

May 11, 2017

## **Ivanhoe Mines issues financial results and review of operations for the first quarter of 2017**

### **The start of early-works construction for the main production shaft at the Platreef platinum-group metals mine in South Africa highlights Ivanhoe's achievements in a busy first quarter**

**TORONTO, CANADA – Ivanhoe Mines (TSX: IVN; OTCQX: IVPAF) today announced its financial results for the first quarter ended March 31, 2017. All figures are in U.S. dollars unless otherwise stated. Ivanhoe Mines is a Canadian mining company focused on advancing its three mine-development projects in Sub-Saharan Africa: the Platreef platinum-palladium-gold-nickel-copper discovery in South Africa; and the Kamo-a-Kakula copper discovery and the Kipushi zinc-copper-lead-germanium mine in the Democratic Republic of Congo (DRC).**

#### **HIGHLIGHTS**

- **On April 12, 2017, Ivanhoe announced the start of early-works construction for Shaft 2 at the Platreef platinum-group metals, nickel, copper and gold mine now being developed in South Africa. Shaft 2, which will be the main production shaft, will be sunk to a planned, final depth of more than 1,100 metres below surface. It will be equipped with two 40-tonne rock-hoisting skips capable of hoisting a total of six million tonnes of ore per year – which will be the single largest hoisting capacity at any mine in Africa.**
- **Sinking of Platreef's Shaft 1 is proceeding at an average rate of approximately 45 metres per month and is expected to reach the Flatreef Deposit, at a depth of 777 metres below surface, in the first half of 2018. Sinking will continue to a planned final depth of 980 metres below surface. Development work will include four shaft stations at depths of 450, 750, 850 and 950 metres below surface. Shaft 1 will provide development access into the Flatreef Deposit while Shaft 2 is being developed.**
- **On April 25, 2017, Ivanhoe announced the appointment of three leading mine-financing institutions — Export Development Canada, Nedbank Limited (acting through its Corporate and Investment Banking division) and Societe Generale Corporate & Investment Banking — as Initial Mandated Lead Arrangers to arrange debt financing for the development of the Platreef Mine.**
- **On February 24, 2017, the five-million-volt-ampere power line connecting the Platreef site to the South African national grid was energized and now is supplying electricity to Platreef for shaft sinking and construction activities. The new line, a collaboration between Platreef, the South African government and local authorities, also is providing energy to the neighbouring community of Mzombane, which previously was without electricity.**

- The feasibility study for the first phase of underground mine development at Platreef, which is being finalized by DRA Global, is expected to be completed in Q2 2017.
- On March 21, 2017, Ivanhoe announced that a new discovery hole had intersected a shallow, 3.8-kilometre extension of the Kakula Copper Discovery at the Kamo-a-Kakula Project, in the Democratic Republic of Congo. This latest extension has been named Kakula West. The discovery hole, DD1124, intersected 5.83% copper over 8.86 metres at a 2.5% cut-off, including a 6.14-metre interval at 6.84% copper. This drill hole essentially doubled the presently-defined length of the copper-rich mineralized system at Kakula to more than 10 kilometres.
- Excellent visual drill intercepts continue to be returned at Kakula West. The results show a rapidly growing area of shallow copper mineralization characterized by finely disseminated chalcocite in siltstone and maroon diamictite. The style and the overall geometry of mineralization are typical of the high-grade Kakula trend to the east.
- The Kakula Discovery remains open for significant expansion along trend to the west and the southeast, while the remainder of the Kakula Exploration Area remains virtually untested. Twelve rigs now are drilling in the Kakula Exploration Area. More than 25,000 metres have been drilled at Kakula since the start of the year. Ivanhoe expects to issue an updated Mineral Resource estimate for the Kakula Discovery later this month.
- Nearly 200 square kilometres of the approximately 400-square-kilometre Kamo-a-Kakula Project area remain untested. The Kamo-a-Kakula geology team, with the assistance of its technical advisors, has intensively evaluated the structural and stratigraphic controls on mineralization of the broader Kamo-a-Kakula basin. This work has highlighted at least nine high-priority targets located in the untested parts of the Kamo-a-Kakula Project area that are planned to be drill tested this year.
- Kamo-a Copper has retained OreWin Pty. Ltd., of Australia, to prepare a follow-up preliminary economic assessment (PEA) for the development of the Kakula and Kamo-a deposits. The study will be based on the updated Mineral Resource Estimate expected later this month. It is expected that the increased resource base at Kakula will support a mine capacity of approximately six million tonnes per annum (Mtpa). The Kansoko mine capacity also is expected to be six Mtpa, giving the revised PEA a projected peak mine production of approximately 12 Mtpa from the presently delineated Kamo-a and Kakula deposits. In light of the successful step-out drilling at Kakula West, as well as the potential to find additional resources in high-priority targets located in the untested parts of the Kamo-a-Kakula Project area, the Kamo-a-Kakula development plans will be reassessed and amended as the project moves forward.
- Underground mine development at Kamo-a's Kansoko Mine has made good progress and is expected to reach the high-grade copper mineralization at the Kansoko Sud Deposit during Q2 2017. The service and conveyor declines each have been advanced more than 770 metres and are in Kamo-a pyritic siltstone, which overlies the copper ore.
- Specialist engineering firm DRA Global is finalizing the design of the Kakula box cut. Construction of the box cut is expected to begin in Q2 2017 and take approximately five months to complete.
- On February 8, 2017, Ivanhoe received the fourth of five scheduled \$41.2 million installment payments from a Zijin Mining Group Co., Ltd. subsidiary as part of a strategic co-development agreement under which Zijin acquired 49.5% of Ivanhoe's majority stake in the Kamo-a-Kakula copper discovery. Zijin – through its subsidiary, Gold Mountains (H.K.) International Mining Company Limited – agreed to pay a total of \$412 million for the interest in Kamo-a Holding

Limited, beginning with an initial payment of \$206 million in 2015. The fifth and final US\$41.2 million installment payment from Zijin is due on May 23, 2017.

- A pre-feasibility study for the redevelopment of the Kipushi zinc-copper-germanium-lead-silver mine is being prepared by OreWin, of Australia. The comprehensive study will refine Ivanhoe's May 2016 preliminary economic assessment of Kipushi's proposed redevelopment.
- Preparations are underway to start a 6,500-metre drilling program at Kipushi. The planned program, which is expected to begin later this month, will include six metallurgical holes and additional resource drilling in the Fault Zone and the Nord Riche and Southern Zinc zones to upgrade inferred resources to indicated resources.
- Ivanhoe Mines' three projects achieved a combined 11.73 million work hours free of lost-time injuries (LTIF) by the end of Q1 2017. Ivanhoe had recorded 16,055 LTIF hours at Platreef, 5.32 million hours at Kipushi and 6.39 million hours at Kamoakakula to the end of Q1 2017.

## Principal projects and review of activities

### 1. Platreef Project

64%-owned by Ivanhoe Mines  
South Africa

The Platreef Project is owned by Ivanplats (Pty) Ltd., which is 64%-owned by Ivanhoe Mines. A 26% interest is held by Ivanplats' historically-disadvantaged broad-based, black economic empowerment (B-BBEE) partners, which include 20 local host communities with a total of approximately 150,000 people, project employees and local entrepreneurs. In January 2017, Ivanplats reconfirmed its Level 3 status in its third verification assessment on a B-BBEE scorecard. A Japanese consortium of ITOCHU Corporation and its affiliate, ITC Platinum, plus Japan Oil, Gas and Metals National Corporation and JGC Corporation, owns a 10% interest in Ivanplats, which it acquired in two tranches for a total investment of \$290 million.

The Platreef Project hosts an underground deposit of thick, platinum-group metals, nickel, copper and gold mineralization in the Northern Limb of the Bushveld Igneous Complex, approximately 280 kilometres northeast of Johannesburg and eight kilometres from the town of Mokopane in Limpopo Province.

On the Northern Limb, platinum-group metals mineralization is hosted primarily within the Platreef, a mineralized sequence that is traced more than 30 kilometres along strike. Ivanhoe's Platreef Project, within the Platreef's southern sector, is comprised of three contiguous properties: Turfspruit, Macalacaskop and Rietfontein. Turfspruit, the northernmost property, is contiguous with, and along strike from, Anglo Platinum's Mogalakwena group of mining operations and properties.

Since 2007, Ivanhoe has focused its exploration and development activities on defining and advancing the down-dip extension of its original discovery at Platreef, now known as the Flatreef Deposit, which is amenable to highly mechanized, underground mining methods. The Flatreef area lies entirely on the Turfspruit and Macalacaskop properties, which form part of the company's mining right.

### Health and safety at Platreef

The Platreef Project reached a total of 7,121,029 million hours and 16,055 lost-time injury-free hours worked in terms of the Mines Health and Safety Act and the Occupational Health and Safety Act of South Africa by the end of March 2017. Two medical treatment cases and two lost-time-accidents occurred during the first quarter of 2017.

The Platreef Project continues to strive toward its workplace objective of an environment that causes zero harm to any employees, contractors, sub-contractors and consultants.

### **Shaft 1 construction now in fast-sinking mode**

Shaft 1, with an internal diameter of 7.25 metres, will provide access to the Flatreef Deposit and enable the initial underground capital development to take place during the development of Shaft 2 and ultimately will become the primary ventilation intake shaft during the project's four Mtpa production case. Following the successful commissioning of the stage and kibble winders and ancillary equipment, the permanent sinking phase started in July 2016. The initial sinking phase was completed to 107 metres below surface and the main sinking phase has been initiated. Shaft 1 had reached a depth of 346 metres below surface as of May 8, 2017.

An average sinking rate of 45 metres per month is expected during the main sinking phase. The shaft includes a 300-millimetre concrete lined shaft wall. The main sinking phase is expected to reach its projected, final depth of 980 metres below surface in 2018. Shaft stations to provide access to horizontal mine workings for personnel, materials, pump stations and services will be developed at depths of 450, 750, 850 and 950 metres below surface.

**Figure 1: A Platreef engineer examining geotechnical features of the Shaft 1 sidewall.**



**Figure 2: Members of the Platreef sinking team underground in Shaft 1, which was at a depth of 346 metres below surface on May 8, 2017.**



## Shaft 2 early-works construction

Shaft 2 will be located approximately 100 metres northeast of Shaft 1. Shaft 2, with an internal diameter of 10 metres, will be lined with concrete and sunk to a planned, final depth of more than 1,100 metres below surface. It will be equipped with two 40-tonne rock-hoisting skips with a capacity to hoist a total of six million tonnes of ore a year – which will be the single largest hoisting capacity at any mine in Africa. The headgear for the permanent hoisting facility was designed by South Africa-based Murray & Roberts Cementation.

The early works for Shaft 2 will include the excavation of a surface box cut to a depth of approximately 29 metres below surface and the construction of the concrete hitch (foundation) 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 are planned to commence in Q2 2017 and will take approximately 12 months to complete.

**Figure 3: Illustration shows two perspectives of Shaft 2's 103-metre-tall concrete headgear, the hitch (foundation) and internal permanent hoisting facilities.**



## **Platreef implementing a phased approach to a large, underground, mechanized mine**

Ivanhoe plans to develop the Platreef Mine in phases. The initial annual rate of four million tonnes per annum (Mtpa) is designed to establish an operating platform to support future expansions. This is expected to be followed by a potential doubling of production to eight Mtpa; and then a third expansion phase to a steady-state 12 Mtpa, which would establish Platreef among the largest platinum-group-metals mines in the world.

Ivanhoe has made good progress on advancing the feasibility study of the first phase of development of the Platreef Mine. The study, which began in August 2015, is being prepared by principal consultant DRA Global, with specialized sub-consultants including Stantec Consulting, Murray & Roberts Cementation, SRK Consulting, Golder Associates and Digby Wells Environmental. The study is planned for completion in Q2 2017.

### **Metallurgical testwork and processing**

Metallurgical testwork has focused on maximizing the recovery of platinum-group metals and base metals, also while producing an acceptably high-grade concentrate grade for sale to third parties. The three main geo-metallurgical units and composites have produced concentrate grades of approximately 85 to 110 grams per tonne platinum, palladium, rhodium and gold (3PE+gold) at good platinum-group-elements (PGE) recoveries (86% to 88% 3PE+gold).

Comminution and flotation testwork has demonstrated that the optimum grind size of 80% passing 75 micrometres, in one stage of milling is sufficient to achieve the PGE recoveries referred to above. This simplifies the circuit and should enable Ivanhoe to optimize the capital and operating cost of the concentrator.

The flow sheet for phase one comprises a four Mtpa, three-stage crushing circuit, which will feed into two parallel milling-flotation modules, each with a capacity of two million tonnes per year. Flotation is followed by a four-Mtpa tailings-handling and concentrate-thickening, filtration and storage circuit.

### **Planned mining methods to incorporate highly productive, mechanized methods**

The selected mining areas in the current mine plan occur at depths ranging from approximately 700 metres to 1,200 metres below surface. The main access to the Platreef Deposit and ventilation system is expected to be through four vertical shafts: 1, 2, 3 and 4. Shaft 2 will host the main personnel transport cage, and the material and ore-handling system; shafts 1, 3 and 4 will provide ventilation to the underground workings. Shaft 1, now under development, also will be used for initial access to the deposit and early underground development.

The planned mining will incorporate low-cost, mechanized mining methods, including long-hole stoping and drift-and-fill mining. Mined-out areas will be backfilled with a mixture of tailings from the processing plant and cement. The ore will be hauled from the stopes to a series of ore passes that will connect to a main haulage level at Shaft 2, from where it will be hoisted to the surface for processing.

### **Bulk water and electricity supply**

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 Pruisen, southeast of the Northern Limb. The Pruisen Pipeline Project is expected to be developed to deliver water onward from Pruisen to the municipalities, communities and mining projects on the Northern Limb. Ivanhoe 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 10 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.

The Platreef Project's electricity requirement for a four-Mtpa underground mine, concentrator and associated infrastructure has been estimated at approximately 100 million volt-amperes. An agreement has been reached with Eskom, the South African public electricity utility, 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. The self-build and electrical supply agreements are being formulated.

### **First phase of the relocation of informal graves completed; second phase underway**

On February 2, 2017, a South African judge issued a ruling in favour of Ivanplats clearing the way for the company to proceed with the relocation of informal graves in the vicinity of its Platreef Mine development project.

A total of 75 informal graves were successfully relocated from land outside the perimeter of the active mine development site to new burial plots in a formal cemetery. An additional 19 locations were investigated and found not to contain human remains. The Ivanplats support program included assistance in providing new burial plots in a formal cemetery, tombstones and related services.

Ivanplats plans to relocate an estimated 27 additional informal graves as part of the second phase of its relocation program after the permits for the exhumations and reburials have been received. Further phases on peripheral infrastructure areas also are planned. The relocation of remaining informal graves will not impact the development of the Platreef Project.

## **2. Kipushi Project**

68%-owned by Ivanhoe Mines  
Democratic Republic of Congo

The Kipushi copper-zinc-germanium-lead mine in the DRC is adjacent to the town of Kipushi and approximately 30 kilometres southwest of Lubumbashi. It is located on the Central African Copperbelt, approximately 250 kilometres southeast of the Kamao-Kakula Project and less than one kilometre from the Zambian border. Ivanhoe acquired its 68% interest in the Kipushi Project in November 2011; the balance of 32% is held by the state-owned mining company, La Générale des Carrières et des Mines (Gécamines).

### **Health, safety and community development**

The Kipushi Project achieved a total of 5,321,941 work hours free of lost-time injuries, equivalent to 1,694 days, to the end of Q1 2017. Malaria remains the most frequently occurring health concern at Kipushi which increased after the rainy season to an average of 26 cases per month over the quarter.

In an effort to reduce the incidence of malaria in the Kipushi community, a Water Sanitation and Health (WASH) program has been initiated in cooperation with the Territorial Administrator and the local community. The main emphasis of the program's first phase is cleaning storm drains in the municipality to prevent accumulations of ponded water, where malarial mosquitos breed.

The Fionet program to improve malaria diagnostics and treatment expanded to 300 Deki readers installed in 252 medical service providers in Haut-Katanga and Lualaba provinces in Southern DRC, which host Ivanhoe's Kipushi and Kamao-Kakula projects. Deki readers provide automated readings of rapid diagnostic tests to remove the human-error factor and avoid prescription of unnecessary medication. The data is uploaded to a cloud server for analysis by the Ministry of Health in planning malaria-control

measures. There were more than 40,000 patient encounters where Deki readers provided diagnostic testing during the past year, with only approximately 48% of Kipushi Project employees who were symptomatic testing positive for malaria.

### **Project development and infrastructure**

The Kipushi Mine, which had been placed on care and maintenance in 1993, flooded in early 2011 due to a lack of pump maintenance over an extended period. At its peak, water reached 851 metres below the surface. Ivanhoe restored access to the mine's principal haulage level at 1,150 metres below surface in December 2013; since then, crews have been upgrading underground infrastructure to permanently stabilize the water levels.

Since completion of the drilling program, water levels have been lowered to the bottom of Shaft 5, which is planned to be the mine's main production shaft. The shaft is eight metres in diameter, 1,240 metres deep and approximately 1.5 kilometres from the planned main mining area. It provides the primary access to the lower levels of the mine, including the Big Zinc Deposit, through the 1,150-metre haulage level and underground ramp decline.

Engineering work has focused on the upgrading of Shaft 5 conveyances and infrastructure, installation of the rock conveyor system, the stripping and evaluation of the underground jaw crusher, refurbishment of bearer sets on the main rising-water pipes, and the replacement of shaft buntons (struts that reinforce the shaft walls). A new twinned high-volume ventilation fan also has been installed and is being commissioned on surface at Shaft 4 to provide fresh air to the underground workings.

**Figure 4: Shaft 5 main pumping station at the 1,200-metre level.**



**Figure 5: New rollers being installed on the 1,150-metre-level ore conveyor belt as part of the infrastructure upgrading program.**



### **Pre-feasibility study underway at Kipushi**

In September 2016, Ivanhoe began a pre-feasibility study (PFS) on the Kipushi Project that will further refine the optimal development scenario for the existing underground mine at Kipushi. Orewin, of Australia, has been appointed the main engineering firm for the preparation of the PFS. Golder Associates, MDM, SRK, DRA, Murray & Roberts and Grindrod also have been engaged to complete various aspects of the study.

The PFS will refine the positive preliminary economic assessment (PEA) for the redevelopment of the Kipushi Project that was announced on May 2, 2016. The PEA was prepared in compliance with Canadian National Instrument 43-101 – Standards of Disclosure for Mineral Projects.

Highlights of the 2016 PEA, prepared by OreWin and the MSA Group (Pty) Ltd, of Johannesburg, South Africa, include:

- After-tax net present value at an 8% real discount rate is \$533 million.
- After-tax real internal rate of return is 30.9%.
- After-tax project payback period is 2.2 years.
- Leveraging existing surface and underground infrastructure significantly lowers the redevelopment capital compared to a greenfield development project, as well as the time required to reinstate production.

- Life-of-mine average planned zinc concentrate production of 530,000 dry tonnes per annum – with a concentrate grade of 53% zinc – is expected to rank Kipushi, once in production, among the world's major zinc mines.
- Life-of-mine average cash cost of \$0.54/lb. of zinc is expected to rank Kipushi, once in production, in the bottom quartile of the cash-cost curve for zinc producers globally.

**Figure 6: Upgraded supports for Shaft 5 pump columns at the 1,200-metre-level pump station.**



Preparations are underway to start a 6,500-metre drilling program at Kipushi. The planned program, which is expected to begin later this month, will include six metallurgical holes and additional resource drilling in the Fault Zone and the Nord Riche and Southern Zinc zones to upgrade inferred resources to indicated resources.

### **3. Kamo-a-Kakula Copper Project**

39.6%-owned by Ivanhoe Mines  
Democratic Republic of Congo

The Kamo-a-Kakula Copper Project, a joint venture between Ivanhoe Mines and Zijin Mining, has been independently ranked as the largest copper discovery ever made on the African continent, with adjacent prospective exploration areas within the Central African Copperbelt in the DRC, approximately 25 kilometres west of the town of Kolwezi and about 270 kilometres west of Lubumbashi.

Ivanhoe sold a 49.5% share interest in Kamo-a Holding Limited to Zijin Mining in December 2015 for an aggregate consideration of \$412 million. In addition, Ivanhoe sold a 1% share interest in Kamo-a Holding to privately-owned Crystal River Global Limited for \$8.32 million – which Crystal River will pay through a non-interest-bearing, 10-year promissory note. Since the conclusion of the Zijin transaction in December 2015, each shareholder of Kamo-a Holding has been required to fund expenditures at the Kamo-a-Kakula Project in an amount equivalent to its proportionate shareholding interest in the company.

A 5%, non-dilutable interest in the Kamo-Kakula Project was transferred to the DRC government on September 11, 2012, for no consideration, pursuant to the DRC Mining Code. Following the signing of an agreement with the DRC government in November 2016, in which an additional 15% interest in the Kamo-Kakula Project was transferred to the DRC government, Ivanhoe and Zijin Mining now each hold an indirect 39.6% interest in the Kamo-Kakula Project, Crystal River Global Limited holds an indirect 0.8% interest and the DRC government holds a direct 20% interest. Kamo Holding Limited continues to hold an 80% interest in the project.

### **Kakula West Discovery confirmed by assay results and additional follow-up drilling**

On March 21, 2017, Ivanhoe announced that a new step-out hole, DD1124 – drilled 5.4 kilometres west of the present boundary of Kakula’s current Inferred Resources – intersected a relatively shallow, 16.3-metre zone of typical Kakula-style, chalcocite-rich copper mineralization similar to holes drilled in the centre of the high-grade Kakula Deposit on the Kamo-Kakula Copper Project. The new discovery, now referred to as Kakula West extended the length of the Kakula mineralized trend to approximately 10.1 kilometres, essentially doubling the previously estimated strike length of 5.5 kilometres contained in Ivanhoe’s January 23, 2017 news release.

On April 10, 2017, Ivanhoe announced the assay results for DD1124 that confirmed significant high-grade mineralization. DD1124 intersected 8.86 metres (true width) of 5.83% copper at a 3.0% copper cut-off, beginning at a downhole depth of 428.70 metres; 8.86 metres (true width) of 5.83% copper at a 2.5% copper cut-off; 16.05 metres (true width) of 4.14% copper at a 2.0% copper cut-off; and 16.05 metres (true width) of 4.14% copper at a 1.0% copper cut-off. DD1124’s best six-metre intercept was 6.17 metres (true width) at 6.84% copper.

**Figure 7: Drilling at Kakula West.**



In addition to DD1124, additional follow up drilling confirmed the significance of the initial discovery with two western step-out holes:

- DD1138, drilled 400 metres west of DD1124, intersected a zone of moderate-to-strong chalcocite mineralization six to seven metres thick, beginning at a downhole depth of 565.5 metres. Mineralization is hosted in a laminated siltstone horizon, typical of Kakula-style mineralization seen elsewhere at Kakula. The siltstone was separated from the Roan footwall sandstone by a sandy diamictite unit.
- DD1144, drilled 800 metres west of DD1224, intersected similar geology and mineralization to DD1138 with approximately ten metres of moderate chalcocite mineralization, including more strongly mineralized zones starting at a downhole depth of 502 metres and hosted in a laminated siltstone unit.

Full details of the DD1138 and DD1144 intersections can be found in the April 10, 2017 news release.

Excellent visual drill intercepts continue to be returned at Kakula West. The results show a rapidly growing area of shallow copper mineralization characterized by finely disseminated chalcocite in siltstone and maroon diamictite. The style and the overall geometry of mineralization are typical of the high-grade Kakula trend to the east.

The Kakula Discovery remains open along a westerly-southeasterly strike. Importantly, the chalcocite-rich zone of mineralization in DD1124 was intersected at a depth of approximately 400 metres below surface, significantly shallower than several of the mineralized intercepts announced in January 2017 that were drilled closer to the western boundary of the Kakula Inferred Resource.

**Figure 8: Exploration staff processing Kakula drill core at the Kamoia camp facility.**



## **Kamoa-Kakula studies**

The Kamoa-Kakula Project has started a PEA for larger production cases at both Kamoa and Kakula. The Kakula study will be based on an updated Mineral Resource Estimate expected in May 2017. It is anticipated that the increased resource base will support a Kakula mine capacity of approximately six Mtpa. The Kansoko mine capacity also is expected to be increased to six Mtpa through a change in mining method. The revised PEA targets peak mine production of approximately 12 Mtpa from the current resource base at the presently delineated Kamoa and Kakula deposits. In light of the successful step-out drilling at Kakula West, the Kamoa-Kakula development plans will be reassessed and amended on a continuous basis as the project moves forward.

The updated PEA is expected to be completed in Q3 2017.

## **Health and safety at Kamoa-Kakula**

Health and safety remain key priorities for all people working at the Kamoa-Kakula Project. As of March 31, 2017, the Kamoa-Kakula Project had achieved 6,394,834 lost-time injury-free man hours.

During Q1 2017, 58 cases of malaria were diagnosed at the Kamoa clinic, compared to 85 for the same period in 2016. This progress is, in part, due to the project's malaria control plan.

## **Environmental, Social and Health Impact Assessment**

A major update to the Kamoa Environmental, Social & Health Impact Assessment (ESHIA) was submitted to DEPM (DRC environmental authority) on January 30, 2017, before the required five-year anniversary of the approved 2012 ESHIA. The scope of the updated ESHIA included the Kansoko Mine and concentrator, Kakula Mine and concentrator, Kakula tailings storage facility and main Kolwezi access road. Approval for the updated ESHIA was received from the DEPM on March 3, 2017.

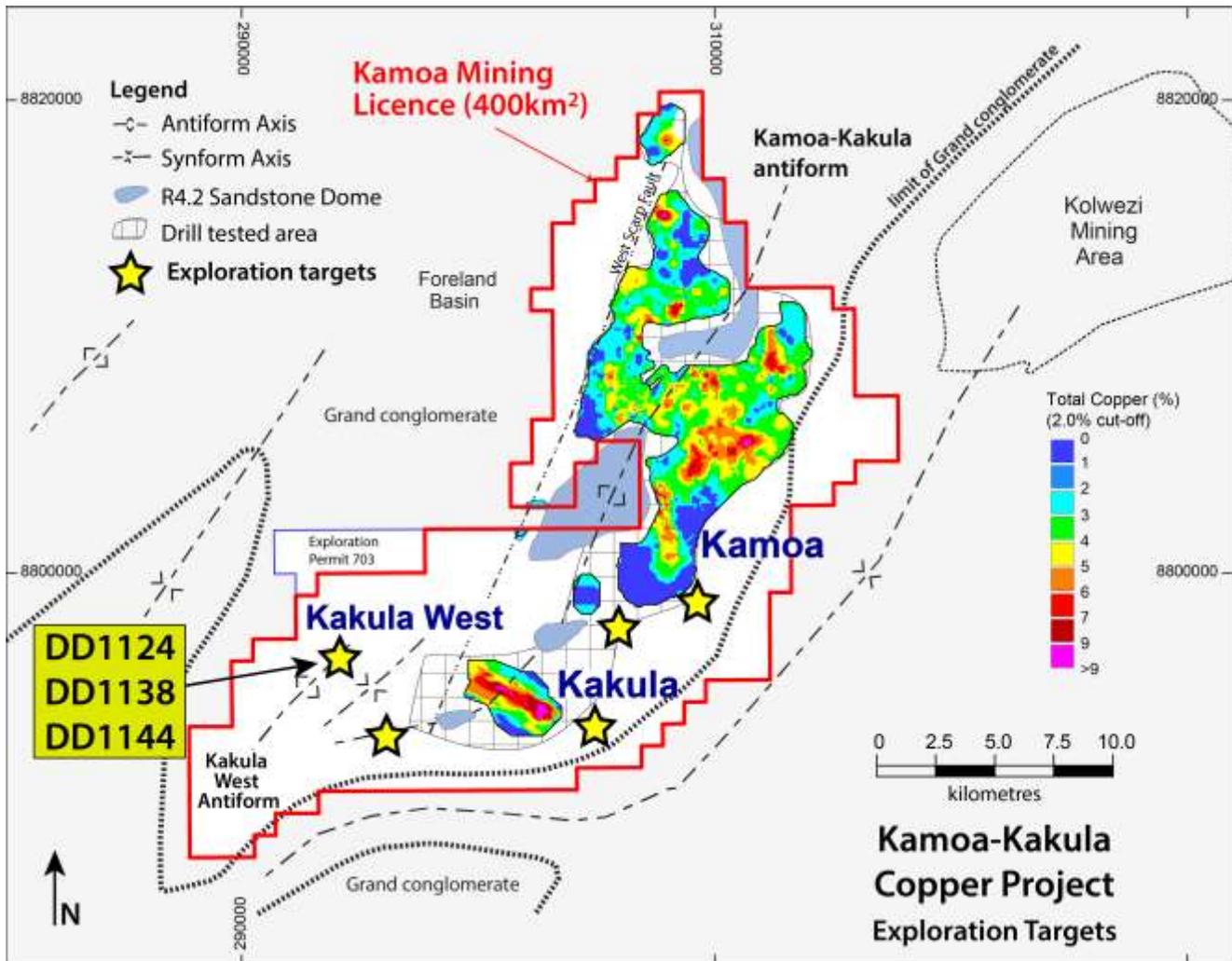
## **Ongoing exploration activities to focus on other high-priority targets**

As of the end of Q1 2017, more than 25,000 metres had been drilled at Kakula since the start of the year. There are 14 rigs on site, 12 of which are currently drilling; 10 from the contractor and two project-owned rigs. Included in the drilling total were holes drilled for geotechnical and metallurgical studies.

Exploration activities significantly increased in Q1 2017. The accelerated exploration program was driven by resource expansion drilling to support an updated Mineral Resource Estimate planned for early Q2 2017 to be used for future development studies on the project. Nine of the 14 rigs on site were dedicated to resource expansion at Kakula. Coinciding with this expansion drilling, exploration activities were increased on untested parts of the Kamoa-Kakula licence. The Kakula West discovery was a result of the expanded grass roots program with three rigs currently dedicated to this area.

With the onset of the dry season, the intention is to reallocate a number of rigs from Kakula resource expansion and development activities to test other areas on the Kamoa-Kakula licence where significant Kakula-style targets have been identified but have been inaccessible during the wet season.

**Figure 9: Kamo-Kakula mining licence, showing copper grade of Indicated and Inferred Resources at a 2% copper cut-off, untested areas, current target areas and location of Kakula West Discovery.**



### Improved copper recoveries and concentrate grades confirmed by preliminary metallurgical tests on drill core from Kakula

Following on from the positive preliminary testwork results received during Q4 2016 of 87.8% recovery at an extremely high concentrate grade of 56% copper, the next phase of flowsheet development has been initiated.

A metallurgical drilling campaign to compile a representative composite sample is underway and is planned to be completed during Q3 2017. This sample will be used for the PFS circuit development and optimization testwork which is planned for the second half of 2017.

Earlier metallurgical testwork indicated that the Kamo and Kakula concentrates contain extremely low arsenic levels by world standards – approximately 0.02%. Given this critical competitive marketing advantage, Kamo-Kakula concentrates are expected to attract a significant premium from copper-concentrate traders for use in blending with concentrates from other mines. The concentrates will help

to enable the other concentrates to meet the limit of 0.5% arsenic imposed by Chinese smelters to meet China's environmental restrictions.

### **Mine development at the Kansoko Mine expected to reach high-grade copper in Q2**

ByrneCut Underground Congo SARL progressed well with the decline development at Kansoko Sud during Q1 2017. A total of more than 1,600 metres of development had been achieved at the end of Q1 2017.

The service and conveyor declines each have been advanced more than 770 metres and are in Kamoia pyritic siltstone, which overlies the copper ore. Development of the underground mine is scheduled to reach the high-grade copper mineralization at the Kansoko Sud Deposit during Q2 2017.

**Figure 10: Operating the underground drill rig during decline development.**



### **Kakula box-cut and decline development**

The Kamoia-Kakula technical team has identified a location for a box cut for the initial portal to planned decline ramps that will provide underground access to the Kakula Deposit. The design of the box cut has been completed and the excavation, support and civil works have been tendered. A preferred bidder has been identified and the project team is in a position to award the contract. Construction of the Kakula box cut is expected to take approximately five months, after which development of the set of twin declines can commence.

A tender document for the Kakula decline development has been completed and will be issued to prospective contractors during Q2 2017.

## **Kamoa mine site connected to the national hydroelectric grid**

The construction of the 120 kilovolt (kV) power line that branches off from the main supply at Kisenge has been completed. A 120kV mobile substation was installed, commissioned and energized on October 30, 2016. The Kamoa mine site now is connected to the national electrical grid and is receiving hydropower for work on site.

An eight-kilometre, 11kV overhead power line with mini substations has been constructed from the mine site to the Kamoa camp and is supplying hydropower to the camp. The supply of electricity from the grid has resulted in significant savings from reduced use of diesel fuel.

The design of a 120kV line connecting the Kansoko mine site with Kakula has been designed and tenders from potential contractors have been received.

## **Initial repair work enables Mwadingusha power station to supply electricity to grid**

The Mwadingusha Unit 1 repair work was completed in August 2016 and the official inauguration ceremony was held at the Mwadingusha power station on September 7, 2016. The Mwadingusha G1 unit, supplying 11 megawatts, was synchronized to the SNEL, the DRC's state-owned power company, national interconnected grid on September 6, 2016.

The contract to purchase four turbines for the Mwadingusha power plant upgrades was awarded and the contract signed between SNEL and the consortium Andritz Hydro & Cegelec Corporation. A site visit by the consortium took place in December in preparation for demolition work to start in August 2017.

## **Continued focus on community and sustainability**

The Sustainable Livelihoods project is largely aimed at economically empowering communities in the vicinity of the planned mine. The project, which has been in place for the past five years, continues to successfully manage the following programs during Q1 2017:

- a small-holder maize (corn) production program yielded maize from local communities as well as the mine's farm;
- a vegetable program supplying produce to the Kamoa-Kakula Project camp kitchen;
- a poultry project that supplies the Kamoa-Kakula Project camp kitchen with chickens and eggs;
- a beekeeping program managing over 50 honey-producing hives; and
- a fish-farming program consisting of two fully-stocked dams.

## SELECTED QUARTERLY FINANCIAL INFORMATION

The following table summarizes selected financial information for the prior eight quarters. Ivanhoe had no operating revenue in any financial reporting period and did not declare or pay any dividend or distribution in any financial reporting period.

	<b>3 Months ended</b>			
	March 31,	December 31,	September 30,	June 30,
	2017	2016	2016	2016
	\$'000	\$'000	\$'000	\$'000
Exploration and project expenditure	8,296	9,507	7,769	8,233
General administrative expenditure	4,953	7,272	4,213	3,657
Share-based payments	1,372	1,442	1,750	1,312
Finance income	(6,429)	(6,827)	(7,239)	(7,367)
Finance costs	479	471	454	445
Total comprehensive loss (profit) attributable to:				
Owners of the Company	1,749	14,101	(1,860)	6,568
Non-controlling interest	3,273	3,914	2,445	3,483
Loss per share (basic and diluted)	0.01	0.02	0.01	0.01

	<b>3 Months ended</b>			
	March 31,	December 31,	September 30,	June 30,
	2016	2015	2015	2015
	\$'000	\$'000	\$'000	\$'000
Exploration and project expenditure *	6,917	10,271	8,553	9,009
General administrative expenditure *	3,693	5,833	4,430	1,323
Share-based payments	1,473	2,345	1,655	1,736
Gain on partial sale of subsidiary	-	(357,671)	-	-
Re-measurement to fair value of the interest retained in joint venture	-	(376,148)	-	-
Finance income	(8,469)	(1,191)	(273)	(445)
Finance costs	428	1,556	36	48
Mark-to-market gain on revaluation of warrants	-	(429)	(970)	(1,334)
Loss (gain) from subsidiary held for partial sale	-	755	(7,958)	2,675
Total comprehensive loss (profit) attributable to:				
Owners of the Company	4,203	(717,213)	9,420	11,008
Non-controlling interest	2,897	2,468	3,439	3,564
(Profit) loss per share (basic and diluted)	0.01	(0.93)	0.00	0.01

\* Prior period amounts have been amended to show the (gains)/losses from subsidiary held for partial sale separately in order to improve comparability.

## DISCUSSION OF RESULTS OF OPERATIONS

### *Review of the three months ended March 31, 2017 vs. March 31, 2016*

The company's total comprehensive loss for Q1 2017 of \$5.0 million was \$2.1 million lower than for the same period in 2016 (\$7.1 million). The decrease mainly was due to a \$5.3 million increase in exchange gains on translation of foreign operations that was partly offset by a \$2.0 million decrease in finance income.

The decrease in finance income was due to the decrease in the deemed finance income on the purchase price receivable from the partial sale of the Kamoia Project from \$4.3 million in Q1 2016 to \$1.1 million for the same period in 2017, which coincides with the decrease in the purchase price receivable.

Exploration and project expenditures for the three months ending March 31, 2017, amounted to \$8.3 million and were \$1.4 million more than for the same period in 2016 (\$6.9 million).

With the focus at the Platreef Project on development and the Kamoia Project being accounted for as a joint venture, \$8.2 million of the total \$8.3 million exploration and project expenditure related to the Kipushi Project. Expenditure at the Kipushi Project increased by \$1.5 million compared to the same period in 2016.

The company's share of losses from the Kamoia Holding joint venture increased from \$4.2 million in Q1 2016 to \$5.5 million in Q1 2017. The following table summarizes the company's share of the comprehensive loss of Kamoia Holding for the three months ending March 31, 2017 and for the same period in 2016:

	<b>Three months ended March 31, 2017</b>	<b>Three months ended March 31, 2016</b>
	<b>\$'000</b>	<b>\$'000</b>
Interest expense	9,183	7,064
Interest income	(292)	-
Exploration costs	5,415	1 684
Foreign exchange (gain) loss	(102)	189
Loss for the period	14,204	8,937
Loss attributable to non-controlling interest	(3,056)	(419)
Loss for the period attributable to joint venture partners	11,148	8,518
<b>Company's share of losses from joint venture (49.5%)</b>	<b>5,518</b>	<b>4,216</b>

The costs associated with mine development are capitalized as development costs in Kamoia Holding, while the exploration expenditure at Kakula is expensed. The interest expense in the Kamoia Holding joint venture relates to shareholder loans where each shareholder is required to fund Kamoia Holding in an amount equivalent to its proportionate shareholding interest.

### *Financial position as at March 31, 2017 vs. December 31, 2016*

The company's total assets decreased by \$3.1 million, from 1,002.2 million as at December 31, 2016, to \$999.1 million as at March 31, 2017. This resulted from the company utilizing its cash resources in its

operations. The company's total liabilities decreased by \$2.7 million to \$43.3 million as at December 31, 2017, from \$46.0 million as at December 31, 2016.

The remaining purchase price receivable due to the company as a result of the sale of 49.5% of Kamo Holding decreased as the company received \$41.2 million from Zijin on February 8, 2017. The present value of the remaining consideration receivable, net of transaction costs, was \$38.4 million as at March 31, 2017 and is due on May 23, 2017.

The company's investment in the Kamo Holding joint venture increased by \$12.5 million from \$473.6 as at December 31, 2016, to \$486.2 million as at December 31, 2017, with the current shareholders funding the operations equivalent to their proportionate shareholding interest. The company's portion of the Kamo Holding joint venture cash calls amounted to \$13.5 million during Q1 2017, while the company's share of comprehensive loss from joint venture amounted to \$5.5 million. At Kamo-Kakula, the focus remained on development, together with an exploration program at the Kakula Discovery.

Property, plant and equipment increased by \$13.5 million, with a total of \$9.7 million being spent on project development and to acquire other property, plant and equipment, \$9.0 million of which pertained to development costs of the Platreef Project.

The company utilized \$12.2 million of its cash resources in its operations and earned interest income of \$0.8 million in Q1 2017.

## **LIQUIDITY AND CAPITAL RESOURCES**

The company had \$291.2 million in cash and cash equivalents as at March 31, 2017. Certain of the company's cash and cash equivalents, having an aggregate value of \$10.7 million, are subject to contractual restrictions as to their use and are reserved for the Platreef Project.

As at March 31, 2017, the company had consolidated working capital of approximately \$338.0 million, compared to \$364.8 million at December 31, 2016. The Platreef Project working capital is restricted and amounted to \$5.6 million at March 31, 2017, and \$14.8 million at December 31, 2016. Excluding the Platreef Project working capital, the resultant working capital was \$332.4 million at March 31, 2017, and \$350.0 million at December 31, 2016. The company believes it has sufficient resources to cover its short-term cash requirements. However, the company's access to financing always is uncertain and there can be no assurance that additional funding will be available to the company in the near future.

On December 8, 2015, Zijin, through a subsidiary company, acquired a 49.5% interest in Kamo Holding for a total of \$412 million in a series of payments. Ivanhoe received an initial \$206 million from Zijin on December 8, 2015, and a further \$41.2 million on each of March 23, 2016, July 8, 2016, October 25, 2016, and February 8, 2017; the last remaining \$41.2 million is scheduled to be received on May 23, 2017. Since December 8, 2015, each shareholder in Kamo Holding has been required to fund Kamo Holding in an amount equivalent to its proportionate shareholding interest.

The company's main objectives for 2017 at the Platreef Project are the completion of the phase one feasibility study, the continuation of Shaft 1 construction and commencement of construction of Shaft 2. At Kipushi, the principal objective is the completion of the PFS and continued upgrading of mining infrastructure. At the Kamo-Kakula Project, priorities are the continuation of drilling, the continuation of construction of the twin declines at Kamo and the commencement of a box-cut at Kakula. The company expects to spend \$50 million on further development at the Platreef Project; \$26 million at the Kipushi Project; \$4 million on regional exploration in the DRC; and \$11 million on corporate overheads for the remainder of 2017 – as well as its proportionate funding of the Kamo-Kakula Project, expected to be \$35 million for the remainder of 2017.

This news release should be read in conjunction with Ivanhoe Mines' Q1 2017 Financial Statements and Management's Discussion and Analysis report available at [www.ivanhoemines.com](http://www.ivanhoemines.com) and at [www.sedar.com](http://www.sedar.com).

### **Qualified Person**

Disclosures of a scientific or technical nature in this news release 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 considered independent under NI 43-101 as he is the Vice President, Project Geology and Evaluation. Mr. Torr has verified the technical data disclosed in this news release.

Ivanhoe has prepared a current independent NI 43-101-compliant technical report for each of the Platreef Project, the Kipushi Project and the Kamoa-Kakula Project, which are available under the company's SEDAR profile at [www.sedar.com](http://www.sedar.com):

- Technical Report dated January 20, 2017 prepared by OreWin Pty. Ltd., Amec Foster Wheeler and SRK Consulting Inc. covering the company's Kamoa-Kakula Project;
- Technical Report dated April 22, 2016 prepared by OreWin, Amec Foster Wheeler, Stantec Inc., SRK and DRA Projects (Pty.) Ltd. covering the company's Platreef Project; and
- Technical Report dated March 11, 2016 prepared by MSA Group (Pty) Ltd and OreWin covering the company's Kipushi Project.

These technical reports include relevant information regarding the effective dates and the assumptions, parameters and methods of the mineral resource estimates on the Platreef Project, the Kipushi Project and the Kamoa-Kakula Project cited in this news release, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this news release in respect of the Platreef Project, Kipushi Project and Kamoa-Kakula Project.

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### **Forward-looking statements**

Certain statements in this release constitute "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws. Such statements and information involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the company, its 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 the

company's current expectations regarding future events, performance and results and speak only as of the date of this release.

Such statements include without limitation, the timing and results of: (i) statements regarding Shaft 1 providing initial access for early underground development at the Flatreef Deposit; (ii) statements regarding the station development of Shaft 1 at the 450-, 750-, 850- and 950-metre levels; (iii) statements regarding the sinking of Shaft 1, including that a sinking rate of 45 metres per month is expected; (iv) statements regarding Shaft 1 reaching the planned, final depth at 980 metres below surface in 2018; (v) statements regarding the timing of the commencement of Shaft 2 development, including that construction of the early works is to commence in Q2 2017 and will take approximately 12 months to complete; (vi) statements regarding the operational and technical capacity of Shaft 1; (vii) statements regarding the internal diameter and hoisting capacity of Shaft 2; (viii) statements regarding the company's plans to develop the Platreef Mine in three phases: an initial annual rate of four million tonnes per annum (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; (ix) statements regarding the planned underground mining methods of the Platreef Project including long-hole stoping and drift-and-fill mining; (x) statements regarding peak water use of 10 million litres per day at the Platreef Project and development of the Pruisen Pipeline Project; (xi) statements regarding the Platreef Project's estimated electricity requirement of 100 million volt-amperes; (xii) statements regarding the completion of a feasibility study at the Platreef Project in Q2 2017; (xiii) statements regarding the declines having been designed to intersect the high-grade copper mineralization in the Kansoko Sud area during the second quarter of 2017; (xiv) statements regarding the completion of an updated Mineral Resource Estimate at the Kamoa-Kakula Project in May 2017 and an updated preliminary economic assessment in Q3 2017; (xv) statements regarding the timing, size and objectives of drilling and other exploration programs for 2017 and future periods including a metallurgical drilling campaign at the Kakula deposit planned for Q2 2017; (xvi) statements regarding the implementation of the Social and Labour Plan at the Platreef Project and pledged expenditure of R160 million; (xvii) statements that the Kakula box-cut is expected to take approximately five months; and (xviii) statements regarding expected expenditure for the remainder of 2017 of \$50 million on further development at the Platreef Project; \$26 million at the Kipushi Project; \$4 million on regional exploration in the DRC; and \$11 million on corporate overheads – as well as its proportionate funding of the Kamoa-Kakula Project, expected to be \$35 million for the remainder of 2017.

As well, all of the results of the pre-feasibility study of the Kamoa-Kakula Project and preliminary economic assessment of development options for the Kakula deposit, the pre-feasibility study of the Platreef Project and the preliminary economic assessment of the Kipushi Project, constitute forward-looking statements or 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, estimates of capital and operating costs and the size and timing of phased development of the projects. Furthermore, with respect to this specific forward-looking information concerning the development of the Kamoa-Kakula, Platreef and Kipushi Projects, the company has based its assumptions and analysis on certain factors that are inherently uncertain. Uncertainties include: (i) the adequacy of infrastructure; (ii) geological characteristics; (iii) metallurgical characteristics of the mineralization; (iv) the ability to develop adequate processing capacity; (v) the price of copper, nickel, zinc, platinum, palladium, rhodium and gold; (vi) the availability of equipment and facilities necessary to complete development; (vii) the cost of consumables and mining and processing equipment; (viii) unforeseen technological and engineering problems; (ix) accidents or acts of sabotage or terrorism; (x) currency fluctuations; (xi) changes in regulations; (xii) the compliance by joint venture partners with terms of agreements, (xiii) the availability and productivity of skilled labour; (xiv) the regulation of the mining industry by various governmental agencies; and (xiv) political factors.

This release also contains references to estimates of Mineral Resources and Mineral Reserves. The estimation of Mineral Resources is inherently uncertain and involves subjective judgments about many relevant factors. Estimates of Mineral Reserves provide more certainty but still involve similar subjective judgements. 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 or Mineral Reserve 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/or changes in mine plans; (vi) the possible failure to receive required permits, approvals and licences; and (vii) changes in law or regulation.

Forward-looking statements and information 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 or information, including, but not limited to, the factors discussed below and under "Risk Factors", 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 or labour unrest; changes in commodity prices; and the failure of exploration programs or studies to deliver anticipated results 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 of the company's Q1 2017 MD&A.