Step-out drilling extends length of Kakula Discovery by approximately 1.6 kilometres, or 40%, to at least 5.5 kilometres

Kakula and Kamoa both remain open for significant expansion

New resource estimate and preliminary economic assessment being fast-tracked to examine expanded Kamoa-Kakula development options

KOLWEZI, DEMOCRATIC REPUBLIC OF CONGO--(Marketwired - Jan 23, 2017) - Ivanhoe Mines (TSX:IVN)(OTCQX:IVPAF) Executive Chairman Robert Friedland and Chief Executive Officer Lars-Eric Johansson today announced assay results from another 25 holes as part of the ongoing 2016-2017 drilling campaign at the Kakula Discovery on the company's Tier One Kamoa-Kakula Copper Project, near the mining centre of Kolwezi in the Democratic Republic of Congo (DRC).

The Kakula Discovery remains open along a northwesterly-southeasterly strike. Massive potential for resource expansion is considered to remain within the Kakula Discovery area. High-grade, chalcocite-rich copper mineralization has been outlined along a corridor that currently is approximately one kilometre wide and at least 5.5 kilometres long (see Figure 2).

The latest drilling results further reinforce the exceptional continuity of high-grade copper mineralization and the relatively flat-lying geometry. Highlights include:

- DD1093, a step-out hole drilled 1.6 kilometres northwest of the current boundary of Kakula's current Inferred Resources, intersected typical Kakula-style mineralization similar to holes drilled in the centre of the high-grade Kakula Discovery. The hole intersected 11.10 metres (true width) of 5.82% copper at a 3.0% copper cut-off, beginning at a downhole depth of 993.0 metres; 11.10 metres (true width) of 5.82% copper at a 2.5% copper cut-off; 11.90 metres (true width) of 5.57% copper at a 2.0% copper cut-off; and 12.88 metres (true width) of 5.26% copper at a 1.0% copper cut-off. A photograph of the mineralized intersection in hole DD1093 is shown in Figure 10.
- DD1080, drilled 1.0 kilometre northwest of the boundary of Kakula's current Inferred Resources, intersected 4.49 metres (true width) of 8.51% copper at a 3.0% copper cut-off, beginning at a downhole depth of 857.6 metres; 4.99 metres (true width) of 7.96% copper at a 2.5% copper cut-off; 4.99 metres (true width) of 7.96% copper at a 2.0% copper cut-off; and 10.23 metres (true width) of 4.75% copper at a 1.0% copper cut-off.
- DD1065, drilled 300 metres northwest of the boundary of Kakula's current Inferred Resources, intersected 6.24 metres (true width) of 6.44% copper at a 3.0% copper cut-off, beginning at a downhole depth of 638.0 metres; 7.24 metres (true width) of 5.96% copper at a 2.5% copper cut-off; 8.39 metres (true width) of 5.43% copper at a 2.0% copper cut-off; and 8.39 metres (true width) of 5.43% copper at a 1.0% copper cut-off.

"It is remarkable to drill a step-out hole more than 1.6 kilometres beyond the limits of the previous mineral resource boundary and intersect almost identical, high-grade, chalcocite-rich mineralization," said Mr. Friedland.

"The open-ended nature of the extremely high-grade copper mineralization at the unfolding Kakula Discovery certainly has caught the attention of the mining industry. The ongoing results speak for themselves - and leave me speechless."

In addition to the three step-out drill holes highlighted above that extend the Kakula Discovery to the northwest, hole DD1079, drilled 400 metres southeast of Kakula's current Inferred Resources and beyond a line of poorly mineralized drill holes, intersected significant Kakula-style chalcocite mineralization within a siltstone unit. The hole intersected 3.51 metres (true width) of 3.63% copper at a 3.0% copper cut-off, beginning at a downhole depth of 851.0 metres; 3.51 metres (true width) of 3.63% copper at a 2.5% copper cut-off; 3.51 metres (true width) of 3.63% copper at a 1.0% copper cut-off.

"This hole provides profound encouragement for the potential continuity of Kakula-style mineralization along strike to the southeast," said David Edwards, Geology Manager for the Kamoa-Kakula Project.

In response to the spectacular exploration success, Ivanhoe Mines and Zijin Mining have accelerated the Kakula exploration program with the mobilization of additional contracted drill rigs. Nine rigs now are drilling at Kakula, focused in the northwest resource expansion area, where the aim is to initially infill an area of 2.6 square kilometres immediately northwest of Kakula's current Inferred Resource boundary. Infill drilling of Inferred Resources is ongoing in the central section of Kakula. To the southeast, step-out drilling is continuing to explore extensions of the Kakula high-grade zone along trend. The current Kakula drill plan is shown in Figure 2.

Ongoing geological studies leading to new Kamoa-Kakula exploration targets

In addition to exploring along the Kakula trend, significant overall potential exists both within the Kakula exploration area and on the

Kamoa-Kakula mining licence as a whole. Approximately 200 square kilometres of the 400-square-kilometre Kamoa-Kakula project area remain untested.

The Kamoa-Kakula geology team, with the assistance of its technical advisors, is intensively evaluating the structural and stratigraphic controls on mineralization of the broader Kamoa-Kakula basin. This project is intended to define and rank priority targets located in the untested parts of the licence.

Initial work has highlighted a number of high-priority drill targets that are planned to be tested this year. Figure 3 highlights the expansive area of the mining licence that remains to be drill tested in relation to the currently defined Mineral Resources, as well as showing some of the exploration targets that are being investigated.

Figure 1. Kamoa-Kakula Project map shows the initial development area for the Kansoko Mine and the adjacent Kakula resources area.

http://media3.marketwire.com/docs/1083518f1.jpg

Figure 2. Planned exploration drilling over the Kakula exploration area for Q1 2017 and Q2 to Q4 2017 showing current and future target areas and locations of recent significant intersections.

http://media3.marketwire.com/docs/1083518f2.jpg

Figure 3. Kamoa-Kakula mining licence showing copper grade of Indicated and Inferred Resources at a 2% copper cut-off, untested areas and current target areas.

http://media3.marketwire.com/docs/1083518f3.jpg

Figure 4. Drill-hole location plan for the Kakula discovery area shows holes completed and in progress, superimposed on 1% composite grade-thickness contours.

http://media3.marketwire.com/docs/1083518f4.jpg

Figure 5. Location Plan showing grade and thickness of recent results superimposed on 2.0% composite grade-thickness contours.

http://media3.marketwire.com/docs/1083518f5.jpg

Figure 6. Location Plan showing grade and thickness of recent results superimposed on 2.5% composite grade-thickness contours.

http://media3.marketwire.com/docs/1083518f6.jpg

Figure 7. Location Plan showing grade and thickness of recent results superimposed on 3.0% composite grade-thickness contours.

http://media3.marketwire.com/docs/1083518f7.jpg

Figure 8. Strip-logs of drill holes DD1021, DD1070 & DD1032 showing typical Kakula-style mineralization.

http://media3.marketwire.com/docs/1083518f8.pdf

Kakula exploration program has been accelerated, with nine rigs now drilling in a bid to further expand the discovery area.

http://media3.marketwire.com/docs/1083518i1.jpg

Figure 9. Section along the axis on the Kakula Deposit on the section A-A'-A" showing drilling completed to date and composites at a 3% copper cut-off.

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As shown in Figure 9, the Kakula Deposit is a gently-dipping blanket of thick, chalcocite-rich copper mineralization. Initial mine development is planned to begin in the flat, near-surface zone highlighted in the inset which, at a 3% cut-off, is between 7.1 metres and 11.7 metres thick and with copper grades between 8.11% and 10.35% along the deposit's axis.

Figure 10. High-grade copper intersection in drillhole DD1093.

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New Kakula Mineral Resource estimate expected early in Q2 2017

Ivanhoe Mines expects to produce an updated Mineral Resource estimate for the Kakula Deposit within 90 days. The initial Mineral Resource estimate for Kakula - the second major discovery on the Kamoa mining licence - was detailed in Ivanhoe Mines' October 12, 2016, news release. Based on approximately 24,000 metres of drilling in 65 holes, Kakula contained Indicated Mineral Resources estimated at 66 million tonnes at 6.59% copper, plus Inferred Resources of 27 million tonnes at 5.26% copper, at a 3% cut-off. At a lower, 1% cut-off, Kakula contained Indicated Mineral Resources estimated at 192 million tonnes at 3.45% copper plus Inferred Resources of 101 million tonnes at 2.74% copper.

Kakula's addition boosted the combined Kamoa-Kakula Indicated Mineral Resources to 944 million tonnes at 2.83% copper, plus Inferred Resources of 286 million tonnes at 2.31% copper, at a 1% cut-off.

The October 2016 Kakula Mineral Resource was defined by drilling covering a total area of 8.7 square kilometres within the larger 60-square-kilometre Kakula exploration area. The total areal extent of Indicated Resource is 4.6 square kilometres at a 1% cut-off and the areal extent of the Inferred Resource is 3.3 square kilometres at a 1% cut-off. The average dip of the mineralized zone in the Indicated Resource area is 13 degrees, while the average dip is 16 degrees in the Inferred Resource area.

With the addition of Kakula's Mineral Resources, Wood Mackenzie - a prominent, international industry research and consulting group - demonstrated that the Kamoa-Kakula Project is the largest copper discovery in Zambia and the DRC, making it the largest copper discovery ever made on the African continent. Wood Mackenzie's research, independently prepared for Ivanhoe Mines in October 2016, also showed that Kamoa-Kakula already ranked among the 10 largest copper deposits in the world.

Approximately 46,000 metres now have been drilled at the Kakula Discovery since the current drilling campaign was started in May 2016.

New preliminary economic assessment will analyze expanded development scenarios of up to 16 million tonnes per annum.

In addition to updating the Kakula Mineral Resource estimate, an expanded preliminary economic assessment (PEA) also is underway that will assess the potential of mining the combined Kamoa and Kakula discoveries at extraction rates of between eight and 16 million tonnes per annum (Mtpa) - believed by Ivanhoe Mines' engineering team to better reflect the size, thickness and grade of the deposits and the associated economics.

The December 2016 PEA estimated that the initial phase of production from Kakula, at a rate of 4 Mtpa, would have a projected average grade of 7.52% copper over the initial five years of operations. Given the potential to significantly expand Kakula's high-grade resources, the project engineering team is targeting a life-of-mine average annual copper production scenario for a mine of up to 8 Mtpa at Kakula, potentially producing in excess of 400,000 tonnes per annum.

Ivanhoe Mines expects that the extension of the Kakula Discovery by approximately 40% will have a major, positive impact on the project's economics, offering the potential to significantly expand Kakula's mining rate and extend the deposit's mine life.

"The December 2016 PEA assessed the economics of building an initial mine at Kamoa-Kakula with the primary focus of keeping the pre-production capital costs to a maximum of \$1 billion," said Mr. Johansson.

"Given that we already have a Tier One, high-grade resource base at Kamoa-Kakula, the engineering team is going to remove availability of capital as a constraint. The next version of the PEA will focus on determining the optimal initial development scenario, as well as the best steady-state mining rate, which balances capital efficiency with effective scale and long-term operating costs to maximize the project's net present value."

In addition, data collection and testwork to support a subsequent pre-feasibility study also is underway to enhance the findings of the Kakula 2016 PEA.

Mineralization at Kakula is substantively thicker and higher grade than elsewhere on the Kamoa mining licence; it also is consistently bottom-loaded and will support the construction of selective, mineralized zone (SMZ) composites at cut-offs up to at least 3% copper. The lateral consistency of mineralization at these higher cut-offs presents significant opportunities for mine planning, with large areas of the resource having chalcocite-rich mineralization with average grades in excess of 6% when using the 3% SMZ.

Chalcocite (copper sulfide, Cu<sub>2</sub>S) is opaque and dark-grey to black, with a metallic lustre (see Figure 9 for an example of Kakula high-grade chalcocite drill core). Due to its very high percentage of contained copper by weight (the percentage of the mineral that is actual metal to be extracted is 80% copper by weight) and its capacity to produce an exceptionally clean, high-grade concentrate, chalcocite is considered to be the most valuable copper mineral.

Based on initial metallurgical test work, the chalcocite-rich nature of the copper mineralization at the Kakula Deposit is expected to yield higher metallurgical recoveries and higher concentrate grades, which in turn are expected to reduce unit transportation costs and therefore improve financial returns.

Bench-scale metallurgical flotation test work at XPS Consulting and Testwork Services laboratories in Falconbridge, Canada, achieved copper recoveries of 87.8% and produced a concentrate with an extremely high grade of 56% copper using the flowsheet developed during the Kamoa pre-feasibility study (PFS). The material tested was a composite of chalcocite-rich Kakula drill core, assaying 8.1% copper.

Earlier metallurgical testwork indicated that the Kamoa concentrates contain arsenic levels of approximately 0.02%, which are extremely low by world standards. Given this critical competitive marketing advantage, Kamoa's concentrates are expected to attract a significant premium from copper-concentrate traders for use in blending with concentrates from other mines. The Kamoa concentrates will help to enable high-arsenic concentrates from mines in Chile and elsewhere to meet the limit of 0.5% arsenic imposed by Chinese smelters to meet China's new environmental restrictions.

A metallurgical test-work program also is underway at Zijin's laboratories to evaluate the potential of bio-leaching material from the Kakula and Kamoa deposits.

Advancing underground development at the Kamoa Deposit now more than half way toward reaching high-grade copper mineralization

Underground mine development at the Kansoko Sud area of the Kamoa Deposit is progressing ahead of plan and within budgeted costs. The twin declines, incorporating service and conveyor tunnels, have advanced more than 550 metres since the first excavation blast was conducted in May 2016. The underground declines now are more than half-way toward the high-grade copper mineralization at the planned Kansoko Mine and are expected to intersect the orebody early in the second quarter this year.

Ivanhoe Mines expects that the fleet of mining equipment will begin development work at the adjacent Kakula Deposit once the twin declines have intercepted the mineralized zones at the Kansoko Mine development and a bulk sample has been obtained for feasibility-level metallurgical test work.

Excavated rock from the advancing, underground access tunnels is hauled to the surface through the box cut at the Kansoko Mine development on the Kamoa Deposit, adjacent to the Kakula Discovery.

http://media3.marketwire.com/docs/1083518i2.jpg

http://media3.marketwire.com/docs/1083518i3.jpg

Ongoing construction of the twin declines that will provide underground mining access now has progressed more than 550 metres and is past the half-way point between the Kansoko Mine's surface box cut and targeted, high-grade copper mineralization at the Kamoa Deposit.

http://media3.marketwire.com/docs/1083518i4.jpg

Table 1. Recent Kakula drill results completed since the October 2016 Mineral Resource estimate.

http://media3.marketwire.com/docs/1083518t1.pdf

Table 2: Drill-Hole Collar Locations and Orientation

http://media3.marketwire.com/docs/1083518t2.pdf

## Current partners in the Kamoa-Kakula Project

The Kamoa-Kakula Project is a very large, stratiform copper deposit with adjacent prospective exploration areas within the Central African Copperbelt, located approximately 25 kilometres west of the town of Kolwezi and about 270 kilometres west of Lubumbashi. The Kamoa Copper Deposit was discovered by Ivanhoe Mines (then named Ivanhoe Nickel & Platinum) in 2008, followed by the discovery of the Kakula Deposit in early 2016.

In August 2012, the DRC government granted mining licences to Ivanhoe Mines for the Kamoa-Kakula Project that cover a total of 400 square kilometres. The licences are valid for 30 years and can be renewed at 15-year intervals. Mine development work at the project began in July 2014 with construction of a box cut for the decline ramps for the planned Kansoko Mine that will provide underground access to the high-grade mining areas in Kansoko Sud and Kansoko Centrale.

Following the signing of a partnership agreement with the DRC government last November, Ivanhoe Mines and Zijin Mining each hold an indirect 39.6% interest in the Kamoa-Kakula Project, Crystal River Global Limited holds an indirect 0.8% interest and the DRC government holds a direct 20% interest.

In addition, Ivanhoe Mines, Zijin Mining and Crystal River recently amended their Shareholder, Governance and Option Agreement that originally took effect December 8, 2015. The agreement governing their relationship in the Kamoa-Kakula Project codifies the operation of the project committee and the management of the DRC subsidiary, Kamoa Copper SA, so that the agreement is consistent with existing, on-the-ground practice. The amendments also clarify that if Ivanhoe Mines arranges project financing for 65% of the capital required to develop the first phase of the Kamoa-Kakula Project, Ivanhoe Mines then will be entitled to acquire the indirect 0.8% interest in the Kamoa-Kakula Project held by Crystal River for a price equal to the then current market value of that interest as determined by an independent expert valuator. The acquisition of Crystal River's indirect 0.8% interest in the Kamoa-Kakula Project would give Ivanhoe Mines majority control of Kamoa Holding Limited, the entity that presently owns 80% of the Kamoa-Kakula Project. Zijin Mining already had 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 Kamoa-Kakula Project, as set out in a feasibility study, without any recourse, and on terms acceptable to Ivanhoe Mines. If Ivanhoe Mines and Zijin Mining cannot agree on project financing, the matter will be referred to binding arbitration in Hong Kong.

At the request of Ivanhoe Mines and Zijin Mining, and subject to the satisfaction of the applicable conditions, the DRC will provide its assistance in obtaining the advantages contemplated by the DRC's special law - No. 14/005, enacted to facilitate Sino-Congolese cooperation - relating to the tax, customs, parafiscal tax, non-tax revenues and currency exchange regime applicable to cooperation projects.

## Qualified Person and Quality Control and Assurance

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

Ivanhoe Mines maintains a comprehensive chain of custody and QA-QC program on assays from its Kamoa Project. Half-sawn core is processed at Kamoa's on-site preparation laboratory and prepared samples then are shipped by secure courier to Bureau Veritas Minerals (BVM) Laboratories in Australia, an ISO17025-accredited facility. Copper assays are determined at BVM by mixed-acid digestion with ICP finish. Industry-standard certified reference materials and blanks are inserted into the sample stream prior to dispatch to BVM. For detailed information about assay methods and data verification measures used to support the scientific and technical information, please refer to the current technical report on the Kamoa Copper Project on the SEDAR profile of Ivanhoe Mines at www.sedar.com.

## **About Ivanhoe Mines**

Ivanhoe Mines is advancing its three principal projects in Sub-Saharan Africa: Mine development at the Platreef platinum-palladium-gold-nickel-copper discovery on the Northern Limb of South Africa's Bushveld Complex; mine development and exploration at the Kamoa-Kakula copper project on the Central African Copperbelt in the DRC; and upgrading of the historic, high-grade Kipushi zinc-copper-lead-germanium mine, also on the DRC's Copperbelt. For details, visit www.ivanhoemines.com.

Certain statements in this release constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws, including without limitation: (1) statements regarding the massive potential for resource expansion; (2) statements regarding the expectation to have an updated independent Mineral Resource estimate prepared for Kakula in early Q2 2017 and within 90 days of this press release; (3) statements regarding the potential for continuity of Kakula-style mineralization along strike to the southeast; (4)

statements regarding the aim of initial drilling to infill an area of 2.6 square kilometers; (5) statements regarding the high-grade Kakula zone remains open along a southeasterly and northwesterly strike; and (6) statements regarding the expectation that Kamoa's concentrates will attract a significant premium from copper-concentrate traders for use in blending with concentrates from other mines. Such statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the company, 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 release.

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, 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. The factors and assumptions used to develop the forward-looking information and statements, and the risks that could cause the actual results to differ materially are set forth in the "Risk Factors" section and elsewhere in the company's most recent Management's Discussion and Analysis report and Annual Information Form, available at www.sedar.com.

This news release 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, 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 estimates may have to be re-estimated based on, among other things: (i) fluctuations in copper, platinum, palladium, gold, rhodium, 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.

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