



**Altech Chemicals**  
Limited

# QUARTERLY REPORT

September 2018

## Official ground breaking ceremony held at Johor HPA site

- Ground breaking ceremony at Malaysian HPA plant site
- Australian High Commissioner and German Ambassador to Malaysia unveil official opening plaque
- Ceremony attended by partners from Malaysia, Germany, Japan and Australia
- Initial Stage 1 construction works commencing

## Patent granted for Kaolin to HPA production process

- Patent granted to Altech for its kaolin to HPA production process
- Affords protection to Altech and its unique 8 step production method
- Altech in a strong position to defend its intellectual property rights

## Bullish outlook for HPA demand in the lithium-ion battery sector

- New emerging opportunity for HPA demand in the lithium-ion battery sector
- HPA coating directly onto lithium-ion battery anodes and cathodes
- Quality and consistency key for lithium-ion battery manufacturers
- HPA pricing at ~US\$40,000/tonne in Korea and Japan
- Altech's new proposed supply welcomed by South Korean market
- Altech's proposed HPA product quality and capacity well received

## Geotechnical survey at Johor site completed

- Geotechnical ground survey program completed
- Site topography, soil stability and soil analysis completed
- Part of Stage 1 construction works

## Mezzanine debt due-diligence

- Due diligence process commenced end July 2018
- Advisian appointed as independent technical consultant
- Due diligence is well advanced and on track

## Project funding status

- US\$190 million senior debt package completed
- Mezzanine debt of US\$90 million in due-diligence
- Target 65-70% debt-equity ratio
- Equity via a partial project sell down and/or share placement
- Construction is running concurrent to finance close



Opening address by Altech managing director Mr Iggy Tan

## Official ground breaking ceremony held at Johor HPA site

The Company has now completed clearing the ~4Ha site for its proposed high purity alumina (HPA) plant in Johor, Malaysia. Site clearance followed execution of the stage 1 construction agreement for the HPA plant with appointed German engineering, procurement and construction (EPC) contractor, SMS group (SMS).

On 8 August 2018, the Company hosted an official ground breaking ceremony in Johor, Malaysia marking the commencement of stage 1 construction. The ceremony was held at the Company's Tanjung Langsat HPA plant site and was attended by a range of dignitaries, project stakeholders and Altech's full board of directors and staff. Dignitaries included the Australian High Commissioner to Malaysia, H.E. Andrew Goledzinowski; the German Ambassador to Malaysia, H.E. Nikolaus Graf Lambsdorf; the Australian Trade Commissioner to Malaysia, Ms Kelly Matthews and the head of the Malaysia/German chamber of commerce Mr Daniel Bernbeck. Stakeholders representatives included executives from KfW IPEX-Bank (senior lender), Euler Hermes (German government export credit agency), SMS group (EPC contractor) and Mitsubishi Corporation (sales off-take partner); representatives from Johor Corporation, the Malaysian Investment Development Authority (MIDA), and key local service providers and suppliers.

In his opening address, Altech managing director Mr Iggy Tan thanked the Altech board for its unwavering support for the project and its leadership, both of which have been instrumental in enabling the Company's HPA project to advance to the significant ground breaking milestone. Mr Tan also thanked Altech's management and staff, attributing the project's success to date to the team based culture within the Company. "The success of any organisation is largely due to the workplace culture – within Altech we have fostered a team orientated, dynamic and compassionate culture", he said.

Mr Tan noted the remarkable achievements of the Company over the last four years, "During a period of slightly less than four years the Company has completed a definitive feasibility study and a final investment decision study for its HPA project; developed and finalised a kaolin to HPA process design; concluded laboratory pilot plant test-work; finalised JORC compliant kaolin resource and reserve estimations; secured and acquired the site for its HPA plant and kaolin mining operation; concluded environmental and development approvals in both Australia and Malaysia; executed a 10 year HPA off-take arrangement; negotiated a US\$280m fixed-price lump-sum turn-key EPC contract for a 4,500tpa HPA plant; secured senior project finance of US\$190m from German Government owned KfW IPEX-Bank and is in lender due diligence for US\$150m of additional project finance initiatives. None of this would have been possible without the dedication and focus the team consisting of board members, management, staff, shareholders and all stakeholders," Mr Tan said.

Mr Tan thanked Altech's global partners including Mitsubishi Corporation, KfW IPEX-Bank, Euler Hermes, the German Government and SMS group. He made special mention of the support of major shareholders including the Melewar group headed by Prince Ya'acob Khyra and the SMS group.

In his address to attendees, the Australian High Commissioner to Malaysia, H.E. Andrew Goledzinowski congratulated the Company on its achievements to date and acknowledged the bringing together of Australia, Malaysia, Germany and Japan because of the project. He said that Altech's HPA project is an example of the calibre of high technology investment that Malaysia in encouraging and promoting.



Ground breaking shovels



Ground breaking – Altech Chairman and key stakeholders



Australian High Commissioner and German Ambassador

Altech's non-executive chairman Mr Luke Atkins said “the Company is very proud to have reached this important milestone of commencing the construction of its HPA plant. This is a real testament to the Board, management team and staff of the Company who have been dedicated and purely focused.” Mr Atkins also acknowledged the vision, dedication and drive of managing director, Mr Iggy Tan who has been instrumental in bringing the project to fruition.

### Patent granted for Kaolin to HPA production process

A Certificate of Grant for an Innovation Patent from the Australian Patent Office (IP Australia) was received during the quarter, for the Company's process of producing high purity alumina (HPA) from kaolin (aluminous clay). Altech originally filed the patent titled 'A Method for the Preparation of Alumina' in October 2014. The granted patent covers the production of alumina from all types aluminous clay including kaolin, using hydrochloric acid and includes the following steps:

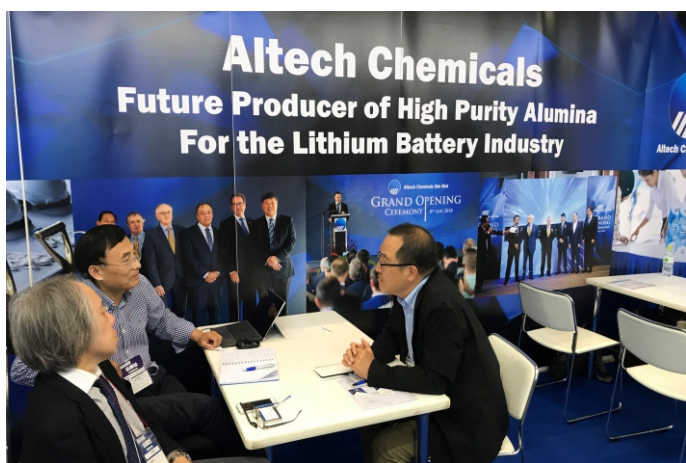
1. treating kaolin or aluminous material to reduce particle size and increase the alumina content;
2. calcining the kaolin or aluminous material;
3. leaching the aluminous material with hydrochloric acid;
4. solid liquid separation to provide a pregnant liquor;
5. crystallising aluminium chloride hexahydrate by adding hydrogen chloride gas;
6. precipitating and separation of aluminium chloride hexahydrate;
7. dissolving the aluminium chloride hexahydrate in water and repeating the crystallisation process;
8. roasting and calcining aluminium chloride hexahydrate to provide alumina.

The grant of the patent acknowledges that Altech's process for producing HPA from aluminous material such as kaolin incorporates unique steps. The journey to patent grant was quite arduous. The Company commenced the process in 2014 and has now received the Certificate of Grant – 4 years later. The patent will help protect the Company's unique HPA production process and the technology that it has developed. Now that this patent is granted, Altech is in strong position to defend its intellectual property rights with the assistance of WRAYS, the Company's patent attorney.

## Bullish outlook for HPA demand in the lithium-ion battery sector

During the quarter, the Company provided details of recent developments and the current outlook for high purity alumina (HPA) demand in the lithium-ion battery sector following its attendance at BATTERY OSAKA, a three-day international rechargeable battery exhibition held in Osaka, Japan.

The battery conference is one of two international rechargeable battery exhibitions held in Japan each year, and is a significant event for the lithium-ion battery industry. The exhibition, now in its 5th year, attracts representatives from major lithium-ion battery manufacturers, materials suppliers and equipment suppliers, all of which are predominantly located in Japan, South Korea and China. Altech was fortunate to secure a large and predominant exhibition booth, which it manned in conjunction with Mitsubishi Corporation (Mitsubishi), Altech's exclusive HPA off-take partner. The exhibition ran from 26 to 28 September 2018.



Altech's Exhibition Booth - Battery Osaka Conference

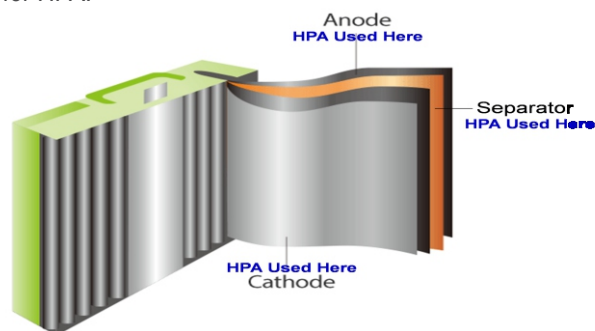
## Lithium-ion Battery Sector: HPA Market Developments, Outlook, Supply and Price

Direct coating of lithium-ion battery anodes and cathodes with HPA – an exciting new development. On 8 June 2018 Altech reported the faster than expected migration by lithium-ion battery manufacturers to HPA coated battery separators, as a replacement for traditional non-coated plastic polymer separators. The report was based on new HPA market research by London based CRU Consulting and Sydney based Petra Capital Pty Ltd, plus previous research by Persistence Market Research and Altech. HPA coated lithium-ion battery separator sheets greatly increase the integrity of the separator – this allows a lithium-ion battery to operate at higher temperatures, it enhances heat dissipation and assists to prevent thermal run-aways, thereby increasing overall battery safety. The report noted that the rapid transition of lithium-ion battery separator sheet manufacturers to HPA coated separator sheets is expected to deliver a higher than forecast (by Persistence Market Research and Altech) increase in HPA demand by 2025.

However, from discussions with lithium-ion battery manufacturers in attendance at the Osaka battery exhibition, it was apparent that HPA is now increasingly being directly applied as an outer coating layer on the anode and cathode of lithium-ion batteries, in addition to being used as a coating on polymer separator sheets.

Manufacturers explained that lithium-ion batteries with HPA directly applied to anode and cathode materials, maintain superior battery cycling behaviour, exhibit significantly reduced dendrite (crystalline mass) growth, enhanced thermal conductivity and reduced anode/cathode shrinkage and expansion. Dendrite formation in a lithium-ion battery is a major cause of battery failure, especially in high capacity batteries.

The direct application of HPA as a coating on lithium-ion battery anode and cathode materials is an exciting development that is likely to represent an additional market opportunity and demand driver for HPA.



### Quality and Consistency are Critical

A predominant theme emanating from discussions with lithium-ion battery manufacturers at the exhibition was the importance of HPA purity and product consistency. Specifically, the lower the purity of HPA used in lithium-ion battery coating applications, the higher the possibility of battery failure and degradation, reduced cycling behaviour and/or reduced conductivity. Consistency of HPA quality was emphasised in discussions, with any variability in material quality being potentially problematic to lithium-ion battery manufacturers in the production process. It is for these reasons that little if any low quality HPA was reported as being used by lithium-ion battery manufacturers in the South Korea and Japan, in spite of lower pricing.

Overall, potential end-users of Altech's HPA were impressed with the proposed product specifications, which they believed are highly suited to their proposed applications. It is currently estimated that less than 2kg of HPA would be used in an electric vehicle lithium-ion battery, this represents a total cost of less than US\$100 per vehicle; a seemingly small price to pay for battery life, quality and safety.



Tunku (Prince) Yaacob Khyra

### Looming HPA Supply Concern

An exhibition delegate from South Korea directly raised with Altech the industry's concern about future HPA supply to South Korea, given current HPA usage and demand trends. Specifically the delegate identified the lack of diversity of HPA supply into the South Korean market, where Japanese HPA manufacturer Sumitomo and its South Korean subsidiary dominate supply. Major South Korean lithium-ion battery manufacturers include Samsung SDI, LG Chem and SK; South Korea is currently one of the world's leading lithium-ion battery producing countries. In the delegate's opinion, a new high quality HPA producer such as Altech would be a much-needed addition to HPA supply for the South Korean and Japanese markets. Mitsubishi and Altech plan to advance discussions with several of these lithium-ion battery manufacturers in the near future as part of ongoing marketing efforts.

### Current HPA Pricing

Several Japanese and Korean buyers at the exhibition were able to confirm that the prevailing market price for the highest consistency and quality 4N HPA (99.99%), typically from Japan, is around US\$40,000 per tonne. The Mitsubishi representative in attendance at the exhibition also reported this level of pricing. Altech has used a price of ~US\$27,000 per tonne in its final investment decision study (FIDS) financial model and bank financial model. As previously reported, if the current 4N HPA price of US\$40,000 per tonne was applied to the Company's FIDS financial model, the HPA project would report an IRR of ~33% and generate EBITDA of ~US\$ 133 million per annum at name plate production of 4,500tpa.

Altech managing director, Mr Iggy Tan said "a key take away from the Osaka battery exhibition is that the HPA market appears to be evolving in line with forecasts from groups such as CRU Consulting and Persistence Market Research, and if anything perhaps a little stronger than forecast – this is positive for Altech. HPA is a specialty high quality material, which attracts premium pricing because it is critical to the manufacture of high quality lithium-ion batteries – such as are used in electric vehicles. The cost of HPA used in an electric vehicle lithium-ion battery is insignificant, but a compromise in the quality of HPA used in the battery may result in a catastrophic failure such as thermal runaway. Altech intends to operate at the premium end of HPA market and does not see low quality HPA producers as competitors. Our main target markets has always been Japan, South Korea and Taiwan. It is apparent that HPA pricing continues to be strong and consistent in these markets."

## Geotechnical survey at Johor site completed

A geotechnical ground drilling and survey program at the site of the Company's proposed high purity alumina (HPA) plant in Johor, Malaysia was completed during the quarter.

The detailed geotechnical survey is part of Stage 1 construction activities for the Malaysian HPA plant. Geotechnical works included an assessment of soil types, soil stability and a detailed assessment of site topography; each being required to confirm the HPA plant's final civil engineering design. A full analysis of the site soil profile was used to confirm the final foundation piling requirements. The Company's appointed engineering, procurement and construction (EPC) contractor SMS group GmbH (SMS) of Germany is co-ordinating the study and responsible for the final civil design and engineering work.



Geotechnical Sites

## Mezzanine debt due diligence update

Progress of the detailed project due diligence by an independent technical consultant appointed by the proposed mezzanine debt and steam facility providers is on track and proceeding as planned.

On 11 May 2018 Altech announced that it had received an indicative non-binding mezzanine debt term sheet for a drawdown facility of US\$90 million from a global investment bank for its proposed Malaysian HPA project. On 15 June 2018 Altech announced that it has executed an indicative non-binding term sheet for a US\$60 million stream finance facility with a US based global alternative investment group.

Advisian, the independent consulting arm of WorleyParsons Group, was appointed as independent technical adviser in July 2018 by both the proposed mezzanine debt provider and by the proposed stream facility provider. Project due diligence commenced on 27 July 2018 with a kick-off meeting in Frankfurt, Germany, which was attended by Altech management and representatives from m.Plan International (technical consultant to the senior lender – KfW IPEX-Bank); SMS group (Altech's appointed EPC contractor); the proposed mezzanine lender; the proposed stream facility provider and Advisian.

Whilst Advisian's due diligence work has benefited from the extensive amount of information generated during due diligence by the senior lender, it is currently anticipated that Advisian's due diligence may take until the end November 2018 to finalise, resulting in a 4-month due diligence process. In comparison senior debt due diligence took approximately 15 months to complete.

Assuming a positive result from the Advisian due diligence work, the next step for both the proposed mezzanine lender and the stream facility provider will be to present the project to respective internal investment committee's for final approval. An updated HPA market report, most likely from CRU Consulting, will likely be commissioned prior to respective investment committee project consideration. Upon investment committee approval, a binding term sheet and an exclusive mandate can be executed for each proposed facility. The process for final documentation, including the negotiation of inter-creditor arrangements with the senior lender can then proceed, and ultimately project finance close.

## Project funding status

Atlech is in the final stages of finalising the required funding for its HPA project. The US\$190 million senior debt package with German government-owned KfW IPEX-Bank was secured with execution of commitment and terms in the first quarter of the year. Drawdown of the loan is subject to satisfying a list of conditions precedent items, principal of which is securing a balance of funds. Until draw-down the Company is subject to quarterly commitment fees for the undrawn portions of the committed US\$170 million ECA loan and the US\$20 million commercial facility loan.

On 11 May 2018, Atlech announced that it had received an indicative non-binding mezzanine debt term sheet of US\$90 million from a global investment bank. On 15 June 2018, the Company also received an indicative non-binding term sheet for a US\$60 million stream finance facility with a US based global alternative investment group. Both terms sheets are indicative and non-binding and remain subject to, amongst other things; due diligence; investment committee approval, agreement on binding terms and various approvals (including from the senior lender, boards and regulatory authorities).

Both the Mezzanine and stream lenders have commenced the due diligence work and it is currently anticipated that the process will take until the end November 2018 to finalise. Assuming a positive result, the next step for both the proposed mezzanine lender and the stream facility provider will be to present the project to respective internal investment committee's for final approval. The process for final documentation will include the negotiation of inter-creditor arrangements with the KfW IPEX bank and ultimately project finance close.

The final investment decision study (FIDS) determined the total capital cost of the Company's Malaysian HPA plant and associated kaolin mine at Meckering, Western Australia at US\$ 298 million. In addition to capital cost, total funds will include items such as working capital, lender debt service accounts, bank fees, arrangement fees, debt service reserve and lender contingency reserves. The total funds required for the project will be available once the project finance structure is finalised and the requirements of various lenders confirmed. For large scale projects, such as the Company's HPA project, it not unusual for total financing, contingency and working capital costs to aggregate at up to one third of total capital costs.

The Company currently expects that this is likely to be the case based on feedback from proposed lenders on structuring and contingencies. The Company is currently targeting 65-70% of debt to equity ratio for the final funding mix.

Based on the debt-equity ratio target, the Company envisages that further equity to support the project financing will be required. The equity component of the project finance is being pursued in two distinct work streams, joint venture or partial project sell down and/or a placement of shares by the Company.

On the joint venture work stream, the Company continues to have discussion with funds, private equity and industrial groups for a possible partial sale at the project level. This in conjunction with mezzanine debt, is an attractive option for the Company as it will significantly reduce shareholder dilution. The Company is targeting potential strategic joint venture partners that can add value to the Company's HPA business.

On the equity work stream, Petra Capital is appointed to assist the Company with a possible equity raise that may be required to finalise the total balance of funds to enable draw-down of senior debt. Any equity amount is yet been determined, as it will depend on the amount of mezzanine debt secured, the outcome of the joint venture and project sell down option, any steam finance facility, plus final financing costs, reserve accounts, working capital and any lender mandated contingency. Atlech is targeting potential equity partners that share its longer-term vision for the Company to be a substantial force in the global HPA market. Follow-up presentations by Company management to various investors will continue in the target regions like Europe, USA, Australia and the Asia-Pacific in the coming months.

### **Construction is running concurrent to finance close**

The decision by the Company to equity fund Stage 1 construction of its proposed Malaysian HPA plant in parallel with finance close, rather than wait for finance close to occur, is allowing project momentum to be maintained. At the Company's Johor HPA site, clearance is now complete; a ground breaking ceremony was conducted on 8 August 2018; and geotechnical drilling is complete – allowing for the submission of a site development order application with local Johor authorities. Once the development order is approved, site works will commence, which includes earth works, drainage, foundation piling and the construction of a workshop building and a substation.



**Altech Chemicals**  
Limited

# QUARTERLY REPORT

September 2018

## Company Snapshot

Altech Chemicals Limited (ASX:ATC) (FRA:A3Y)  
ABN 45 125 301 206

### FINANCIAL INFORMATION

(as at 30 September 2018)

Share Price:	\$0.145
Shares:	572.5m
Options:	Nil
Performance Rights*:	28.7m
Market Cap:	\$83m
Cash:	\$7.6m

### DIRECTORS

Luke Atkins	Non-executive Chairman
Iggy Tan	Managing Director
Peter Bailey	Non-executive Director
Dan Tenardi	Non-executive Director
Tunku Yaacob Khya	Non-executive Director
Uwe Ahrens	Alternate Director

### COMPANY SECRETARY/CFO

Shane Volk

### HEAD OFFICE

Suite 8, 295 Rokeby Road,  
Subiaco, Western Australia, 6008

T. +61 8 6168 1555

F. +61 8 6168 1551

E. [info@altechchemicals.com](mailto:info@altechchemicals.com)

W. [www.altechchemicals.com](http://www.altechchemicals.com)

\*subject to vesting conditions



## Schedule of Tenements

As per ASX Listing Rule 5.3.3, the Company held the following tenements (exploration and mining leases) as at 30 September 2018:

Tenement ID	Registered Holder	Location	Project	Grant Date	Interest end of quarter
E70/4718-I	Canning Coal Pty Ltd	WA Australia	Kerrigan	01/12/2015	100%
M70/1334	Altech Meckering Pty Ltd	WA Australia	Meckering	19/05/2016	100%

### ABOUT ALTECH CHEMICALS LTD (ASX:ATC) (FRA:A3Y)

Altech Chemicals Limited (Altech/the Company) is aiming to become one of the world's leading suppliers of 99.99% (4N) high purity alumina (HPA). HPA is a high-value, high margin and highly demanded product as it is the critical ingredient required for the production of synthetic sapphire. Synthetic sapphire is used in the manufacture of substrates for LED lights, semiconductor wafers used in the electronics industry, and scratch-resistant sapphire glass used for wristwatch faces, optical windows and smartphone components. There is no substitute for HPA in the manufacture of synthetic sapphire. Global HPA demand is approximately 25,315tpa (2016) and demand is growing at a compound annual growth rate (CAGR) of 16.7% (2016-2024), primarily driven by the growth in worldwide adoption of LEDs. As an energy efficient, longer lasting and lower operating cost form of lighting, LED lighting is replacing the traditional incandescent bulbs. Current HPA producers use expensive and highly processed feedstock materials such as aluminium metal to produce HPA. Altech has completed a Final Investment Decision Study (FIDS) for the construction and operation of a 4,500tpa HPA plant at the Tanjung Langsat Industrial Complex, Johor, Malaysia. The plant will produce HPA directly from kaolin clay, which will be sourced from the Company's 100%-owned kaolin deposit at Meckering, Western Australia. Altech's production process will employ conventional "off-the-shelf" plant and equipment to extract HPA using a hydrochloric (HCl) acid-based process. Production costs are anticipated to be considerably lower than established HPA producers. The Company is currently in the process of securing project financing with the aim of commencing project development in mid-2018.

### Forward-looking Statements

This report contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward-looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this report and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this report will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward-looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.

The mezzanine debt term sheet and the stream finance facility term sheet referred to in this report and previous ASX announcements are indicative in nature; are non-binding; and in both cases contain the general terms of a proposed transaction. Any future binding commitment will be subject to and is contingent upon all internal approvals of the financial institution / facility provider, as well as the completion of due diligence (including but not limited to legal and technical due diligence) and the completion of legally binding documentation. There is no certainty that the mezzanine project debt or that the stream finance facility will be approved or that any transaction/s will be concluded based on what was presented in the term sheets. The Company makes no representations or warranties whatsoever as to the outcome of the mezzanine debt process or the stream finance facility process and/or the success of any future equity raising that may be undertaken to secure the balance of project funds required for the draw-down of senior project debt.



## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

**Name of entity**

ALTECH CHEMICALS LTD

**ABN**

45 125 301 206

**Quarter ended ("current quarter")**

SEPTEMBER 2018

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(1)	(1)
(b) development	(2,232)	(2,232)
(c) production	-	-
(d) staff costs	(446)	(446)
(e) administration and corporate costs	(479)	(479)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	38	38
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Deposits Paid	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(3,120)</b>	<b>(3,120)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(432)	(432)
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) HPA Plant (Stage 1 Construction pre-paid)	(8,948)	(8,948)

**Mining exploration entity and oil and gas exploration entity quarterly report**

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(9,380)</b>	<b>(9,380)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	21,214	21,214
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	(1,353)	(1,353)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>19,861</b>	<b>19,861</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	261	261
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(3,120)	(3,120)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(9,380)	(9,380)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	19,861	19,861
4.5	Effect of movement in exchange rates on cash held		
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>7,622</b>	<b>7,622</b>

**Mining exploration entity and oil and gas exploration entity quarterly report**

<b>5. Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1 Bank balances	7,622	261
5.2 Call deposits		
5.3 Bank overdrafts		
5.4 Other (provide details)		
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>7,622</b>	<b>261</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

**Current quarter  
\$A'000**

213

Director remuneration and rent of office premises

**7. Payments to related entities of the entity and their associates**

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

**Current quarter  
\$A'000**

**Mining exploration entity and oil and gas exploration entity quarterly report**

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1 Loan facilities		
8.2 Credit standby arrangements		
8.3 Other (please specify)		
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

--

<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Exploration and evaluation	-
9.2 Development	(2,000)
9.3 Production	-
9.4 Staff costs	(350)
9.5 Administration and corporate costs	(400)
9.6 Other	-
<b>9.7 Total estimated cash outflows</b>	<b>(2,750)</b>

<b>10. Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
10.1 Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced				
10.2 Interests in mining tenements and petroleum tenements acquired or increased				

**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.



Sign here: .....  
(Director/Company secretary)

31 October 2018  
Date: .....

SHANE VOLK

Print name: .....

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly 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 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.