Excellent copper recoveries and concentrate grades confirmed by preliminary metallurgical tests of drill core from Kakula Discovery at the Kamoa Project in D.R. Congo

Results indicate copper mineralization from Kamoa’s Kakula and Kansoko zones to be processed through the same concentrator

KOLWEZI, DEMOCRATIC REPUBLIC OF CONGO – Robert Friedland, Executive Chairman of Ivanhoe Mines (TSX: IVN), and Lars-Eric Johansson, Chief Executive Officer, today announced initial metallurgical test results from a sample of drill core from ongoing exploration in the Kakula Discovery zone, in a southerly portion of the Kamoa Copper Project.

The tests achieved copper recoveries of 86% and produced a copper concentrate with an extremely high grade of 53% copper. The results also indicate that material from Kamoa's Kakula and Kansoko zones could be processed through the same concentrator plant, which would yield significant operational and economic efficiencies.

The Kamoa Copper Project, located approximately 25 kilometres west of the town of Kolwezi, is a joint venture between Ivanhoe Mines and Zijin Mining Group Co., Ltd. The 60-square-kilometre Kakula Discovery zone is on the Kamoa mining licence, approximately 10 kilometres southwest of the Kamoa Project's planned initial mining area at Kansoko Sud.

Testing of the Kakula sample was conducted at Zijin’s laboratory in China, using the flowsheet developed during the Kamoa pre-feasibility study (PFS). The material tested was a composite of drill holes DD996 and DD998, assaying 4.1% copper. As a comparison, testing of a previous development composite sample from the planned, initial mining deposit at Kamoa’s Kansoko Sud zone and the adjacent Kansoko Centrale zone, assaying 3.61% copper, achieved an 85% recovery and a concentrate grade of 37% copper. The PFS circuit was optimized on this material.

Mineralogy on the Kakula sample of drill core confirmed that the material is chalcocite dominant, with lesser amounts of bornite.

“These preliminary Kakula metallurgical test results are positive as they indicate that the metallurgy at Kakula is very similar to that at Kansoko Sud and Centrale, and that mineralization from these three areas can be successfully processed through the same concentrator plant,” said Vongani Nkuna, Kamoa’s Senior Process Engineer.

“The next steps are to repeat and confirm the Kakula metallurgical results by running duplicate tests at Zijin’s laboratory and XPS’s laboratory in Canada. After this, we will look at minor changes to the planned Kamoa concentrator circuit to further improve recoveries. Once we have a resource model for the Kakula area, we will plan a rigorous sample selection and test work campaign.”
Kamoa is planning to start the variability tests shortly on individual drill core samples from the Kansoko Sud and Kansoko Central areas.

**Metallurgical Test Work and Concentrator Design**

Between 2010 and 2015, a series of metallurgical test work programs were completed on drill core samples of known Kamoa copper mineralization. These investigations focused on metallurgical characterization and flow-sheet development for the processing of hypogene and supergene copper mineralization.

Bench-scale metallurgical flotation test work carried out at XPS Consulting and Testwork Services laboratories in Falconbridge, Ontario, Canada, has shown positive results. The most recent work was conducted on composite samples of drill core from the Kansoko Sud and Kansoko Centrale areas in the southern part of the Kamoa Mineral Resource area. Two master composite samples were formulated: one was representative of the first four to five years of planned mine production and the other was representative of projected production in years five to 15. Test work on the master composite representative of the early years of mining, and grading 3.61% copper, produced a copper recovery of 85.4% at a concentrate grade of 37.0% copper. Material from the later years of mining, grading 3.20% copper, produced a copper recovery of 89.2% at a concentrate grade of 35.0% copper using the same flowsheet.

Average arsenic levels in the concentrate were measured to be approximately 0.02%, which is significantly lower than the limit of 0.5% imposed by Chinese smelters. Very low arsenic levels in concentrate are expected to attract a premium from copper-concentrate traders.

The concentrator design incorporates a run-of-mine stockpile, followed by primary and secondary crushing on surface. The crushed material, with a design size distribution of 80% passing (or P80) 9 millimetres (mm), is fed into a two-stage ball-milling circuit for further size reduction to a target grind size P80 of 53 micrometres (µm). The milled slurry is subjected to rougher flotation followed by scavenger flotation. The high-grade, or fast-floating rougher concentrate, and medium-grade or slow-floating scavenger concentrate, are collected separately. The rougher concentrate is upgraded in two stages of cleaning to produce a high-grade increment to final concentrate. The medium-grade scavenger concentrate and tailings from the two rougher cleaning stages are combined and re-ground to a P80 of 10µm before being cleaned in two stages. The cleaned scavenger concentrate then is combined with the cleaned rougher concentrate to form the final concentrate. The final concentrate is thickened before being pumped to the concentrate filter. Filter cake then is bagged for shipment to market.

Kakula mineralization is flat-lying, bottom-loaded and chalcocite dominant

The primary objective of the current drilling program at the Kakula Discovery is to confirm and expand a thick, flat-lying, bottom-loaded zone of very high-grade copper mineralization at the southern part of the Kakula Discovery area that has the potential to have a significant, positive impact on the Kamoa Project's future development plans.

Kakula’s drilling program has seven rigs operational in the field and two rigs on standby. The planned 25,000 metres of drilling are scheduled to be completed later this year.

The drilling results from the Kakula Discovery area (see Ivanhoe’s news release dated June 20, 2016) confirm that mineralization at Kakula is relatively shallow, flat-lying, and consistently bottom loaded, with grades increasing downhole toward the contact between the host Grand Conglomerate and the underlying Mwashia sandstone. The highest copper grades are associated with a siltstone/sandstone unit occurring within the Grand Conglomerate, approximately one metre above the top of the sandstone contact.
Mineralization displays vertical mineral zonation from chalcopyrite to bornite to chalcocite, with the highest grades associated with the siltstone unit consistently characterized by chalcocite-dominant mineralization. The consistent nature of Kakula mineralization supports the creation of selective mineralized zones at cut-offs up to 2.5% and 3% copper.

Qualified persons, Quality Control and Assurance

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 National Instrument 43-101. Mr. Torr has verified the technical data disclosed in this news release.

About Ivanhoe Mines

Ivanhoe Mines is advancing and developing its three principal projects:

- The Kamaa Copper Discovery in a previously unknown extension of the Central African Copperbelt in the DRC’s Lualaba Province.
- The Platreef Discovery of platinum, palladium, nickel, copper, gold and rhodium on the Northern Limb of the Bushveld Complex in South Africa.
- The historic, high-grade Kipushi zinc-copper mine, also on the Copperbelt in the DRC.

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Cautionary statement on forward-looking information

Certain statements in this release constitute “forward-looking statements” or “forward-looking information” within the meaning of applicable securities laws, including without limitation: (i) statements that material from Kamaa’s Kakula and Kansoko zones can be successfully processed through the same concentrator plant; (ii) statements regarding plans to implement minor changes to the planned Kamaa concentrator circuit to further improve recoveries; (iii) statements regarding the planned start of variability test work shortly on individual drill core samples from the Kansoko Sud and Kansoko Central areas; (iv) statements that very low arsenic levels in concentrate are expected to attract a premium from copper-concentrate traders, and (v) statements regarding the completion of 25,000 metres of drilling later this year.

Forward-looking statements involve significant risks and uncertainties, should not be read as guarantees of future performance or results, and will not necessarily be accurate indicators of whether or not such results will be achieved. 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 here, as well as unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities; the failure of parties to contracts with the company to perform as agreed; social, political or labour unrest; changes in commodity prices (and copper in particular); limitations and availability of capital; and the failure of exploration programs or studies to deliver anticipated results (including the actual results of drilling and exploration activities), or results that would justify and support continued exploration, studies, development or operations.
Although the forward-looking statements contained in this 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 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 release.

The company’s actual results could differ materially from those anticipated in these forward-looking statements as a result of the factors 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](http://www.sedar.com).