

30 October 2018

Company Announcements

Australian Securities Exchange Limited
Level 40, Central Park,
152-158 St Georges Terrace
PERTH WA 6000

QUARTERLY ACTIVITIES REPORT PERIOD ENDING 30 SEPTEMBER 2018

Ironbark Zinc Limited ("**Ironbark, the Company**") (ASX: IBG) hereby provides a report on its activities for the period ending 30 September 2018. During this busy reporting period the Company maintained focus towards developing the world class Citronen zinc project (Citronen). The zinc price remains strong and with stronger long term zinc forecasts, a granted Mining Permit over one of the largest zinc deposits in the world and current Feasibility Study – Ironbark is uniquely well placed moving forward to achieve long life and large scale production.

The Company is now working hard to secure finance in order to develop the large scale Citronen zinc project. During the quarter the following significant milestones were achieved:

- Conducted successful site visits with key potential investors and service providers as part of the Due Diligence process
- Site works including minor box-cut excavation works towards the ore body, plant and equipment maintenance, and camp improvements.
- Proposed shipping route chartered and proven
- Finance Discussions and Due Diligence Ongoing – Cutfield Freeman & Co
- Byrnecut Mining MOU

Subsequent to the quarter

- Metso MOU
- Board nominee resignation and update

Ironbark has bolstered its push towards project financing with the appointed financial advisors, Cutfield Freeman & Co., (CF&Co) who are a highly credentialed tier one international financial advisory firm, engaged to assist Ironbark structure the financing for the world class Citronen zinc project.

CF&Co is an independent corporate finance house with offices in London, Toronto and Hong Kong providing independent advice to companies in the mining and metals sectors. CF&Co advises on all aspects of corporate, project and offtake-related finance, mergers and acquisitions, and joint ventures. CF&Co has acted on a wide variety of transactions for a range of mining companies including BHP Billiton Ltd, Dynatec

Corporation, Molycorp Inc, Zijin Mining Group Co., and Anatolia Mineral Development Ltd/Alacer Gold Corporation.

As part of the financing process Ironbark conducted a series of site visits to the Citronen proposed mine site during August 2018. The primary goal was to take several groups of high calibre potential investors, private equity groups, bankers, equipment suppliers and mining operators to review the project site. Investment criteria for many of the investors include completing site inspections as part of the due diligence process. The agenda for the inspections included an appraisal of drill core selected from the site core library as well as a visit to the areas of outcropping mineralisation (Figure 1) that occur at the Discovery zone over a strike length of 2 kilometres. Investigations were also made of the proposed decline area, tailings dam and various other planned infrastructure locations (Figure 2). The site visit typically impresses upon the investors the open ended nature of the mineralisation and the Exploration Target of 302- 347 Mt @ 4.4-5.0% zinc + lead (ASX announcement 28 January 2010). The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration completed to date to estimate a Mineral Resource in accordance with the JORC 2012 Edition Guidelines. It is uncertain if further exploration will result in the delineation of a Mineral Resource.

The current resource stands at 70.8Mt @ 5.7% zinc + lead using a 3.5% zinc cut-off (Measured 25Mt, Indicated 26.5Mt and Inferred 19.3Mt) which compares favourably against a global average underground primary zinc mine head grade of 4.9% zinc*



Figure 1: Discovery zone mineralisation outcropping over 2km of strike

* S&P Global, October 2018



Figure 2: Proposed site layout with inspections of key areas made by the investors

Site Activities and Mining

Ironbark reported that it commenced site works, including preliminary and small scale box-cut and portal preparation at the decline (Figures 3 & 4). The equipment on site was serviced and the site prepared for early works next year. The commencement of breaking ground on site is a strong endorsement of the support shown by the Greenland Government and the validity of the current Mine Permit.



Figure 3: First cut of footprint to the portal

The Citronen Mine will be one the largest zinc mines in the world at full scale production. It will also be one of the cleanest mines by virtue of many factors such as the self-neutralising tailings that are planned to mostly be pumped back underground where they will freeze into a solid with a higher Unconfined Compressive Strength than that of paste fill cement. Ironbark has focused on entering into agreements that will ensure an environmentally friendly and sustainable operating environment. The project location serendipitously steers the operation towards the cleanest environmental practices as they are also the most cost effective solution in this instance.

Portal and decline engineering plans were prepared and submitted to the Greenland Authorities to allow Ironbark to commence site activities this year including commencing portal works. The site works commenced portal establishment using a box-cut method, as well as servicing the equipment on site such as the bulldozers, Prinoth snow plough, and other general maintenance and preparation work.

Ironbark appointed MiningPlus, a highly experienced Mining Consultant, to provide engineering and technical services for the Citronen Project. MiningPlus designed the initial open pit and underground mining schedule for Citronen. Figure 2 shows the infrastructure of the Citronen Project and the location of the portal; Figure 4 shows a photograph of the portal area looking north towards the fjord. The portal location, Figure 5, has been chosen in an area of outcropping solid rock that is in the centre of the high grade “Beach Zone” orebody allowing the highest grade ore to be mined first.





Figure 4: Portal location



Figure 5: Portal Location at Citronen Fjord

Milestone ship route proven

Ironbark announced the significant achievement of proving the viability of shipping from the Citronen base metal project in Greenland. Ironbark chartered the "Nunavik", a 189m long Polar Class Cargo ship which has proved shipping access to the Citronen area (Figure 7) marking the first time a large commercial ship has travelled so far north on the eastern coast of Greenland. The vessel took advantage of late summer ice conditions and open water leads whenever possible to prove viable access to the project area (Figures 8 and 9). Ironbark chartered the icebreaking Nunavik to transit the area as part of the overall proof of logistical plan. The Citronen Project represents one of the World's largest zinc deposits and will be a largely conventional mine with the exception of its location. The ship accessed the project area with relative ease, even late in the season. This endeavour is a major milestone for Ironbark and supports the shipping plans as outlined in the Feasibility Study.

The Citronen project has some unique characteristics that are likely to make this one of the most environmentally friendly and sustainable global operations. Ironbark plans to draw on these advantages to deliver one of the cleanest zinc mines in the world. In conjunction with Fednav's impeccable environmental track record and reputation, Ironbark ensured that the Nunavik made this journey consuming low sulphur marine diesel oil instead of conventional heavy fuel oil (HFO) while in Greenland waters.



Figure 6: The Nunavik in North -East Greenland

The Nunavik is a modern and very powerful icebreaking cargo ship and measures 188.8 metres (619 ft) long and has a beam of 26.6 metres (87 ft). Fully laden, she draws 11.75 metres (38.5 ft) of water and has a deadweight tonnage of 31,754 tonnes. She is built for navigation in ice according to the International Association of Classification Societies (IACS) Polar Class 4, which allows year-round operation in thick first-year ice which may include old ice inclusions. The Nunavik is owned and operated by Fednav and services Canadian Royalties' Nunavik Nickel Mine, in Canada.

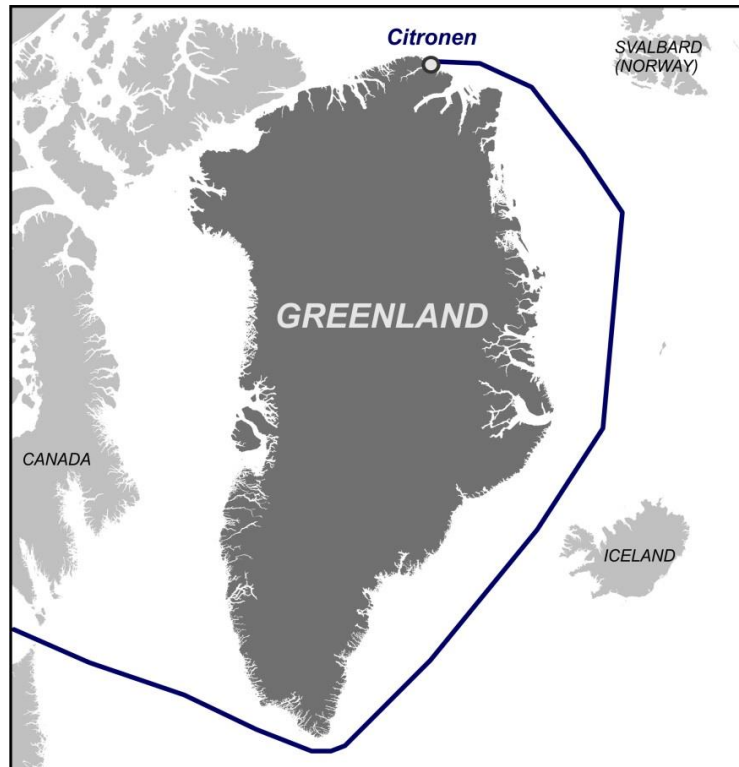


Figure 7: The planned shipping route



Figure 8: Junction of the main Fjord, Frederik Hyde Fjord and the open ocean - taken from an aircraft servicing the Citronen project

Fednav is Canada's largest ocean-going dry-bulk ship owning and chartering group. For close to 75 years, Fednav has been delivering practical, innovative maritime transportation solutions as a pioneer in the international shipping industry. With offices on four continents and a reputation built on a commitment to customer care and reliability, Fednav is the leader in international shipping on the Great Lakes, as well as the Arctic, boasting the world's largest fleet of ice-class bulk carriers.



Fednav understands that their business has an impact on the environment. While shipping remains the most environmentally friendly form of transportation for the majority of the world's goods and commodities, ships and their airborne and waterborne emissions affect our natural surroundings. Fednav is keenly aware of, and committed to, their responsibility to conduct business in an ethical and sustainable manner.

For several years, Fednav has committed to lowering its greenhouse gas emissions (GHG) by 1% per year (in grams per tonne-mile). Over the last decade, they have nearly doubled the target. Fednav's new vessels emit 40% less GHG than the ship the company built 30 years ago.



Figure 9: Long Finned Pilot Whale

Fednav is a founding member of Green Marine, a voluntary, bi-national programme aimed at strengthening the marine industry's environmental performance, and continues to achieve Green Marine's top ratings for minimising its environmental footprint. Fednav Limited was also presented with the IBJ Bulk Ship Operator Environmental Protection Award.

During this voyage with Ironbark, the Nunavik collected valuable local marine life information, and in conjunction with instruction from qualified Danish Marine Observers (MMSO) recorded the local marine fauna (Figure 9). Ironbark and Fednav are acutely aware and respectful of the sensitive arctic environment. The information will be compiled and passed on to the Greenland environmental bodies and we look forward to developing strong and mutually beneficial relationships with the organisations as we progress the development of the mine.



Financing Progress

There has been an encouraging level of interest in the project from a broad range of investors with access to the Citronen data room which has been prepared for potential investors. Several site visits were facilitated this year as part of the due diligence process for potential financiers. This included bankers, private equity groups and industrial groups. The site visit was a customary and critical requirement as part of the due diligence process. Cutfield Freeman & Co. are assisting Ironbark with the overall financing process and are operating as the first contact to manage the potential financing scenarios. Ironbark is delighted with the quality of the parties interested in the Citronen project.

One of Ironbark's strategies is to minimise the capital costs of the project. The Company is in discussions with parties with regard to contract mining, lease hire and Build Own Operate (BOO) opportunities. Specific key capital items that are potentially open to off balance sheet financing/ownership include the Power Plant, the Mining Fleet, the Supply of Critical Processing Equipment, the Ship Loader and Marshalling Yard, and the Fuel Farm. These could potentially reduce the capital costs by up to US\$150M and would form part of the financing. Some of these components may qualify Ironbark for to access European Credit Authorities (ECA) funding schemes.

The collective financing options will be evaluated to form the best possible outcome for shareholders. The financing is likely to include a blend of debt, equity and possibly even partnership or joint venture. All options will have specific pathways and timeframes to reach conclusion and Ironbark is pursuing these as fast as is possible.

Milestones and updates will be provided to the market as they are achieved.

Byrnecut Mining Services Agreement

Ironbark announced that it entered into a Memorandum of Understanding with Byrnecut Offshore Pty Ltd ("**Byrnecut**").

The agreement provides Ironbark with the extensive international experience in underground hard rock mechanised mining. The role is intended to include underground contract mining services, underground mine cost modelling, providing the underground mining fleet, and includes holding the debt and security of the equipment. Ironbark has commenced work seeking to remove key capital items off the Capital Cost of the Citronen project. Ironbark has identified several further key opportunities to reduce the project Capital Cost. The parties will work towards a more detailed cost based commercial agreement operating under agreed margins through each project stage and will also encompass agreed performance margins. Ironbark is in discussions with other highly regarded groups for the remaining disciplines or to support the project that have the potential to collectively and significantly assist with the overall project financing. Byrnecut will operate under the Greenland Government guidelines and will assist Ironbark achieve its training and employment obligations. A Byrnecut technical representative visited Citronen during the site inspections conducted in August 2018.

Byrnecut is an internationally recognised underground mining contractor that offers both a full range of professional mining support services and a 30 year history of world class mining experience. Since starting its international operations in 1999, it has grown into one of the most experienced underground mining contractors across the globe. Byrnecut currently



employs over 4,000 people worldwide with operations currently in the Australia, Democratic Republic of Congo, Mali, Burkina Faso, Saudi Arabia and Tanzania.

ByrneCut specialises in mechanised underground mine feasibility, mine development and mine production and has been successful in securing many Australian and international contracts over the past 30 years. It offers its clients a range of services including:

- Mechanised development and production
- Shotcreting
- Equipment rebuilds and maintenance engineering
- Mine engineering consultancy services
- Workforce safety and training
- Labour hire and management
- Raise drilling
- Shaft sinking

ByrneCut has first-hand knowledge of the skills necessary to overcome remote location logistics, language barriers and upskilling the national workforce. They offer clients a safe, efficient and professional contracting service to assist in optimising the development and production of their mineral resources, training of local workforce, and they are capable of providing first world mining capabilities to any international location. ByrneCut have the capacity to provide Ironbark with an immediate “bolt-on” underground mining expertise that will assist Ironbark as we move from financing to active mining.

Zinc Market Update

The zinc price has continued to show volatility over the quarter but at the time of writing trades at a similar price to the price at beginning of the quarter. In fact the zinc price has shown some resilience against a period of global volatility but this has largely simply been the result of the apparent and growing critical shortage of zinc held in stockpiles. At the time of writing the zinc price was ~US\$1.23/lb or US\$2,700/t. Since the date of the last quarter until the date of this report, the zinc stockpiles held in the London Metal Exchange (LME) have fallen by nearly 40%, which is significant. In fact the Shanghai Futures Exchange and LME zinc stockpiles are currently now solidly less than a week's global average consumption. This very tight market bodes well for ongoing zinc market tightness and the zinc price. There is debate about the projected tightness going forward after the International Lead and Zinc Study Group (ILZSG) revised its supply-demand forecasts in October. The ILZSG amended the global zinc deficit forecast for 2018 to 322,000 tonnes from the previously estimated 263,000. The ILZSG also extended the deficit position to continue in the end of 2019 despite a projected 6.4% increase in mine production. At this stage mine production forecasts have exceeded actual production and this may continue which Chinese production remaining under environmental permitting pressure. In fact Chinese production this year is expected to fall by 2.5% despite zinc prices rising to 11 years high in the same period. The Chinese have typically led the charge to increase production into a high priced and tight market but this has not been forthcoming.

The price appears to have stabilised and global zinc stockpiles hold at relatively low levels meaning tight supply (Figures 10 & 11).





Figure 10: LME Zinc Stockpiles



Figure 11: LME Zinc Prices

Aside from the inevitable depletion of several of the world's larger zinc mines with little in the way of new discoveries and the ever growing global zinc demand there are other market dynamics at play. China has historically produced almost half of the world's zinc and generally consumes approximately this amount. Since 2014, the Chinese authorities have taken a strict stance regarding the protection of the environment. Several Chinese miners, particularly the smaller to medium swing producers, have historically had a substantial and negative impact on the environment. The new Chinese focus has resulted in the suspension of a large number of smaller

operations. This has had a strong and likely lasting effect on the supply and demand fundamentals surrounding zinc production. Existing operations around the world have expanded where possible, in many cases with production growth considered to be near record levels in 2017 and forecast to be equally strong in 2018. Wood Mackenzie forecast that despite this, the global zinc stocks will remain at critically low levels and forecast zinc to rise as high as US\$4,000/t (over US\$1.80/lb) in the first quarter of 2019.

Zinc oxide batteries are now starting to be commercialised and have hits manufacturing costs of below US\$100 kw/h, substantially lower than a lithium battery storage solution, see NantEnergy. In addition the zinc oxide batteries have the potential to have a substantially longer cycle life and do not overheat, reducing the risk of fire. NantEnergy claim that over 200,000 people are now dependent on zinc air batteries. While at an uncertain and early stage, the broader adoption of zinc oxide batteries could result in an unexpected but significant increase in the consumption of zinc.

Cash Position

The Company holds a cash position at the end of the September 2018 quarter of approximately \$1.72 million with no debt. Ironbark saw a strong cash burn over the Quarter related primarily to its field activities in Greenland this year.

Subsequent to the end of the September Quarter

Memorandum of Understanding with Metso Sweden AB

Ironbark announced on 29 October 2018 that it has entered into a Memorandum of Understanding with Metso Sweden AB ("**Metso**")

The agreement provides a framework to negotiating a commercial agreement regarding services and equipment to be provided to Ironbark by Metso. This Memorandum of Understanding seeks to:

- 1) Provide a platform to negotiate a commercial and binding agreement regarding services and equipment to be provided by Metso to Ironbark for the Citronen Zinc Project.
- 2) Enable Metso to commence engineering tasks which shall precede the completion of detailed engineering of processing equipment, including the provision of technical specifications for specific third party supplied equipment. The completion of the design works, and manufacture of the key process equipment is contingent upon the parties entering into a commercially binding agreement to design, manufacture and supply the Citronen processing plant.

Ironbark is also in discussions with other highly regarded groups regarding the supply of all components of the Citronen Facility. These companies have the potential to significantly assist with the overall project financing.

Metso have collaborated with Ironbark for several years and were instrumental in the preparation of the Process Flow Sheet for the Citronen Feasibility Study. The two groups have maintained open communication during this time. A Metso technical representative visited the project site in August 2018.

Metso is a world-leading industrial company offering equipment and services for the sustainable processing and flow of natural resources in the mining, aggregates, recycling and process industries. Metso's unique knowledge and innovative solutions, Metso helps its customers improve their operational efficiency, reduce risks and increase profitability. Metso is listed on the Nasdaq Helsinki in Finland and had sales of about EUR 2.7 billion in 2017. Metso employs over 12,000 people in more than 50 countries.

The future commercial agreement will, inter alia, contain and address the following matters:

- Scope of Metso's supply of services and equipment;
- Price for Metso's supply of services and equipment and payment terms, including a lump sum cost for remaining engineering works and project management scope;
- Delivery terms;
- Provision of Process Guarantee;
- Metso compliance with Greenlandic Government requirements and guidelines as applicable.

Managing Director, Jonathan Downes, stated that "We are delighted to have moved towards building on our long running relationship with Metso and the Citronen zinc project. Metso is exceptionally well regarded internationally and has direct experience with operations which are very similar in commodity/grade/scale to the Citronen project. Metso is also located in Scandinavia and therefore is well positioned to comply and assist with the training and employment obligations that Ironbark is operating under in Greenland."

Board Nominee Resignation and Update

Ironbark announced the resignation of David Kelly, a Glencore International AG (**Glencore**) nominee, as a director of Ironbark.

Concurrent with the notification of Mr Kelly's resignation (which was announced to ASX on 8 October 2018), Ironbark received from Glencore a request for Ironbark to appoint a replacement Glencore nominee director.

The Board of Ironbark have decided not to appoint a replacement Glencore nominee director and have informed Glencore of that decision.

Glencore has provided a further notice to Ironbark that it:

- considers it has a contractual right to appoint a nominee director to the Ironbark board;
- requests the immediate reinstatement of a nominee director; and
- reserves its rights in relation to the matter.

Ironbark disagrees that Glencore has a contractual right to an ongoing Board position. At this stage Ironbark rejects the appointment of a nominee Glencore director. Ironbark is in discussions with Glencore regarding Glencore's future support of and involvement with the Company.

End.

For further information please visit Ironbark's website www.ironbark.gl or contact us:

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About Ironbark

Ironbark is listed on the Australian Securities Exchange and is seeking to become a base metal mining house.

Ironbark seeks to build shareholder value through exploration and development of its projects and also seeks to actively expand the project base controlled by Ironbark through acquisition. The management and board of Ironbark have extensive technical and corporate experience in the minerals sector.

The wholly owned Citronen base metal project currently hosts in excess of 13.1 Billion pounds of zinc (Zn) and lead (Pb). For full details refer to ASX announcement 25 November 2014 – Citronen Project Resource Update – JORC 2012 compliant resource. Ironbark is not aware of any new information or data that materially affects the information included in this ASX release, and Ironbark confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the resource estimates in this release continue to apply and have not materially changed.

The current JORC 2012 compliant resource for Citronen:

70.8 million tonnes at 5.7% Zn + Pb

Category	Mt	Zn%	Pb%	Zn+Pb%
Measured	25.0	5.0	0.5	5.5
Indicated	26.5	5.5	0.5	6.0
Inferred	19.3	4.9	0.4	5.3

Using Ordinary Kriging interpolation and reported at a 3.5% Zn cut-off

Including a higher grade resource of:

29.9 million tonnes at 7.1% Zn + Pb

Category	Mt	Zn%	Pb%	Zn+Pb%
Measured	8.9	6.6	0.6	7.2
Indicated	13.7	6.8	0.5	7.3
Inferred	7.3	6.2	0.5	6.6

Using Ordinary Kriging interpolation and reported at a 5.0% Zn cut-off

“Ironbark is an emerging leader amongst Australia’s mineral resource companies, dedicated to the development of its major base metal mining operation in Greenland – the world class Citronen Project, and the acquisition of quality base metals projects.”

Disclosure Statements and Important Information

Forward Looking Statements

The following information is not intended to guide any investment decisions in Ironbark Zinc Limited. This material contains certain forecasts and forward-looking information, including possible or assumed future performance, costs, production levels or rates, reserves and resources, prices and valuations and industry growth and other trends. Such forecasts and information are not a guarantee of future performance and involve many risks and uncertainties, as well as other factors. Actual results and developments may differ materially from those implied or expressed by these statements and are dependent on a variety of factors. The Company believes that it has a reasonable basis for making the forward looking statements in the announcement, based on the information contained in this and previous ASX announcements.

The Citronen Zinc Project is considered to be at an early development stage and will require further regulatory approvals and securing of finance and there is no certainty that these will occur. Nothing in this material should be construed as either an offer to seek a solicitation or as an offer to buy or sell Ironbark securities. Consideration of the technical and financial factors requires skilled analysis and understanding of their context.

Ironbark is not aware of any new information or data that materially affects the information included in this ASX release, and Ironbark confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the estimates in this release continue to apply and have not materially changed.

Competent Persons Statement

The information included in this report that relates to Exploration Targets, Exploration Results & Mineral Resources is based on information compiled by Ms Laursen (B. ESc Hons (Geol), GradDip App. Fin., MSEG, MAIG), an employee of Ironbark Zinc Limited. Ms Laursen has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Targets, Exploration Results, Mineral Resources and Ore Reserves. Ms Laursen consents to the inclusion in the report of the matters based on this information in the form and context in which it appears

Competent Persons Disclosure

Ms Laursen is an employee of Ironbark Zinc Limited and currently holds securities in the company.



Schedule of Tenements (as required by ASX Listing Rule 5.3.3)

IRONBARK ZINC LIMITED CONSOLIDATED BASIS				
SCHEDULE OF INTERESTS IN MINING TENEMENTS				
Project	Mining Licence and tenements held	Location of tenements	Beneficial % interest at end of the quarter	Change in the quarter
Captains Flat (Joint Venture with Glencore)	EL6381	New South Wales	50%	
Fiery Creek	EL6925 EL8107	New South Wales	100%	
Citronen	ML2016/30 EL2007/31 EL2010/47	Greenland	100%	
Mestersvig	EL2011/28 EL2007/32 EL2016/22	Greenland	100%	
Washington Land	EL2007/33	Greenland	100%	

