IVANHOE MINES
NEW HORIZONS

July 31, 2017

Ivanhoe Mines releases positive results of an independent definitive feasibility study for the planned first phase of its Platreef platinum-group elements, nickel, copper and gold mine in South Africa

First phase of development envisages an annual throughput rate of four million tonnes a year, producing 476,000 ounces of platinum, palladium, rhodium and gold, plus 33 million pounds of nickel and copper

Platreef Mine is projected to be Africa's lowest-cost producer of platinum-group metals, with a cash cost of US$351 per ounce of 3PE+Au, net of by-products, and including sustaining capital costs

Potential for relatively quick and capital-efficient expansion to six and eight million tonnes a year, and beyond, using start-up infrastructure

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

Expressions of interest received for approximately US$900 million of the targeted US$1 billion project financing and discussions have begun around the financing of the broad-based, black economic empowerment structure

Strategic discussions continuing with significant global mining companies and investors

MOKOPANE, SOUTH AFRICA – Ivanhoe Mines' (TSX: IVN; OTCQX: IVPAF) Executive Chairman Robert Friedland, Chief Executive Officer Lars-Eric Johansson and Platreef Project Managing Director Dr. Patricia Makhesha today welcomed the positive findings of an independent definitive feasibility study (DFS) of the planned initial four million tonnes per annum (Mtpa) mine and concentrator in the first phase of development of the company's Platreef platinum, palladium, rhodium, gold, nickel and copper mine.

The Platreef Project, which contains the Flatreef Deposit, is a Tier One discovery by Ivanhoe Mines' geologists on the Northern Limb of South Africa's Bushveld Igneous Complex, the world's premier platinum producing region.

Ivanhoe Mines plans to develop the Platreef Mine in three phases: 1) An initial rate of four Mtpa to establish an operating platform to support future expansions; 2) a doubling of production to eight Mtpa; and 3) expansion to a steady-state 12 Mtpa.

The independent Platreef DFS covers the first phase of development that would include construction of a state-of-the-art underground mine, concentrator and other associated infrastructure to support initial concentrate production by early 2022. As Phase 1 is being developed and commissioned, there would be opportunities to refine the timing and scope of subsequent phases of expanded production.

"The completion of the definitive feasibility study for the first phase of production is another key milestone in Ivanhoe's planned transformation of the Platreef Discovery into one of the pre-eminent South African producers of platinum-group metals," said Mr. Friedland.

"Platreef is a massive, high-grade, long-life and Tier One deposit that will produce a suite of vital metals, many of which are essential to sustain our urbanizing planet. The nickel and copper by-products are essential in the electric car revolution and the platinum and palladium are equally vital for hydrogen fuel cell technology and catalytic converters to clean the air."

"We now have a clear and defined path forward to initial production and subsequent phases of development. We are confident that the Platreef Project will benefit all of our stakeholders, including the 20 local communities that are our equity partners, for generations to come," Mr. Friedland added.

Mr. Friedland said the results reported in the new study demonstrate Platreef's robust economics, which first were highlighted in the March 2014 preliminary economic assessment and further reinforced by the January 2015 pre-feasibility study.

"Now this definitive study has confirmed the technical viability of what is projected to be the world's lowest-cost, and in time expected to be the largest, single primary producer of platinum-group metals.

"Despite lower metal prices used in the definitive feasibility study compared to the 2015 pre-feasibility study, we have maintained the excellent economics of the Platreef Project due, in part, to the mine optimization work completed with assistance from industry-leading experts, such as Whittle Consulting of Melbourne, Australia. Even at today's spot metal prices, the Platreef Project would generate an operating margin in excess of 40%," Mr. Friedland added.

Dr. Makhesha said: "We are proud to have shared our almost 20 years of exploration and development achievements at Platreef with supportive stakeholders. These stakeholders, including more than 150,000 local Mokopane area residents, see international investment and professionally managed development of natural resources as keys to unlock widely shared opportunities and prosperity."

Key features of the Platreef DFS include:

- **Indicated Mineral Resources contain an estimated 41.9 million ounces of platinum, palladium, rhodium and gold with an additional 52.8 million ounces of platinum, palladium, rhodium and gold in Inferred Resources.**
- **Enhanced Mineral Reserve containing 17.6 million ounces of platinum, palladium, rhodium and gold – an increase of 13% – following stope optimization and mine sequencing work.**
- **Development of a large, safe, mechanized, underground mine with an initial four Mtpa concentrator and associated infrastructure.**
- **Planned initial average annual production rate of 476,000 ounces (oz.) of platinum, palladium, rhodium and gold (3PE+Au), plus 21 million pounds of nickel and 13 million pounds of copper.**

- **Estimated pre-production capital requirement of approximately US$1.5 billion, at a ZAR:USD exchange rate of 13 to 1.**
- **Platreef would rank at the bottom of the cash-cost curve, at an estimated US$351 per ounce of 3PE+Au produced, net of by-products and including sustaining capital costs, and US$326 per ounce before sustaining capital costs.**
- **After-tax Net Present Value (NPV) of US$916 million, at an 8% discount rate.**
- **After-tax Internal Rate of Return (IRR) of 14.2%. The actual return to project equity owners is expected to be higher as a result of the significant amount of project financing which is being raised.**

Ivanhoe Mines indirectly owns 64% of the Platreef Project through its subsidiary, Ivanplats, and is directing all mine development work. The South African beneficiaries of the approved broad-based, black economic empowerment structure have a 26% stake in the Platreef Project. The remaining 10% is owned by a Japanese consortium of ITOCHU Corporation; Japan Oil, Gas and Metals National Corporation; and Japan Gas Corporation.

The Platreef DFS was prepared for Ivanhoe Mines by principal consultant DRA Global, with economic analysis led by OreWin, and specialized sub-consultants including Amec Foster Wheeler, Stantec Consulting, Murray & Roberts Cementation, SRK Consulting, Golder Associates and Digby Wells Environmental. The full technical report will be filed on SEDAR at www.sedar.com and on the Ivanhoe Mines website at www.ivanhoemines.com within 45 days of the issuance of this news release.

Table 1.0: Platreef DFS results.

Item	Units	Total / Average Life of Mine
Mined and processed		
Mineral Reserves	Million tonnes	125
Platinum	g/t	1.95
Palladium	g/t	2.01
Gold	g/t	0.30
Rhodium	g/t	0.14
3PE+Au	**g/t**	**4.40**
Copper	%	0.17
Nickel	%	0.34
Key financial results		
Life of mine	Years	32
Pre-production capital	US$ million	1,544
Peak funding	US$ million	1,485
Mine-site cash cost	US$ per ounce 3PE+Au	399
Total cash cost after credits	US$ per ounce 3PE+Au	326
All-in cash cost after credits	US$ per ounce 3PE+Au	351
Site operating costs	US$ per tonne milled	48.79
After-tax $NPV_{8\%}$	US$ million	916
After-tax IRR	%	14.2
Project payback period	years	5.3

1. The economic analysis is based on Probable Mineral Reserves only.
2. 3PE+Au = platinum, palladium, rhodium and gold.
3. Metal prices used in the Mineral Reserve estimate are as follows: US$1,600/oz platinum, US$815/oz palladium, US$1,300/oz gold, US$1,500/oz rhodium, US$8.90/lb nickel and US$3.00/lb copper.
4. A declining Net Smelter Return (NSR) cut-off of US$155/tonne–$80/tonne was used in the Mineral Reserve estimate.
5. Metal price assumptions used for the DFS economic analysis are as follows: US$1,250/oz platinum, US$825/oz palladium, US$1,300/oz gold, US$1,000/oz rhodium, US$7.60/lb nickel and US$3.00/lb copper.
6. All-in cash costs include sustaining capital costs.

Summary of financial results

The DFS economic analysis used life-of-mine (LoM) price assumptions of US$1,250/oz platinum, US$825/oz palladium, US$1,300/oz gold, US$1,000/oz rhodium, US$7.60/lb nickel and US$3.00/lb copper. These prices were based on a review of consensus price forecasts from financial institutions and similar studies that had been published recently.

The results of the financial analysis show an after-tax NPV_8 of US$916 million, an after-tax IRR of approximately 14% and a payback period of approximately five years. The cash flow estimates have been prepared on a real basis, as at January 1, 2017, and using mid-year discounting to calculate the NPV. A summary of the financial results is shown in Table 1.1.

Table 1.1: Financial results.

	Discount Rate	Before Taxation	After Taxation
Net present value (NPV) (US$ million)	Undiscounted	8,897	6,471
	5.0%	2,794	1,961
	8.0%	**1,392**	**916**
	10.0%	838	500
	12.0%	461	217
Internal rate of return (IRR)		16.2%	14.2%
Project payback period	(Years)	5.2	5.3
Exchange rate	(ZAR:USD)	13:1	

Table 1.2: Sensitivity of Net Present Value and IRR to commodity prices and exchange rates.

	ZAR: USD	Change in Commodity Prices (+/- %)				
		-28%	-12%	**0%**	+12%	+28%
		Implied Platinum Price (US$ per ounce)				
		900	1,100	**1,250**	1,400	1,600
$NPV_{8\%}$ (US$ million) *(IRR)*	9:1	-844 *(2.7%)*	-290 *(6.3%)*	94 *(8.5%)*	466 *(10.5%)*	962 *(12.9%)*
	11:1	-301 *(5.9%)*	209 *(9.4%)*	580 *(11.6%)*	952 *(13.7%)*	1,446 *(16.2%)*
	13:1	48 *(8.4%)*	544 *(11.9%)*	916 *(14.2%)*	1,286 *(16.4%)*	1,779 *(19.0%)*
	15:1	295 *(10.5%)*	791 *(14.1%)*	1,161 *(16.5%)*	1,530 *(18.7%)*	2,017 *(21.3%)*
	17:1	483 *(12.3%)*	979 *(16.0%)*	1,347 *(18.5%)*	1,713 *(20.8%)*	2,202 *(23.5%)*

Figure 1.1: After-tax cash flow at different commodity prices.

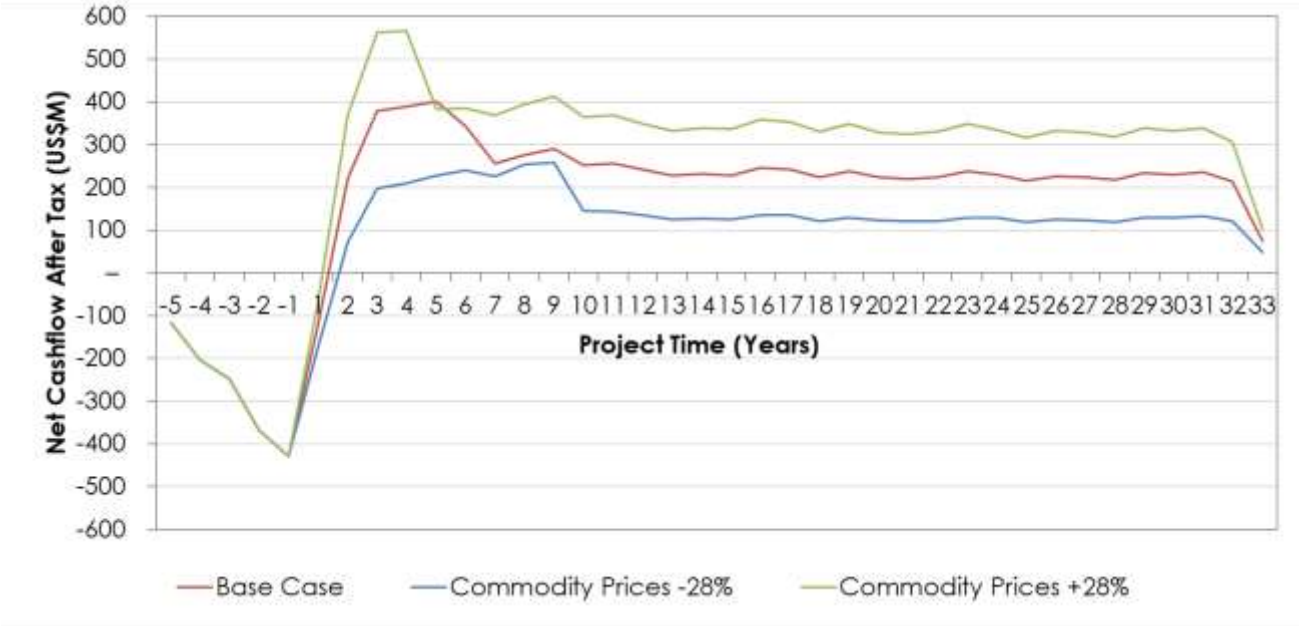


Table 1.3: Comparison of 2017 DFS results to 2015 PFS.

Operational results (annual average)	**Units**	**PFS**	**DFS**	
Steady-state throughput	Million tonnes	4	4	
Life of mine	years	31	32	
Feed grade (3PE+Au)[4]	g/t	4.02	4.40	
Concentrate produced	kt	159	174	
Saleable metal (3PE+Au)	koz	433	476	
Key financial results				
Pricing scenario		***2015 Pricing*[1]**	***2015 Pricing*[2]**	***2017 Pricing*[3]**
Total cash cost after credits (3PE+Au)	US$ per ounce	322	329	326
All-in cash cost after credits (3PE+Au)[5]	US$ per ounce	402	355	351
Peak funding	US$ million	1,590	1,453	1,485
After-tax $NPV_{8\%}$	US$ million	972	1,447	916
After-tax IRR	Real %	13.4%	17.2%	14.2%

1. Based on long-term prices of US$1,630/oz platinum, US$815/oz palladium, US$1,300/oz gold, US$2,000/oz rhodium, US$8.90/lb nickel and US$3.00/lb copper, and ZAR:USD of 11:1.
2. Based on long-term prices of US$1,630/oz platinum, US$815/oz palladium, US$1,300/oz gold, US$2,000/oz rhodium, US$8.90/lb nickel and US$3.00/lb copper, and ZAR:USD of 13:1.
3. Based on long-term prices of US$1,250/oz platinum, US$825/oz palladium, US$1,300/oz gold, US$1,000/oz rhodium, US$7.60/lb nickel and US$3.00/lb copper, and ZAR:USD of 13:1.
4. 3PE+Au = platinum, palladium, rhodium and gold.
5. All-in cash costs include sustaining capital costs.

Table 1.4: Cash costs after credits.

	US$ per ounce of 3PE+Au		
	YEARS 1-5	**YEARS 1-10**	**LIFE-OF-MINE AVERAGE**
Mine site	$442.3	$392.1	$399.5
Realization	$266.6	$304.3	$339.8
Total cash costs before credits	**$708.9**	**$696.4**	**$739.2**
Nickel credits	$304.5	$306.5	$334.4
Copper credits	$71.5	$71.1	$79.1
Total cash costs after credits	**$332.9**	**$318.9**	**$325.7**
Sustaining capital costs	$25.4	$26.1	$25.0
All-in cash costs after credits[(2)]	**$358.3**	**$345.0**	**$350.7**

1. Totals may vary due to rounding.
2. All-in cash costs include sustaining capital costs.

Table 1.5: Production summary of key average annual production results.

Item	Units	Average Life of Mine
Steady-state production[1]	Million tonnes pa	3.9
Platinum	g/t	1.95
Palladium	g/t	2.01
Gold	g/t	0.30
Rhodium	g/t	0.14
3PE+Au[2]	**g/t**	**4.40**
Copper	%	0.17
Nickel	%	0.34
Recoveries		
Platinum	%	87.4
Palladium	%	86.9
Gold	%	78.6
Rhodium	%	80.5
Copper	%	87.9
Nickel	%	71.9
Concentrate produced		
Concentrate	kt/a	174
Platinum	g/t	38.2
Palladium	g/t	39.1
Gold	g/t	5.3
Rhodium	g/t	2.4
3PE + Au[2]	**g/t**	**85.1**
Copper	%	3.3
Nickel	%	5.5
Recovered metal		
Platinum	koz/a	214
Palladium	koz/a	219
Gold	koz/a	30
Rhodium	koz/a	14
3PE + Au[2]	**koz/a**	**476**
Copper	Mlb/a	13
Nickel	Mlb/a	21

1. Production over 32 years life of mine for four Mtpa steady-state production.
2. 3PE+Au is the sum of the grades for and production of platinum, palladium, rhodium and gold.

Table 1.6: Total pre-production and sustaining capital costs, including contingency.

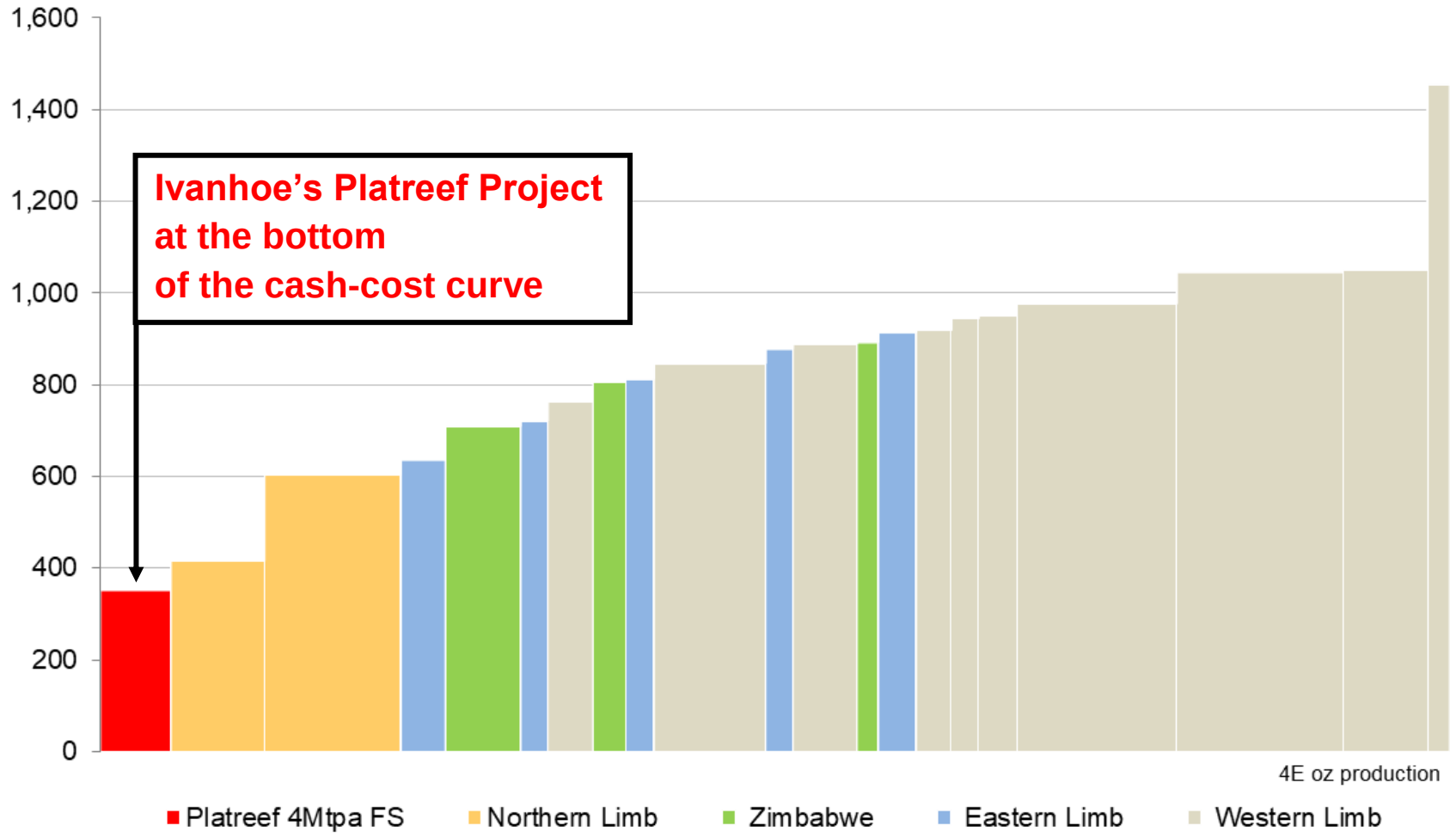
US$ million	Pre-Production	Sustaining	Total
Mining			
Exploration and geology	12	9	20
Mining	779	349	1,129
Capitalized operating costs	63	–	63
Subtotal	**854**	**358**	**1,213**
Concentrator & tailings			
Concentrator	240	6	246
Subtotal	**240**	**6**	**246**
Infrastructure			
Infrastructure	230	23	253
Site Costs	9	3	11
Capitalized operating costs	36	–	36
Subtotal	**275**	**26**	**300**
Owners cost			
Owners Cost	44	8	52
Closure	1	16	17
Sub-total	**45**	**24**	**69**
Capex before contingency	**1,413**	**414**	**1,827**
Contingency	131	3	135
Capex after contingency	**1,544**	**418**	**1,962**

1. Sustaining capital expenditure also includes 2023 construction capital expenditure.
2. Totals may vary due to rounding.

Higher nickel and copper grades contribute to lower cash costs for operations on the Northern Limb of South Africa's Bushveld Igneous Complex, as illustrated by Figure 2.0. Among the current and potential future Northern Limb producers, Platreef's estimated net total cash cost of US$351 per 3PE+Au ounce, net of copper and nickel by-product credits and including stay-in-business (SIB) capital costs, ranks at the bottom of the cash-cost curve.

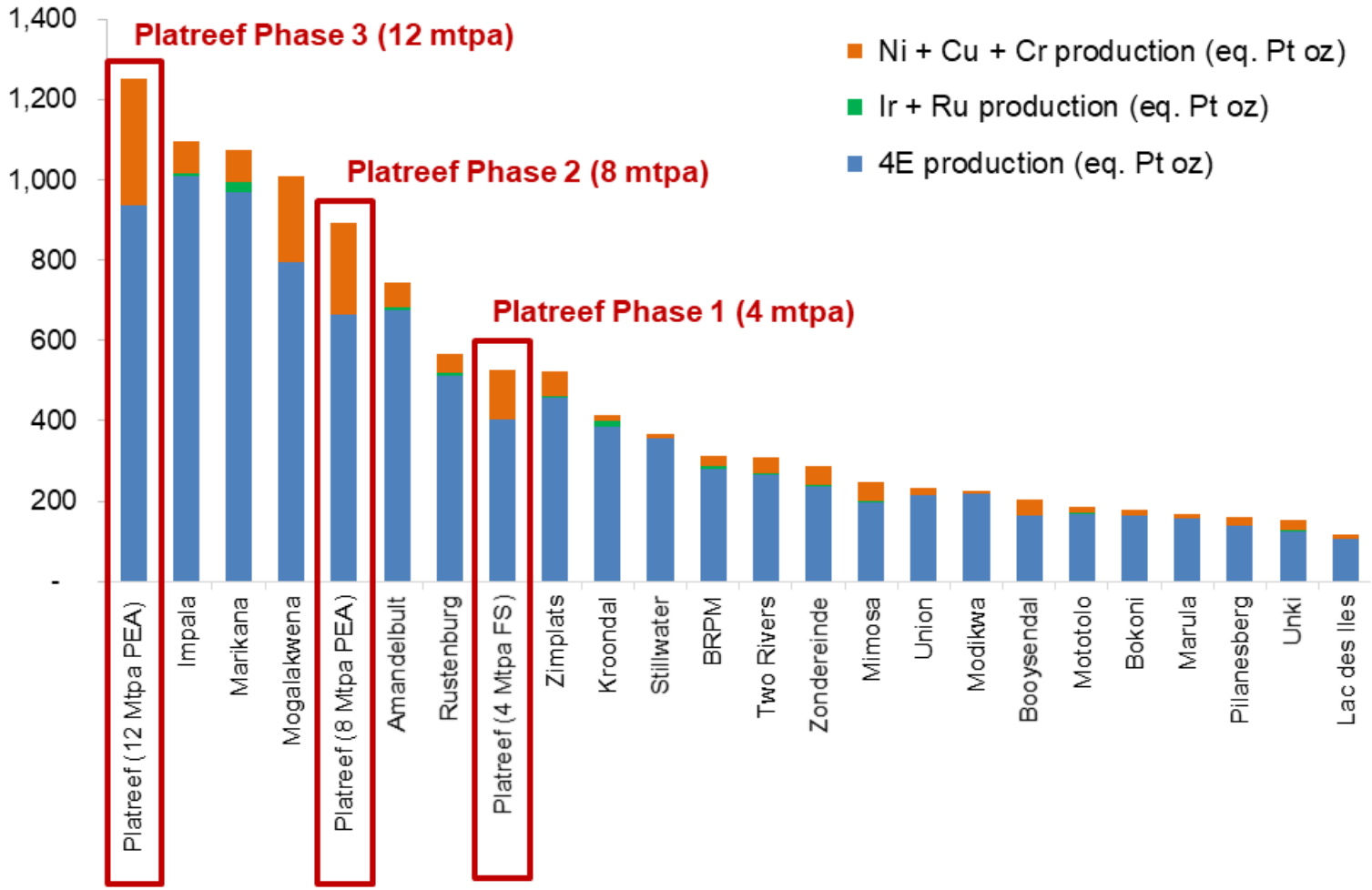
At a projected production rate of 12 Mtpa, Platreef would be the largest primary platinum-group metals mine in the world, producing over 1.2 million platinum equivalent ounces per annum (including nickel and copper), as illustrated by Figure 3.0.

Figure 2.0: Net total cash cost + SIB capital (2017 mines in production and selected projects), US$/3PE+Au oz.



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.

Figure 3.0: Total 2017E global primary platinum-equivalent production.



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.

Mineral Resources

The mineral resources used as the basis of the DFS were those amenable to underground selective mining. Information on Platreef Project geology and mineralization is contained in the Platreef Project National Instrument (NI) 43-101 Technical Report dated April 22, 2016, filed on SEDAR at www.sedar.com and on the Ivanhoe Mines website at www.ivanhoemines.com.

Table 1.7: Mineral Resources amenable to underground selective mining methods (base case is highlighted).

Indicated Mineral Resources Tonnage and Grades								
Cut-off 3PE+Au	**Mt**	**Pt (g/t)**	**Pd (g/t)**	**Au (g/t)**	**Rh (g/t)**	**3PE+Au (g/t)**	**Cu (%)**	**Ni (%)**
3 g/t	204	2.11	2.11	0.34	0.14	4.7	0.18	0.35
2 g/t	346	1.68	1.70	0.28	0.11	3.77	0.16	0.32
1 g/t	716	1.11	1.16	0.19	0.08	2.55	0.13	0.26
Indicated Mineral Resources Contained Metal								
Cut-off 3PE+Au		**Pt (Moz)**	**Pd Moz)**	**Au (Moz)**	**Rh (Moz)**	**3PE+Au (Moz)**	**Cu (Mlb)**	**Ni (Mlb)**
3 g/t		13.9	13.9	2.2	0.9	30.9	800	1,597
2 g/t		18.7	18.9	3.1	1.2	41.9	1,226	2,438
1 g/t		25.6	26.8	4.5	1.8	58.8	2,076	4,108
Inferred Mineral Resources Tonnage and Grades								
Cut-off 3PE+Au	**Mt**	**Pt (g/t)**	**Pd (g/t)**	**Au (g/t)**	**Rh (g/t)**	**3PE+Au (g/t)**	**Cu (%)**	**Ni (%)**
3 g/t	225	1.91	1.93	0.32	0.13	4.29	0.17	0.35
2 g/t	506	1.42	1.46	0.26	0.10	3.24	0.16	0.31
1 g/t	1431	0.88	0.94	0.17	0.07	2.05	0.13	0.25
Inferred Mineral Resources Contained Metal								
Cut-off 3PE+Au		**Pt (Moz)**	**Pd Moz)**	**Au (Moz)**	**Rh (Moz)**	**3PE+Au (Moz)**	**Cu (Mlb)**	**Ni (Mlb)**
3 g/t		13.8	14.0	2.3	1.0	31.0	865	1,736
2 g/t		23.2	23.8	4.3	1.6	52.8	1,775	3,440
1 g/t		40.4	43.0	7.8	3.1	94.3	4,129	7,759

1. Mineral Resources have an effective date of April 22, 2016. The Qualified Persons for the estimate are Dr. Harry Parker, RM SME, and Mr. Timothy Kuhl, RM SME.
2. Mineral Resources are reported inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. The 2 g/t 3PE+Au cut-off is considered the base-case estimate and is highlighted. The rows are not additive.
4. Mineral Resources are reported on a 100% basis. Mineral Resources are stated from approximately -200 m to 650 m elevation (from 500 m to 1,350 m depth). Indicated Mineral Resources are drilled on approximately 100 x 100 m spacing; Inferred Mineral Resources are drilled on 400 x 400 m (locally to 400 x 200 m and 200 x 200 m) spacing.

5. Reasonable prospects for eventual economic extraction were determined using the following assumptions. Assumed commodity prices are Platinum: $1,600/oz; palladium: $815/oz; gold: $1,300/oz; rhodium: $1,500/oz; copper: $3.00/lb; and nickel: $8.90/lb. It has been assumed that payable metals would be 82% from smelter/refinery and that mining costs (average $34.27/t) and process, general and administrative costs, and concentrate transport costs (average $15.83/t of mill feed for a four Mtpa operation) would be covered. The processing recoveries vary with block grade but typically would be 80%-90% for platinum, palladium and rhodium; 70-90% for gold; 60-90% for copper; and 65-75% for nickel.
6. 3PE+Au = platinum, palladium, rhodium and gold.
7. Totals may not sum due to rounding.

Proposed mining methods

Mining zones in the current Platreef mine plan occur at depths ranging from approximately 700 metres to 1,200 metres below surface. Primary access to the mine will be by way of a 1,104-metre-deep, 10-metre-diameter production shaft (Shaft 2). Secondary access to the mine will be via a 980-metre-deep, 7.25-metre-diameter ventilation shaft (Shaft 1), which is under construction. During mine production, both shafts also will serve as ventilation intakes. Three additional ventilation exhaust raises (Ventilation Raise 1, 2, and 3) are planned to achieve steady-state production.

Mining will be performed using highly productive mechanized methods, including long-hole stoping and drift-and-fill. Each method will utilize cemented backfill for maximum ore extraction. The current mine plan has been improved over the 2015 PFS mine plan by optimizing stope design, employing a declining Net Smelter Return (NSR) strategy and targeting higher-grade zones early in the mine life. This strategy has increased the grade profile by 23% on a 3PE+Au basis in the first 10 years of operation and 10% over the life of the mine.

The ore will be hauled from the stopes to a series of internal ore passes and fed to the bottom of Shaft 2, where it will be crushed and hoisted to surface.

Increased Mineral Reserves at Platreef Project

Ivanhoe has declared an increased Probable Mineral Reserve of 17.6 million ounces of platinum, palladium, rhodium and gold, using a declining NSR cut-off of $155/t to $80/t. This increase of 13% follows stope optimization and mine sequencing work, resulting in improved head grades. Tables 1.8 and 1.9 show Probable Mineral Reserves for Platreef.

Table 1.8: Platreef Probable Mineral Reserves – tonnage and grades as at May 24, 2017.

Method	Mt	NSR ($/t)	Pt (g/t)	Pd (g/t)	Au (g/t)	Rh (g/t)	3PE+Au (g/t)	Cu (%)	Ni (%)
Ore development	11.1	159.9	1.96	2.05	0.30	0.14	4.45	0.17	0.35
Long-hole	93.1	152.1	1.88	1.95	0.29	0.13	4.25	0.16	0.33
Drift-and-fill	20.4	182.0	2.28	2.23	0.37	0.15	5.03	0.18	0.37
Total	**124.7**	**157.7**	**1.95**	**2.01**	**0.30**	**0.14**	**4.40**	**0.17**	**0.34**

Table 1.9: Platreef Probable Mineral Reserves – contained metal as at May 24, 2017.

Method	Mt	Pt (Moz)	Pd (Moz)	Au (Moz)	Rh (Moz)	3PE+Au (Moz)	Cu (Mlb)	Ni (Mlb)
Ore development	11.1	0.7	0.7	0.1	0.05	1.6	42	85
Long-hole	93.1	5.6	5.8	0.9	0.4	12.7	333	681
Drift-and-fill	20.4	1.5	1.5	0.2	0.1	3.3	83	167
Total	**124.7**	**7.8**	**8.0**	**1.2**	**0.5**	**17.6**	**457**	**932**

1. Mineral Reserves have an effective date of May 24, 2017. The Qualified Person for the estimate is Jon Treen (Stantec), P. Eng., with Professional Engineers of Ontario.
2. A declining NSR cut-off of $155/t to $80/t was used for the Mineral Reserve estimates.
3. The NSR cut-off is an elevated cut-off above the marginal economic cut-off.
4. Metal prices used in the Mineral Reserve estimate are as follows: US$1,600/oz platinum, US$815/oz palladium, US$1,300/oz gold, US$1,500/oz rhodium, US$8.90/lb nickel and US$3.00/lb copper.
5. Metal-price assumptions used for the DFS economic analysis are as follows: US$1,250/oz platinum, US$825/oz palladium, US$1,300/oz gold, US$1,000/oz rhodium, US$7.60/lb nickel and US$3.00/lb copper.
6. Tonnage and grade estimates include dilution and mining recovery allowances.
7. Total may not add due to rounding.
8. 3PE+Au = platinum, palladium, rhodium and gold.

Based on the cut-off grade and mining criteria applied to the Platreef resource model, the Probable Mineral Reserve will support a 32-year mine life at a steady-state production rate of four Mtpa. The Mineral Reserve at four Mtpa only includes a third of the Mineral Resource estimate above an $80 per tonne NSR cut-off, which provides an opportunity to ramp-up production in future.

Metallurgy and processing methods

Metallurgical test work has focused on maximizing recovery of platinum-group elements (PGE) and base metals, mainly nickel, while producing an acceptably high-grade concentrate suitable for further processing and/or sale to a third party. The three main geo-metallurgical units and composites tested produced smelter-grade final concentrates of approximately 85 g/t PGE+Au at acceptable PGE recoveries. Test work also has shown that the material is amenable to treatment by conventional flotation without the need for mainstream or concentrate ultrafine re-grinding. Extensive bench scale testwork comprising of open circuit and locked cycled flotation testing, comminution testing, mineralogical characterisation, dewatering and rheological characterisation was performed at Mintek in South Africa, which is an internationally accredited metallurgical testing facility and laboratory.

Comminution and flotation test work has indicated that the optimum grind for beneficiation is 80% passing 75 micrometres. Platreef ore is classified as being ‘hard’ to ‘very hard’ and thus not suitable for semi-autogenous grinding; a multi-stage crushing and ball-milling circuit has been selected as the preferred size reduction route.

Improved flotation performance has been achieved using high-chrome grinding media as opposed to carbon steel media. The inclusion of a split-cleaner flotation circuit configuration, in which the fast-floating fraction is treated in a cleaner circuit separate from the medium- and slow-floating fractions, resulted in improved PGE, copper and nickel recoveries and concentrate grades.

As with the PFS, a two-phased development approach was used for the DFS flow-sheet design. The selected flow sheet comprises a common four Mtpa, three-stage crushing circuit, feeding crushed material to two parallel milling-flotation modules, each with a nominal capacity of two Mtpa. Flotation is followed by a common concentrate thickening, concentrate filtration, tailings disposal and tailings-handling facility.

Future expansion options

Given the size and potential of the Platreef resource, as demonstrated by the phased expansions outlined in the PEA, Shaft 2 has been engineered with a crushing and hoisting capacity of six Mtpa.

This allows for a relatively quick and capital-efficient first expansion of the Platreef Project to six Mtpa by increasing underground development and commissioning a third, two-Mtpa processing module and associated surface infrastructure as required.

A further expansion to more than eight Mtpa would entail converting Shaft 1 from a ventilation shaft into a hoisting shaft. This would require additional ventilation exhaust raises, as well as a further increase of underground development, commissioning of a fourth, two-Mtpa processing module and associated surface infrastructure, as described in the PEA as Phase 2 of the project.

Supply of water and electricity

The Olifants River Water Resource Development Project (ORWRDP) is designed to deliver water to the Eastern and Northern limbs of South Africa's Bushveld Complex. The project consists of the new De Hoop Dam, the raised wall of the Flag Boshielo Dam and related pipeline infrastructure that ultimately is expected to deliver water to Pruissen, southeast of the Northern Limb. The Pruissen Pipeline Project is expected to be developed to deliver water onward from Pruissen to the municipalities, communities and mining projects on the Northern Limb. Ivanhoe Mines is a member of the ORWRDP's Joint Water Forum.

The Platreef Project's water requirement for the first phase of development is projected to peak at approximately 7.5 million litres per day, which is expected to be supplied by the water network. Ivanhoe also is investigating various alternative sources of bulk water, including an allocation of bulk grey-water from a local source.

On February 24, 2017, the five-million-volt-ampere (MVA) electrical power line connecting the Platreef site to the South African public electricity utility (Eskom) was energized and now is supplying electricity to Platreef for shaft sinking and construction activities. The new power line, a collaboration between Platreef, Eskom and the Mogalakwena Local Municipality, also established a platform to provide energy to the neighboring community of Mzombane, which previously was without electricity reticulation and supply.

Platreef's electrical power requirement for the phase one, four Mtpa, underground mine, concentrator and associated infrastructure has been estimated at approximately 100 MVA. An agreement has been reached with Eskom for the supply of phase-one power. Ivanhoe chose a self-build option for permanent power that will enable the company to manage the construction of the distribution lines from Eskom's Burutho sub-station to the Platreef Mine.

Photo 1: Platreef Mine illustration of first-phase surface infrastructure and host communities. The secured surface area is designed to accommodate an expansion to eight Mtpa.

Update on construction progress

Shaft 1 sinking continues to advance at a rate of 45 to 50 metres per month, and has reached a depth of 450 metres below surface. Shaft 1 is expected to reach its projected, final depth of 980 metres below surface in 2018. The first lateral development off-shaft at 450 metres below surface is underway. This station will serve as an intermediate water pumping and shaft cable termination station.

Early-works surface construction for Shaft 2 began in late May 2017. It includes the excavation of a surface box-cut to a depth of approximately 29 metres below surface and construction of the concrete hitch for the 103-metre-tall concrete headgear (headframe) that will house the shaft's permanent hoisting facilities and support the shaft collar. The early-works construction is expected to be completed in approximately 12 months.

Concentrate off-take

Concentrate off-take discussions are underway with several South African PGM smelters. Ivanhoe Mines has received indications of interest from a number of these parties. Ivanhoe Mines' internal studies forecast sufficient smelting capacity in South Africa for the first phase of production from the Platreef Project. Several off-take agreements may have to be negotiated to achieve optimal terms for the Platreef Project. Technical discussions have begun with the objective of finalizing one or more off-take agreements before the production of first concentrate.

Project financing and strategic discussions underway

On July 19, 2017, Ivanhoe Mines announced the appointment of two leading mine-financing institutions, in addition to the three leading financial institutions appointed earlier this year, to arrange project financing for the development of the Platreef Project. The five Initial Mandated Lead Arrangers (IMLAs) will make best efforts to arrange a total debt financing of up to US$1 billion for the development of Platreef's first-phase, four Mtpa mine. Preliminary expressions of interest now have been received for approximately US$900 million of the targeted US$1 billion financing. Negotiation of a term sheet is ongoing. In addition, preliminary discussions have commenced with leading financial institutions around the financing of the black economic empowerment partners' contribution to the development capital.

"The issuance of the definitive feasibility study is a critical step in arranging the project debt financing. The results of the study confirm our belief that the Platreef Project will deliver high operating margins and significant cash flow, even at lower commodity prices," Mr. Johansson said.

Based on long-term prices, Platreef's life-of-mine average basket price is US$1,051 per ounce of 3PE+Au produced. Given the project's total cash cost after credits of US$326 per ounce of 3PE+Au, Platreef's operating margin is 69% per ounce of 3PE+Au, net of nickel and copper by-products.

Platreef's return on capital invested[(1)] is 15.0% over the life of the mine. The return to Ivanhoe Mines is expected to exceed this figure given the intention to arrange US$1 billion of project financing for the development of the project.

Continuing strategic discussions concerning Ivanhoe Mines and its projects are intensifying with several significant mining companies and investors across Asia, Europe, Africa and elsewhere. Several investors that have expressed interest have no material limit on the provision of capital.

Ivanhoe Mines will provide further comment only if a specific transaction or process is concluded, or if further disclosure is required or deemed appropriate. There can be no assurance that the company will pursue any transaction or that a transaction, if pursued, will be completed.

1. As measured by life-of-mine operating margin divided by capital invested in the project. Capital invested in the project is the historic expenditure up to December 31, 2016, of US$334 million, plus the estimated pre-production and sustaining capital cost of US$1.962 billion.

Photo 2: Members of the Initial Mandated Lead Arrangers visiting the Platreef Mine in July 2017.

Major investment in skills training for mining and other jobs

The planned Platreef Mine is projected to require a full-time workforce of approximately 2,200 within four years of the start of production.

Work is progressing well on the implementation of Ivanhoe's Social and Labour Plan (SLP), to which the company has pledged a total of R160 million ($12 million) during the first five years, culminating in November 2019. The approved plan includes R67 million ($5 million) for the development of job skills among local residents and R88 million ($7 million) for local economic development projects.

Ivanhoe Mines also has committed to building a community development centre adjacent to the mine as part of the company's objective of helping to establish a base of qualified, local candidates for jobs at the mine and its associated minerals processing plant.

Other goals include equipping people with portable skills to help enable them to become self-employed or to be productively employed in sectors other than mining, such as construction or agriculture.

In addition, Ivanhoe plans to launch five local economic development projects under the SLP that will result in the creation of approximately 800 jobs.

Photos 3 and 4: Shaft 1 sinking activities.

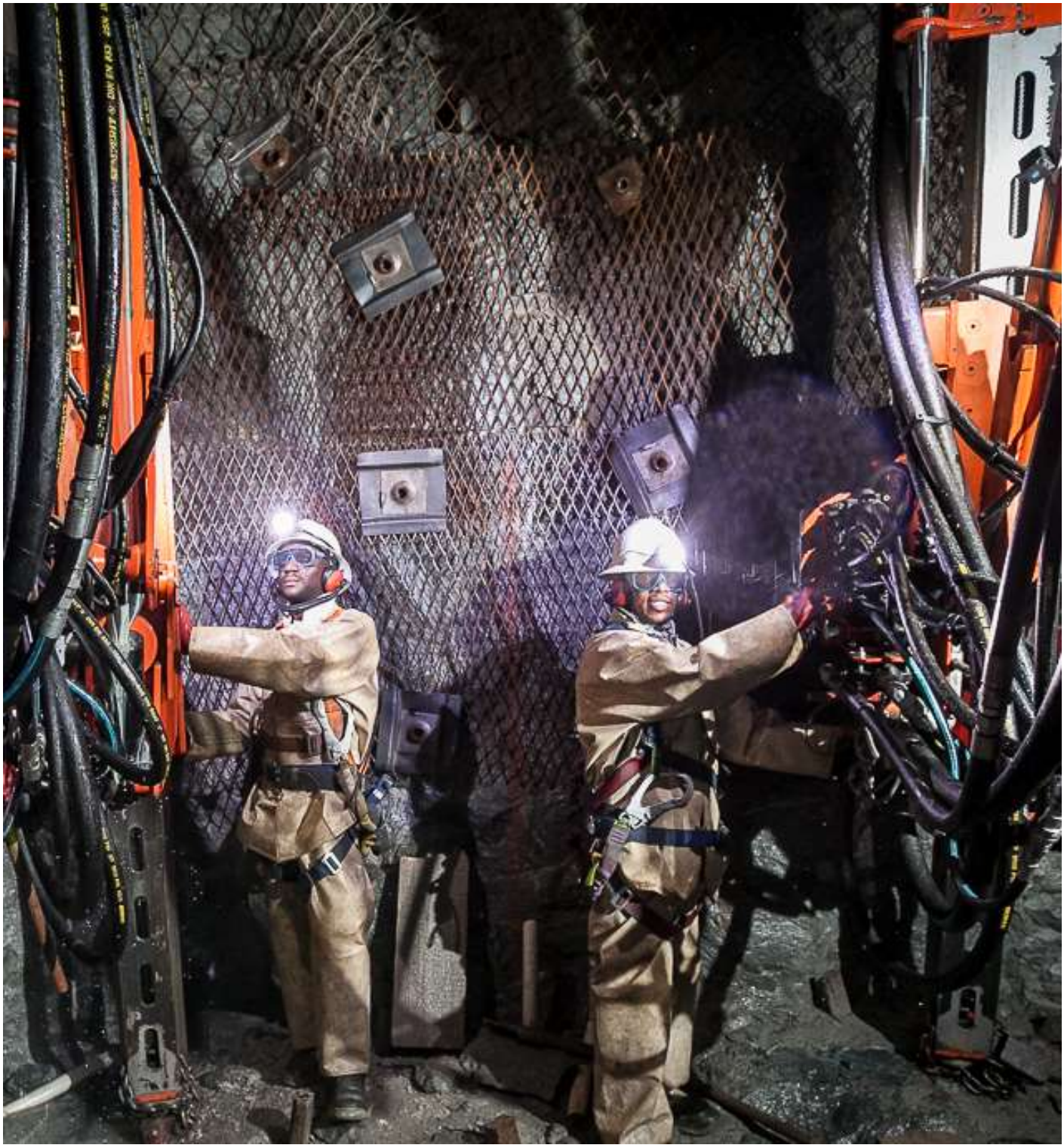


Photo 5: Shaft 2 early works underway.

Qualified persons

The following companies have undertaken work in preparation of the DFS and Technical Report:

- OreWin – Overall report preparation and economic analysis.
- DRA Global – Process and infrastructure.
- Amec Foster Wheeler – Mineral Resource estimation.
- SRK Consulting – Mine geotechnical recommendations.
- Stantec Consulting International – Mineral Reserve estimation and mine plan.
- Golder Associates – Water and tailings management.

The independent qualified persons responsible for preparing the Platreef definitive feasibility study, on which the technical report will be based, are Bernard Peters (OreWin); Dr. Harry Parker (Amec Foster Wheeler); Timothy Kuhl (Amec Foster Wheeler); William Joughin, (SRK); Jon Treen (Stantec); Val Coetzee (DRA Global); and Francois Marais (Golder Associates). Each person has reviewed and approved the information in this news release relevant to the portion of the Platreef DFS for which they are responsible.

Other scientific and technical information in this news release has been reviewed and approved by Stephen Torr, P.Geo., Ivanhoe Mines' Vice President, Project Geology and Evaluation, a Qualified Person under the terms of NI 43-101. Mr. Torr has verified the technical data disclosed in this news release.

Sample preparation, analyses and security

During Ivanhoe's work programs, sample preparation and analyses were performed by accredited, independent laboratories. Sample preparation was accomplished by Set Point laboratories in Mokopane, South Africa. Sample analyses were accomplished by Set Point Laboratories, Johannesburg; Lakefield Laboratory (now part of the SGS Group), Johannesburg; Ultra Trace Laboratory, Perth; Genalysis Laboratories, Perth and Johannesburg; SGS Metallurgical Services, South Africa; Acme, Vancouver; and ALS Chemex, Vancouver. Bureau Veritas Minerals Pty Ltd assumed control of Ultra Trace during June 2007 and is responsible for assay results after that date.

Sample preparation and analytical procedures for samples that support Mineral Resource estimation have followed similar protocols since 2001. The preparation and analytical procedures are in line with industry-standard methods for platinum, palladium, gold, nickel and copper deposits. Drill programs included insertion of blank, duplicate, standard reference material and certified reference material samples. The quality-assurance and quality-control (QA/QC) program results do not indicate any problems with the analytical protocols that would preclude use of the data in Mineral Resource estimation.

Sample security has been demonstrated by the fact that the samples always were attended or locked in the on-site core facility in Mokopane.

Information on sample preparation, analyses and security is contained in the Platreef Project NI 43-101 Technical Report dated April 22, 2016, filed on SEDAR at www.sedar.com and on the Ivanhoe Mines website at www.ivanhoemines.com.

Data verification

Amec Foster Wheeler E&C Services Inc. (Amec Foster Wheeler) reviewed the sample chain of custody, quality-assurance and quality-control QA/QC procedures and qualifications of analytical laboratories. In addition, Amec Foster Wheeler audited the assay database, core logging and geological interpretations. Based on these reviews, Amec Foster Wheeler considers that the data are acceptable to support Mineral Resource estimation.

Details of the data verification supporting the Mineral Resource estimate are set out in the Platreef Project NI 43-101 Technical Report dated effective April 22, 2016, and filed on June 24, 2016, available on Ivanhoe Mines' SEDAR profile at www.sedar.com and www.ivanhoemines.com.

About Ivanhoe Mines

Ivanhoe Mines is advancing its three principal projects in Southern Africa: 1) Mine development at the Platreef platinum-palladium-gold-nickel-copper discovery on the Northern Limb of South Africa's Bushveld Complex; 2) mine development and exploration at the tier one Kamoa-Kakula copper discovery on the Central African Copperbelt in the Democratic Republic of Congo (DRC); and 3) upgrading at the historic, high-grade Kipushi zinc-copper-silver-germanium mine, also on the DRC's Copperbelt. For details, visit www.ivanhoemines.com.

Information contacts

Investors
Bill Trenaman +1.604.331.9834

Media
North America: Bob Williamson +1.604.512.4856
South Africa: Jeremy Michaels +27.11.088.4300

Website www.ivanhoemines.com

FORWARD-LOOKING STATEMENTS

Certain statements in this news release constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws. Such statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements of the company, the Platreef Project, 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 the company's current expectations regarding future events, performance and results, and speak only as of the date of this news release.

The forward-looking statements and forward-looking information in this news release include without limitation, (i) statements regarding early-works construction is expected to take approximately 12 months; (ii) statements regarding Shaft 2 is to be sunk to a planned, final depth of 1,104 metres below surface; (iii) statements regarding Shaft 1 is expected to reach its projected, final depth of 980 metres below surface in 2018; (iv) statements regarding the planned mining of the Flatreef Deposit will incorporate highly productive mechanized mining methods, including long-hole stoping and drift-and-fill mining; (v) statements regarding the first phase estimated annual production of 476,000 ounces of platinum-group metals and gold; and (vi) statements regarding Ivanhoe's plans to develop the Platreef Mine in three phases: an initial annual rate of four Mtpa to establish an operating platform to support future expansions; followed by a doubling of production to eight Mtpa; and then a third expansion phase to a steady-state 12 Mtpa.

In addition, all of the results of the Platreef DFS constitute forward-looking statements and forward-looking information. The forward-looking statements include metal price assumptions, cash flow forecasts, projected capital and operating costs, metal recoveries, mine life and production rates, and the financial results of the

Platreef DFS. These include statements regarding the Platreef Project IRR of 14.2% after tax, the Platreef Project's NPV of US$916 million at an 8% discount rate after tax (as well as all other before and after taxation NPV calculations), estimated all-in cash costs (including the life-of-mine average estimate of US$351 per ounce of 3PE+Au net by-product credits), capital cost estimates (including pre-production capital of US$1,544 million), proposed mining plans and methods, a mine life estimate of 32 years, a project payback period of 5.3 years; the expected number of people to be employed at the Project; and the availability and development of water and electricity for the Platreef Project.

Readers are cautioned that actual results may vary from those presented.

All such forward-looking information and statements are based on certain assumptions and analyses made by Ivanhoe Mines' management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believe are appropriate in the circumstances. These statements, however, are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information or statements including, but not limited to, unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities; the failure of parties to contracts to perform as agreed; social or labour unrest; changes in commodity prices; unexpected failure or inadequacy of infrastructure, industrial accidents or machinery failure (including of shaft sinking equipment), or delays in the development of infrastructure, and the failure of exploration programs or other studies to deliver anticipated results or results that would justify and support continued studies, development or operations. Other important factors that could cause actual results to differ from these forward-looking statements also include those described under the heading "Risk Factors" in the company's most recently filed MD&A as well as in the most recent Annual Information Form filed by Ivanhoe Mines. Readers are cautioned not to place undue reliance on forward-looking information or statements. Certain of the factors and assumptions used to develop the forward-looking information and statements, and certain of the risks that could cause the actual results to differ materially are presented in the "Platreef 2016 Resource Technical Report" dated effective April 22, 2016 and filed on June 24, 2016, available on SEDAR at www.sedar.com and on the Ivanhoe Mines website at www.ivanhoemines.com.

This news release also contains references to estimates of Mineral Resources and Mineral Reserves. The estimation of Mineral Resources and Mineral Reserves 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, which may prove to be unreliable and depend, to a certain extent, upon the analysis of drilling results and statistical inferences that may ultimately prove to be inaccurate. Mineral Resource or Mineral Reserve estimates may have to be re-estimated based on, among other things: (i) fluctuations in platinum, palladium, gold, rhodium, copper, nickel or other mineral prices; (ii) results of drilling; (iii) results of metallurgical testing and other studies; (iv) changes to 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.

Although the forward-looking statements contained in this news release are based upon what management of the company believes are reasonable assumptions, the company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this news release and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the company 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 news release.