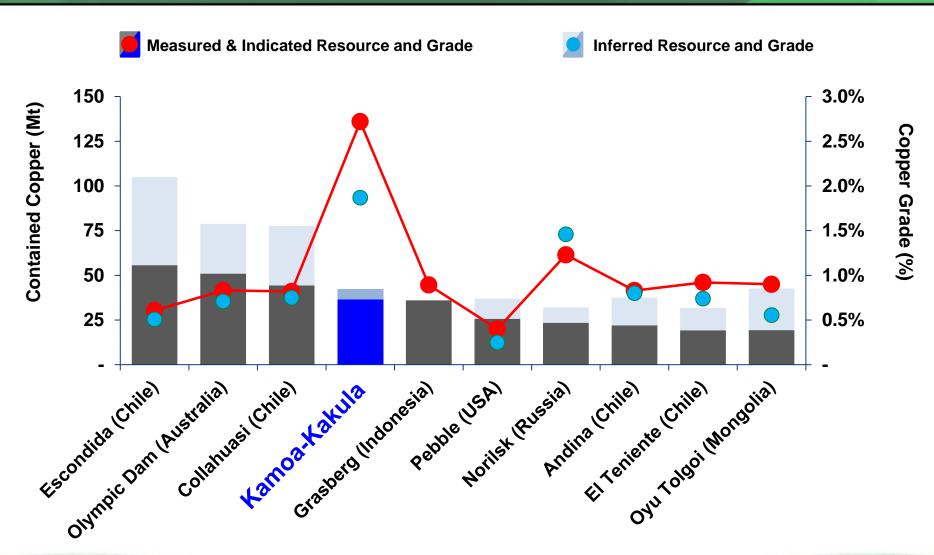
Notes:

- 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 (RM) 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 for Kamoa is 27 November 2017, and the cut-off date for drill data is 23 November 2015. The Kakula Mineral Resource is a combination of separate Kakula and Kakula West models, with the West Scarp Fault forming the boundary between the two. The effective date of the estimate for Kakula West is 10 November 2018, and the cut-off date for the drill data is 1 November 2018. Mineral Resources are estimated using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves. Mineral Resources are reported inclusive of Mineral Reserves, on a 100% basis. Ivanhoe holds an indirect 39.6% interest in the Project. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- 2 Tonnage and contained-copper tonnes are reported in metric units, contained-copper pounds are reported in imperial units and grades are reported as percentages.
- 3 Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.



Among the World's Largest Copper Deposits

GEOLOGY

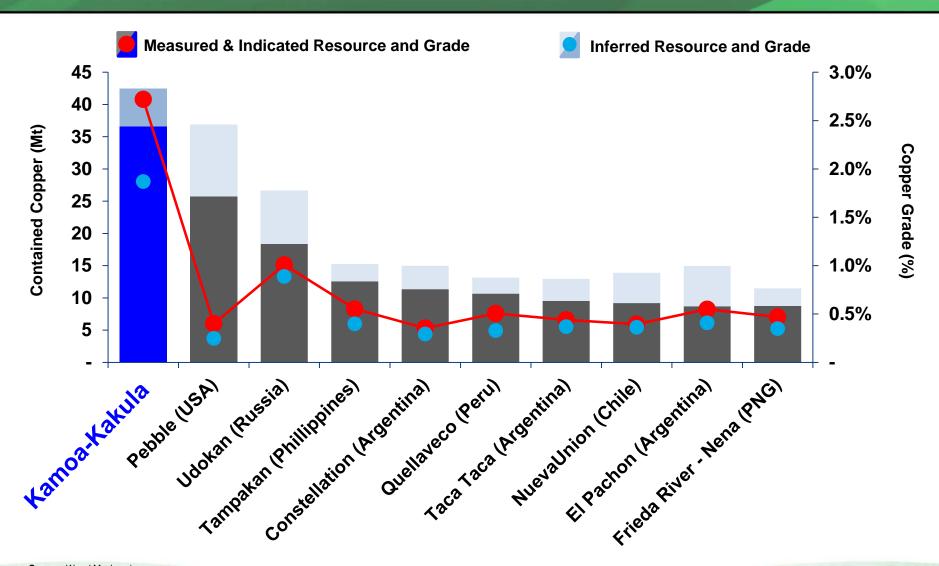


Source: Company filings, Wood Mackenzie.

Note: Selected based on copper contained in Measured & Indicated Mineral Resources, inclusive of Mineral Reserves.

World's Largest Undeveloped Copper Deposit

GEOLOGY



Source: Wood Mackenzie.

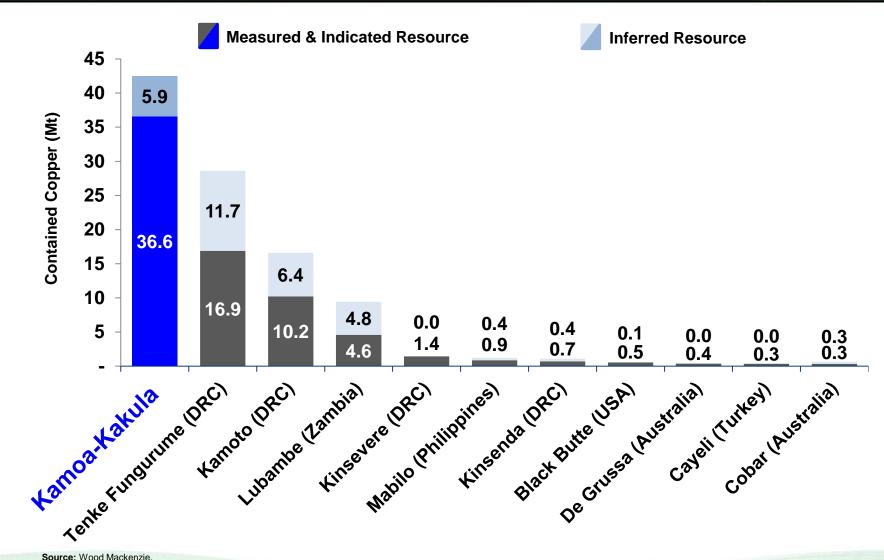
Note: Contained copper in undeveloped deposits (Measured & Indicated Resources, inclusive of Mineral Reserves, and Inferred Resources). Ranked by contained copper in Measured & Indicated Resources



World's Largest High-Grade Copper Deposit

KAMOA-KAKULA

GEOLOGY

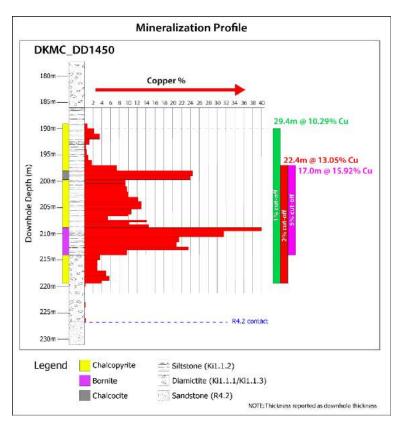


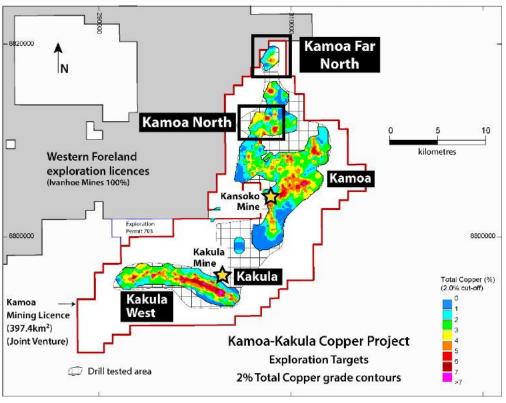
Source: Wood Mackenzie.

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



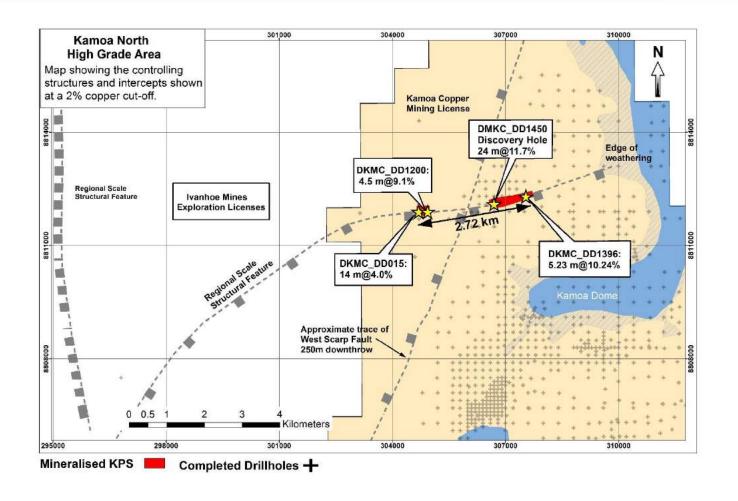
 22.4-metre intersection of 13.05% copper in a shallow, flat-lying discovery at Kamoa North





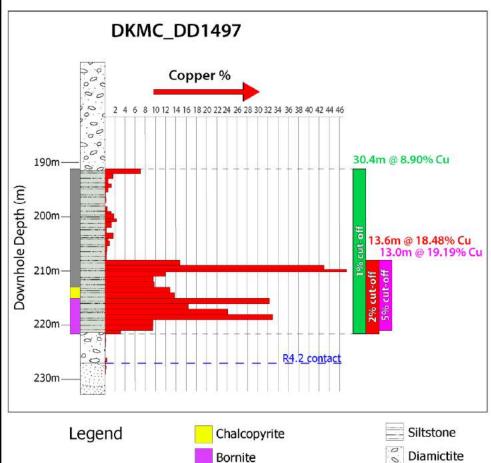
Kamoa North has the thickest, highest-grade copper intersection drilled to date at Kamoa-Kakula



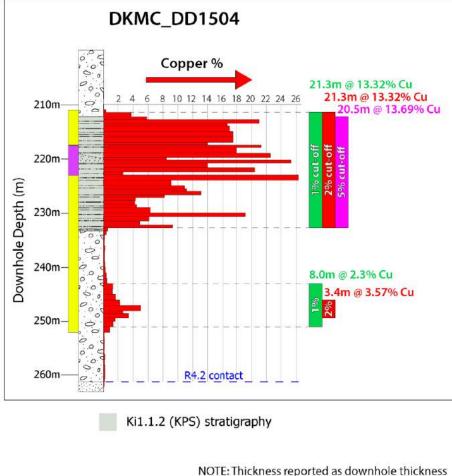


Mineralization Profiles

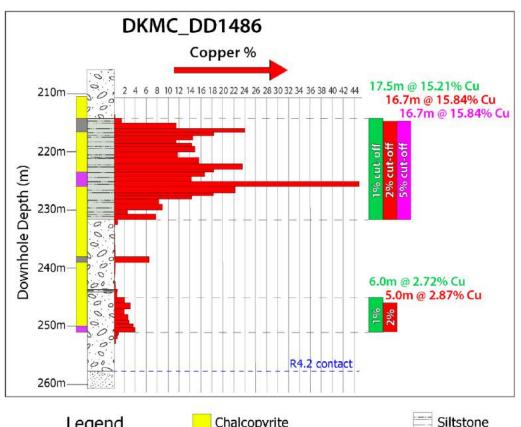
Sandstone

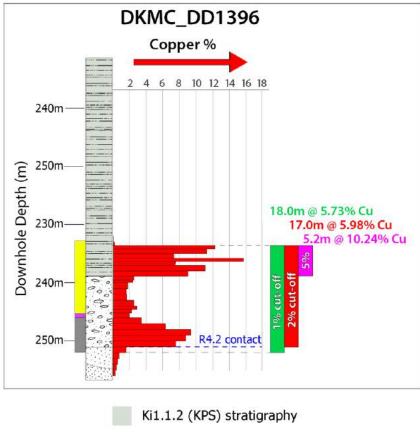


Chalcocite



Mineralization Profiles



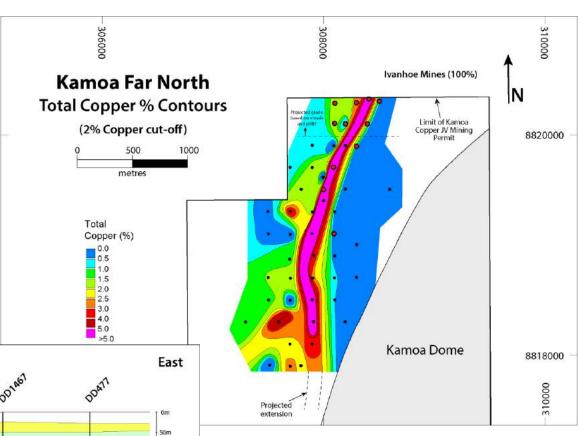


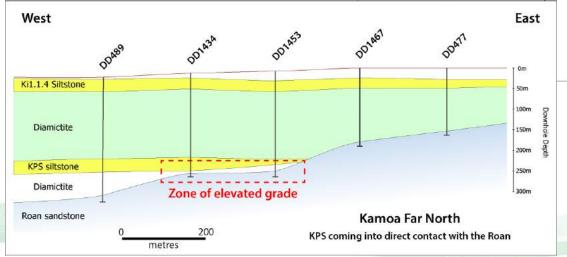




NOTE: Thickness reported as downhole thickness

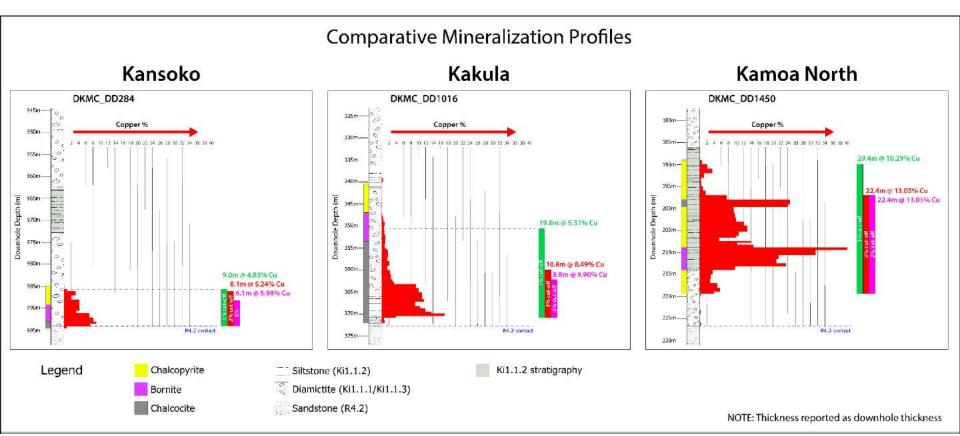
A narrow zone where the KPS (the best reductant) is brought close to the Roan (the aquifer)



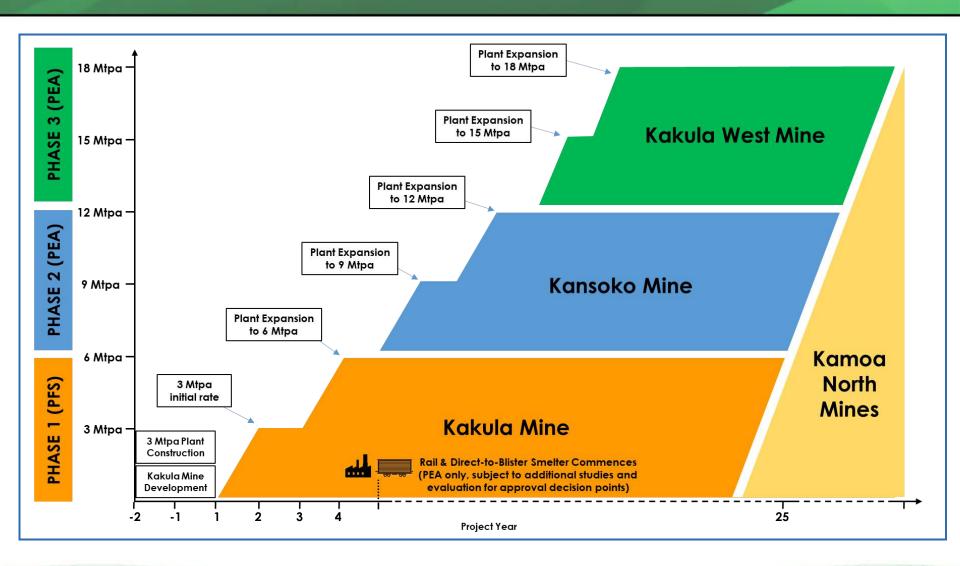




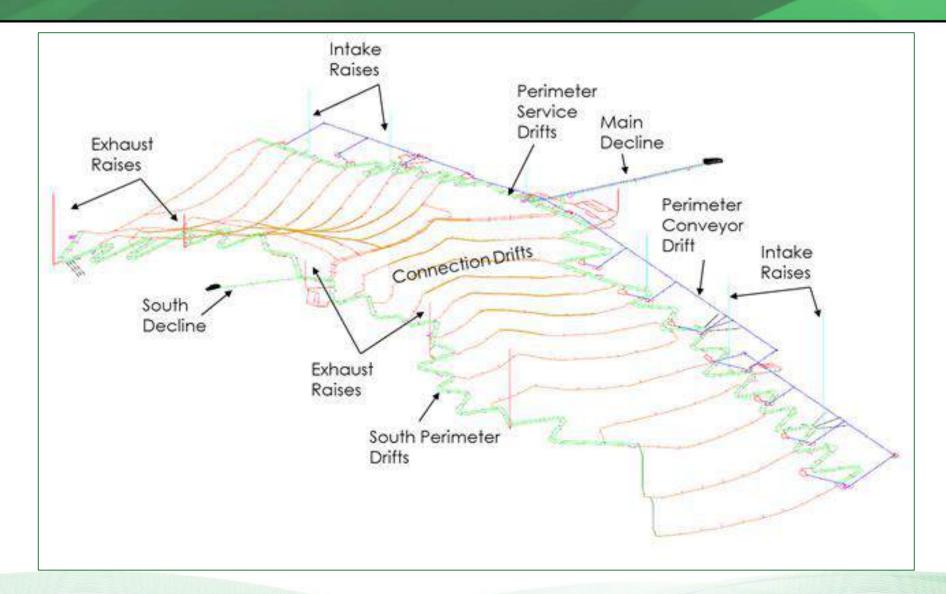
How good is Kamoa North?



PROJECT DEV'T



PROJECT DEV'T



Latest PFS and PEA Results

Description	Kakula PFS (Feb. 2019)	Kamoa-Kakula PEA (Feb. 2019)	
Mining Area	Kakula	Kakula + Kamoa + Kakula West	
Steady State Production	6 Mt	18 Mt (6 + 6 + 6 Mt)	
Copper Feed Grade (1)	6.39%	5.66%	
Copper Recovery (2)	85.4%	85.1%	
Copper Concentrate Grade (2)	57.3%	45.2%	
Copper Concentrate Produced (2)	391 ktpa	1,055 ktpa	
Copper Metal Produced (2)	224 ktpa	472 ktpa	
Peak Copper Metal Produced	360 ktpa (Yr. 4)	740 ktpa (Yr. 12)	
Mine Site Cash Cost (1)	\$0.46/lb	\$0.63/lb	
Total Cash Cost (1)	\$1.11/lb	\$0.93/lb ⁽³⁾	
Peak Funding	\$1,099M	\$1,099M	
After-tax NPV _{8%} ⁽⁴⁾	\$5,440M	\$10,030M	
IRR (Real %)	46.9%	40.9%	

Notes:



¹ First ten year average.

² Life-of-mine average.

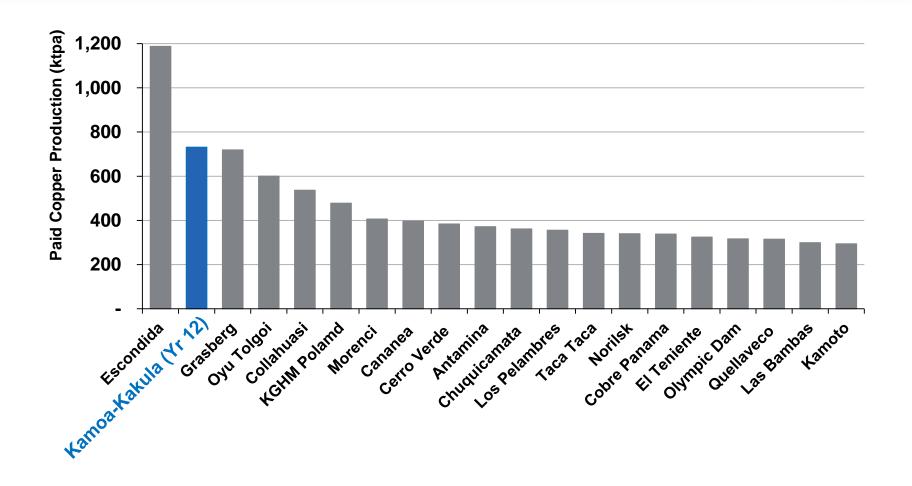
³ Cash cost after acid credits (before credits: \$1.04/lb Cu).

⁴ Consensus long-term copper price of \$3.10/lb and \$250/t acid. Includes the impact of the 2018 DRC Mining Code.

Expected to be Among the Largest Copper Mines

KAMOA-KAKULA

SUMMARY

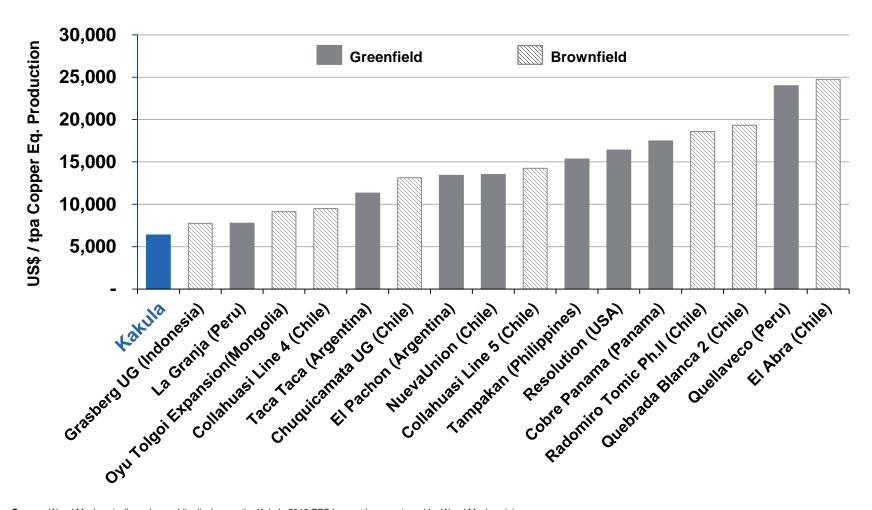


Source: Wood Mackenzie (based on public disclosure, the Kakula 2019 PFS has not been reviewed by Wood Mackenzie).

Note: Kamoa-Kakula 2019 PEA production based on projected peak copper production (which occurs in year 12) of the 18 Mtpa alternative development option.



SUMMARY



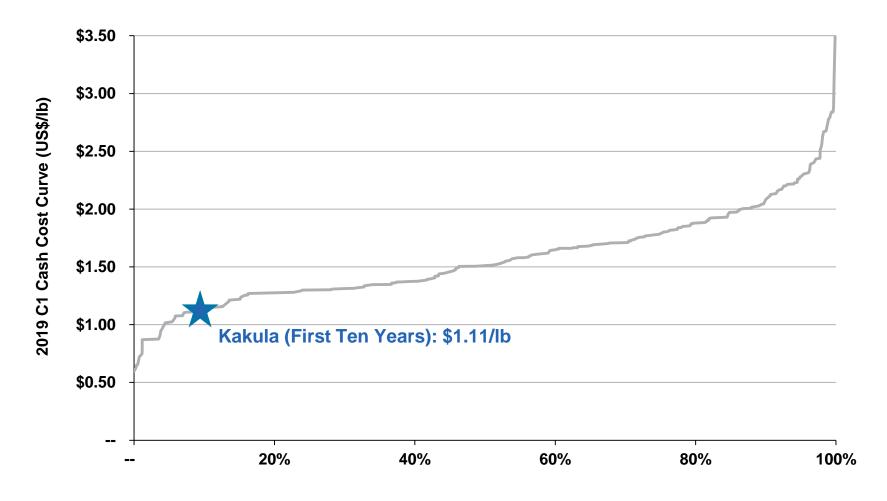
Source: Wood Mackenzie (based on public disclosure, the Kakula 2019 PFS has not been reviewed by Wood Mackenzie).

Note: : Recently approved, probable and possible projects with nominal copper production capacity in excess of 200 kt/a (based on public disclosure and information gathered in the process of routine research). Kamoa-Kakula Project based on a Kakula 6 Mtpa mine, with initial and expansion capital of \$1,856M and 10 year average copper production (291 ktpa), as detailed in the Kakula 2019 PFS.



First Quartile Cash Cost

SUMMARY



Source: Wood Mackenzie (based on public disclosure, the Kakula 2019 PFS has not been reviewed by Wood Mackenzie).

Note: Represents C1 pro-rata cash costs that reflect the direct cash costs of producing paid copper incorporating mining, processing, mine-site G&A and offsite realization costs, having made appropriate allowance for the costs associated with the co-product revenue streams. Kakula is based on the average total cash cost during the first 10 years as detailed in the Kakula 2019 PFS.



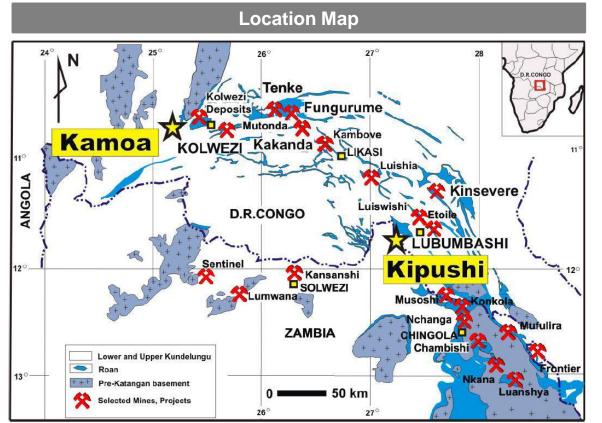


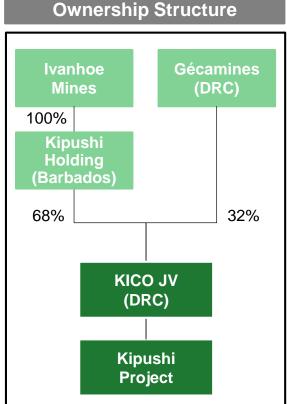
3. Kipushi Project

IVANHOE MINES

Overview of Kipushi Project

INTRODUCTION

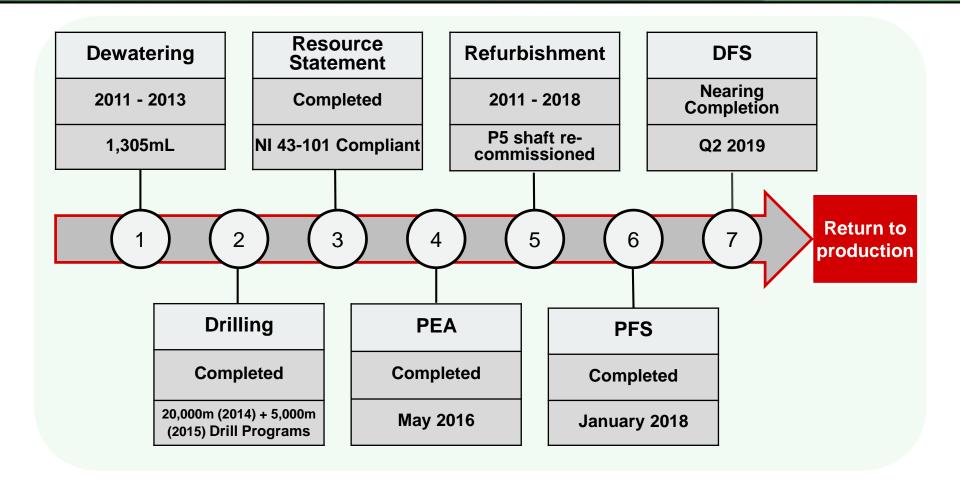




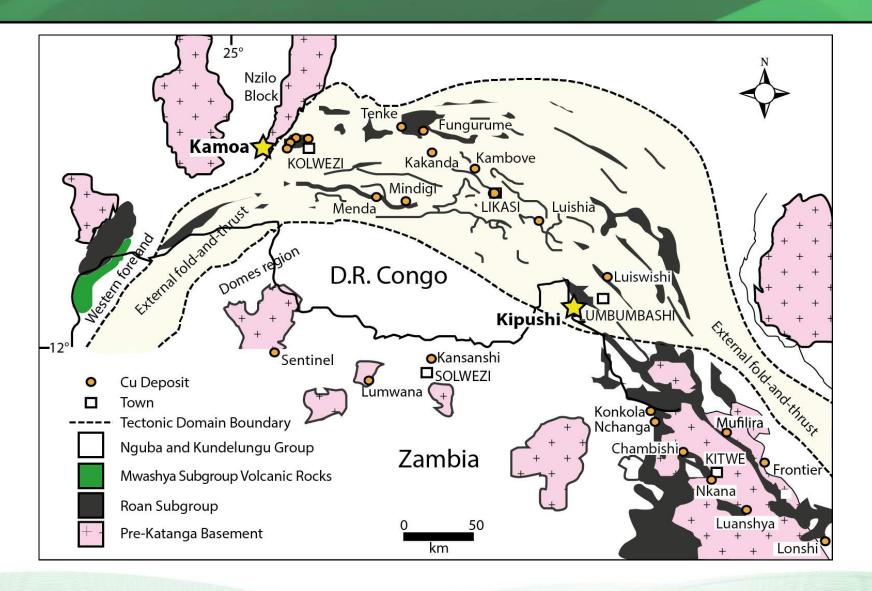
Historic Zinc-Copper mine on the DRC Copperbelt, located near the DRC-Zambia border

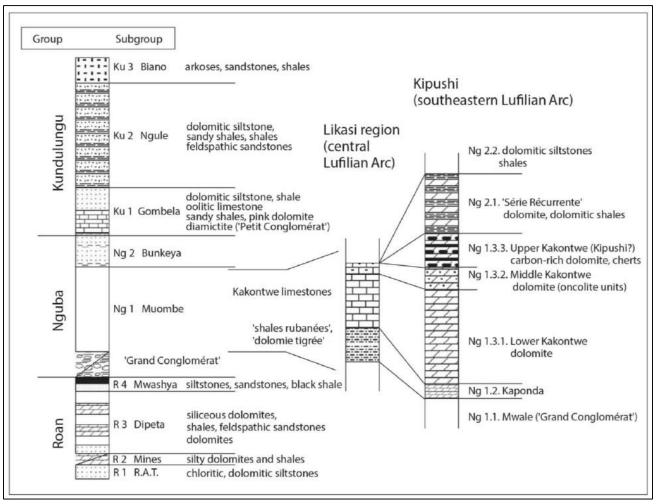
KIPUSHI

INTRODUCTION

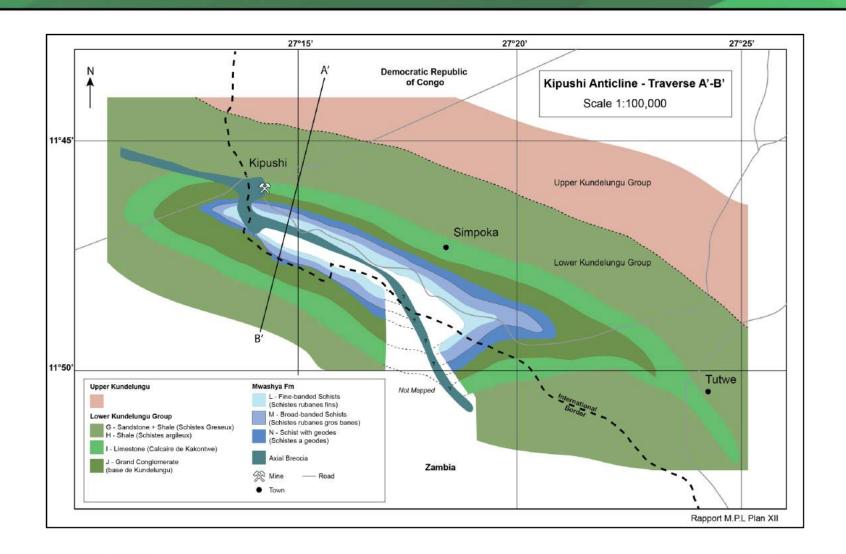


World-class project with over \$300 million invested to date since acquisition in 2011



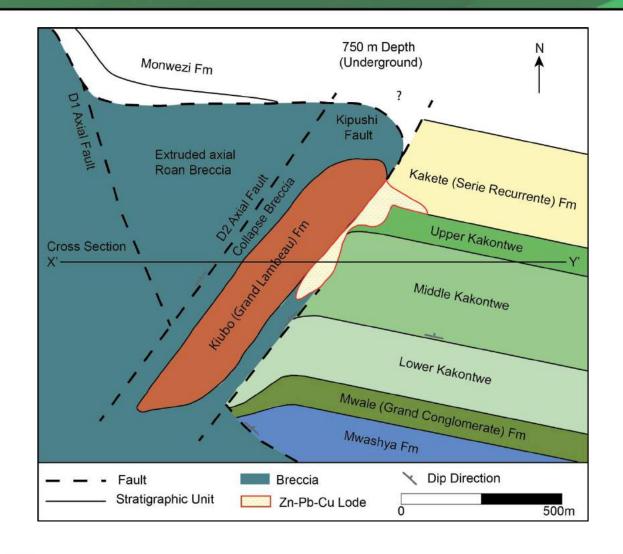


Source: Heijilen et al (2008)



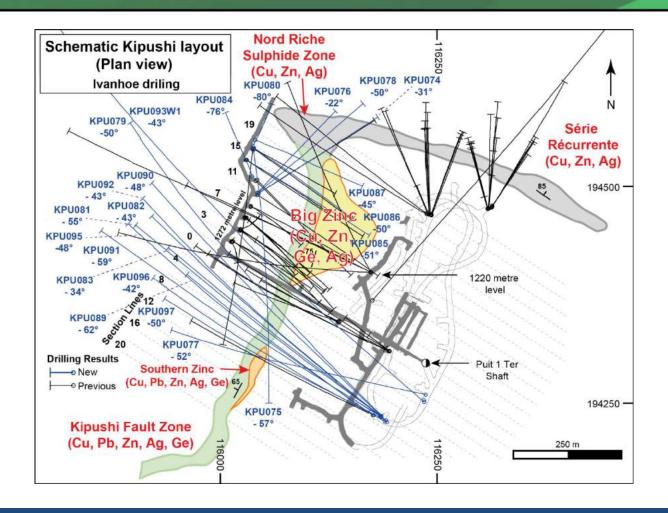
Mine Geology & Mineralization

GEOLOGY



25,000m Drill Campaign Completed

GEOLOGY

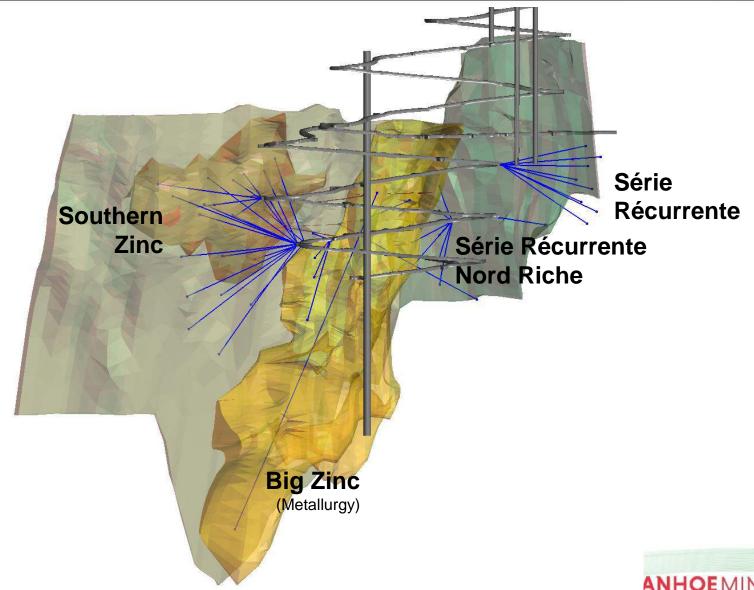


Drilling more than doubled historical resources, with mineralization open laterally and at depth



2017 Drill Programme

GEOLOGY



Zinc-Rich Mineral Resource (at 7% Zn Cut-Off Grade, 14 June 2018)

KIPUSHI GEOLOGY

Category ^(1,2,3,4,5)	Tonnes (Millions)	Zn %	Cu %	Pb %	Ag g/t	Co ppm	Ge g/t
Measured	3.65	39.87	0.65	0.35	18	18	56
Indicated	8.13	33.30	0.87	1.36	25	11	68
Measured & Indicated	11.78	35.34	0.80	1.05	23	13	64
Inferred	1.14	33.77	1.24	0.24	12	14	62
	Contained Metal Quantities						
Category ^(1,2,3,4,5)	Tonnes (Millions)	Zn Pounds (Millions)	Cu Pounds (Millions)	Pb Pounds (Millions)	Ag Ounces (Millions)	Co Pounds (Millions)	Ge Ounces (Millions)
Category ^(1,2,3,4,5) Measured							
	(Millions)	(Millions)	(Millions)	(Millions)	(Millions)	(Millions)	(Millions)
Measured	(Millions)	(Millions) 3,210.6	(Millions) 52.3	(Millions)	(Millions)	(Millions) 0.14	(Millions) 6.60
Measured Indicated Measured &	(Millions) 3.65 8.13	(Millions) 3,210.6 5,965.5	(Millions) 52.3 156.4	(Millions) 27.8 244.4	(Millions) 2.06 6.59	(Millions) 0.14 0.20	(Millions) 6.60 17.77

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.
- The cut-off grade calculation was based on the following assumptions: zinc price of 1.00 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 210 USD/tonne, 90% zinc recovery and 85% payable zinc.

Copper-Rich Mineral Resource (at 1.5% Cu Cut-Off Grade, 14 June 2018)

KIPUSHI GEOLOGY

Category ^(1,2,3,4,5)	Tonnes (Millions)	Cu %	Zn %	Pb %	Ag g/t	Co ppm	Ge g/t
Measured Indicated	0.14 2.15	2.74 4.12	1.52 2.94	0.04 0.06	16 22	77 76	21 19
Measured & Indicated	2.29	4.03	2.85	0.06	21	76	19
Inferred	0.44	3.89	10.77	0.04	19	75	55
			Contai	ned Metal Qua	antities		
Category ^(1,2,3,4,5)	Tonnes (Millions)	Cu Pounds (Millions)	Zn Pounds (Millions)	Pb Pounds (Millions)	Ag Ounces (Millions)	Co Pounds (Millions)	Ge Ounces (Millions)
Measured	0.14	8.5	4.7	0.1	0.07	0.02	0.09
Indicated	2.15	195.4	139.4	3.0	1.51	0.36	1.31
Measured & Indicated	2.29	204.0	144.2	3.1	1.58	0.39	1.40
Inferred	0.44	37.9	104.9	0.4	0.27	0.07	0.78

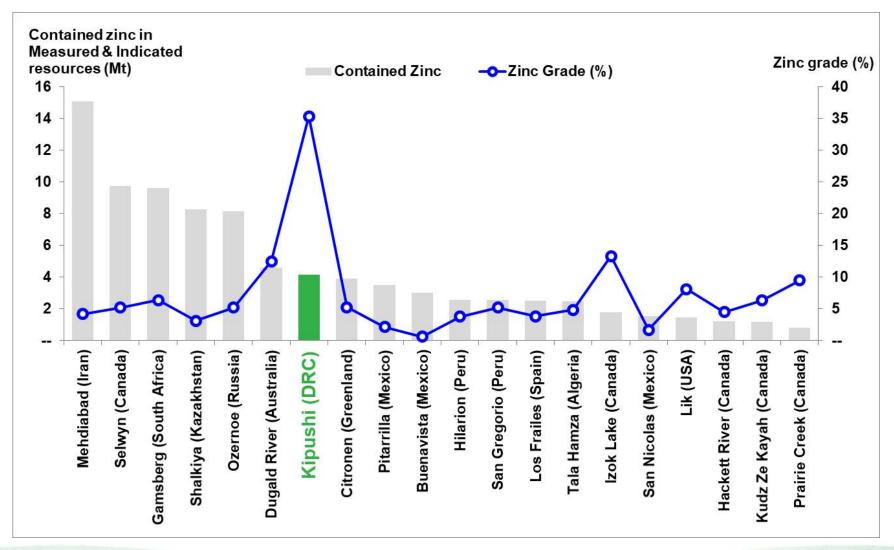
Copper-rich areas of mineralization provide an additional revenue opportunity

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: copper price of 3.0 USD/lb, mining cost of 50 USD/tonne, processing cost of 10 USD/tonne, G&A and holding cost of 10 USD/tonne, 80% copper recovery and 96% payable copper.

Top 20 Zinc Projects by Contained Zinc

GEOLOGY



Source: Company filings, Wood Mackenzie

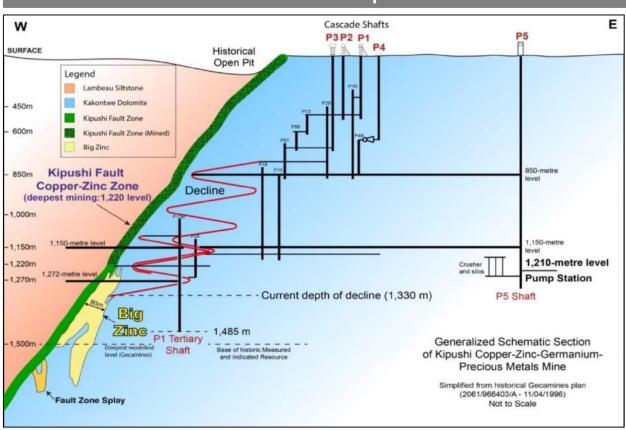
Note: Note: All tonnes and zinc grades of the above-mentioned projects (except for Kipushi) are based on public disclosure and have been compiled by Wood Mackenzie.



Existing Infrastructure

- Historic mining occurred from 1,220mL to surface
- Infrastructure includes:
 - Mine shafts
 - Head frames
 - Underground excavations (workshops, etc.)
 - Cross-cuts / ventilation
 - Series of pumps
- Newest shaft, P5
 - 1,240m deep
 - Maximum hoisting capacity of 1.8Mtpa
 - Pump station at 1,200mL
- Access through existing decline with limited development required





Significant underground infrastructure in good condition reduces pre-production capital cost

Kipushi Economics

Description	2016 PEA	2017 PFS
Material Treated	939 kt	780 kt
Feed Grade	32.2%	32.1%
Recovery	93.0%	89.6%
Concentrate Produced	530 kt	381 kt
Concentrate Grade	53%	59%
Metal Produced	281 kt	225 kt
Zinc Cash Cost	\$0.54/lb ⁽¹⁾	\$0.48/lb
Pre-Production Capital	\$409M	\$337M
After-tax NPV _{8%}	\$533M ⁽²⁾	\$683M ⁽³⁾
IRR (Real %)	30.9%	35.3%

Definitive feasibility study underway and expected to be completed in H2 2018

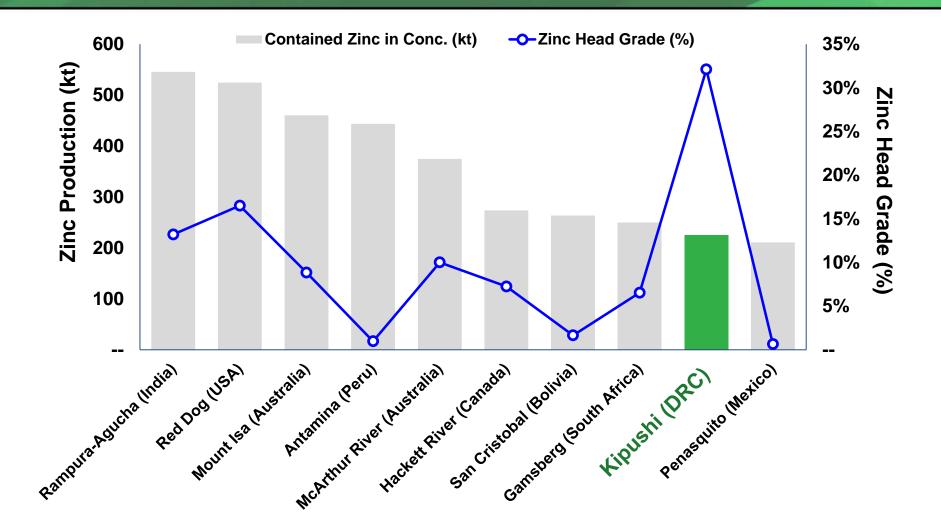
Notes:

- 1 Life of mine average cash cost after copper credits (before credits: \$0.56/lb Zn).
- 2 \$1.01/lb long-term zinc price.
- 3 \$1.10/lb long-term zinc price.



Expected To Be Top 10 Zinc Producer

ECONOMICS



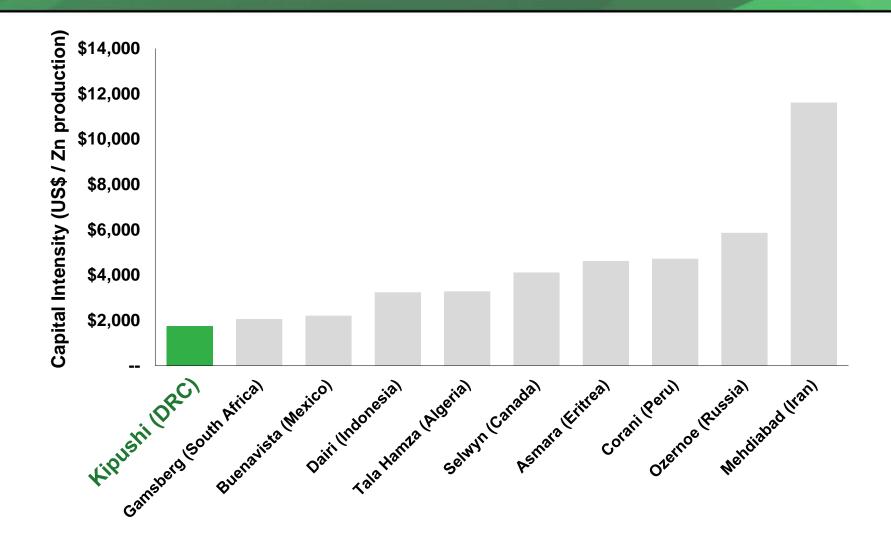
Source: Company filings, Wood Mackenzie

Note: World's major zinc mines defined as the world's 10 largest zinc mines ranked by forecasted production by 2020.



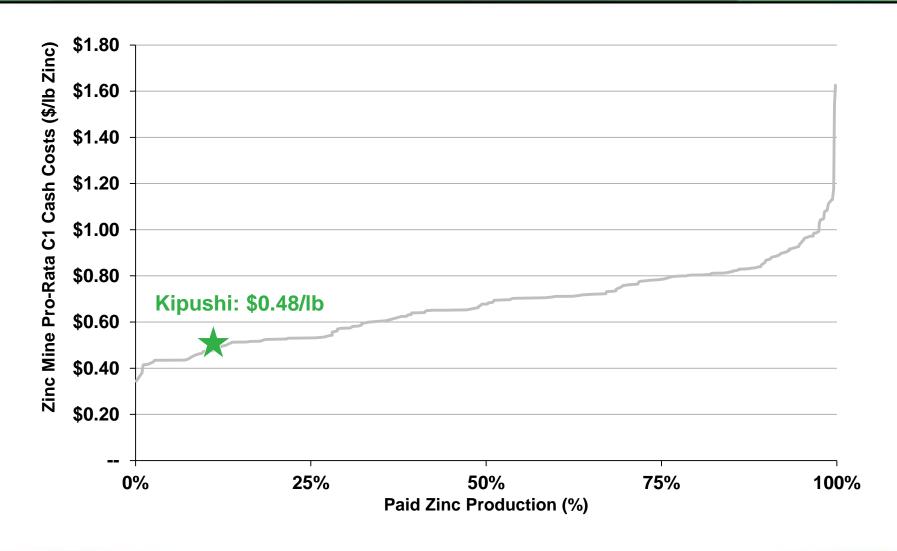
Capital Intensity

ECONOMICS



First Quartile Cash Costs

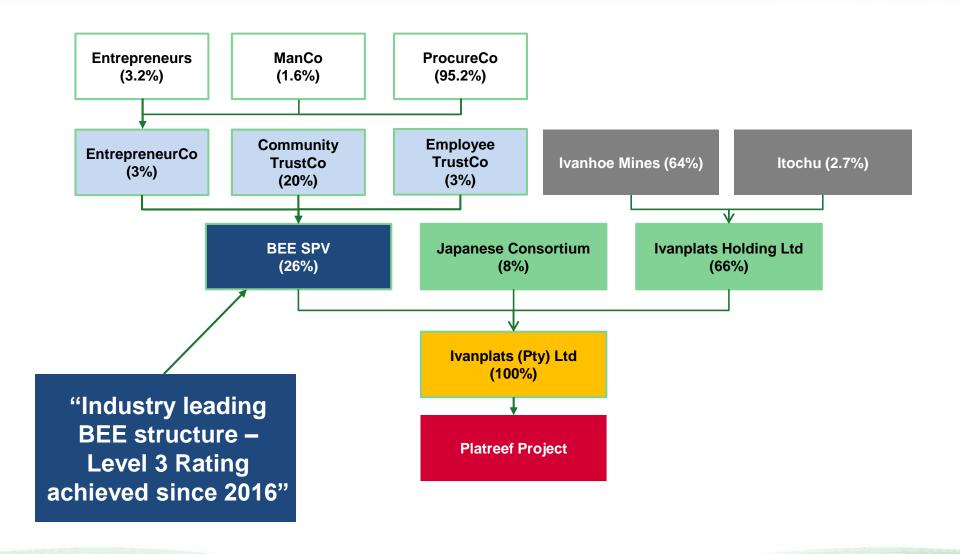
ECONOMICS





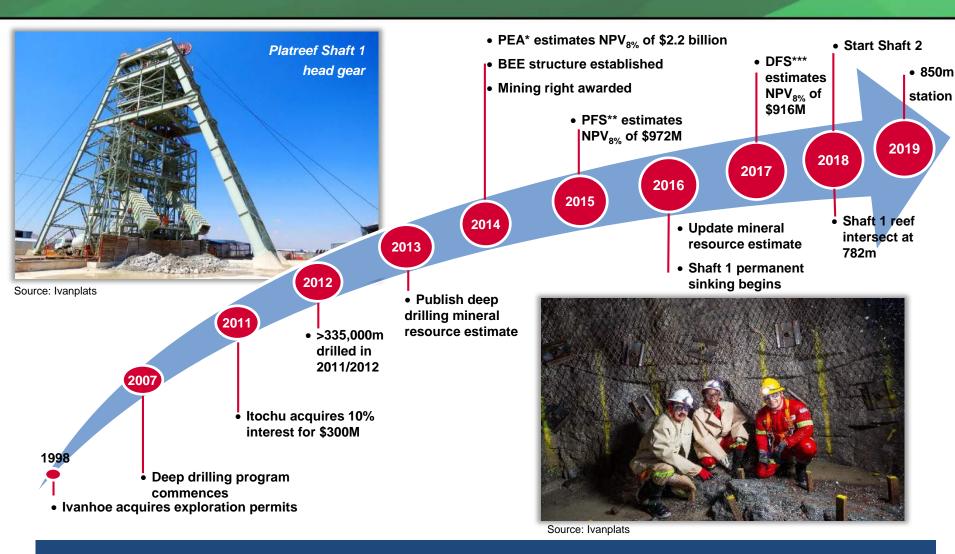
IVANHOEMINES NEW HORIZONS

Ivanplats - Ownership Structure



Project Timeline & Achievements to Date

PLATREEF INTRODUCTION



Developing a unique deposit into the future of PGM mining in South Africa

^{*} PEA based on 12Mtpa production case

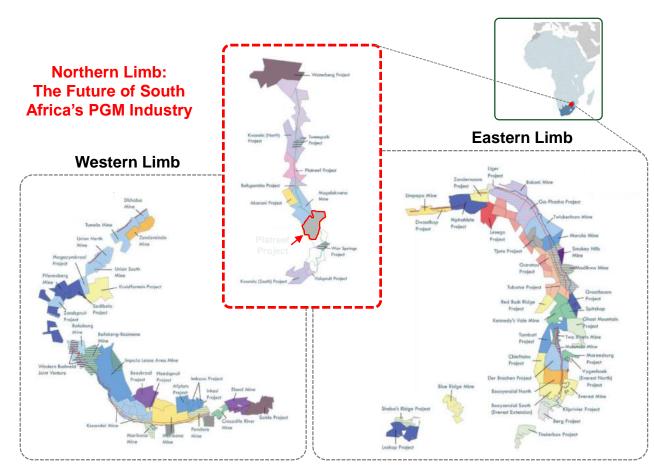
^{**} PFS based on 4Mtpa production case

^{***} DFS based on 4Mtpa production case

The Bushveld Igneous Complex (BIC)

GEOLOGY

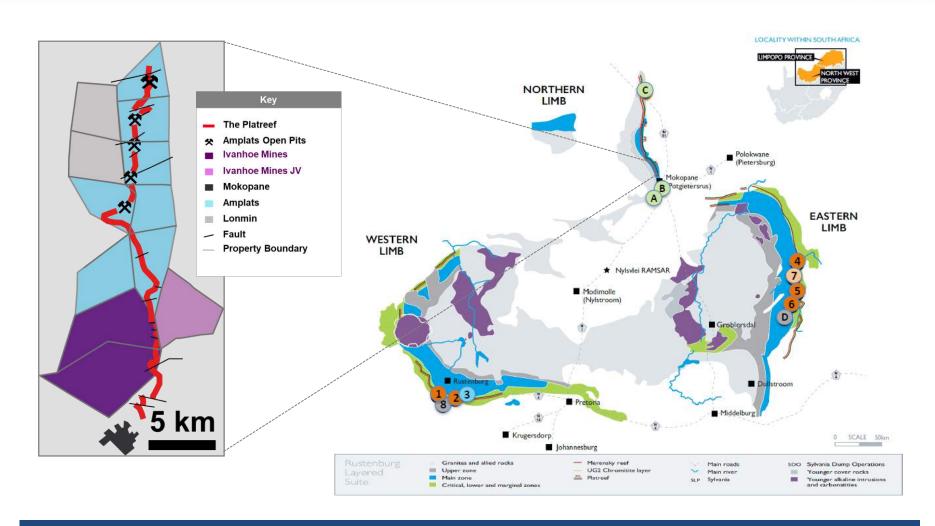
Anglo American Impala Platinum **Lonmin Platinum Aquarius Platinum Northam Platinum** Platinum Australia **Realm Resources Eastern Platinum** Jubilee Platinum **Atlatsa Resources Platmin Platfields Resources NKWE** Glencore **Bauba Platinum African Rainbow Minerals Village Main Reef Royal Bafokeng Resources** Wesizwe **Sylvania Resources**



South Africa's Bushveld Complex Produces ~75% of Global Primary Platinum

Project Location – Ivanhoe & Others

GEOLOGY

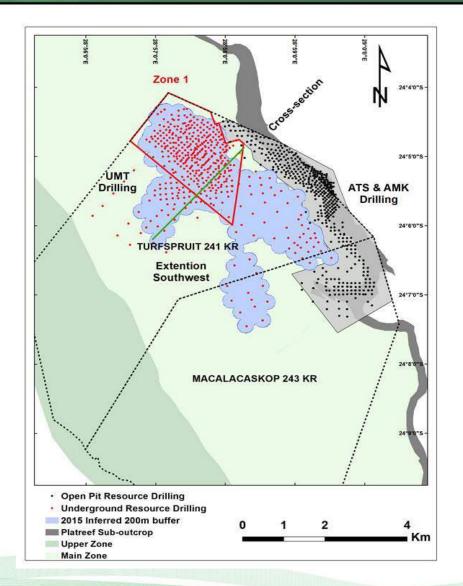


Northern Limb the future to cost-effective PGM ounces in South Africa



Project History – Exploration & Drilling

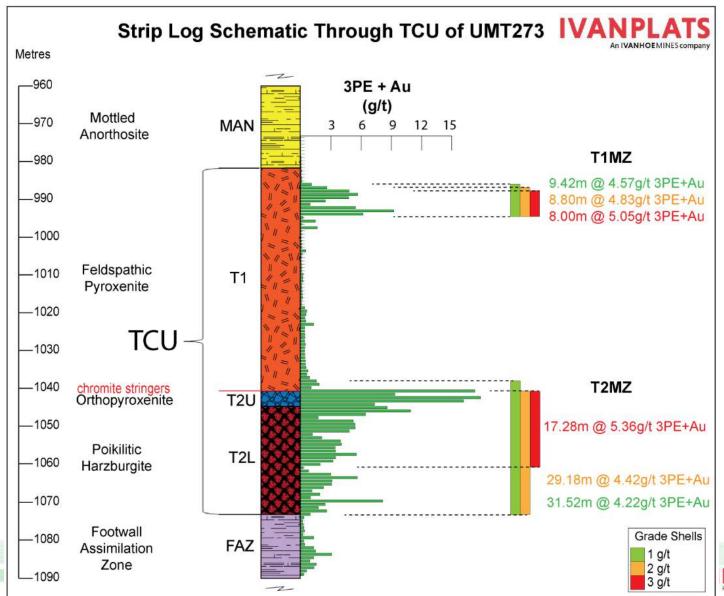




- 2000-2006: Discovery of Open-pit Resource; 563 holes, 187,000m
- 2007-2012: Discovery of Underground Resource;413 holes; ~443,000m
- 2010: Discovery of Thick High-grade Flatreef
- 2011: 30 Drill rigs; Discovery of Southwest Extension
- 2011/12: Recognition of Merensky and UG2
 Analogues (re-logged 340 holes in five weeks)
- 2013: Geotech and Metallurgy Drilling for FS
- 2014/15: Zone 1 Expansion and Infill
- 2016/17: No surface drilling

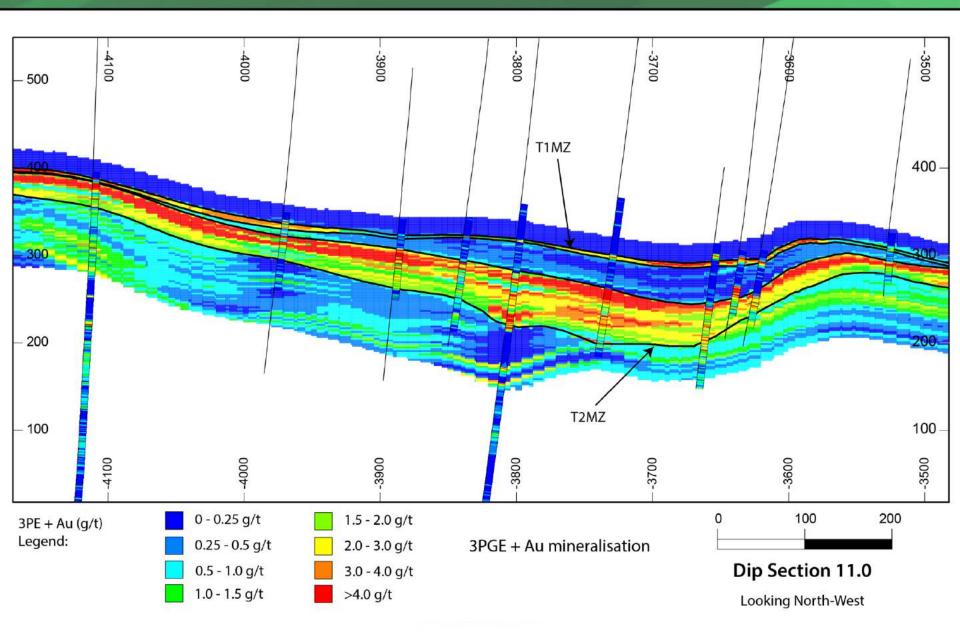
Platreef Mineralised Zones

GEOLOGY



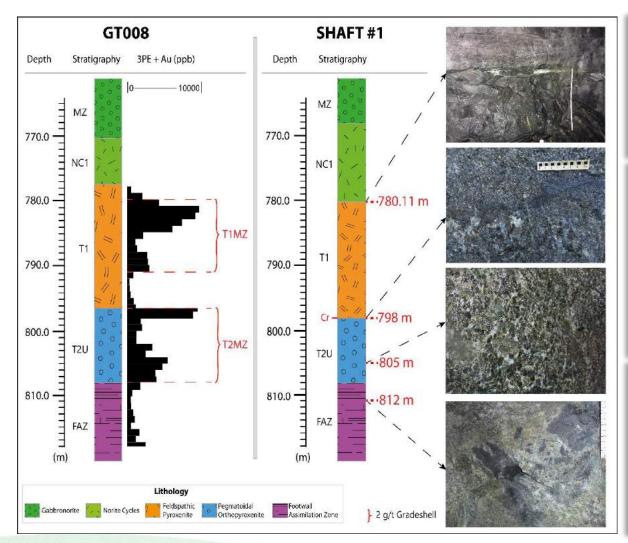


Platreef Mineralised Zones



Shaft 1 – Reef Intersect (-780m to -809m) – 29m!

GEOLOGY









Source: Ivanplats

Mineral Resource: June 2016

Indicated Mineral Resources - Tonnage and Grades								
Cut-off Grade (3PE+Au)	Mt	Pt (g/t)	Pd (g/t)	Au (g/t)	Rh (g/t)	3PE+Au (g/t)	Cu (%)	Ni (%)
3.0 g/t	204	2.11	2.11	0.34	0.14	4.7	0.18	0.35
2.0 g/t	346	1.68	1.70	0.28	0.11	3.77	0.16	0.32
1.0 g/t	716	1.11	1.16	0.19	0.08	2.55	0.13	0.26
Inferred Mineral Resources - Tonnage and Grades								
		Inter	red Mineral Res	sources - Tonn	age and Grade	es		
Cut-off Grade (3PE+Au)	Mt	Pt (g/t)	red Mineral Res	Au (g/t)	age and Grade Rh (g/t)	3PE+Au (g/t)	Cu (%)	Ni (%)
	M t 225						Cu (%) 0.17	Ni (%) 0.35
(3PE+Au)		Pt (g/t)	Pd (g/t)	Au (g/t)	Rh (g/t)	3PE+Au (g/t)		

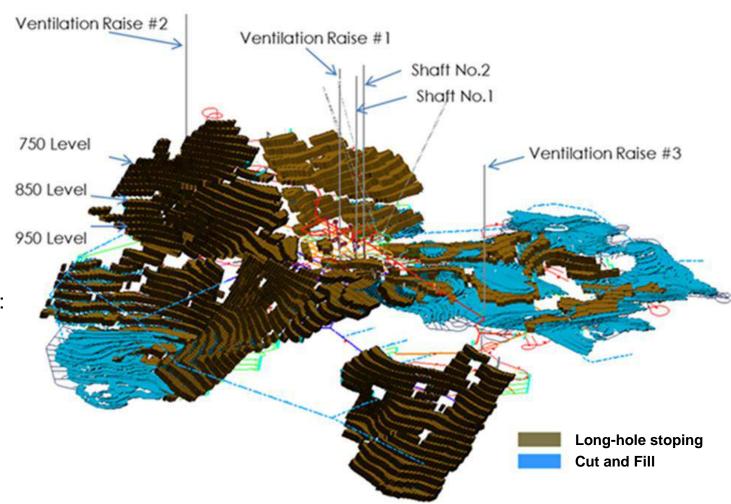
De-risking the project with 50m drill spacing's for indicated resource estimate



4Mtpa FS Mine Planning

MINING

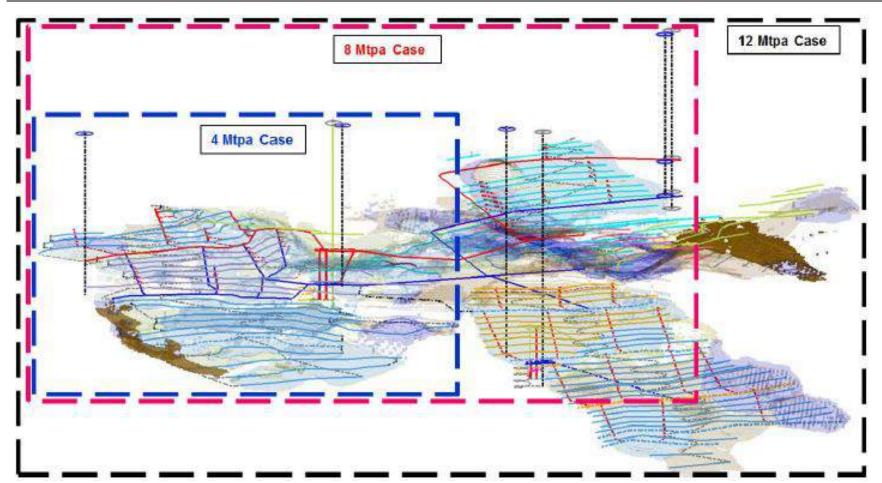
- 5 x Vertical Shafts
- Shaft 1: initial underground development; primary vent intake
- Shaft 2: main production
- Raise 1, 2 & 3: vent exhausts
- 750, 850 &950m levels



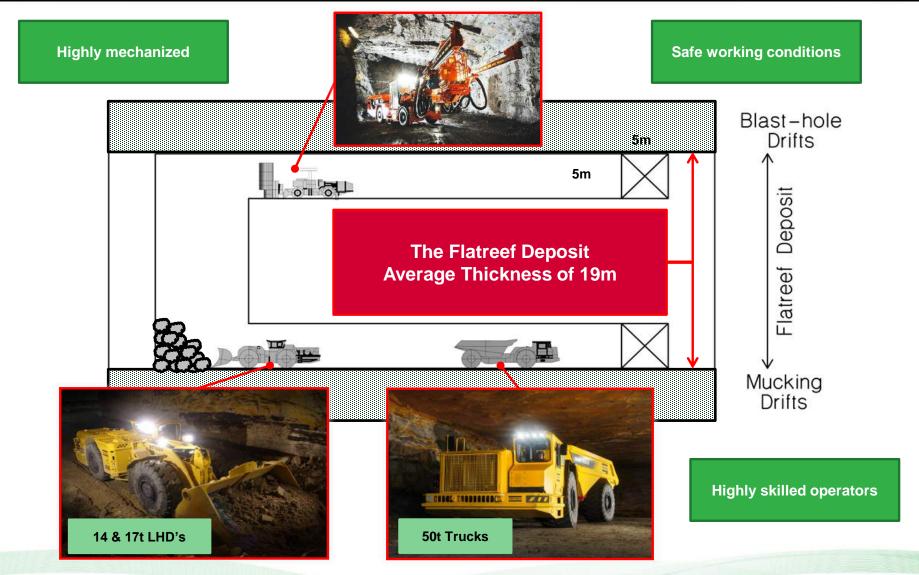
75% of the mineral reserve will be mined with long-hole stoping method

MINING

Elevated View – Mine Expansions for 4 Mtpa, 8 Mtpa and 12 Mtpa Phases (Looking Southeast)



MINING



PLATREEF

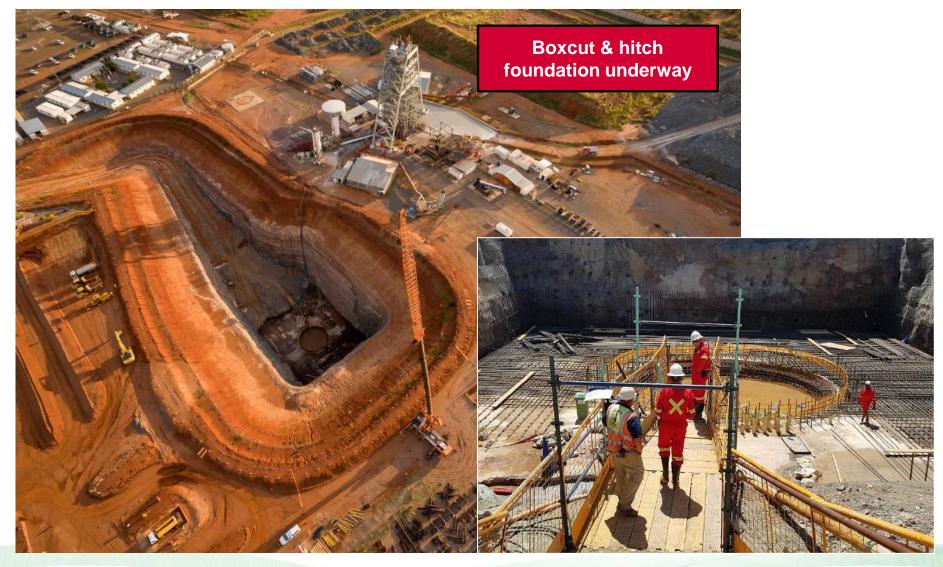
DEVELOPMENT



Project Progress – Shaft 2 Early Works

PLATREEF

DEVELOPMENT



Mine Layout & Surface Infrastructure

Twenty communities with an estimated 150,000 local residents to participate in Platreef's development as equity partners in broad-based, black economic empowerment structure

Reduced surface footprint = minimize overall environmental and social impact



Capital & Operating Costs (DFS July 2017)

Capital Cost (US\$M)				
Category	US\$ M			
Shaft #1	46			
Shaft #2	186			
Underground Mining	622			
Concentrator & Tailings	240			
Surface Infrastructure	275			
Total Direct Capital Cost (inc. EPCM)	1,368			
Owner's Costs	45			
Total Capital Cost (inc. Indirects)	1,413			
Contingency	131			
Total Capital Cost (inc. Contingency)	1,544			

Revenue & Opera	ting Costs (US\$/t milled)
Revenue	
Platinum	68.6
Palladium	46.3
Gold	9.9
Rhodium	3.5
Copper	9.7
Nickel	40.8
Gross Sales Revenue	178.8
Less: Realisation Costs	
Transport	0.6
Treatment & Refining	32.2
Royalties	8.7
Total Realisation Costs	41.5
Net Sales Revenue	137.3
Site Operating Costs	
Mining	33.3
Processing & Tailings	10.5
Infrastructure	2.4
General & Administration	2.8
Total	48.8
Operating Margin	50%
Sperating margin	30 /0

Notes:



¹ Metal price assumptions used: US\$1,250/oz Pt, US\$825/oz Pd, US\$1,300/oz Au, US\$1,000/oz Rh, US\$7.60/lb Ni, US\$3.00/lb Cu.

² Based on ZAR exchange rate of 13:1

Feasibility Study Results

Description	PEA	PFS	FS
Steady-State Production – Material Treated	12 Mtpa	4 Mtpa	4 Mtpa
Feed Grade (3PE+Au)	3.87 g/t	4.02 g/t	4.40 g/t
Recovery (3PE+Au) ⁽¹⁾	85.7%	86.5%	86.4%
Concentrate Produced	413 ktpa	159 ktpa	174 ktpa
Concentrate Grade (3PE+Au)	83 g/t	85 g/t	85 g/t
Avg. Annual Metal Produced (3PE+Au)	1,109 kozpa	433 kozpa	476 kozpa
Cash Cost (3PE+Au) ⁽²⁾	\$371/oz	\$322/oz	\$326/oz
Cash Cost + SIB Capex (3PE+Au)(2)	\$465/oz	\$402/oz	\$351/oz
Peak Funding	\$1,853M	\$1,590M	\$1,485M
After-tax NPV _{8%}	\$2,179M ⁽³⁾	\$972M ⁽⁴⁾	\$916M ⁽⁵⁾
After-tax IRR (Real %)	14.9%	13.4%	14.2%

Optimized mine plan in 2017 FS maintains economics despite significantly lower consensus commodity prices

Notes:

- 1 The 3PE+Au recovery is a weighted average of Pt, Pd, Rh and Au LOM average recoveries.
- Life of mine average cash cost after nickel and copper credits (before credits: \$854, \$792 and \$751 per oz 3PE+Au for PEA, PFS and FS, respectively).
- 3 Metal price assumptions used for the PEA economic analysis: US\$1,700/oz Pt, US\$820/oz Pd, US\$1,300/oz Au, US\$1,700/oz Rh, US\$8.35/lb Ni, US\$3.00/lb Cu.
- 4 Metal price assumptions used for the PFS economic analysis: US\$1,630/oz Pt, US\$815/oz Pd, US\$1,300/oz Au, US\$2,000/oz Rh, US\$8.90/lb Ni, US\$3.00/lb Cu.
- 5 Metal price assumptions used for the FS economic analysis: US\$1,250/oz Pt, US\$825/oz Pd, US\$1,300/oz Au, US\$1,000/oz Rh, US\$7.60/lb Ni, US\$3.00/lb Cu.

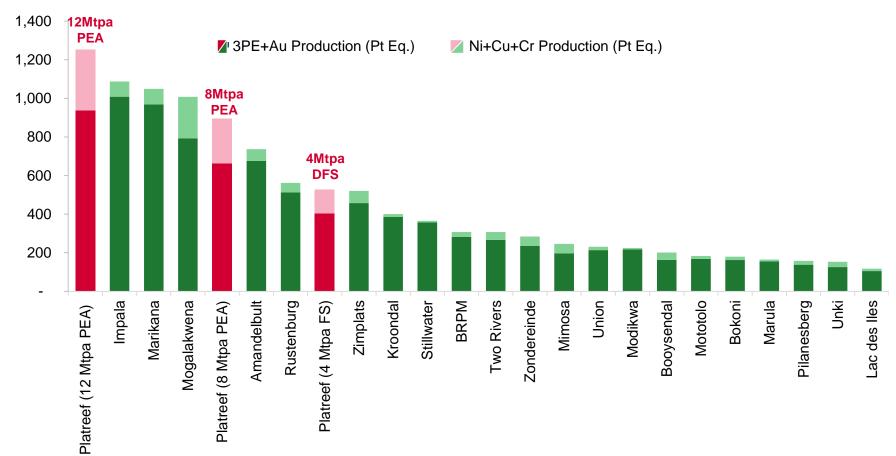


Expected To Be Largest Primary PGM Producer

ECONOMICS

PLATREEF

Pt Equivalent Production (kozpa)



Source: Company filings, SFA (Oxford)

Notes

The Platreef mine is not currently in production, but once in production it is expected to be among the world's largest primary PGM producers.

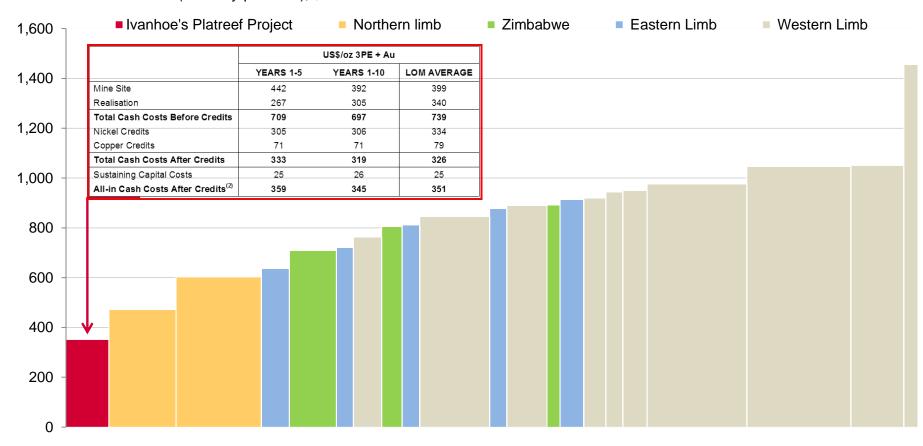
1 SFA (Oxford). Data for Platreef Project is based on reported DFS and PEA parameters, and is not representative of SFA's view.



Industry Leading Cash Costs

ECONOMICS

2017 Cash Costs + SIB (net of by-products), \$/oz 3PE+Au



Production (koz 3PE+Au)

Source: Company filings, SFA (Oxford)

Notes:

1 SFA (Oxford). Data for Platreef Project is based on reported DFS parameters, and is not representative of SFA's view.

