

## CFOAM Limited – March 2018 Quarterly Activities Report

Triadelphia, WV, USA, CFOAM Limited, (ASX: CFO, **the Company**), through its 100%-owned subsidiary CFOAM LLC (**CFL**), the developer of carbon foam, CFOAM®, used for ultra-high-end performance engineering materials in the industrial, aerospace, military and commercial product markets, is pleased to report its March Quarterly Activities Report and Appendix 4C.

### Highlights:

- **Cash receipts** from CFOAM® products sales were **US\$476,269** - a near tripling from the December quarter. This also represents the highest quarterly level of cash receipts for the current financial year.
- While quarterly sales were lower vs the prior quarter – and some variability in sales and shipments is expected over the short-term until Phase 1 is operational and sales volumes reach a higher critical mass - actual **production** increased materially for the quarter (to **2,430 production units** of CFOAM® products, representing a **62% increase** from prior quarter's level). This is the largest quarterly production level for the current financial year.
- This level of production was achieved despite several large repair and maintenance projects that were undertaken and completed in the quarter. While these maintenance programs, combined with some harsh winter conditions, contributed to some downtime, overall production uptime and productivity were significantly improved quarter-on-quarter. Production levels also benefitted from the seven-day operation that was put in place during Q1-2018.
- **Current inventory increased from 2,367 units to a total of 4,178 production units.** Importantly, much of this inventory can be used to meet non-composite tooling applications that require lower density requirements. This will enable greater non-tooling customer validation/testing, and higher future, multi-market sales prior to, and after, the Phase 1 production start-up commencing in Q3-2018. These markets include, among others, fire proofing in new buildings, structures for machining tools and the US Navy exhaust uptake program.
- Although the cost of coal is a small percentage of our overall COGS, it is nonetheless the critical raw material component that determines the characteristics and application performance of CFOAM® products. The Company has embarked on a detailed evaluation of US coal mining operations to assure the quality and security of its coal supply well in advance of materially higher production capacity. Some variability in the quality of ground coal supplied over the past few months prompted the decision to undertake this evaluation, involving a comprehensive multi-pronged approach. This included a ten-day field trip involving visits to multiple coal mines, and a full scientific review (with the support of coal-sourcing and analytical lab experts) of

the key characteristics of CFOAM® products that can be produced through the processing of a broad range of coal sources. This evaluation will ensure that, as production ramps up materially, the recently witnessed quality issues do not re-occur.

- Several of the coal mine candidates visited already exhibit promising properties in regards to higher production yields and improved application properties versus those derived from the Company's historical coal supplier. In addition to providing some additional benefits to the current manufacturing process through higher productivity, such an initiative enables the Company to strengthen its core technology and, going forward, will ensure that coal feedstock is optimized - *at all times* - in terms of quality, productivity and cost.
- Complementing this critical approach to coal sourcing is the **start-up of the Blairsville, PA, coal pulveriser**. Commissioning and start-up will begin in May and is expected to result in a tangible overall product quality enhancement by enabling the Company to set process parameters to coal grinding conditions that are optimized for the production of quality CFOAM® products. This contrasts with the current, and historical, situation where the coal grinding process function has been outsourced to a long-term third-party operation.
- **Capital investments during the quarter amounted to US\$706,964**. This included the capital costs associated with the ongoing re-construction of the coal pulveriser and the implementation of the Phase 1 expansion program, comprising the construction of a new, highly advanced kiln.
- **Technology** – in its efforts to strengthen intellectual property coverage, the Company is currently in the process of filing a number of additional patent applications in the US and internationally. This effort is considered critical to sustain and protect the competitive advantage the Company possesses in the long-run and will be continued, and expanded, going forward.
- **Sales pipeline development and other key accomplishments** that took place during the past quarter include the following events:
  - The Company exhibited at JEC World 2018, the world's largest composite materials trade show, in Paris, France. Participation to this event led to a very significant number of active contacts and customer prospects having started to test CFOAM® products, thus adding to the sales pipeline activity.
  - During the quarter, the Company closed on the loans from West Virginia Jobs Investment Trust (WVJIT) (US\$400,000 loan and US\$600,000 bridge loan) and Summit Community Bank (Summit) (US\$600,000 loan and US\$600,000 bridge loan). Bridge loans are due to be repaid at the time of the completion of the US\$2.2 million Phase 1 project, when the US\$1.2 million low-interest loan from West Virginia Economic Development Authority (WVEDA) will be disbursed.

- During the March quarter, the whole US\$1 million of loans from WVJIT was fully disbursed and covered all Phase 1 capital expenditures during the quarter as well as capital outlays that were incurred during prior year. The loans from Summit will only start being disbursed during the June quarter, to cover subsequent capital expenditures until completion of the project.

## Outlook

**Improved operating performance** – the Company expects the greater focus on coal sourcing to lead to greater production stability, and significantly, a smoother transition through the calendar H2-2018 production ramp-up.

- **Continued progress of commercial development activities** – although the Company expects some “lumpiness” in market demand for the current June quarter associated with changes to coal sourcing and the commissioning of the coal pulveriser to ensure that current capacity is optimised for the all-important Phase 1 commissioning in Q3-2018, shipments during the June quarter are expected to increase, driving overall stronger sales.
- At this time, the Company’s goal is to reach current production capacity by the beginning of July, prior to the start-up of the Phase 1 expansion program – projected in August 2018. Following the changes implemented by the new management and Board of Directors, the Company believes that the 12-month period taken to achieve this will constitute a very strong result. However, the focus is already on ensuring that Phase 1 commissioning is essentially seamless. If this goal is achieved as expected, sales and shipments will increase materially over the course of H2-2018.
- As compared to the 27<sup>th</sup> March 2018 Sales Pipeline update, there has been some further progress in commercial development activities, particularly among customers performing test evaluations. This is critically important as it underscores the Company’s expansion program and the plan to move to an expediated Phase 2 expansion decision. As often communicated, the Company is *not* demand-constrained but is production-constrained, and the primary focus remains on remedying this as quickly as possible:
  - **Category 1 – commercial customers: 17 customers** in applications that include: composite tooling/aerospace, aerospace structures, defence, lightning/heat dissipation, audio, composite tooling/boats and electronics.
  - **Category 2 – customers close to qualification: 18 customers (+2)** in applications that include: composite tooling, batteries, fire-resistant parts, space/rocket nozzles, defence, heat dissipation, structures for machining tools, transportation and electric conductivity.

- **Category 3 – customers performing tests evaluation: 35 customers (+1)** in applications that include: composite tooling, cookware, transportation, space, defence, construction, chemicals and water filtration.
- Since the last update it is significant that, following product evaluation performed over the past few months, one of the world's leading composite tooling companies has placed a purchase order for an inaugural shipment of CFOAM® product, for delivery at about the time that the Phase 1 capacity expansion is projected to start-up. It is fully expected that this first order will be followed by repeat orders, thus contributing meaningfully to the projected volume ramp-up to take place in the latter part of 2018.
- This underscores the relevance of the Company's marketing strategy, which is to focus on "strategic customers" that have leading positions in composite tooling and can thus qualify CFOAM® products on an accelerated basis, while their large potential demand enables them to underpin CFO's phased capacity expansion. Concurrently, the Company is also focused on the broader sales pipeline management, which entails more diverse, and potentially larger, applications *and* addressable markets that will support the Company's medium and long-term growth plans.
- At this time, CFO is actively involved in the testing and qualification of CFOAM® products with other leading composite tooling companies in North America and Europe. Moreover, several companies are in advanced phases of testing and qualification in applications such as rail transportation, fireproof construction materials, and avionics applications by a leading aerospace company.
- Additionally, Touchstone Research Laboratory's (TRL) US Navy program, for which a critical, initial purchase order is expected foreseeably, will further underpin a burgeoning sales pipeline. While this Program has been a focus for many investors, the Company would reiterate that while this Program, once underway, would be very significant in size over the medium to long run, it is not a critical component of CFO's immediate planned expansion, especially as it relates to the success of the Phase 1 expansion.
- **Enhancing the organisation's capability** – In addition to having established a seven-day manufacturing operation, the Company is currently engaged in the recruiting of new, and upgrading of existing, key management positions. As part of this effort, a highly experienced materials science technologist has recently joined CFOAM, LLC to become the head of its technical development function. Further, additional personnel will be identified, and hired, over the next few months to fulfil key roles.
- **Continued implementation of Phase 1 expansion project** - implementation of the Phase 1 expansion program is on-budget and on-track for a start-up date in August 2018.
- **Active planning phase for Phase 2 expansion program** - discussions with equipment vendors have moved to a later-stage of detailed capital engineering design and

costing. This includes the final negotiations regarding the deposit for the retrofitting of two autoclaves and the performance of pre-engineering studies, which will shorten the lead time following a capital investment decision. In addition, the Company has again had further encouraging discussions with various bodies of the State of West Virginia administration regarding the possibility of securing aid packages that would support CFO's investment in a Phase 2 capital investment. The Board still anticipates that a decision confirming a formal commitment to the Company's Phase 2 capital program will take place in Q3-2018.

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## **About CFOAM Limited**

CFOAM® is an inorganic carbon material that is manufactured from coal, pitch or lignin feedstock. CFOAM® manufactured in this process has a rigid foam structure, similar in appearance to pumice stone, but with entirely different properties. CFOAM® is currently used across a wide variety of markets including composite tooling for the aerospace sector, energy absorbing applications and defence applications. Additional markets such as the automotive applications for energy absorption and fire resistance are also expected become significant to the Company over time.

CFOAM® was developed to meet the growing demand for ultra-high-end performance engineering materials in the, industrial, aerospace, military and commercial product markets.

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