

31 JANUARY 2020

DECEMBER 2019 QUARTERLY ACTIVITIES REPORT.

HIGHLIGHTS

- Drilling program commenced at the Blue Moon project zinc-copper-gold project
- VAT leaching trial at the Platina Scandium Project produces encouraging results
- In-depth scandium market assessment completed with Traxys
- Positive Scoping Study on the Skaergaard palladium and gold project completed
- Completion of a \$1.25 million Share Purchase Plan

Blue Moon Zinc-Copper-Gold Project, USA

Platina is earning up to a 70% interest in the project. The volcanogenic massive sulphide deposit has an existing Canadian NI43-101 mineral resource which is open at depth and along strike and has favourable metallurgy.

During the quarter, Platina started its stage 1 drilling program at Blue Moon comprising 1,132m in two holes, BMZ79 and BMZ80. The holes were planned to test the northern border of the resource as well as extend the zone of high-grade mineralisation near hole BMZ78 which was drilled by Blue Moon Zinc Corporation in 2018 (*see ASX release, "Transformational transaction - acquisition of a high-grade zinc-copper-gold project", 29 August 2018*).

The first hole of this program, BMZ79, was drilled to a total depth of 560m and intersected 40m of mineralisation from 410m with variable concentration of visible zinc and copper mineralisation.

Subsequent to the end of the quarter, the company announced diamond drill hole BMZ79 intersected the highest zinc interval at the project to date, 1.71m at 51.9% zinc, 1.49% copper, 0.05% lead, 0.85 g/t gold and 31.9 g/t silver from 414.65m as well as the following intervals:

- 7.47m at 25.55% zinc, 0.87% copper, 0.68 g/t gold and 17 g/t silver from 412.81m, including:
- 3.05m at 49.60 % zinc, 1.39% copper, 0.91 g/t gold and 30 g/t silver from 414.65m.

New frontiers. New growth.

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A second zone of zinc mineralisation in the same hole from 450m, included:

- 10.96m at 3.11% zinc, 0.47 % copper and 0.27% lead from 450.37m, including:
- 2.08m at 4.22% zinc from 457.16m.

The second hole, BMZ80, was drilled to a total depth of 572m and intersected 30m of mineralisation from 385m with variable concentrations of visible zinc and copper mineralisation – see (*ASX release, Massive Sulphides Intersected in Second Hole at Blue Moon, 23 December 2019*). The mineralisation density varies along the width of the intersection. Assay results are awaited.

Platina is earning up to a 70% interest in the project. In addition, Platina received 6 million Blue Moon (TSX.V:MOON) shares through a placement of CAD300,000 on the 15th October 2010.

Platina Scandium Project, New South Wales

The Platina Scandium Project (PSP) located in central New South Wales is one of the largest and highest-grade scandium deposits in the world. It has the potential to become Australia’s first scandium producer with cobalt and nickel credits.

A DFS was completed in late 2018 demonstrating the technical and economic viability of constructing the project. The positive DFS demonstrated the opportunity to create substantial long-term sustainable shareholder value at a manageable capital cost (see Table 1). The next step to unlocking value in the project is to secure an offtake agreement to facilitate project financing and finalise the required permits to begin construction.

Stage 1 Annual Production		20 tonnes
Stage 2 Annual Production (from Year 5)		40 tonnes
Life-of-mine for financial model		30 years
Net Present Value (8%), real, after-tax	\$US166 million	AUD\$234 million
Internal Rate of Return, post-tax		29%
Payback Period (undiscounted)		5.3 years
Stage 1 Capital Expenditure	\$US48.1 million	AUD\$67.8 million
Stage 2 Capital Expenditure	\$US11.1 million	AUD\$15.6 million
Total Life-of-Project Capital Expenditure*	\$US104.1 million	AUD\$146.5 million
Life-of-Mine Average Cash Operating Costs#	525/kg	739/kg
Life-of-Mine Scandium Oxide Price	1,550/kg	2,183/kg
USD to AUD Exchange Rate		0.71

*Includes sustaining capital costs. # Mining, processing, general and administration costs. Excludes royalties



Permitting

To finalise permitting for the PSP, the Environmental Impact Assessment and Development Applications (mine and process plant) needs to be completed. The company submitted a Mining Lease Application (MLA) during the June 2019 quarter. Work has commenced on the preparation of Development Applications, which require land holder lease or land purchase agreements to be secured at the Red Heart Mine. This process remains ongoing.

To conserve cash resources, we have decided to defer the Environmental Impact Assessment's at the Red Heart mine site and the Condobolin plant site until it is closer to securing an offtake agreement.

Scandium Marketing Update

Platina's prime objective is to secure production offtake agreements, which will enable project financing options to be pursued for construction funding. The company is actively working on a scandium off-take marketing program, which is targeting potential customers in the USA, Europe, Asia and Australia.

While the solid oxide fuel cell industry has been the dominant consumer of scandium in recent years, the metal's greatest value is as an aluminium alloy targeting aerospace, marine, military and automobile industries. Scandium can produce stronger, more heat tolerant, weldable aluminium products which are being increasingly incorporated into transportation applications for electric vehicles and lowering fuel efficiency requirements. However, the market for aluminium-scandium alloys remains very small and undeveloped.

We believe the key to the development of the scandium market is the establishment of a western world supply source and lower prices for scandium oxide and alloys that can compete with other aluminium alloys in the market. Our belief is that the PSP has the potential to produce the world's lowest cost scandium oxide and create competitively priced supply. However, the ongoing challenge remains the small size of the market relative to the scale of operation required for the proposed PSP High-Pressure-Acid leach process (HPAL).

We are tackling the market entry challenge through a number of new initiatives, including the following:

1. *Aligning with Traxys*

Platina has signed a Memorandum of Understanding with Traxys Europe S.A to assess scandium product and market development, and potential funding for the PSP. Traxys is proposing to assist in developing and executing a strategic product, market and marketing development plan, and in sourcing funding in return for receiving long term exclusive marketing and distribution rights to the scandium products produced from the project.

A review of the aluminium alloy supply chain is being undertaken with Traxys to identify potential partners for aluminium scandium alloy development. This work forms part of the marketing strategy development to be completed under the MoU signed in September 2019. Manufacturers of semi-finished aluminium alloy products in Europe are being approached to identify products in specific end-use applications that could be suited to the properties of aluminium scandium alloys.

The growth of electric vehicles in the transportation sector requires the development of strong lightweight materials that can be formed into complex shapes. A recent conference in Germany provided the opportunity to meet with the OEMs and their suppliers in the automotive sector. There is also interest in the aerospace sector where there is a history of aluminium scandium alloy development. These contacts will be developed in the next quarter.



2. *Assessing opportunities for producing at a smaller production scale*

Platina is assessing the application of a small-scale vat leach technology used for nickel laterite ores to scandium processing in a bid to establish a smaller, lower cost project better aligned to the low volumes of the current scandium market. While conventional HPAL may recover more metal, the technology is more complex, larger scale and requires considerably more capital. Core Metallurgy in Brisbane has been engaged to conduct the trial.

The test program includes a series of agglomeration tests using a range of additives, and subsequent column leaching to simulate vat leaching conditions. A sample of Platina scandium ore was subjected to a series of agglomeration tests using a pilot scale agglomerator. The agglomerates produced (Figure 1) were subjected to 30 minute soak tests in diluted sulphuric acid solution. Agglomerates produced using just sulphuric acid as the additive were observed to disintegrate in the soak test. Following extensive testing an agglomerate was produced using a combination of organic binder and sulphuric acid that maintained its structure after the soak test.



Figure 1: Ore sample after agglomeration

After identifying the optimal agglomeration conditions, a 5 kg batch of agglomerated ore was produced and placed in an 80 mm diameter column to assess its ability to remain permeable with the significant mass loss expected due to iron dissolution. The column (Figure 2) was irrigated with 200 g/L sulphuric acid at a rate of 10 L/h/m² for 7 days, and although significant slumping was observed the column maintained permeability for the duration of the test. The testing and assay program will continue in the March quarter.



Figure 2: Left photo demonstrates the leach column and the right photo is the pregnant leach solution



3. *Assessing the potential to produce other revenue streams from the PSP*

The company has previously demonstrated that it could extract high purity alumina from clarified leach solutions produced from the recovery of scandium in a HPAL plant. However, recoveries were low. An alternative process technology will now be trialled to investigate whether we can achieve better recoveries of the aluminium which will be converted into high purity alumina, which has a premium value, and is used to manufacture sapphire glass and lithium-ion-battery separators. The proposed test work program was deferred until the results of the VAT leaching program are received.

Skaergaard Gold & PGM Project, Greenland

Located on the east coast of Greenland, Skaergaard is one of the world's largest undeveloped gold and palladium resources.

A new internal scoping study for the Skaergaard Project in Greenland has defined a clearer development pathway for one of the world's largest undeveloped gold deposits and one of the largest palladium resources outside of South Africa and Russia, with by-product metals magnetite and vanadium.

The internal scoping study, independently prepared by engineering consultants, SRK Consulting demonstrates the grades of the palladium and gold ore zones are relatively low and a large-scale underground mining operation and process plant with a high initial capital outlay will be required to realise the benefits of economies of scale. The project economics are highly sensitive to changes in revenue, operating and capital costs but has demonstrated a positive outcome. The significant increase in the price of palladium in 2019 and continuing into 2020 has had a positive impact on the project's economics and the outlook for palladium demand and pricing remains robust.

Metallurgical test work has demonstrated the amenability of the gold and platinum group metal (PGM) mineralisation to processing by means of both gravity and froth flotation processes. In addition, leaching of the concentrates has demonstrated the potential to produce gold doré on site. Preliminary results are also encouraging in terms of titano-magnetite and ilmenite recovery, demonstrating that those minerals are upgradeable by a combination of magnetic separation and flotation. It has been shown that the vanadium can be recovered in the titano-magnetite concentrate.

Skaergaard is located in an area of steep terrain, glaciation and frequently hostile climatic conditions. Similar conditions are encountered at other mines in arctic conditions and can be addressed by suitable engineering, operational, and environmental practices.

Platina notes that the majority of the JORC mineral resources are defined as inferred (refer to ASX announcement dated 23 July 2013, "New Resource Estimate for Skaergaard Gold and PGM Project, East Greenland"), and as a consequence, Platina is unable to release the production target or forward-looking information produced as part of the scoping study pursuant to regulatory requirements.

The scoping study showed a significant investment was required to progress the project to the next stage. Advancing the project to the feasibility stage will require drilling to convert inferred to indicated mineral resources (estimated at more than 10,000 metres), detailed metallurgical test work to determine processing characteristics and refine the process route, and quality and pricing of saleable products. In addition, further assessment of engineering, design and technology factors for the design and location of the process plant, tailings disposal and mining methods is critical in defining the project concept and the expected capital and operating costs. As such, Platina will seek to find a financial and technical partner to help develop the project. We will engage a suitable financial advisor to assist in the partnering process.

During the quarter, Platina lodged applications to renew its Skaergaard licences. As part of the renewal process, the company reduced the size of EL2007/01 tenement from 141 to 100 square kilometres to reduce its forward expenditure commitments.



Munni Munni PGM & Gold Project, Western Australia

Situated in the Pilbara region of Western Australia, Munni Munni is one of Australia's most significant PGM occurrences.

Platina holds a 30% interest in the Munni Munni project in a joint venture with Artemis Resources who is the Operator. There were no exploration activities at Munni Munni during the quarter.

The company has received several approaches to acquire its 30% interest in the Joint Venture and is currently reassessing the value of its equity in the project given the significant recent increase in the price of Palladium.

Corporate Activities

During the quarter, Platina completed an underwritten Shareholder Share Purchase Plan (SPP) to raise \$1.25 million before costs at an issue price of \$0.021 per share.

Subsequent to the end of the quarter, the company received a Research and Development refund claim totalling \$187,497 before costs from eligible expenditure activities at the Platina Scandium project in 2019 under the Federal Government's R&D tax incentive scheme.

In addition, Platina received 6 million Blue Moon (TSX.V:MOON) shares through a placement of CAD300,000 on the 15th October 2010.

This announcement was authorised by Mr Corey Nolan, Managing Director of Platina Resources Limited.

Platina is an Australian-based company focused on returning shareholder value by advancing early-stage metals projects through exploration, feasibility, permitting and into development.

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References to previous ASX Releases

The information in this report that relates to Exploration Results is based on information compiled by Dr Gustavo Delendatti, a member of the Australian Institute of Geoscientists. Dr Delendatti is an independent consultant, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which it is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition) of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Delendatti consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Mineral Resources and Ore Reserves were last reported by the company in compliance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves in market releases dated as follows:

- Platina Scandium Project - Positive Definitive Feasibility Study, 13 December 2018;
- Platina Scandium Project Ore Reserve, 13 December 2018;
- Transformational Transaction – Joint Venture on a high-grade Zinc-Copper-Gold project, 29 August 2019
- Drilling Intersects Significant Zinc Mineralisation, 24 January 2020

The company confirms that it is not aware of any new information or data that materially affects the information included in the market announcements referred above and further confirms that all material assumptions underpinning the production targets and all material assumptions and technical parameters underpinning the Ore Reserve and Mineral Resource statements contained in those market releases continue to apply and have not materially changed.



Disclosures required under ASX Listing Rule 5.3.3

1. Mining tenements held at the end of the quarter and their location

Tenement ID	Area	Location	Ownership	% Ownership
M47/123	Munni Munni	WA, Australia	PGM	30*
M47/124	Munni Munni	WA, Australia	PGM	30*
M47/125	Munni Munni	WA, Australia	PGM	30*
M47/126	Munni Munni	WA, Australia	PGM	30*
E47/3322	Munni Munni	WA, Australia	PGM	30*
EL7644	Owendale	NSW, Australia	PGM	100
EL8672	Condobolin	NSW, Australia	PGM	100
EL2007/01	Skaergaard	Greenland	PGM	100
EL2012/25	Qialivarteerpik	Greenland	PGM	100
American Eagle	Central California	USA	BMZ	Earning up to 70%
Blue Bell & Bonanza	Central California	USA	BMZ	Earning up to 70%
Red Cloud 1	Central California	USA	BMZ	Earning up to 70%
Red Cloud 2	Central California	USA	BMZ	Earning up to 70%
Red Cloud 3	Central California	USA	BMZ	Earning up to 70%
Red Cloud 4	Central California	USA	BMZ	Earning up to 70%
Red Cloud 5	Central California	USA	BMZ	Earning up to 70%
Red Cloud 6	Central California	USA	BMZ	Earning up to 70%
Red Cloud 7	Central California	USA	BMZ	Earning up to 70%
Red Cloud 8	Central California	USA	BMZ	Earning up to 70%
James Gann Jr. trust of 1991	Central California	USA	BMZ	Earning up to 70%
James Gann Jr. trust of 1991	Central California	USA	BMZ	Earning up to 70%

*See note 3 below

2. Mining tenements acquired and disposed of during the quarter and their location

During the quarter, the Company lodged applications to renew its Skaergaard licences. As part of the renewal process, the Company reduced the size of EL2007/01 tenement from 141 to 100 square kilometres to reduce its forward expenditure commitments.

3. Beneficial percentage interests held in farm-in or farm-out agreements at end of the quarter and beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter

In August 2015, Platina entered into an agreement with Artemis under which Artemis could earn a 70% interest in the Munni Munni Platinum Group Elements Project, comprising M47/123, 124, 125, 126 and E47/3322 (the "Munni Munni Project") by expending \$750,000 over a 3-year period. In August 2018, the Company announced that that Artemis satisfied the conditions required to acquire a 70% interest and formal documentation formalising the joint venture is currently being finalised.

The company is not party to any other farm-in or farm-out agreements.