

Iondrive Technologies

March 2023 Quarterly Activities Report

Iondrive Limited (ASX: ION) (“Iondrive”, “ION” or the “Company”) is pleased to present its quarterly report for the period ended 31 March 2024 (the Quarter).

Highlights

Iondrive Technologies

- **Comprehensive market research study results received from highly respected battery supply chain consulting firm Rho Motion**
- **Results highlight the growing demand for sustainable battery recycling solutions and validate Iondrive’s strategic position**
- **Large-scale bench trials commenced at the University of Adelaide, and were completed in April**
- **Independent verification of the large-scale bench trials is also underway at Independent Metallurgical Operations in Perth, and to also generate process data for a pilot plant design**
- **The Company is exploring various business models with potential partners, including licensing and toll manufacturing, to fortify its execution strategy for battery recycling technology in Australia, Europe and USA**
- **Bench trials, the Rho Motion study and the execution strategy serve as crucial steps in completing the Prefeasibility Study (“PFS”), expected by July**
- **PFS aims to mitigate technical, commercial, and execution risks in preparation for the projected pilot plant construction in FY2025**

Exploration

- **KoBold commenced a comprehensive field program across all five JV Lithium projects, to be completed by June 2024, comprising 300 man-days of field work**
- **Compilation of recently received assays relating to work conducted by the KoBold JV during the November-December period, with an announcement pending**

Corporate

- **Dr. Ebbe Dommissie appointed to Chief Executive Officer of Iondrive Ltd**
- **Dr. Dommissie’s appointment builds upon his early success with progressing the PFS for the Company’s lithium battery recycling technology**

Iondrive Technologies

Rho Motion Recycling Market Study

During the Quarter, Iondrive announced the results from a comprehensive market research study conducted by Rho Motion, highlighting the compelling market dynamics for battery recycling and the Company's emerging role in it. The study affirms the market's attractiveness and the strong business case for battery recycling, forecasting a substantial ramp-up in volume.

Key market dynamics include environmental regulations, EV driven demand for critical minerals, and significant growth in end-of-life batteries. Battery material available for recycling (Black Mass) is forecast to grow at a CAGR of 25% pa, reaching two million tonnes by 2030, and continuing at 19% pa for a decade thereafter. The study also recognised the 'green' price premiums and increasing demand for sustainable recycled materials, with EU legislation leading the way mandating the inclusion of recycled metals in new EV vehicle batteries from 2030.

The study highlights Iondrive's strategic advantage as an early mover with a novel, environmentally friendly process with higher recovery rates and selectivity in extraction of individual critical minerals in a closed loop process using benign, biodegradable organic solvents. Current recycling methods, employ smelting or acid hydrometallurgical processes, pose significant environmental challenges, including air pollutants, harmful acid waste, high greenhouse gas emissions, and elevated energy costs. Consequently, manufacturers within the vehicle supply chain are actively seeking partnerships with raw materials suppliers to enhance their recycling capabilities and minimise their environmental impact.

The study also confirms that securing a reliable source of Black Mass feedstock and establishing dependable offtake agreements are critical components of Iondrive's commercial strategy. Moreover, the study also recommended optimum points for product valorisation in the value chain to maximise value of recycled products.

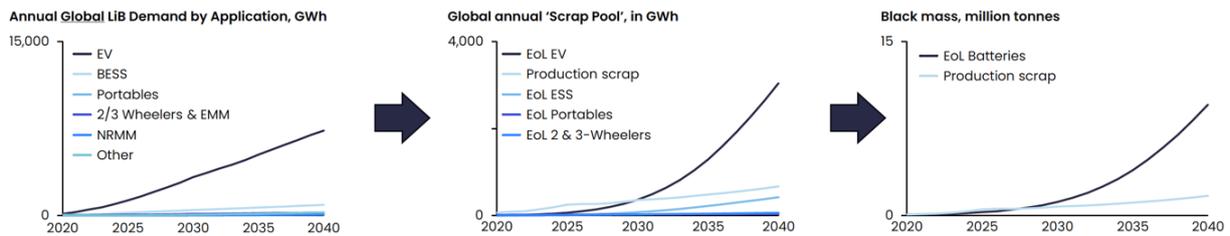


Figure 1 – Projected Growth in LiB's and Black Mass
 (Source: Rho Motion Study March 2024 for Iondrive Ltd)

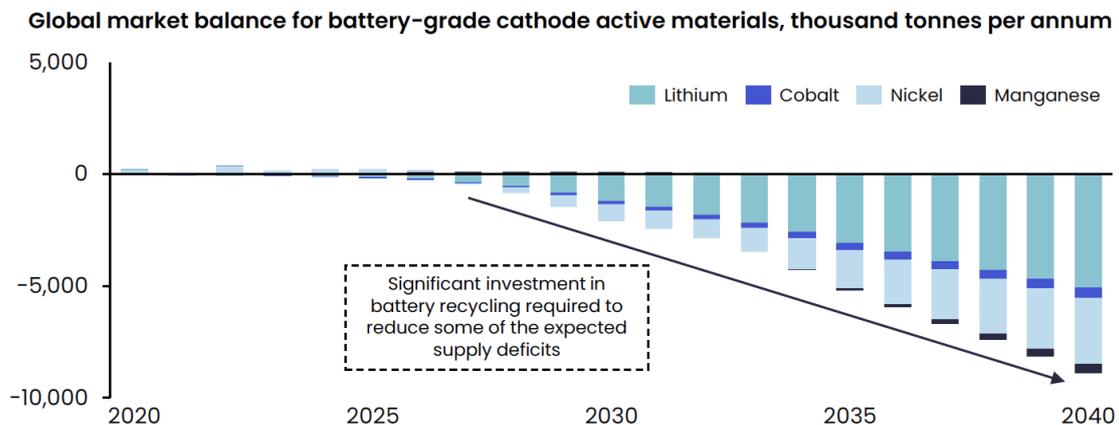


Figure 2 - Global market deficit for battery-grade cathode active materials, thousand tonnes per annum (Source: Rho Motion Study March 2024 for Iondrive Ltd)

Large-scale bench trials

Large-scale bench trials are currently in progress at the University of Adelaide and are being independently verified at Independent Metallurgical Operations in Perth, providing data for equipment sizing and reagents requirements for Opex and Capex estimates, and process data for the pilot plant design.

PFS Completion

The large-scale bench trials are expected to be completed later this month and will be followed by economic modelling and benchmarking comparison of Iondrive’s process against the existing Hydromet processes. The benchmarking study will also consider other factors such as environmental impact. In parallel, Iondrive will complete its execution strategy including an evaluation of multiple business models, such as licensing and toll manufacturing, to optimise the commercialisation path for its battery recycling technology.

These activities, alongside the completed Rho Motion market study, comprise a techno-economic evaluation integral to the PFS, which aims to mitigate technical, commercial, and execution risks of the project. The PFS is anticipated to conclude in July, paving the way for pilot plant construction in FY2025.

Exploration

The Company continues to progress exploration activities under its Earn-in and Joint Venture Agreement with Kobold Metals Company (“KoBold”). KoBold is a US-based privately held company that couples geology, geoscience, data science/artificial intelligence to search for minerals critical to the global clean energy transition. KoBold and is backed by world-class technology investors including Breakthrough Energy Ventures (initiated by Bill Gates) and Silicon Valley venture capital firm Andreessen Horowitz.

Under the terms of the agreement, KoBold may earn a 75% interest in Iondrive’s Samgeun, Seobyeok, Danyang, Seosan and Cheongpyeong Li Projects (Figure 3) through a two stage earn-in arrangement of \$AUD7 million over 5 years. ION’s wholly owned subsidiary, Korea Metals Resources (“KRM”), is engaged as Field Operator through to May 2025, with cost reimbursements helping to minimise the Company’s cost base in South Korea. Refer ASX Announcement 22 November 2023.

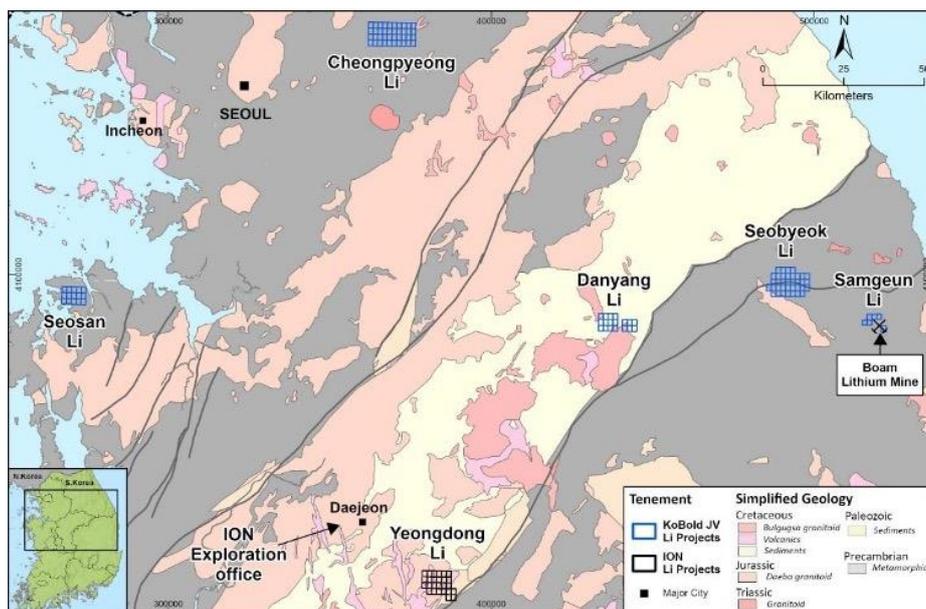


Figure 3: Location of Kobold Li Joint Venture projects and 100% owned ION Li Projects.

Exploration during the quarter included the planning and design of a comprehensive field program across all five Joint Venture projects over the March-June period which includes regional stream sediment sampling, geologic mapping, heavy mineral analysis, and radiometric dating. The program comprises some 300 man-days of field work and commenced in March at Samgeun and Seobyeok projects after the winter break. Additional work during the quarter included compilation of work conducted during the November-December period by the JV, and the review of recently received assay results from that program. A further announcement in relation to the assay results and the work program are expected within the next two weeks.

Exploration over the coming quarter will comprise continuation of the current field program across the five Joint Venture projects, with further results expected to ready for announcement in July.

Iondrive is continuing to advance discussions with a number of parties in relation to the potential joint venture or sale of its rare earth elements and Au-Ag-Cu projects.

Corporate

Dr. Ebbe Dommissé Appointed to Chief Executive Officer

In February, Iondrive appointed Dr. Ebbe Dommissé as its Chief Executive Officer. Dr. Dommissé's appointment follows his successful tenure over the previous quarter as Interim CEO, during which he led the pre-feasibility study for the Company's lithium battery recycling technology. Dr Dommissé brings over 25 years of diverse industry experience and a strong track record in operations and commercialisation, making him an ideal candidate to spearhead the company's strategic objectives.

Dr. Dommissé's appointment follows Mr Robert Smillie's retirement as Managing Director and CEO of Iondrive. Mr Smillie continues in a consulting capacity to oversee the lithium exploration in South Korea and manage the relationship with KoBold. Additionally, he will continue to drive efforts to monetise the Company's exploration projects involving rare earth elements and Au-Ag-Cu projects.

Quarterly Cashflows

For the Quarter, the Company reported total net cash outflows of just \$179,000, represented by:

- net cash outflows from Operating activities of \$599,000, which included \$64,000 inflow from KoBold for the reimbursement of costs associated with exploration activities. This was the first reimbursement and related to the month of December 2023. This reimbursement will increase in coming quarters;
- partly offset by cash inflows from Investing activities of \$428,000, largely from the sale of Iondrive's remaining shares held in LSE listed Bluebird Merchant Ventures Limited (LSE: BMV); and
- cash outflows from Financing activities of \$8,000 relating to a property lease.

These cashflow movements in the Quarter resulted in a reported consolidated cash balance of \$2,351,000 as at 31 March 2024. The Company also expects to lodge a Research & Development Tax Incentive claim in the September quarter in excess of \$500,000.

Cash flows for the Quarter include related party payments of \$100,000, comprising Non-Executive Directors fees and remuneration for the Managing Director through to his retirement 12 February 2024.

Exploration Tenure

The following tenements were 100% owned by the Company as at 31 March 2024:

Project Name	Tenement Info			Register Info		
	Korean	English	Block ID	No.	Type	Date of Granting
Hampyeong	나주	Naju	136	200970	Exploration	1/11/2018
Aphae	무안	Muan	99	201136	Exploration	26/03/2019
Deokon	전주	Jeonju	70	201041	Exploration	31/07/2018
	전주	Jeonju	80	201040	Exploration	31/07/2018
	전주	Jeonju	60	201218	Exploration	17/12/2019
Dokcheon	영암	Yeongam	116	201143	Exploration	4/12/2019
	영암	Yeongam	114	201465	Exploration	19/01/2024
Janghwal	해남	Haenam	139	201302	Exploration	20/08/2021
Goseong	충무	Chungmu	131	201439	Exploration	18/5/2023
	충무	Chungmu	136	201414	Exploration	22/11/2022
	충무	Chungmu	142	201440	Exploration	19/5/2023
	삼천포	Samcheonpo*	2	201422	Exploration	1/02/2030
	삼천포	Samcheonpo*	3	201423	Exploration	1/02/2030
	삼천포	Samcheonpo*	12	201424	Exploration	1/03/2023
	삼천포	Samcheonpo*	13	201425	Exploration	1/03/2023

Table 1: Granted ION tenements

* Tenements were relinquished on 1 April 2024.

An additional tenement was granted at Samcheonpo on 19 April 2024.

Authorised for release by the Board of Iondrive Limited.

Further Information

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Iondrive Limited: Company Profile

Iondrive is an emerging battery technology commercialisation and critical minerals exploration group listed on the Australian Securities Exchange (ASX: ION). The commercialisation business holds three exclusive world-wide licences from the University of Adelaide comprising next generation battery technologies: 1) an environmentally sustainable method for recycling lithium batteries; 2) an enhanced performance non-flammable

lithium-ion based battery, and 3) a low-cost, high cycle life water-based battery. The mineral exploration business based in South Korea is advancing exploration on its five priority Lithium Projects through an Earn-In and Joint Venture Agreement with a subsidiary of KoBold Metals Company (“KoBold”). Under the agreement, KoBold may earn a 75% interest through a two-stage earn-in of \$7 million over 5 years to November 2028. Iondrive’s in-country technical team is providing field operator services to, and is largely funded by, KoBold. Iondrive is actively pursuing opportunities to realise value for its rare earth elements and precious metals projects through external funding (earn-in agreement) or divestment.

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

IONDRIVE LIMITED

ABN

30 107 424 519

Quarter ended ("current quarter")

31 MARCH 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	64	-
1.2 Payments for		
(a) exploration & evaluation	(210)	(796)
(b) research & development (battery technologies)	(248)	(1,298)
(c) production		
(d) staff costs	(177)	(827)
(e) administration and corporate costs	(39)	(505)
1.3 Dividends received (see note 3)		
1.4 Interest received	20	34
1.5 Interest and other costs of finance paid	-	(1)
1.6 Income taxes paid		
1.7 Research and development refunds	-	584
1.8 Other (short term lease payments)	(9)	(22)
1.9 Net cash from / (used in) operating activities	(599)	(2,831)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) tenements		
(c) property, plant and equipment	-	(7)
(d) exploration & evaluation	-	(181)
(e) investments		
(f) cash held by acquired entity	-	17

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities (JV sale transaction costs)		
	(b) tenements		
	(c) property, plant and equipment	4	4
	(d) investments – sale of BMV shares	424	1,505
	(e) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (loans to 50% owned JV's)		
2.6	Net cash from / (used in) investing activities	428	1,338

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	(177)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings	-	(171)
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (repayment of lease liability)	(8)	(20)
3.10	Net cash from / (used in) financing activities	(8)	(368)

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,530	4,213
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(599)	(2,831)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	428	1,338
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(8)	(368)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	(1)
4.6	Cash and cash equivalents at end of period	2,351	2,351

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	198	1,779
5.2	Call deposits	2,153	751
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,351	2,530

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	100
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

The above amount at item 6.1 relates to Directors fees, including the executive salary of the Company's Managing Director.

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities		
7.2 Credit standby arrangements		
7.3 Other (please specify)		
7.4 Total financing facilities		
7.5 Unused financing facilities available at quarter end		
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(599)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(599)
8.4 Cash and cash equivalents at quarter end (item 4.6)	2,351
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	2,351
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	3.9
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer:	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:	

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date:29 April 2024.....

Authorised by:The Board of Directors.....
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg *Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.