

1. Company Details

Name of entity:	Archer Materials Limited
ABN:	64 123 993 233
Reporting period:	For the half year ended 31 December 2023
Previous period:	For the half year ended 31 December 2022

2. Results for announcement to the market

	31 December 2023 \$	31 December 2022 \$	Variance \$	Variance %
Revenue from ordinary activities	-	-	-	-
Profit/(loss) from ordinary activities after tax attributable to members	-	-	-	-
Net profit/(loss) for the period attributable to members	(2,809,855)	(3,574,865)	765,010	21%

Dividends

No dividends have been paid or proposed during the current reporting period.

Key notes

The net loss of the Group for the half year ended 31 December 2023 was \$2,809,855 (31 December 2022: \$3,574,865) and includes:

- Share based payments expense of \$1,174,271 representing the expense for the 6-month period to 31 December 2023, associated with unlisted option vesting during the period (31 December 2022: \$3,101,457).
- Direct expenditure on quantum and biochip technology research activities (including allocation of direct personnel costs) of \$2,083,003 (31 December 2022: \$1,413,047).

The above expense items are offset by:

- Net unrealised gain of \$97,455, associated with revaluation of Archer's financial assets as at 31 December 2023 (31 December 2022: loss of \$548,566);
- \$1,030,792 of 'other income' associated with the estimated research and development tax incentive receivable based on associated expenditure for the half year to 31 December 2023 (31 December 2022: \$701,682); and
- Interest income of \$481,214 (31 December 2022: \$173,344).

3. Net tangible assets

	31 December 2023 (cents)	31 December 2022 (cents)	Variance (cents)	Variance
Net tangible assets per share	9.3 cents	11.4 cents	(2.1 cents)	(18%)

The net tangible assets calculation does not include rights-of-use assets of \$159,639 (31 December 2022: \$14,451) or intangible assets of \$392,976 (31 December 2022: \$288,612) but includes the lease liabilities of \$159,639 (31 December 2022: \$14,450).

4. Control gained over entities

Not applicable.

5. Loss of control over entities

Not applicable.

6. Dividends

No dividends have been paid or proposed during the current or prior reporting period.

7. Dividend reinvestment plans

Not applicable.

8. Details of associates and joint venture entities

Not applicable.

9. Foreign entities

Details of origin of accounting standards used in compiling the report:

Not applicable.

10. Audit qualification or review

Details of audit/review dispute or qualification (if any):

The Financial Report of Archer Materials Limited for the half year ended 31 December 2023 accompanying notes have been reviewed by Grant Thornton Audit Pty Ltd and the Directors do not expect any disputes or qualifications.

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11. Attachments

Details of attachments (if any):

The Financial Report of Archer Materials Limited for the half year ended 31 December 2023 is attached.

This information should be read in conjunction with the 2023 Annual Report.

Additional information supporting the Appendix 4D disclosure requirements can be found in the Director's Report and the consolidated financial statements for the half year ended 31 December 2023.

12. Signed

As authorised by the Board of Directors



Signed _____

Date 16 February 2024

Greg English
Executive Chairman
Adelaide

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The Archer logo features a stylized orange and white 'A' symbol followed by the word 'ARCHER' in a bold, white, sans-serif font. The background of the entire page is a close-up, high-angle photograph of a blue printed circuit board (PCB) with various electronic components and intricate gold-colored circuit traces.

ARCHER

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FINANCIAL REPORT

For the half-year ended
31 December 2023

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About this Report

This report has been prepared for Archer stakeholders in line with statutory and regulatory obligations. It summarises the Group's operations, performance and financial position as at and for the half year ended 31 December 2023.

All references to Archer, the Group, the Company, we, us, and our, refer to Archer Materials Limited (ABN 64 123 993 233) and its subsidiaries. All dollar figures are in Australian currency unless otherwise stated. All references to half year refer to the six-month period ending 31 December 2023.

This report should be read in conjunction with the Group's Annual Report for the year ended 30 June 2023 and any public announcements made by the Group during the half year ended 31 December 2023 and up to the date of this report.

The laboratory plant and equipment shown in the photos and images in this report are not assets of the Company.

Directors' Report

Your Directors present this report for the half year ended 31 December 2023.

Directors

The Directors of Archer during the half year and until the date of this report are as follows:

Gregory English (Executive Chairman)

Kenneth Williams (Non-Executive Director)

Bernadette Harkin (Non-Executive Director)

Principal activities

Archer is a technology company that operates within the semiconductor industry. The Group is working on developing advanced semiconductor devices, including computer chips relevant to quantum computing and medical diagnostics.

During the half year, the principal activities of the Group were:

- Progressing its technology development, including its quantum computing qubit processor chip (“¹²CQ chip”) and ‘lab-on-a-chip’ biochip technology (“Biochip”).
- Utilising semiconductor technology development infrastructure and facilities, R&D, people and IP, to support research activities.
- Protecting key intellectual property assets (e.g. patents and international patent applications).
- Establishing and strengthening commercial partnerships.

Summary of financial performance

The net loss of the Group for the half year ended 31 December 2023 was \$2,809,855 (31 December 2022: \$3,574,865) and includes:

- Share based payments expense of \$1,174,271 representing the expense for the 6-month period to 31 December 2023, associated with unlisted option vesting during the period (31 December 2022: \$3,101,457).
- Direct expenditure on quantum and biochip technology research activities (including allocation of direct personnel costs) of \$2,083,003 (31 December 2022: \$1,413,047).

The above expense items are offset by:

- Net unrealised gain of \$97,455, associated with revaluation of Archer's financial assets as at 31 December 2023 (31 December 2022: loss of \$548,566). Refer Note 6.
- \$1,030,792 of ‘other income’ associated with the estimated research and development tax incentive receivable based on associated expenditure for the half year to 31 December 2023 (31 December 2022: \$701,682); and
- Interest income of \$481,214 (31 December 2022: \$173,344).

During the reporting period the Group's net cash position (which includes short term cash deposits) decreased by \$1,755,557 from \$23,317,462 (1 July 2023) to \$21,561,905 (31 December 2023). The Group has no corporate debt.

This decrease in cash was predominantly influenced by cash outflows associated with:

- Direct expenditure on quantum and biochip technology research activities (\$2,083,003).
- Intellectual property assets and plant and equipment (\$61,901).
- Corporate, administration and wages (net of allocations to advance materials & technology activities) expenditure (\$1,914,006).

These outflows were offset by inflows associated with:

- Interest income receipts (\$878,875)
- Research and development tax incentive in respect of the claim for the year ended 30 June 2023 (\$1,455,936)

Dividends

No dividends were paid, recommended or declared during the current or previous reporting period.

Key risks and uncertainties

The following are key risks that may impact Archer's financial and operating results in the future:

- The inability to successfully develop and ultimately commercialise the ¹²CQ and Biochip technologies.
- Access to suitable financing and funding arrangements.
- Dependency on the services of key service providers (e.g. foundries).
- Unfavourable changes to market or operating conditions.
- External cyber-attacks and failure to protect our information.
- Inability to access suitable laboratories in Australia and overseas.
- Early termination of key agreements such as the ¹²CQ Licence Agreement with the University of Sydney.

The half-year financial report does not include all financial risk management information and disclosures required in the annual report and as such, should be read in conjunction with the Group's most recent Annual Report released to the ASX. Readers should review and have regard to these Risks when considering the information contained in this report.

Risk management

Archer has established an Audit and Risk Management Committee to ensure, amongst other things, that risks are identified and assessed in a consistent manner. The Audit and Risk Management Charter is available on our website at: archerx.com.au/corporate-governance.

Review of Operations

Archer is researching innovative computer chip technologies towards potential commercialisation in the semiconductor industry. The Company is progressing the research and development of its ^{12}CQ chip and Biochip.

Technology development and commercialisation activities

^{12}CQ chip

The Archer ^{12}CQ qubit processor chip will require high fidelity control (data input) and readout (data output) to function successfully. Readout allows for interpretation of quantum calculations for the user, while minimising the loss of quantum information to the surrounding environment.

Archer's focus involved designing and developing several quantum state readout technologies from first principles for the unique carbon-based qubit material in Archer's ^{12}CQ chip (Image 1). The Archer team designed and manufactured microwave circuitry for which readout devices will be embedded. These circuit designs were validated using electromagnetic simulation software and then built.

The Archer team used the simulation software to validate readout device component designs, which are undergoing foundry fabrication. Testing and manufacturing some of these readout device components for measurements is done in partnership with an industry-based measurement facility in Germany.

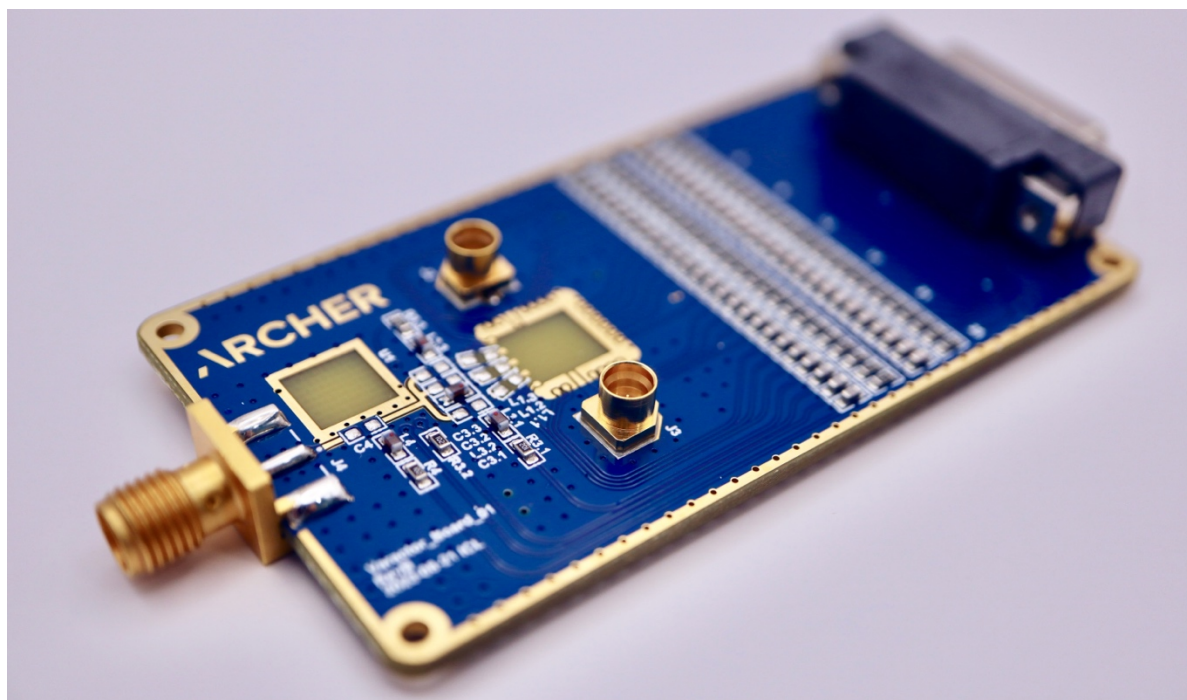


Image 1. A device developed by Archer to readout quantum states for the ^{12}CQ technology.

Early-stage measurements and testing provided a proof-of-principal for initial approaches to Archer's readout technology, including the first indications of quantum state detection.

Archer then designed, developed, fabricated, and began measurements on its readout circuits, including devices incorporating the unique carbon nanomaterial used for the ^{12}CQ chip. Faraday shielding for the readout devices was also designed, manufactured, and implemented.

The Company completed the design, assembly, and integration of electronic equipment to interface between readout technology and state-of-art measurement systems in facilities in Australia. Early-stage measurements commenced on readout devices, including employing the microwave reflectometry technique.

The readout devices were based on a single electron radio-frequency-box architecture and were fabricated using scanning electron microscopy and electron beam lithography.

The work validated the readout device's sensitivity to a single electronic energy level and demonstrated the tuneability of the respective resonant circuit using a varactor technology. This tuneability is significant in the context of optimising the signal-to-noise ratio of the device's microwave readout tone.

Radio-frequency reflectometry measurements at Archer involve the nanoscale precision placement of particles embedded within quantum electronic devices. These devices are then incorporated within a specialised circuit and RF reflectometry is used as a measurement tool.

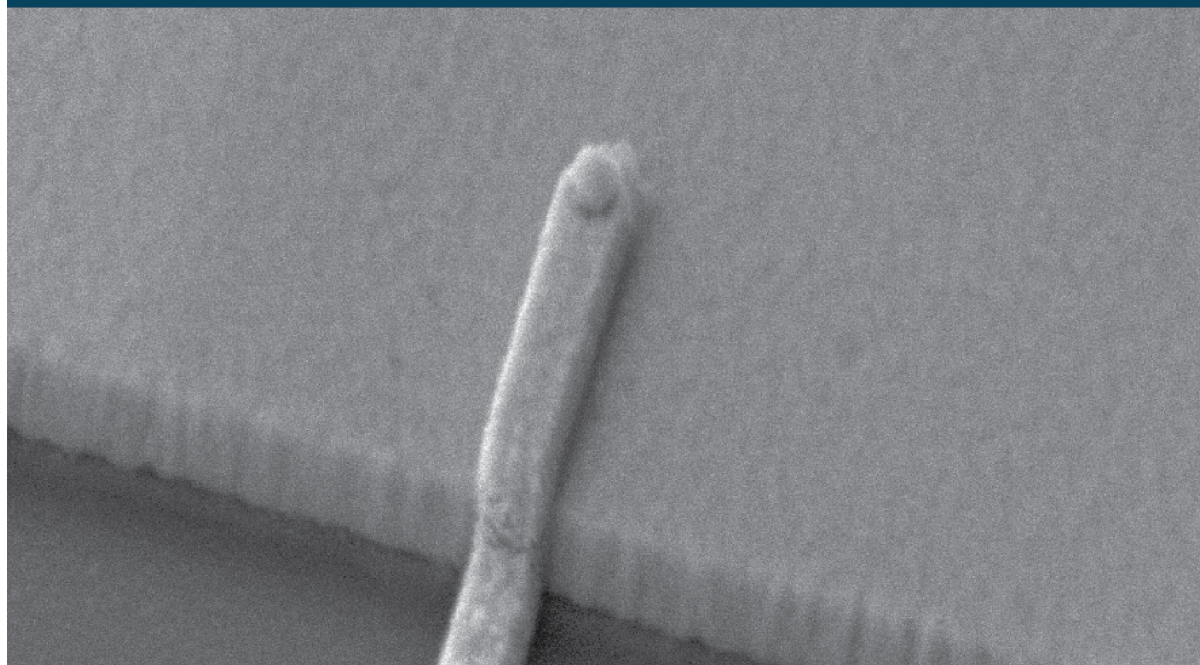


Image 2. Readout device components fabricated by Archer for the ^{12}CQ technology. The components show the result of ultra-precise nanometre alignment applied in multiple fabrication steps between nanosized electrodes and a discrete 50 nanometre (spherical) particle of the carbon material.

The readout devices and components required a high level of nanoscale precision between multiple fabrication steps. More advanced fabrication included the nanometre (one billionth of a metre) alignment between nanosized electrodes and discrete 50 nanometre particles of the carbon material used in the ^{12}CQ technology (Image 2).

The development of optimised reflectometry-based readout was awarded a UNSW Science Translational Impact Seed Funding grant to support the R&D required for the associated cryogenics and high-end electronic equipment. Archer also gained access to an Australian-based Helium Ion Beam microscope, providing ultra-precise imaging resolution and ion beam based milling for the formation of quantum nanodevices as part of Archer's R&D.

The design and manufacture of readout hardware, technology, and associated techniques for the ^{12}CQ chip is ongoing. During the half-year, the Company also developed and tested low-temperature operation devices ("ESR Devices") for the quantum spin state detection in few- and single-carbon nanostructures using electron spin resonance measurement techniques. Initial measurements indicated a strong correlation between the simulated and real devices.

Further developments were made during the half-year that link to the potential future operation of Archer's ^{12}CQ chip and build on Archer's advances reported in FY23 on its wafer-scale manufacturing of hundreds of chip-based quantum electronic devices incorporating and integrating the company's ^{12}CQ qubit material for testing and measurements.

Magnetoresistance was for the first time observed in Archer's unique carbon-based qubit material – paving the way towards potential spintronic applications of the unique ^{12}CQ carbon material. The measurements were performed using QEDs fabricated at the nanometre-scale and state-of-the-art cryogenic measurement facilities in Australia.

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The Archer team also estimated for the first time the 'exchange interaction' parameter in the qubit material. Archer used powdered quantities of qubit material samples in various pulsed electron spin setups and configurations at a range of temperatures. The exchange interaction parameter will guide the design of the qubit logic gates.

Archer brought in specialist staff from the semiconductor industry, with experience developing and commercialising semiconductor products and technology.

Archer intends to manufacture wafer-scale runs of the ESR Devices within a commercial foundry in the United States in the second half of calendar year 2024. Archer is working with commercial foundry partners in Europe for the scaled production of prototyped readout circuit and device designs, including the potential use of cutting-edge 28 nanometre Fully Depleted Silicon on Insulator Complementary Metal-Oxide-Semiconductor ("FDSOI CMOS") process technology.

Archer's Biochip

Archer's biochip innovation aims to integrate graphene field effect transistors ("gFETs") into advanced fluidic systems to create miniaturised lab-on-a-chip device platforms for medical diagnostics. If successful, this could enable the ability to parallelise the detection of multiple biologically relevant targets on a chip.

Archer's first-generation gFET design was submitted to a commercial foundry partner in Germany for a six-inch Multi-Project Wafer ("MPW") run. In parallel, Archer sent an advanced gFET design to a commercial foundry partner in the Netherlands for a whole four-inch wafer run for validation. The MPW fabrication was independent of Archer's dedicated whole wafer run.

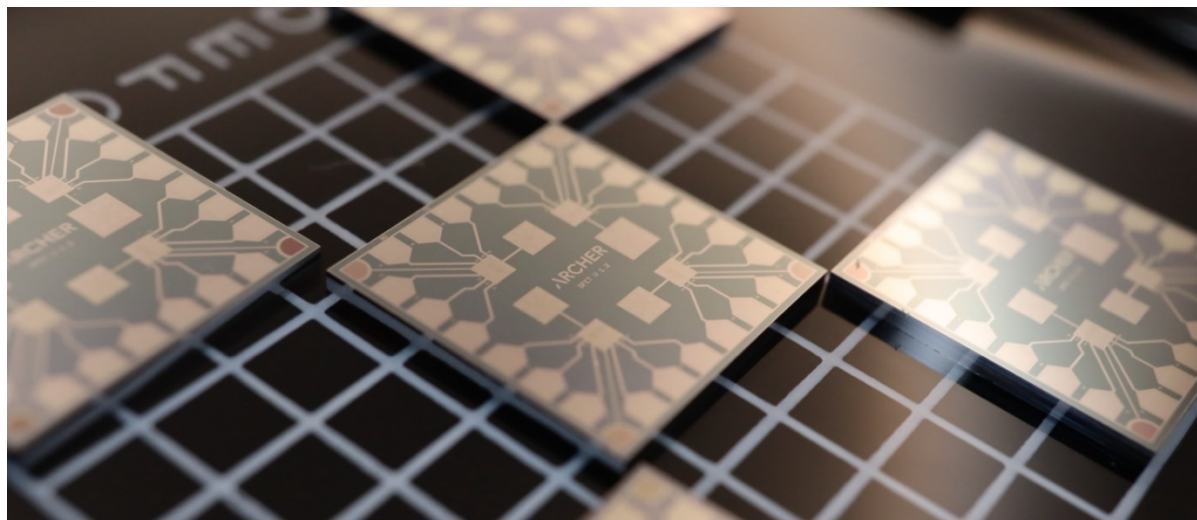


Image 3. Archer's first-generation Biochip gFET chips diced from the 6-inch multi-project wafer manufactured by a German foundry partner.

Archer Materials' commercial foundry partners in Germany and the Netherlands validated its biochip gFET designs by successfully manufacturing the prototype chips (Images 3 and 4). The MPW and whole wafer gFET fabrication are consistent with Archer using its chip designs to allow possible future scalability for the manufacturing process of the Biochip graphene devices.

The MPW gFET device manufacture was the first joint fabrication between Archer and an external foundry partner, as the final fabrication processes were performed in-house by the Company in Australia. The whole wafer fabrication of the advanced gFET device design is a significant step towards possible future industrial production. The advanced gFET design led to single-device multiplexing, meaning the biochip technology may be able to sense different liquid samples to potentially test for multiple diseases at once.



Image 4. Archer's advanced gFET chips diced from the whole four-inch wafer fabricated in a commercial foundry in the Netherlands.

The Company demonstrated multiplexing readout for its advanced Biochip gFET devices by designing and developing new hardware and software systems to readout the signal from four gFET sensors at once on a single chip. This is a significant advancement over the earlier generations of the Biochip system, which could only activate one-sensor-at-a-time.

The new Biochip system with multiplexing capability also provides automated hands-free operation, as it integrates liquid handling automation and data acquisition. The software developed by Archer can display all single and time series measurements in real-time for the four gFET sensors simultaneously.

By developing various designs for Archer's Biochip gFET sensors, the Company can broaden its foundry network, improve quality control of its chips, and expand possible applications.

Archer sent a new Biochip gFET design to a foundry partner in Spain for fabrication through a four-inch whole wafer run. The foundry in Spain has ISO 13485 certification to manufacture medical device components, an important hallmark for future manufacturing partnerships. The gFETs are designed to be fabricated with structures suitable for liquid multiplexing, with advances over previous chip design features, including in gating and channel definition.

Archer plans to test the chips diced from the wafer in its laboratory in Australia, with delivery of the new gFETs anticipated in the first half of 2024. Archer is also working with the foundry partner in Spain to integrate testing of the gFET devices at the point of manufacture to improve the efficiency of the Company's technology development processes.

The Company also progressed two provisional patent applications related to the Biochip technology to patent pending by the Patent Cooperation Treaty pathway. The patent applications cover graphene field effect transistors, and a system of chip readout electronics, fluidics, and integration with liquid delivery automation and software.

Foundry and semiconductor industry partnerships

Archer is continuing to strengthen its relationships with global foundry partners to deliver its chips using a streamlined 'fabless' commercialisation model. During the half-year, Archer engaged with a number of tier-one foundry manufacturers in Asia, Europe, and the US, to secure future semiconductor product manufacturing capability and to support technology development. This has included Archer obtaining process device design kits, and considerations and planning for preliminary device design validations for quantum and biochip technologies, including MPW and whole wafer runs.

Archer's technology patents and patents pending

The below tables detail Archer's patents and patents pending for the Quantum and Biochip technologies.

Quantum technology

Priority Date & Stage	Title & Summary	
3 Dec 2015	A quantum electronic device	
Granted	Patent Office	Patent/Application Number
	Japan	6809670
	South Korea	10-2288974
	China	4606612
	United States of America	11126925
	Australia	2016363118
	Hong Kong	1256636
	Europe (designated countries):	3383792
	Belgium	
	Switzerland	
	Germany	
	Spain	
	France	
	United Kingdom	
	Republic of Ireland	
	Italy	
	Netherlands	
	Sweden	
	Turkey	
9 Jun 2023	Electron spin containing materials and methods for producing said materials	
Provisional Patent	Patent Office	Patent/Application Number
	Australia	2023901839

Biochip technology

Priority Date & Stage	Title & Summary	
15 Feb 2019	Graphene complexes and compositions thereof	
Pending	Patent Office	Patent/Application Number
	Australia	PCT/AU2020/050128
	United States of America	17429442
31 Mar 2022	Fabrication and processing of graphene electron devices on silicon with a SiO₂ passivation layer	
Pending	Patent Office	Patent/Application Number
	Australia	PCT/AU2023/050251
17 Oct 2022	Nanofabrication of electronic device components	
Pending	Patent Office	Patent/Application Number
	Australia	PCT/AU2023/051025
1 Dec 2021	Detection and quantification of nucleic acids	
Pending	Patent Office	Patent/Application Number
	Australia	PCT/AU2022/051434
11 Nov 2022	A device, system, and method for sensing an electronic property of fluid sample	
Pending	Patent Office	Patent/Application Number
	Australia	PCT/AU2023/051141
23 Dec 2022	Methods for fabrication of graphene field effect transistors with a liquid top-gate and associated componentry	
Pending	Patent Office	Patent/Application Number
	Australia	PCT/AU2023/051357

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Changes in equity

There were no changes in equity during the reporting period.

Significant changes to the state of affairs

The Directors are not aware of any significant changes in the state of affairs of the Group occurring during the half-year ended 31 December 2023, other than as disclosed in this half year report.

Events subsequent to the end of reporting date

2,550,000 unlisted options with an exercise price of \$1.79 and expiring on 31 May 2025, were forfeited in accordance with the terms of which they were issued.

Auditor's Declaration

The auditor's independence declaration as required under section 307C of the Corporations Act 2001 is set out on page 11 and forms part of the director's report for the financial half-year ended 31 December 2023.

This report is signed in accordance with a resolution of the Board of Directors.



Greg English
Executive Chairman

Adelaide

Dated this 16th day of February 2024

Auditor's Independence Declaration



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170 Frome Street
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Adelaide SA 5001
T +61 8 8372 6666

Auditor's Independence Declaration

To the Directors of Archer Materials Limited

In accordance with the requirements of section 307C of the *Corporations Act 2001*, as lead auditor for the review of Archer Materials Limited for the half-year ended 31 December 2023, I declare that, to the best of my knowledge and belief, there have been:

- a no contraventions of the auditor independence requirements of the *Corporations Act 2001* in relation to the review; and
- b no contraventions of any applicable code of professional conduct in relation to the review.

GRANT THORNTON AUDIT PTY LTD
Chartered Accountants

J L Humphrey
Partner – Audit & Assurance

Adelaide, 16 February 2024

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Statement of Profit or Loss and Other Comprehensive Income

(For the half-year ended 31 December 2023)

		CONSOLIDATED GROUP	
	NOTES	31 December 2023	31 December 2022
		\$	\$
REVENUE			
Revenue from ordinary activities		-	-
Research and development tax concession		1,036,728	750,153
Other income	3	578,669	746,910
		1,615,397	1,497,063
EXPENSES			
Depreciation expense		(48,080)	(17,072)
Amortisation of intangibles		(12,712)	(8,892)
Quantum and biochip technology research expenditure		(2,083,003)	(1,413,047)
Employee benefits expense		(567,399)	(477,409)
Share based payments expense write back - forfeited options	10	-	336,098
Share based payments expense	10	(1,174,271)	(3,101,457)
ASX listing and share registry expense		(103,617)	(111,939)
Corporate consultants / public relations expenses		(254,545)	(103,497)
Other expenses		(181,625)	(174,713)
LOSS BEFORE INCOME TAX EXPENSE		(2,809,855)	(3,574,865)
Income tax benefit		-	-
LOSS FOR THE PERIOD FROM CONTINUING OPERATIONS		(2,809,855)	(3,574,865)
DISCONTINUED OPERATIONS			
Loss after income tax for the period from discontinued operations.		-	-
LOSS ATTRIBUTED TO MEMBERS OF THE PARENT ENTITY		(2,809,855)	(3,574,865)
Other comprehensive income		-	-
TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO MEMBERS OF THE PARENT ENTITY		(2,809,855)	(3,574,865)
LOSS PER SHARE		Cents	Cents
Basic and diluted loss per share		(1.10)	(1.44)
LOSS PER SHARE FOR CONTINUING OPERATIONS			
Basic and diluted loss per share		(1.10)	(1.44)

The accompanying notes should be read in conjunction with the financial statements.

Statement of Financial Position

(As at 31 December 2023)

	NOTES	CONSOLIDATED GROUP	
		31 December 2023	30 June 2023
		\$	\$
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	4	490,760	772,317
Term deposits – short term	4	21,071,145	22,545,145
Trade and other receivables	5	1,250,347	2,032,765
Other financial assets	6	972,334	874,879
Prepayments		896,980	537,127
Total current assets		24,681,566	26,762,233
NON-CURRENT ASSETS			
Intangible assets	7	392,976	353,694
Property, plant and equipment		91,649	83,880
Right-to-use asset – Office lease		159,639	9,097
Total non-current assets		644,264	446,671
TOTAL ASSETS		25,325,830	27,208,904
CURRENT LIABILITIES			
Trade and other payables		469,854	785,719
Lease Liability		159,639	9,097
Employee entitlements		296,591	378,868
Total current liabilities		926,084	1,173,684
NON-CURRENT LIABILITIES			
Lease Liability		-	-
Employee entitlements		35,093	34,983
Total non-current liabilities		35,093	34,983
TOTAL LIABILITIES		961,177	1,208,667
NET ASSETS		24,364,653	26,000,237
EQUITY			
Issued capital	8	47,799,119	47,799,119
Reserves	9	16,546,105	15,371,834
Accumulated losses		(39,980,571)	(37,170,716)
TOTAL EQUITY		24,364,653	26,000,237

The accompanying notes should be read in conjunction with the financial statements.

Statement of Changes in Equity

(For the half-year ended 31 December 2023)

	Issued Capital \$	Accumulated Losses \$	Share Based Payments Reserve \$	Total \$
BALANCE AT 1 JULY 2022	47,723,569	(29,197,602)	10,893,334	29,419,301
Shares issued during the period (net of costs)	75,550	-	-	75,550
Expense associated with unlisted option vesting during the period	-	-	2,765,359	2,765,359
Transactions with owners	47,799,119	(29,197,602)	13,658,693	32,260,210
Transfer of share-based payments reserve to accumulated losses	-	561,883	(561,883)	-
Total comprehensive loss for the period	-	(3,574,865)	-	(3,574,865)
BALANCE AT 31 DECEMBER 2022	47,799,119	(32,210,584)	13,096,810	28,685,345
	Issued Capital \$	Accumulated Losses \$	Share Based Payments Reserve \$	Total \$
BALANCE AT 1 JULY 2023	47,799,119	(37,170,716)	15,371,834	26,000,237
Expense associated with unlisted option vesting during the period (refer Note 10)	-	-	1,174,271	1,174,271
Transactions with owners	47,799,119	(37,170,716)	16,546,105	27,174,508
Total comprehensive loss for the period	-	(2,809,855)	-	(2,809,855)
BALANCE AT 31 DECEMBER 2023	47,799,119	(39,980,571)	16,546,105	24,364,653

The accompanying notes should be read in conjunction with the financial statements.

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Statement of Cash Flows
(For the half-year ended 31 December 2023)

		CONSOLIDATED GROUP	
		31 December 2023	31 December 2022
CASH FLOW FROM OPERATING ACTIVITIES		\$	\$
	Payments to suppliers and employees	(1,914,006)	(855,797)
	Payments for quantum and biochip technology research activities	(2,083,003)	(1,413,047)
	Research & development tax concession	1,455,936	-
	Interest received	878,875	154,248
	Innovations connect grant received	-	25,000
	NET CASH USED IN OPERATING ACTIVITIES	(1,662,198)	(2,089,596)
	11 (a)		
CASH FLOWS FROM INVESTING ACTIVITIES			
	Proceeds from short term deposits	1,474,000	2,000,000
	Payments for intellectual property	(24,391)	(49,164)
	Payment for plant and equipment	(37,510)	(53,134)
	NET CASH USED IN INVESTING ACTIVITIES	1,412,099	1,897,702
CASH FLOWS FROM FINANCING ACTIVITIES			
	Proceeds from issue of shares	-	75,550
	Payment of lease liability	(31,458)	(5,299)
	NET CASH (USED IN)/PROVIDED BY FINANCING ACTIVITIES	(31,458)	70,251
	8		
	Net (decrease) / increase in cash held	(281,557)	(121,643)
	Cash at beginning of period	772,317	1,418,542
	CASH AT THE END OF THE PERIOD	490,760	1,296,899

The accompanying notes should be read in conjunction with the financial statements.

Notes to the Financial Statements

(For the half-year ended 31 December 2023)

NOTE 1 – STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Preparation

These general purpose interim financial statements for the half-year reporting period ended 31 December 2023 have been prepared in accordance with the requirements of the *Corporations Act 2001* and Australian Accounting Standards including AASB 134: Interim Financial Reporting. Compliance with Australian Accounting Standards ensures that the financial statements and notes also comply with International Financial Reporting Standards.

This interim financial report covers Archer Materials Limited and its controlled entities (the Group). The financial statements do not include all of the information required for full annual financial statements and should be read in conjunction with the annual financial statements of the Group for the year ended 30 June 2023, together with any public announcements made during the half-year.

Significant Accounting Policies

The interim financial statements have been prepared in accordance with the same accounting policies adopted in the Group's last annual financial statements for the year ended 30 June 2023 unless otherwise stated.

New or amended Accounting Standards and Interpretations adopted.

The consolidated entity has adopted all of the new or amended Accounting Standards and Interpretations issued by the Australian Accounting Standards Board ('AASB') that are mandatory for the current reporting period.

Any new or amended Accounting Standard or Interpretations that are not yet mandatory have not been early adopted.

NOTE 2 – SEGMENT REPORTING

The Directors have considered the requirements of AASB 8 - Operating segments and the internal reports that are reviewed by the chief operating decision maker (the Board) in allocating resources have concluded at this time there are no separately identifiable segments. The Group operates in one segment being materials technology research and development.

NOTE 3 – INCOME

	CONSOLIDATED GROUP	
	6 months to 31 December 2023	6 months to 31 December 2022
	\$	\$
Interest income	481,214	173,344
Net fair value gain on financial assets (refer Note 6)	97,455	548,566
Commonwealth innovation grant	-	25,000
TOTAL INCOME	578,669	746,910

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NOTE 4 – CASH AND CASH EQUIVALENTS

	CONSOLIDATED GROUP	
	31 December 2023	30 June 2023
	\$	\$
Cash at bank and cash on hand	490,760	772,317
Short term deposits	21,071,145	22,545,145
TOTAL CASH AT BANK AND ON HAND	21,561,905	23,317,462

Short term bank deposits are at call with 30 days' notice.

NOTE 5 – TRADE AND OTHER RECEIVABLES

	CONSOLIDATED GROUP	
	31 December 2023	30 June 2023
	\$	\$
Research and development tax receivable – FY23 claim	-	1,450,000
Research and development tax receivable – HY24 estimate	1,030,792	-
Accrued interest	132,591	530,252
Other receivables	86,964	52,513
	1,250,347	2,032,765

NOTE 6 – OTHER FINANCIAL ASSETS

	31 December 2023	30 June 2023
	\$	\$
Financial assets designated at fair value through profit or loss		
- Listed Investment in Volatus Capital Corp (“Volatus”)	9,038	18,617
- Listed Investment in ChemX Materials Ltd (“ChemX”) – shares	948,832	821,549
- Listed Investment in ChemX Materials Ltd (“ChemX”) - options	14,464	34,713
	972,334	874,879

Reconciliation

Reconciliation of the fair values at the beginning and end of the current and previous period are set out below:

Opening fair value	874,879	1,708,806
Additions – listed options in ChemX (at cost)	-	14,464
Revaluation increments / (decrements)	97,455	(848,391)
Closing fair value	972,334	874,879

Financial assets at fair value through profit or loss

Financial assets not measured at amortised cost or at fair value through other comprehensive income are classified as financial assets at fair value through profit or loss. Typically, such financial assets will be either: (i) held for trading, where they are acquired for the purpose of selling in the short-term with an intention of making a profit, or a derivative; or (ii) designated as such upon initial recognition where permitted. Fair value movements are recognised in profit or loss.

The fair value of listed investments (publicly traded equity securities) is based on quoted market prices at the end of the reporting period.

NOTE 7 – INTANGIBLE ASSETS

	31 December 2023 \$	30 June 2023 \$
Patents, licences and trademarks - at cost	449,967	397,973
Accumulated amortisation	(56,991)	(44,279)
	392,976	353,694
Movements in carrying amounts:		
Balance at the beginning of the period	353,694	248,340
Additions	51,994	124,698
Amortisation	(12,712)	(19,344)
Balance at the end of the period	392,976	353,694

NOTE 8 – ISSUED CAPITAL

	31 December 2023 \$	30 June 2023 \$
254,847,013 (30 June 2023: 254,847,013) fully paid ordinary shares	47,799,119	47,799,119

Six months to 31 December 2023

	Number of shares	31 December 2023 \$
Movements in fully paid shares		
Balance as at 1 July 2023	254,847,013	47,799,119
Shares issued - nil	-	-
Balance as at 31 December 2023	254,847,013	47,799,119

NOTE 9 – RESERVES

a) Share-based payments reserve

	31 December 2023 \$	30 June 2023 \$
Share based payment reserve	16,546,105	15,371,834

Movement associated with Options during the period:

Opening balance	15,371,834	10,893,334
Granted – expense associated with vesting during the year	1,174,271	5,890,941
Exercised	-	(544,060)
Forfeited	-	(336,098)
Lapsed	-	(532,283)
Closing Balance	16,546,105	15,371,834

The share-based payments reserve records items recognised as an expense on the valuation of Options or performance rights. Refer Note 10 for further details regarding the movement in Options during the reporting period.

NOTE 10 – SHARE BASED PAYMENTS

UNLISTED OPTIONS (“Options”)

Six months ended 31 December 2023

The number of Options and weighted average exercise prices are as follows for the reporting period:

	Number of Options	31 December 2023 \$	Weighted average exercise price per Option
Opening Balance (1 July 2023)	24,950,000	15,371,834	\$1.7300
Expense related to vesting of options issued in prior periods	-	1,174,271	\$1.7900
Closing Balance (31 December 2023)	24,950,000	16,546,105	\$1.7261

Weighted average remaining contractual life of Options at 31 December 2023 is 1.35 years.

Options are unlisted and are exercisable into fully paid ordinary shares in the Company on a one for one basis.

During the reporting period an amount of \$1,174,271 recorded to the Statement of Profit or Loss and Other Comprehensive Income under ‘share based payments expense’ (31 December 2022: \$3,101,457), associated with vesting of Options granted during prior periods.

There were no Options granted, exercised, lapsed or forfeited during the reporting period.

NOTE 11 – CASH FLOW INFORMATION

a) Reconciliation of cash flows from continuing operations with loss after income tax	31 December 2023 \$	31 December 2022 \$
Loss after income tax	(2,809,854)	(3,574,865)
Depreciation	48,080	17,072
Amortisation of intangibles	12,712	8,892
Net fair value gain on financial assets (Note 6)	(97,455)	(548,566)
Write back of share-based payments expense - forfeited Options	-	(336,098)
Share based payments	1,174,271	3,101,457
Changes in assets and liabilities:		
- Decrease/(increase) in prepayments, trade and other receivables	422,564	(637,589)
- (Decrease) / increase in trade and other payables	(330,348)	8,191
- Increase in employee entitlements	(82,168)	(128,090)
Net cash used in operating activities from continuing operations	(1,662,198)	(2,089,596)

b) Non-Cash Financing and Investing Activities

There were no non-cash investing or financing activities undertaken during reporting period.

NOTE 12 – CONTINGENT ASSETS, LIABILITIES & COMMITMENTS

Sugarloaf Land Option

In November 2018 Archer announced the sale of its Sugarloaf farmland for \$1.35 million. The transaction settled on 1 July 2019 with Archer receiving the \$1.35 million sale proceeds in July 2019. The purchaser of the farmland granted Archer an option to buy back approximately 30% of the Sugarloaf farmland, which may be required for the construction of the Sugarloaf Graphite Processing Facility (“Land Option”). The Land Option may be exercised by Archer any time before 4 December 2038. The Land Option was not assigned to iTech Minerals Ltd.

ChemX Materials Limited – royalty

In June 2021 Archer announced the completion of the sale of tenements to ChemX Materials Limited. In addition to the consideration already received, Archer is also entitled to a 2% Net Smelter Return royalty on the value of all minerals (excluding graphite) extracted from the tenements sold to ChemX.

Leigh Creek Project bonus payment

In August 2020, the Company sold the Leigh Creek Magnesite Project (“Project”) to Magmetal Tech Pty and Witchimag Pty Ltd (“Witchimag”). Under the terms of the Project sale agreement, Archer is entitled to a bonus payment if certain transactions occur, including a change of Control of Witchimag, after completion (“Further Transaction”). The bonus payment is equal to 5% of the value of the consideration paid under the Further Transaction (“bonus payment. On 15 January 2024, Canadian Securities Exchange (“CSE”) listed Crest Resources Inc (“Crest”) announced to the CSE, that it had finalised terms for the acquisition of 69.5% of Witchimag. Accordingly, Archer may be entitled to a bonus payment on completion of the acquisition.

The Group did not have any further contingent assets or liabilities as at 31 December 2023.

NOTE 13 – EVENTS SUBSEQUENT TO REPORTING DATE

The following events have occurred since the reporting date:

- 2,550,000 unlisted options with an exercise price of \$1.79 and expiring on 31 May 2025, were forfeited in accordance with the terms of which they were issued.

Directors' Declaration

The Directors of the Company declare that:

1. The Financial Statements and Notes, as set out on pages 12 to 20 are in accordance with the *Corporations Act 2001*, including:
 - a) complying with Accounting Standard AASB 134 Interim Financial Reporting, and
 - b) giving a true and fair view of the consolidated entity's financial position as at 31 December 2023 and of its performance for the half-year ended on that date.
2. In the Director's opinion there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.



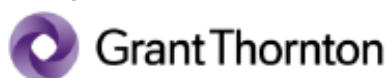
Greg English
Executive Chairman

Adelaide

Dated this 16th day of February 2024

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Independent Auditor's Review Report



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Independent Auditor's Review Report

To the Members of Archer Materials Limited

Report on the half year financial report

Conclusion

We have reviewed the accompanying half year financial report of Archer Materials Limited (the Company) and its subsidiaries (the Group), which comprises the consolidated statement of financial position as at 31 December 2023, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the half year ended on that date, a description of accounting policies, other selected explanatory notes, and the directors' declaration.

Based on our review, which is not an audit, we have not become aware of any matter that makes us believe that the accompanying half-year financial report of Archer Materials Limited does not comply with the *Corporations Act 2001* including:

- a giving a true and fair view of the Group's financial position as at 31 December 2023 and of its performance for the half year ended on that date; and
- b complying with Accounting Standard AASB 134 *Interim Financial Reporting and the Corporations Regulations 2001*.

Basis for Conclusion

We conducted our review in accordance with ASRE 2410 *Review of a Financial Report Performed by the Independent Auditor of the Entity*. Our responsibilities are further described in the Auditor's Responsibilities for the Review of the Financial Report section of our report. We are independent of the Company in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* (the Code) that are relevant to our audit of the annual financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

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Directors' responsibility for the half-year financial report

The Directors of the Company are responsible for the preparation of the half-year financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the Directors determine is necessary to enable the preparation of the half-year financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

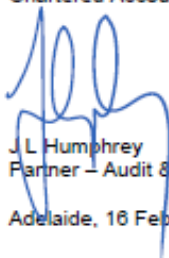
Auditor's responsibility

Our responsibility is to express a conclusion on the half-year financial report based on our review. We conducted our review in accordance with Auditing Standard on Review Engagements ASRE 2410 *Review of a Financial Report Performed by the Independent Auditor of the Entity*, in order to state whether, on the basis of the procedures described, we have become aware of any matter that makes us believe that the half year financial report is not in accordance with the *Corporations Act 2001* including giving a true and fair view of the Group's financial position as at 31 December 2023 and its performance for the half-year ended on that date, and complying with Accounting Standard AASB 134 *Interim Financial Reporting and the Corporations Regulations 2001*.

A review of a half-year financial report consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Australian Auditing Standards and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.



GRANT THORNTON AUDIT PTY LTD
Chartered Accountants



J.L. Humphrey
Partner – Audit & Assurance

Adelaide, 16 February 2024

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Corporate directory

DIRECTORS

Greg English – Executive Chairman
Kenneth Williams – Non-Executive Director
Bernadette Harkin – Non-Executive Director

CHIEF EXECUTIVE OFFICER

Dr. Mohammad Choucair

COMPANY SECRETARY

Damien Connor

REGISTERED OFFICE

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AUSTRALIAN SECURITIES EXCHANGE

The Company is listed on the Australian Securities Exchange.

ASX CODE: AXE

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www.investorcentre.com

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