



## **ASX/TSX ANNOUNCEMENT**

*Quarterly Report of Operations for the  
Period Ended 30 September 2018*



*The only ASX listed company producing high grade, high value  
lithium chemicals for global battery and technical markets*

# SEPTEMBER QUARTER 2018 KEY HIGHLIGHTS<sup>1</sup>

## OLAROS LITHIUM FACILITY (ORE 66.5%)<sup>2</sup>

### September quarter

- Production for the quarter was 2,293 tonnes of lithium carbonate, up 7% on previous corresponding period (PCP)<sup>3</sup> but down 36% quarter on quarter (QoQ) due to a previously announced shutdown of the plant for two weeks (ASX June Quarterly Report - 31 July 2018) and seasonally lower evaporation rates
- Quarterly sales revenue of US\$32 million, up 36% on PCP with realised average price achieved of US\$14,699/tonne on a free on-board basis (FOB)<sup>4</sup>. It is expected that the pricing achieved in the December quarter will be below that achieved in the September quarter, however the pricing achieved for the December half year is not expected to be materially less than the June half year
- Total sales of 2,144 tonnes of lithium carbonate up 3% on PCP
- Cash costs for the quarter (on cost of goods sold basis)<sup>5</sup> were US\$4,640/tonne
- Record gross cash margins of US\$10,059/tonne were up 62% on PCP

## LITHIUM GROWTH PROJECTS

- A US\$40 million early works program is underway as part of the Stage 2 expansion with the construction of evaporation ponds, expanded industrial water supply, production bores, roads, camp infrastructure and accommodation. The US\$40 million forms part of the total capital expenditure of US\$285 million for Stage 2. The expansion will add 25,000 tonnes per annum (tpa) of lithium carbonate and bring Olaroz total production capacity to 42,500tpa. Through 30 September 2018 approximately US\$10 million of the approved US\$40 million has been spent
- All material matters to permit Orocobre and Toyota Tsusho Corporation (TTC) final approvals for both the Stage 2 expansion and Naraha Lithium Hydroxide Plant have been completed with the exception of the Naraha EPC contract with the preferred contractor, Veolia. TTC is the manager of the Naraha joint venture. The terms of the EPC contract are expected to be agreed during this quarter thereby allowing for the integrated and concurrent development of both projects

## BORAX ARGENTINA

- Overall sales volume in the September quarter was down 11% on the June quarter to 9,407 tonnes with sales revenue down by a similar magnitude while the average price per tonne achieved was in line with the June Quarter
- Revenue was impacted by a slower than anticipated commencement of sales to the Brazil agriculture market. Delayed September volumes have been recovered in October
- The Tincalayu Expansion Project feasibility study is under internal review

<sup>1</sup> All figures presented in this report are unaudited

<sup>2</sup> All figures 100% Olaroz Project basis

<sup>3</sup> PCP comparisons are relative to September 2017 quarter

<sup>4</sup> Orocobre report price as "FOB" (Free On Board) which excludes additional insurance and freight charges included in "CIF" (Cost, Insurance and Freight or delivered to destination port) pricing. The key difference between an FOB and CIF agreement is the point at which responsibility and liability transfer from seller to buyer. The Company's pricing is also net of TTC commissions but excludes export taxes. FOB prices are used by the company to provide clarity on the sales revenue that flows back to SDJ, the joint venture company in Argentina

<sup>5</sup> Excludes royalties, export tax and corporate costs



## CORPORATE

- Orocobre corporate had available cash of US\$308.7 million after supporting the Advantage Lithium capital raise (US\$4M), Cauchari JV expenditure and early expenses on the Naraha Lithium Hydroxide Plant. Including SDJ and Borax cash and project debt, net group cash is US\$221.7 million
- Mr Martin Perez de Solay has been appointed as Orocobre's new Managing Director and Chief Executive Officer and will commence in these roles following the upcoming Annual General Meeting and a transition period with the current Managing Director and CEO Richard Seville

## CAUCHARI JOINT VENTURE

### (ADVANTAGE LITHIUM OPERATOR 75% / OROCOBRE 25%)

- During the September quarter the joint venture partners released a Phase 3 drilling program update regarding the brine sampling of diamond core holes CAU20 and CAU21 in the NW Sector of the Cauchari JV property. The results from CAU20 and CAU21 clearly demonstrated the Phase 3 infill drilling and resource conversion program is on track to deliver Measured and Indicated Resources by early 2019
- On 31 August Advantage Lithium released a NI43-101 compliant Preliminary Economic Assessment (PEA) for the Cauchari JV project. Orocobre did not release the results of this study as the use of inferred resources in the PEA does not comply with guidance provided by ASX and ASIC on disclosure of information of this nature
- A Phase 3 Definitive Feasibility Study is planned for completion in the first half of 2019



*Olaroz Lithium Facility*

# OLAROS LITHIUM FACILITY

[Click here for more information on Olaroz](#)

The Olaroz Lithium Facility is located in the Jujuy province of Argentina. Together with partners, TTC and Jujuy Energia y Minería Sociedad del Estado (JEMSE), Orocobre is now operating the first large scale brine-based lithium chemicals facility to be commissioned in approximately 20 years.

Olaroz produces high quality lithium carbonate chemicals for both the battery and industrial markets. It is the only operation in the world with an integrated purification circuit.

The Olaroz Lithium Facility joint venture is operated through Argentine subsidiary Sales de Jujuy S.A. (SDJ). The effective equity interests are: Orocobre 66.5%, TTC 25.0% and JEMSE 8.5%.

## PRODUCTION, SALES AND OPERATIONAL UPDATE

### PRODUCTION AND SALES

Production for the September quarter was 2,293 tonnes, down 36% from 3,596 tonnes in the June quarter due to lower seasonal evaporation and a scheduled two week maintenance outage plus ramp up. Despite this, production in the current quarter was up 7% when compared to the same period in 2017.

Sales were 2,144 tonnes of lithium carbonate with a realised average price of US\$14,699 per tonne on a FOB basis and total sales revenue of US\$32 million. Operating costs (on a cost of goods sold basis) were US\$4,640/tonne, down 7% on the September 2017 quarter. Received average prices are expected to be softer in the December quarter.

Gross cash margins of 68% for the quarter were a record (US\$10,059 per tonne, up 2% QoQ and 62% PCP). This again demonstrates the robust cash generation ability and profitability of the Olaroz operations.

Metric	September quarter 2018	June quarter 2018	Change QoQ (%)	PCP (Sept. FY17)	Change PCP (%)
Production (tonnes)	2,293	3,596	-36%	2,135	7%
Sales (tonnes)	2,144	3,255	-34%	2,072	3%
Average price received (US\$/tonne) <sup>3</sup>	14,699	13,653	8%	11,190	31%
Cost of sales (US\$/tonne) <sup>4</sup>	4,640	3,800	22%	4,987	-7%
Revenue (US\$M)	32	44	-29%	23	36%
Gross cash margin (US\$/tonne)	10,059	9,853	2%	6,203	62%
Gross cash margin (%)	68%	72%	-5%	55%	13%

### OPERATIONAL UPDATE

Production in the September quarter was lower than the June quarter due to the scheduled temporary closure of the plant for maintenance and the lower seasonal evaporation rates. During the two-week closure modifications were undertaken on the BEPEX (dry and bagging) circuit and electrical upgrades, as well as cleaning of one of the main reactors. This is the first major maintenance shutdown since the plant opened nearly four years ago.

Salt harvesting from harvestable ponds (the final eight ponds in the system) continued during the September quarter. Four of the eight harvest ponds have now been cleared of harvestable salts, two are being harvested and two will remain until next winter. The construction of additional pond area negated any potential negative impact from the salt harvesting.

The harvesting process occurs approximately every three years and involves the removal of the majority of salt which has precipitated through the evaporation process.

#### **CARBON DIOXIDE RECOVERY**

Carbon dioxide is used at the Olaroz Lithium Facility in the production of battery grade lithium carbonate. It is currently sourced from near Buenos Aires, Cordoba and Mendoza (transported up to 1,800 kilometres by truck), making it a significant component of total reagent costs.

Following engineering studies which showed that up to 50% of total carbon dioxide used in the production process can be recovered a recovery circuit built by ASKO has been installed and commissioning is due to start shortly. Capital expenditure on this project was less than US\$2M.

#### **FUTURE PRODUCTION AND GUIDANCE**

As previously stated (ASX June Quarter Report, 31 July 2018), Orocobre expects full year production (FY19) will be higher than that achieved in FY18. December quarter production is expected to be materially higher than the September quarter.

## **FINAL INVESTMENT DECISION FOR GROWTH PROJECTS**

All material matters to permit Orocobre and TTC final approvals for both the Stage 2 expansion and Naraha Lithium Hydroxide Plant have been completed with the exception of the Naraha EPC contract with the preferred contractor, Veolia. TTC is the manager of the Naraha joint venture. The terms of the EPC contract are expected to be agreed during this quarter thereby allowing for the integrated and concurrent development of both projects.

As the Stage 2 expansion at Olaroz provides feed for Naraha Lithium Hydroxide Plant, the Orocobre Board has to this point in time considered that the finalisation of the EPC contract at Naraha is also a condition precedent for the approval of the Stage 2 expansion at Olaroz.

## **STAGE 2 EXPANSION AT OLAROZ**

The Stage 2 expansion of Olaroz is fully funded with cash and proposed debt funding arrangements.

#### **PROGRESS TO DATE**

Based on forecast strong demand growth the joint venture partners have scaled the Stage 2 expansion to 25,000 tonnes per annum (total 42,500 tonnes per annum across the whole Olaroz site).

The increased expansion plans retain the simplified design to remove the purification circuit from the incremental production with the proposed development of a 10,000tpa lithium hydroxide plant in Naraha, Japan.

The joint venture has committed to a US\$40 million early works program. This capital forms part of the overall US\$285 million total capital program for Stage 2. This first phase of expansion activities includes the construction of new roads, vegetation clearing, construction of new evaporation and harvest ponds, secondary liming plant, four boreholes, the expansion of existing site infrastructure and camp accommodation. Through 30 September US\$10 million has been spent.

New camp accommodation facilities, capable of housing 120 additional staff and new catering facilities are currently under construction and are expected to be completed in Q4 2018.

Two new harvest ponds (17A, 17B) have been completed and are now filled with concentrated brine, replacing pond area that is temporarily unavailable due to salt harvesting activities as discussed earlier. A new evaporation pond (15B) was also completed during the September quarter.

Drilling of four additional bores has begun. These bores will feed brine into new evaporation ponds being constructed as part of the Stage 2 expansion.

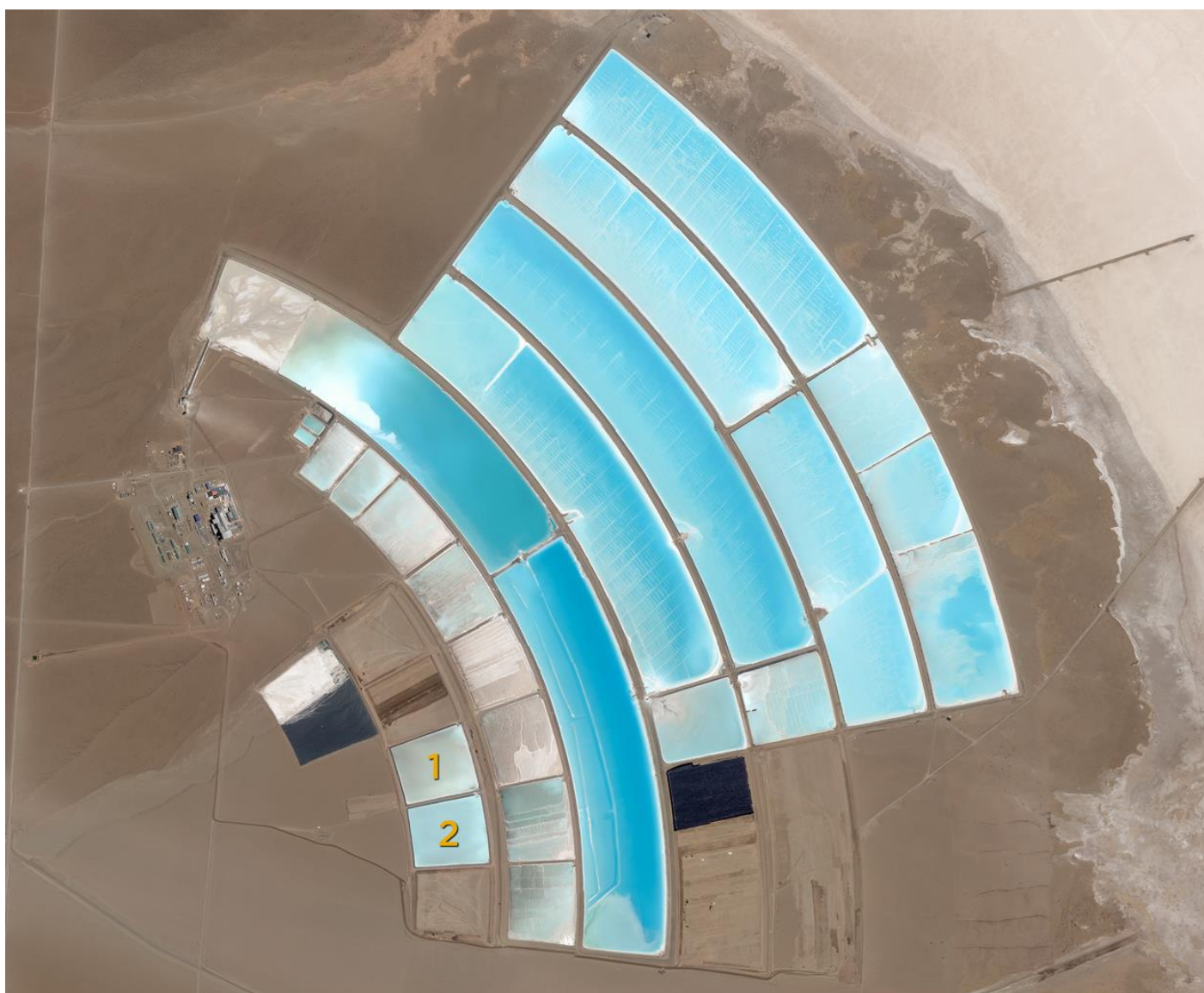
During the quarter construction of a new reactor began at the existing primary Liming plant. This reactor will enable the primary Liming plant to process a higher flow rate of brine before the Stage 2 liming plant is built permitting brine stocks to be increased and facilitating the rapid filling of Stage 2 ponds.



The Company continues to actively seek opportunities to obtain services from the local community, e.g. labour hire and rental accommodation.

**Key project milestones include:**

Milestone	Timing (CY)
Final joint venture approvals	2H 2018
Drilling of wells	2018 – 1H 2019
Construction of ponds	2H 2018 – 2H 2019
Construction of lithium carbonate plant	1H 2019 – 1H 2020
Plant commissioning	2H 2020



*Two new harvest ponds at Olaroz (marked above) are now operational, replacing pond area where salt harvesting continues*

# NARAH LITHIUM HYDROXIDE PLANT

## SCOPE

Orocobre and TTC plan to build a 10,000tpa lithium hydroxide plant in Naraha, Japan. The proposed location is well situated near potential customers which reduces the common risks of caking and degradation of quality when lithium hydroxide is transported and exposed to humidity.

The process will utilise primary grade lithium carbonate sourced from Olaroz and locally sourced Japanese lime.

The capital cost estimate for the lithium hydroxide plant is currently US\$60-70 million (100% basis, pre-subsidies). Subsidies of US\$27 million have been secured from the Japanese government.

Operating costs (excluding lithium carbonate feedstock) for the lithium hydroxide plant remain at approximately US\$1,500/tonne.

## MARKET AND SALES

Total volume of lithium carbonate sold in the September quarter was 2,144 tonnes. Lithium carbonate prices increased to US\$14,699/tonne (FOB) for the quarter. It is expected that the pricing achieved in the December quarter will be below that achieved in the September quarter, however the pricing achieved for the December half year is not expected to be materially less than the June half year.

### LITHIUM MARKET

The lithium market was impacted by similar factors during the September quarter as the previous quarter leading Chinese spot prices to fall below the seaborne contract market.

#### China

Spot prices in China remained under pressure by the change in China's subsidy policy announced earlier in the year which had an enduring impact on lithium demand with key cathode/battery manufacturers including CATL and BYD announcing new nickel-based battery capacity will come online early 2019. The Chinese spot market was also weighed down by broader macro-economic concerns regarding China's economy, particularly the potential impact of trade wars leading some commentators to believe China may be heading toward current account deficit due to a trade imbalance (source: Shanghai Metals Markets). This encouraged continued destocking of raw materials throughout the battery supply chain.

Some additional lithium carbonate volume also entered the market from the brine producers in the Qinghai region with an aggressive pricing approach at seemingly unsustainable levels. This additional volume at marginal prices has had a direct impact on spot market prices within China and a flow on effect to some customers outside of China who have downstream exposure to the China market. The Qinghai region has historically experienced reduced lithium carbonate production levels through the imminent winter season and it is expected that this will be the case again this year.

#### Supply

The market had expected improved supply conditions particularly from converters receiving new Australian spodumene concentrate supply, however these projects are expected to reach completion within the next six months and will require a period of commissioning and customer qualification that has not been accounted for by many market forecasts. Conversion plant projects which were scheduled to come online this year have lagged the announced timelines due to a number of factors including availability of credit and ability to service debt, overly-optimistic project timelines of less than two years, and/or difficulties transitioning from commissioning to production. Furthermore, exports of direct shipping ore (DSO) continued to decrease as DSO suppliers decided to focus investment on producing high quality spodumene concentrate.

#### Outlook

Despite subdued spot market conditions, key suppliers to the contract market maintained an optimistic, long-term perspective with demand forecasts provided by South American producers SQM and Albemarle remaining in the range of 18% to 20% CAGR for 2018 to 2025. During the quarter, the market was reminded of the difficulties involved in ramping up operations. SQM provided updated guidance on FY18 production reducing the initial estimate of ~55ktpa LCE down to between 45ktpa and

50ktpa citing a delay in the ramp-up of their expanded Chile carbonate capacity and ‘logistical challenges given low inventory levels’.

### **Summary**

The market in China has experienced some volatility linked to changes in the EV subsidy policy, a subsequent shift toward high nickel cathode, some new supply entering the market from the Qinghai region and some macro-economic factors. However, the overall supply and demand market picture has not altered significantly. The Company’s view remains that tight market conditions will persist with some lumpiness or variability to be expected as the market grows, and at times, becomes more exposed to short-term macro-environmental factors.



*Salar de Olaroz*

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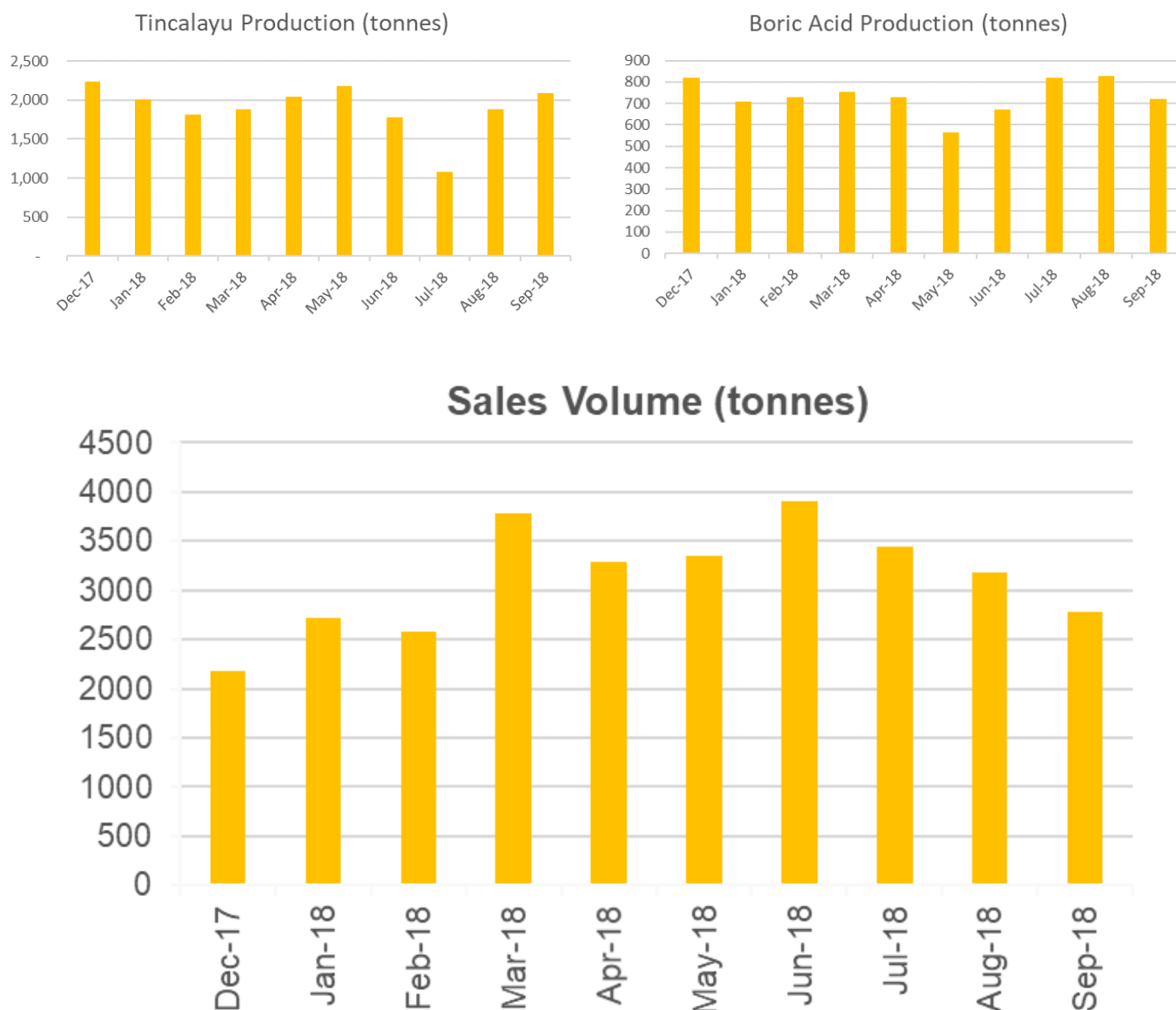
# BORAX ARGENTINA

Borax Argentina continues to demonstrate good progress along the path to becoming a sustainable operational and financial business unit. The strategy of shifting to a product mix that will drive higher average pricing, improved margins and reducing unit costs at full production rates is demonstrating traction.

New product development opportunities are being converted into sales, with a program of new initiatives to be converted throughout the 2019 financial year. Units costs continue to be controlled at or near record lows.

## OPERATIONS

Operations continue to focus on maintaining healthy stock levels with all stock levels remaining above the minimum threshold throughout the September quarter.



## COMBINED PRODUCT SALES VOLUME BY QUARTER

Previous Year Quarters		Recent Quarters	
December 2016	8,767	December 2017	8,341
March 2017	9,672	March 2018	9,079
June 2017	11,398	June 2018	10,590
September 2017	8,543	September 2018	9,407

## TINCALAYU EXPANSION STUDY

The feasibility study on an expansion of the Tincalayu refined borates operation is currently under internal review. Approvals have been received for a new gas pipeline to supply the expanded plant and initial cost estimates are under review.

## MARKET CONDITIONS

The Borax business has continued to develop marketing initiatives that reflect the changing needs of the market by working closely with customers to understand their product specification needs and delivery timelines. The business continues to focus on product development and developing creative customer solutions. Recent new product development initiatives have been gaining traction and are being converted into sales.

Market prices continue to remain in the trough of the price cycle and although there are some encouraging signs of market price improvement there is still nothing definitive at this point to signal ongoing market price improvement. These conditions continue to underline the importance of product innovation and generating customer solutions in order to create value.

# SAFETY AND COMMUNITY

## SAFETY MILESTONES

At Borax, as of 30 September the Sijes mine achieved over 1,113 days without a Lost Time Injury (LTI), Tincalayu achieved over 522 days without an LTI and Campo Quijano had achieved more than 205 days without an LTI.

Borax continues to strengthen employee safety training to reinforce the importance of conducting thorough onsite risk assessments and highlighting the importance of safe operation of vehicles both onsite and when travelling to / from work.

Unfortunately, an incident (involving a contractor) occurred at Olaroz during September resulting in an LTI. As of 30 September, operations had achieved 29 days without an LTI.



*Tincalayu Mine located in Salar del Hombre Muerto, Salta, Argentina*

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## SHARED VALUE PROGRAM AND COMMUNITY

During the September quarter many community engagement initiatives continued across the focus areas of the Company's shared value program.

**Education** highlight for the September quarter was the official opening of the Technical School for Chemistry in Olaroz Chico. As part of SDJ's collaborative approach to development, the school was constructed by the community with funds provided by the Company and in alignment with the education priorities and programs defined by the provincial government. The school has five classrooms, an administrative area, a multimedia room and library, laboratory, health services for women and men, toilets for the disabled, a full kitchen / dining room, covered patio and space for cultural / sporting activities. In addition to the Technical School for Chemistry, the local secondary school will also operate within these facilities. The construction of a student hostel is planned so that young people from other communities in the area can also attend.

**Transparency** initiatives continued, with participatory environmental monitoring activities and presentation of the Environmental Impact Assessment Update prepared as part of the Company's bi-annual review process. We also participated in the UNDP program "Participatory Environmental Governance for the Sustainable Management of Natural Resources in Latin America and the Caribbean", as one of only two case studies from Argentina on participatory environmental monitoring with local indigenous community monitors. One of our regular community monitors from Coranzuli was invited by the UNDP to Panama, to share insights on the participatory monitoring model at SDJ. To reinforce the strength and breadth of our transparency programs, we ran a strategic communications workshop with our communities in August to identify and prioritise the issues and themes they are most interested in, and the preferred nature of disclosure and transparency on those topics.

**Empowerment** initiatives in our communities aim to develop local suppliers and businesses that service both the Company and the community. In September, the bakery 'El Mana', owned by a local family in Olaroz Chico, was inaugurated. Born within the framework of the 'Inclusive Business Development' program, the bakery is a result of successful collaboration between the community of Olaroz, SDJ and catering company Cookins.

**Production and Natural Resources** programs to strengthen local artisanal production were progressed during the September quarter, thereby stimulating local economic growth independent of the Company's activities. The Company is progressing its fibre spinning project in Huancar. This project aims to improve llama fibre washing techniques, reduce water consumption, improve product quality and maximize the productivity of local artisans. There is now a physical space to store production equipment and conduct technical training on production management. The Company anticipates the equipment will be operational by November. By then, community artisans will have completed their training in the fundamental concepts of small business management and will be targeting their initial product sales for December 2018.

### Cultural Festivals

Each year, the September quarter provides an opportunity for the Community to give thanks to the Mother Earth as part of the traditional 'Pachamama Festival'. As part of this annual South American celebration, local community leaders, representatives of the provincial government, SDJ personnel together with special guests presented offerings to Mother Earth (Pachamama) to give thanks for the resources she provides. This ceremony holds great cultural significance for our communities and is one of the most significant cultural events in the Community's annual calendar.

Orocobre also supports patronal festivals in the local communities.



*Sales de Jujuy hosted a Pachamama celebration at the Olaroz Lithium Facility for local dignitaries and community members*

# ADVANTAGE LITHIUM

Advantage Lithium Corp (TSV:AAL) manages a portfolio of high quality assets in Argentina, including the Cauchari joint venture in which Orocobre holds a 25% interest. Orocobre also holds approximately 33.5% of the issued shares of AAL following participation in a private placement by Advantage in July.

## CAUCHARI JV PROJECT

The Cauchari Project is located in Jujuy province in NW Argentina and AAL also has a 100% interest in five other lithium properties that were previously held by Orocobre totalling 85,543 hectares.

On 31 August Advantage Lithium released a NI43-101 compliant Preliminary Economic Assessment (“PEA”) for the Cauchari JV project.

Orocobre did not release the results of this PEA as the use of inferred resources in the study did not comply with guidance provided by ASX and ASIC on disclosure of information of this nature.

Advantage Lithium is conducting further drilling with the aim to upgrade the Cauchari Inferred Resource to a higher category (Indicated or Measured Resource) which will provide the basis for a Feasibility Study, planned for completion in the first half of next calendar year.

## ADVANTAGE LITHIUM PRIVATE PLACEMENT

During the quarter Orocobre supported Advantage Lithium’s private placement. Advantage issued 15,585,000 Common Shares at a price of C\$0.77 per Common Share for gross proceeds of C\$12 million. Orocobre’s total investment in this capital raise was C\$5 million and following completion of the placement Orocobre now holds 33.5% of Advantage Common Shares.

## PHASE 3 DRILL PROGRAM

The Phase 3 resource definition drilling program is currently underway at the Cauchari project site. The Phase 3 program includes additional diamond holes in the NW and SE Sectors to upgrade the resource classification by Q2 2019 to support the Project’s Definitive Feasibility Study.

The Phase 3 drilling program is designed to provide a combined borehole density sufficient to upgrade the current Inferred resources to the Indicated and Measured categories. The Phase 3 drilling is also aimed at further defining resources in the Deep Sand unit.

Currently the Phase 3 drilling and testing program is ongoing and consists of infill resource drilling (10 core holes) to a depth of up to 600 m.

During the September quarter the joint venture partners released a Phase 3 drilling program update regarding the brine sampling of diamond core holes CAU20 and CAU21 in the NW Sector of the Cauchari JV property. The results from CAU20 and CAU21 clearly demonstrated the consistency and quality of the brine resource which is likely to be amenable to conventional processing techniques similar to those undertaken at the nearby Olaroz operation.

## CAUCHARI JV DEVELOPMENT TIMELINE

AAL has also completed a detailed project development schedule and budget and is fully funded beyond the completion of the definitive feasibility study which is targeted for completion in the first half of 2019.



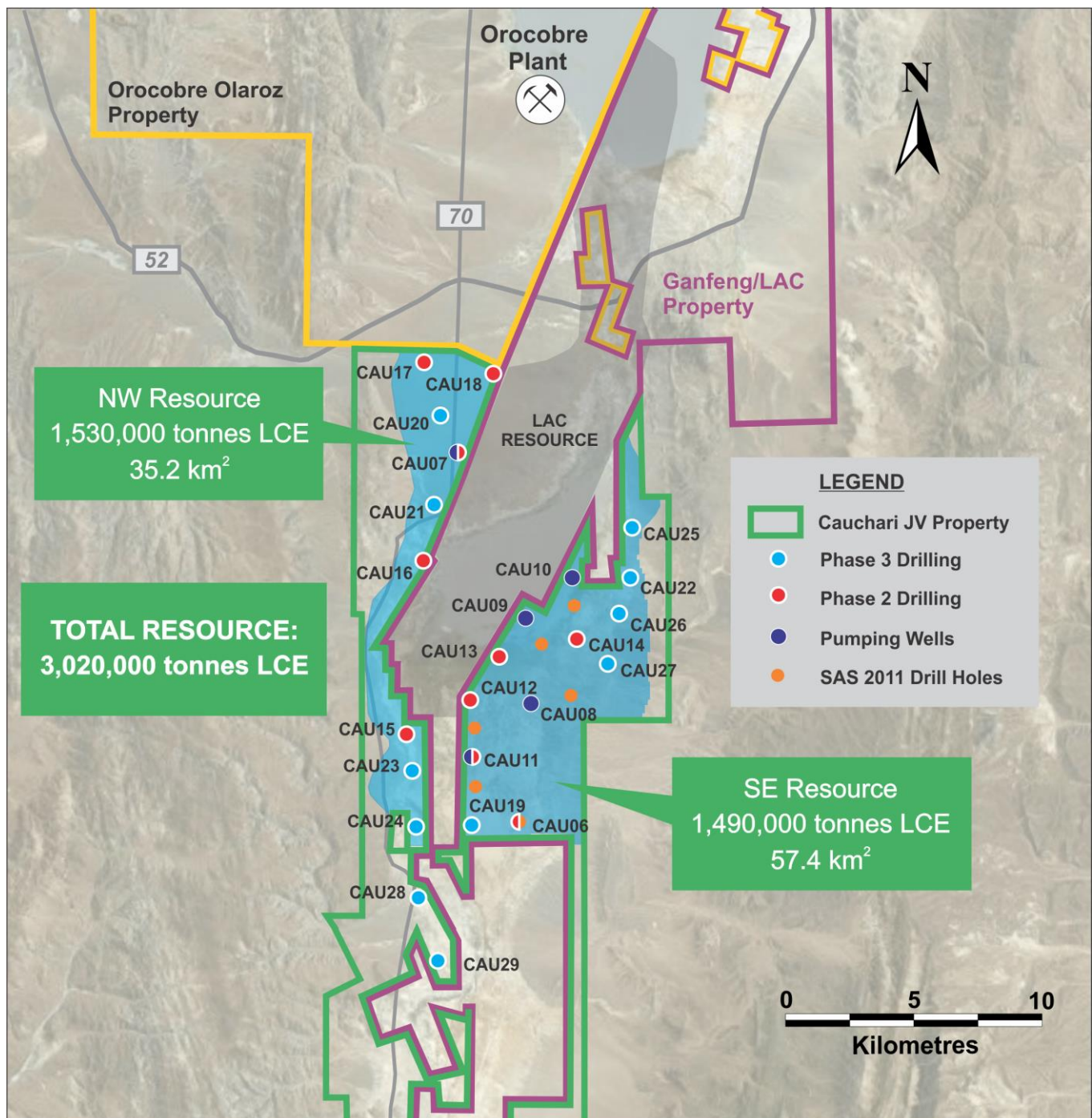
## Drill hole location & details

Exploration Hole Number	Sector	Total Depth (m)	Assay Interval (m)	Lithium (mg/l avg)	Potassium (mg/l avg)	Drilling Method	Coordinates Gauss Kruger Argentine*		Elevation Mean Sea Level	Azimuth	Dip
							Easting	Northing			
CAU20	NW	390	113-318	629	4,537	Diamond	3,420,585	7,385,407	3,982	0	-90
CAU21	NW	283	125-265	607	4,691	Diamond	3,420,351	7,382,047	3,956	0	-90
CAU24	NW	352.5	pending	pending	pending	Diamond	3,419,658	7,369,902	3,944	0	-90

\* Gauss Kruger Zone 3, using the POSGAR Datum. Proposed locations, not yet confirmed by surveying

+ Nominal elevations from DEM. Hole elevations to be confirmed by surveying.

## Location of CAU20, CAU21, Phase 2 & historical drill holes



# CORPORATE AND ADMINISTRATION

## FINANCE

### VAT

VAT refunds of approximately US\$1.7 million were received on a timely basis by SDJ during the quarter.

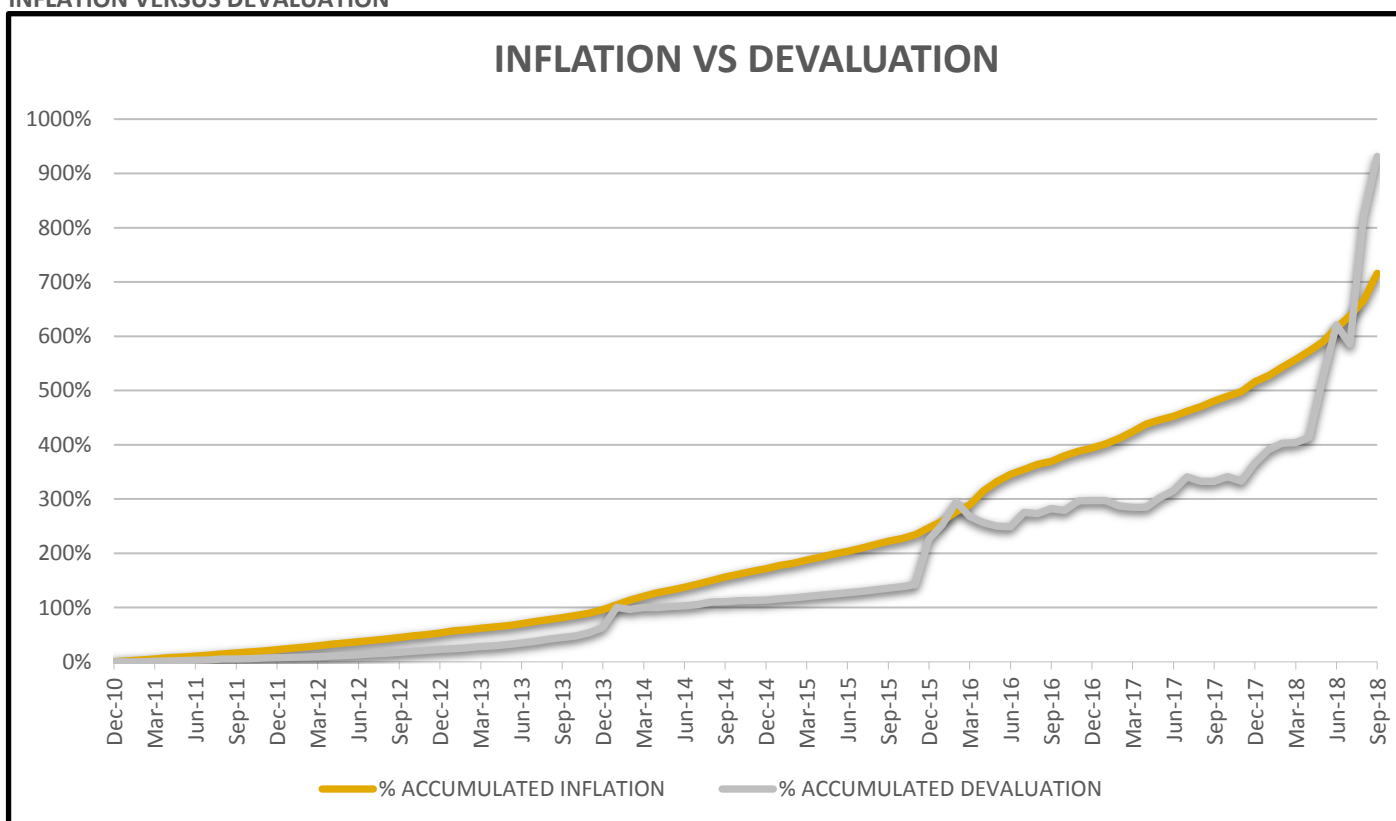
### CASH BALANCE

As at 30 September 2018, Orocobre corporate had available cash of US\$308.7 million after supporting the Advantage Lithium capital raise (US\$4M), Cauchari JV expenditure and early expenses on the Naraha Lithium Hydroxide Plant. Including SDJ and Borax cash and project debt, net group cash is US\$221.7 million.

No working capital financing was provided to Borax Argentina from Orocobre during the quarter.

Corporate operating costs and foreign exchange losses for the quarter were US\$2.1 million and US\$0.1 million respectively. A further US\$6.4 million was paid for development activities in Q1 FY19. Interest received on Term Deposits for the quarter was US\$1.6 million.

### INFLATION VERSUS DEVALUATION



The AR\$/US\$ exchange rate weakened by 43% during the quarter from AR\$28.85/US\$ at 30 June 2018 to AR\$41.25 at 30 September 2018 whilst inflation for the same period was 14.1%. When looking at the accumulated 12-month period from 1 October 2017 to 30 September 2018, devaluation of the AR\$ against the US\$ was 138% versus inflation of 38%. This resulted in balancing US\$ costs for ARS peso denominated expenses for the period considering the delayed response in devaluation vs inflation from the past year, resulting in lower costs at Borax Argentina and to a lesser extent, SDJ. The effect of inflation and devaluation over time generally shows that they cancel each other out.

During the quarter, the Argentine government passed a decree which levied an export duty of AR\$3 per US\$1 exported. At the time such export duty was levied, the Company calculated that such duty would result in a cost of approximately 8% of its sales

revenues, based on the exchange rate at that time of approximately ARS\$37.5/US\$1. The decree states that such export duty will remain in place until December 2020.

## OTHER MATTERS

Mr Martin Perez de Solay has been appointed as Orocobre's new Managing Director and Chief Executive Officer and will commence in these roles following the upcoming Annual General Meeting and a transition period with the current Managing Director and CEO Richard Seville.

Martin's initial focus will be on the established strategy of optimising the operating performance of the Olaroz joint venture and delivering the Company's growth plans for the Olaroz Stage 2 expansion and lithium hydroxide plant in Japan.

After the transition period is completed Richard will be remaining on the Orocobre Board as a Non-Executive Director.

## FOR FURTHER INFORMATION PLEASE CONTACT:

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# ABOUT OROCOBRE LIMITED

Orocobre Limited is listed on the Australian Securities Exchange and Toronto Stock Exchange (ASX:ORE) (TSX:ORL) and is building a substantial Argentinian-based industrial chemicals and minerals company through the construction and operation of its portfolio of lithium, potash and boron projects and facilities in the Puna region of northern Argentina. The Company has built, in partnership with Toyota Tsusho Corporation and JEMSE, the first large-scale, greenfield brine-based lithium project in approximately 20 years at the Salar de Olaroz with planned production of 42,500 tonnes per annum of low-cost lithium carbonate.

The Olaroz Lithium Facility has a low environmental footprint because of the following aspects of the process:

- The process is designed to have a high processing recovery of lithium. With its low unit costs, the process will result in low cut-off grades, which will maximise resource recovery.
- The process route is designed with a zero liquid discharge design. Waste products are stored in permanent impoundments (the lined evaporation ponds). At the end of the project life the ponds will be capped and returned to a similar profile following soil placement and planting of original vegetation types.
- Brine is extracted from wells with minimum impact on freshwater resources outside the salar. Because the lithium is in sedimentary aquifers with relatively low permeability, drawdowns are limited to the salar itself. This is different from halite hosted deposits such as Salar de Atacama, Salar de Hombre Muerto and Salar de Rincon where the halite bodies have very high near surface permeability and the drawdown cones can impact on water resources around the Salar affecting the local environment.
- Energy used to concentrate the lithium in the brine is solar energy. The carbon footprint is lower than other processes.
- The technology developed has a very low maximum fresh water consumption of <20 l/s, which is low by industry standards. This fresh water is produced by reverse osmosis from non-potable brackish water.
- Sales de Jujuy S.A. is also committed to the ten principles of the sustainable development framework as developed by The International Council on Mining and Metals. The Company has an active and well-funded “Shared Value” program aimed at the long-term development of the local people.

In accordance with its Community Policy, Orocobre continues to empower its communities through capacity building initiatives, and to encourage and facilitate direct and indirect community involvement in its activities. Priority in employment and procurement is given to the local communities of Olaroz, Huancar, Puesto Sey, Pastos Chicos, Susques, Catua, Jama, El Toro, Coranzuli and San Juan, all of which receive the necessary education, training, development and support through Orocobre’s Shared Value program.

## TECHNICAL INFORMATION, COMPETENT PERSONS’ AND QUALIFIED PERSONS STATEMENTS

The Company is not in possession of any new information or data relating to historical estimates that materially impacts on the reliability of the estimates or the Company’s ability to verify the historical estimates as mineral resources, in accordance with the JORC Code. The supporting information provided in the initial market announcement on 21/08/12 continues to apply and has not materially changed. Additional information relating to the Company’s Olaroz Lithium Facility is available on the Company’s website in “Technical Report – Salar de Olaroz Lithium-Potash Project, Argentina” dated May 113, 2011 which was prepared by John Houston, Consulting Hydrogeologist, together with Mike Gunn, Consulting Processing Engineer, in accordance with NI 43-101.

The information in this report that relates to exploration reporting at the Cauchari JV project has been prepared by Mr Murray Brooker. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Mr Brooker is an employee of Hydrominex Geoscience Pty Ltd and is independent of Orocobre. Murray has sufficient relevant experience to qualify as a competent person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He is also a “Qualified Person” as defined in NI 43-101. Murray Brooker consents to the inclusion in this announcement of this information in the form and context in which it appears.

## CAUTION REGARDING FORWARD-LOOKING INFORMATION

Forward-looking information may include, but is not limited to, the successful ramp-up of the Olaroz Project, and the timing thereof; the design production rate for lithium carbonate at the Olaroz Project; the expected brine grade at the Olaroz Project; the Olaroz Project's future financial and operating performance, including production, rates of return, operating costs, capital costs and cash flows; the comparison of such expected costs to expected global operating costs; the ongoing working relationship between Orocobre and the Provinces of Jujuy and Salta in Argentina; the on-going working relationship between Orocobre and the Olaroz Project's financiers, being Mizuho Bank and JOGMEC and the satisfaction of lending covenants; the future financial and operating performance of the Company, its affiliates and related bodies corporate, including Borax Argentina S.A. (Borax Argentina); the estimation and realisation of mineral resources at the Company's projects; the viability, recoverability and processing of such resources; timing of future exploration of the Company's projects; timing and receipt of approvals, consents and permits under applicable legislation; trends in Argentina relating to the role of government in the economy (and particularly its role and participation in mining projects); adequacy of financial resources, forecasts relating to the lithium, boron and potash markets; potential operating synergies between the Cauchari Project and the Olaroz Project; the potential processing of brines from the Cauchari Project and the incremental capital cost of such processing, expansion, growth and optimisation of Borax Argentina's operations; the integration of Borax Argentina's operations with those of Orocobre and any synergies relating thereto and other matters related to the development of the Company's projects and the timing of the foregoing matters.

Forward-looking statements are based on current expectations and beliefs and, by their nature, are subject to a number of known and unknown risks and uncertainties that could cause the actual results, performances and achievements to differ materially from any expected future results, performances or achievements expressed or implied by such forward-looking statements, including but not limited to, the risk of further changes in government regulations, policies or legislation; that further funding may be required, but unavailable, for the ongoing development of the Company's projects; fluctuations or decreases in commodity prices; uncertainty in the estimation, economic viability, recoverability and processing of mineral resources; risks associated with development of the Olaroz Project; unexpected capital or operating cost increases; uncertainty of meeting anticipated program milestones at the Olaroz Project or the Company's other projects; exceptional or prolonged adverse weather conditions; risks associated with investment in publicly listed companies, such as the Company; risks associated with general economic conditions; the risk that the historical estimates for Borax Argentina's properties that were prepared by Rio Tinto, Borax Argentina and/or their respective consultants (including the size and grade of the resources) are incorrect in any material respect; the inability to efficiently integrate the operations of Borax Argentina with those of Orocobre; as well as those factors disclosed in the Company's Annual Report for the financial year ended 30 June 2018 and Sustainability Report 2017 available on the ASX website and at [www.sedar.com](http://www.sedar.com).

The Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable. Assumptions have been made regarding, among other things: the timely receipt of required approvals and completion of agreements on reasonable terms and conditions; the ability of the Company to obtain financing as and when required and on reasonable terms and conditions; the prices of lithium, potash and borates; market demand for products and the ability of the Company to operate in a safe, efficient and effective manner. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.