



# Orocobre Limited

**Investor Update**  
**February 2015**

OROC

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# Cautionary Notes

This presentation has been prepared by the management of Orocobre Limited (the 'Company') in connection with meetings with institutional investors, for the benefit of brokers and analysts and not as specific advice to any particular party or person. The information is based on publicly available information, internally developed data and other sources. Where any opinion is expressed in this presentation, it is based on the assumptions and limitations mentioned herein and is an expression of present opinion only. No warranties or representations can be made as to the origin, validity, accuracy, completeness, currency or reliability of the information. The Company disclaims and excludes all liability (to the extent permitted by law) for losses, claims, damages, demands, costs and expenses of whatever nature arising in any way out of or in connection with the information, its accuracy, completeness or by reason of reliance by any person on any of it.

This presentation contains "forward-looking information" within the meaning of applicable securities legislation. Forward-looking information is often characterized by words such as "plan", "expect", "budget", "target", "project", "intend", "believe", "anticipate", "estimate" and other similar words or statements that certain events or conditions "may" or "will" occur. Forward-looking information may include, but is not limited to, the financing and profitability of the Olaroz Project, the completion of construction and the successful commissioning of the Olaroz Project, the capital expenditure incurred at the time of completion of construction and the timing thereof, the commencement of commercial production at the Olaroz Project and the timing thereof, the design production rate for lithium carbonate and potash at the Olaroz Project, the expected brine grade at the Olaroz Project, the expected operating costs at the Olaroz Project and the comparison of such expected costs to expected global operating costs, the ongoing working relationship between Orocobre and the Provinces of Jujuy and Salta, the future financial and operating performance of the Company, its affiliates and subsidiaries including Borax Argentina, the estimation and realization of mineral resources at the Company's projects, the viability, recoverability and processing of such resources, timing of future exploration at 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, production and other milestones for the Olaroz project, the Olaroz project's future financial and operating performance including production, rates of return, operating costs, capital costs and cash flows, potential operating synergies between the Salinas Grandes and Cauchari projects 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 information is subject to known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from those expressed or implied by such forward-looking information, including but not limited to the risk of further changes in government regulations, policies or legislation; the conditions to drawdown of project finance are not satisfied and drawdown is delayed or does not occur, 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 construction and 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; general risks associated with the feasibility and development of the Olaroz Project and the Company's other projects; risks associated with investments 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 consultants (including the size and grade of such 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 year ended June 30, 2014 filed at [www.sedar.com](http://www.sedar.com).

Forward-looking information is based on a number of assumptions and estimates that, while considered reasonable by the Company, may prove to be incorrect. Assumptions have been made regarding, among other things: the Company's ability to carry on its exploration and development activities at its projects and to continue production at Borax Argentina's properties, the timely receipt of required approvals, the prices of lithium, potash and boron, the ability of the Company to operate in a safe, efficient and effective manner and the ability of the Company to obtain financing as and when required and on reasonable terms. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such 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.

# Issue Structure

Item	Details
<b>Issue structure</b>	<ul style="list-style-type: none"> <li>▪ \$40m Placement to eligible institutional and sophisticated investors</li> <li>▪ \$15m Share Purchase Plan, underwritten to \$10m offered to existing shareholders</li> </ul>
<b>Issue size</b>	<ul style="list-style-type: none"> <li>▪ Approximately 19.8 million new ordinary shares (New shares)</li> <li>▪ Shareholder approval required for placement to Chairman and CEO/MD</li> </ul>
<b>Issue price</b>	<ul style="list-style-type: none"> <li>▪ Following bookbuild process \$2.55 per ordinary share, representing a: <ul style="list-style-type: none"> <li>▪ 13.0% discount to the last trading price (A\$2.93)</li> <li>▪ 10.0% discount to the 10 Day VWAP (A\$2.83)</li> </ul> </li> </ul> <p><i>Based on the last closing price of A\$2.93 on 30 Jan 2015</i></p>
<b>Use of proceeds</b>	<ul style="list-style-type: none"> <li>▪ The proceeds will be used principally to provide funding to Olaroz joint venture company, Sales de Jujuy S.A (SDJ SA), for: <ul style="list-style-type: none"> <li>- Deposit to a Debt Service Reserve Account with Mizuho Bank post construction completion</li> <li>- Provide working capital required to fund the JV through to cash flow positive operations and first P&amp;I payment with allowance for Olaroz preliminary expansion studies</li> <li>- Cauchari resource definition drilling and pumping tests.</li> <li>- Working capital for Orocobre Limited</li> </ul> </li> </ul>
<b>Key Dates</b>	<ul style="list-style-type: none"> <li>- Record Date for SPP</li> <li>- SPP Offer Documents and General Meeting Notice Distributed</li> <li>- SPP Offer Period Commences</li> <li>- SPP Offer Period Closes</li> <li>- SPP Allotment Date</li> </ul> <ul style="list-style-type: none"> <li>- 4 February 2015</li> <li>- On or before 13 February 2015</li> <li>- 16 February 2015</li> <li>- 10 March 2015</li> <li>- 13 March 2015</li> </ul>
<b>Ranking</b>	<ul style="list-style-type: none"> <li>▪ New shares will rank equally with existing shares</li> </ul>

# Use of Funds

Use of Funds	A\$m
Debt Service Reserve Account (DSRA) for Mizuho Bank <sup>1</sup>	\$12.5m
Standby Letter of Credit (SBLC) Facility to provide SDJ SA with working capital <sup>2</sup>	\$28.0m
Cauchari Resource Definition Drilling and Pump Testing Program	\$1.0m
Orocobre Working Capital (Corporate)	\$8.5m
<b>Total uses of funds</b>	<b>\$50.0m</b>

## Note 1:

- \$12.5m of funds required to be held in a DSRA as security (post completion) for future principal and interest loan repayments.
- The amount required to be held as security reduces with the reducing balance of the outstanding loan over the life of the facility.
- Funds are expected to flow back to Orocobre from this facility commencing in 2018.

## Note 2:

- \$28m SBLC Facility to provide SDJ SA with working capital.
- Funds are held as security in a restricted term deposit to allow an SBLC facility to be issued which in turn allows Olaroz JV company, SDJ SA, to draw down funds in Argentina to the equivalent ARS\$ (peso) value.
- The AR\$ funds will be used by SDJ SA for general working capital during production ramp up. Expenditures include operating costs, taxes, sustaining capital and expansion studies at Olaroz. The first principal and interest payment due to Mizuho Bank and JOGMEC guarantee fees of approximately US\$7m are due in September. If operating cash flows are insufficient to cover this, the payment will be supported by the SBLC mechanism to fund operating costs in Argentina.
- When SDJ SA is cash flow positive the AR\$ funds draw down will be repaid and the amount required to be held as security in the SBLC facility will also reduce, resulting in cash flow back to Orocobre.



## Olaroz Opening Ceremony – December 2014



# Investment Highlights

## Flagship Olaroz lithium project has achieved first production

- Final circuits of the lithium carbonate plant commissioned and now ramping up to Stage 1 production of 17,500tpa by Q4 CY15
- First production of battery grade Lithium to supply to customers as final stage of product qualification and approval process
- Strong market conditions – the right time to enter the market:
  - supply constraints (Olaroz is the only western world new supply)
  - market growth rate > 10% p.a and > 17% for battery grade
  - leading to price increases – FMC announced 10% increase in Lithium in 2014
  - first orders of lithium carbonate achieved
- Olaroz is a high margin/low cost and long life operation of with significant expansion potential
- Stage 2 – expansion at Olaroz – strategic interest by funding partners and end users already received

## Borax Argentina operations

- Turn around in place. Profitable in FY14. Growth initiatives currently underway in borax products and minerals
- Boron a key component in a number of industrial uses, including glass, ceramics, fibre glass and fertilisers
- Owner of mining properties of a number of lithium exploration projects with a royalty stream (Cauchari, Diablillos and Sal de Vida)

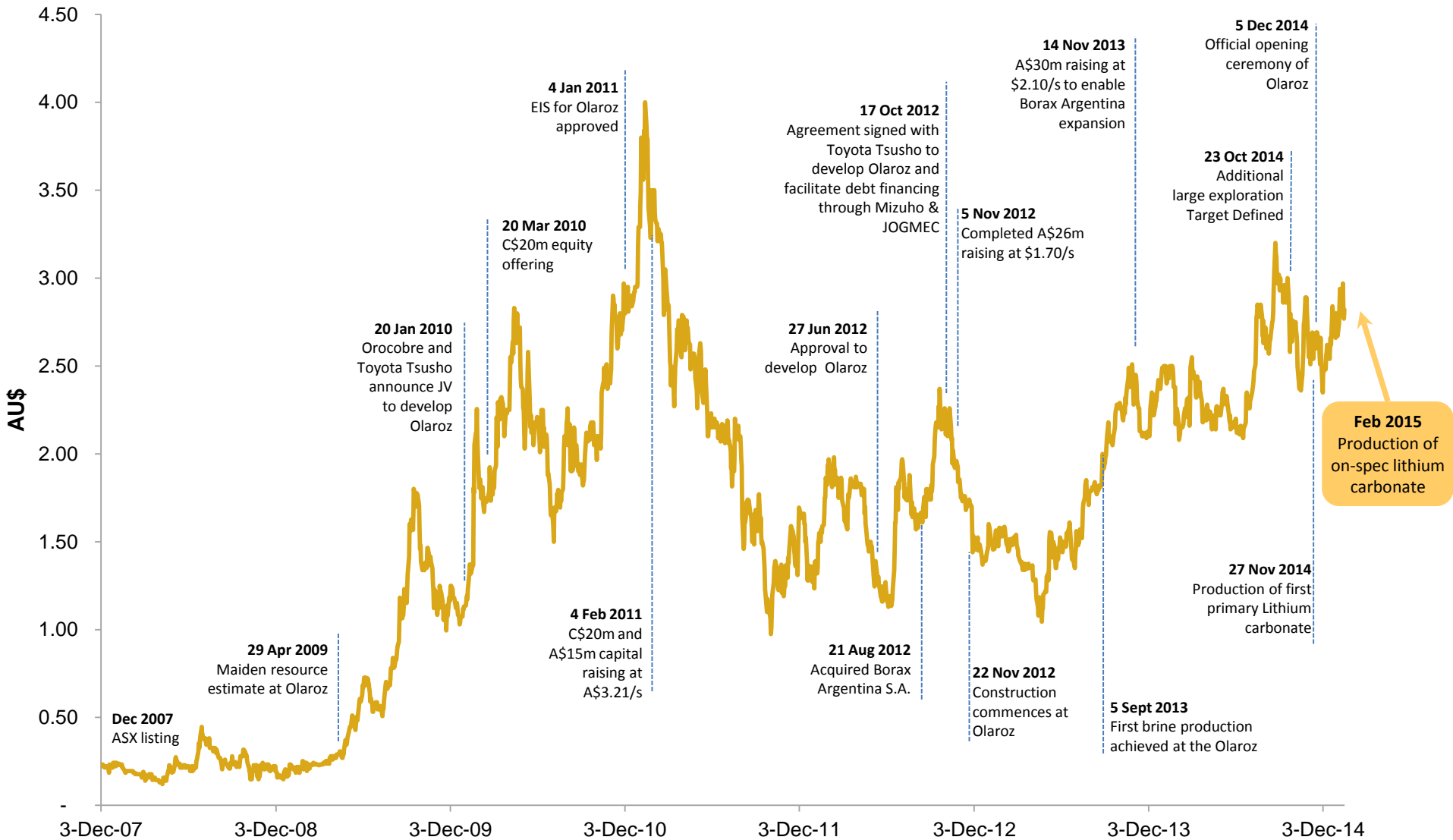
## Portfolio of Argentinian regional projects with attractive potential

- Proximity of Cauchari & Salinas Grandes brines to Olaroz provides expansion potential & execution flexibility

## Long-term lithium and borates markets look very strong

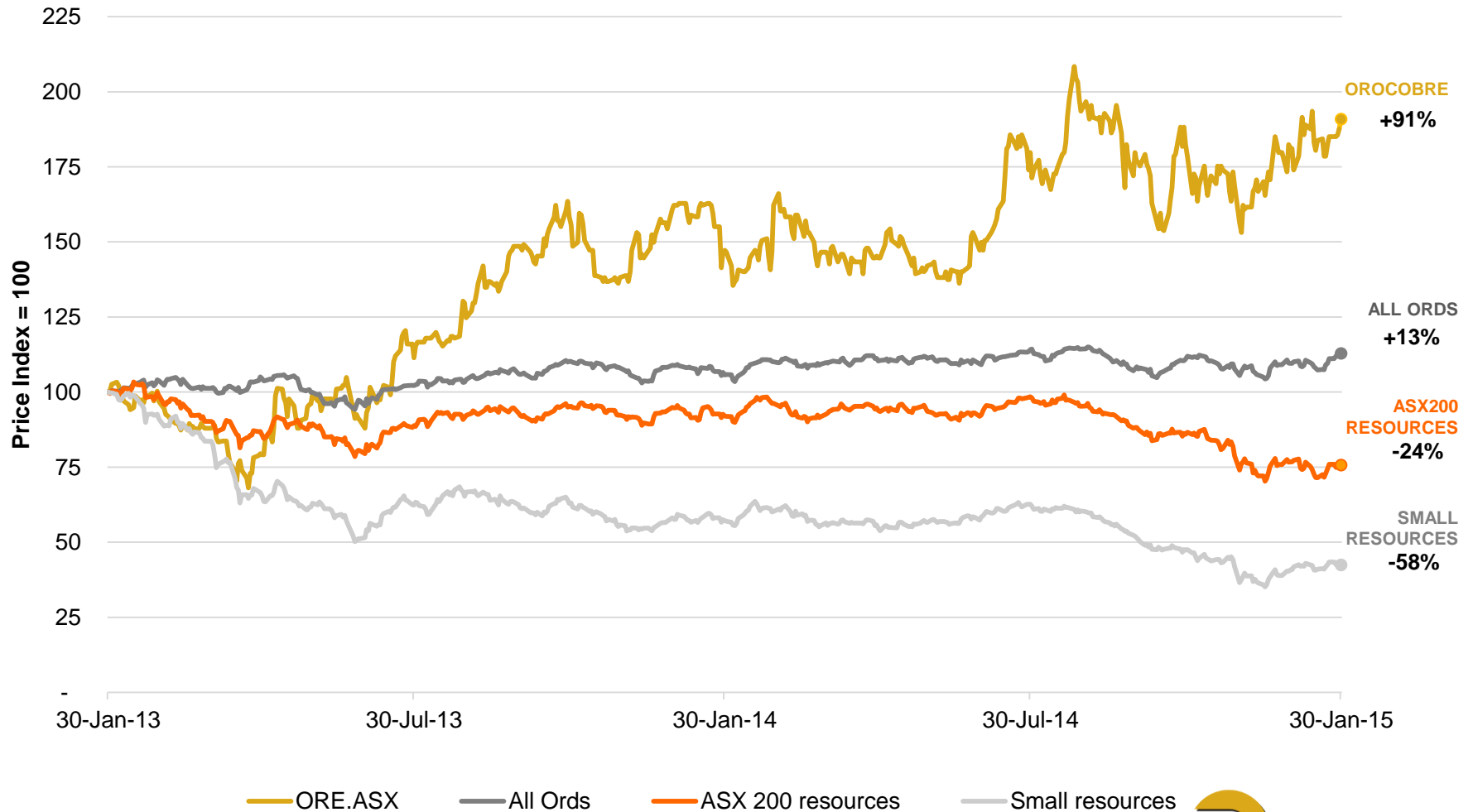
- Annual lithium market demand growth of approximately 10% forecast
- Continued growth in electric transport and lithium battery use has the potential for large demand growth
- >GDP growth forecast in borates

# Orocobre - Delivered Shareholder Value Creation



# Orocobre - Market Outperformance

Orocobre has significantly outperformed both the wider Australian equities market and resources indices over the past two years, increasing its share price 91% from \$1.54 to \$2.93





# Capital Markets Snapshot (ASX:ORE,TSX:ORL)

## Capital Structure (Pre-placement as at 30 January 2015)

<b>Shares on issue</b>	<b>132,041,911</b>
Options on issue	1,901,092
<b>Share price ASX/TSX</b>	<b>A\$2.93/C\$2.78</b>
<b>Market Capitalisation</b>	<b>A\$386.9m</b>
52 week share price range (close):	
ASX	A\$2.08-A\$3.20
TSX	C\$2.05-C\$3.30

## Board of Directors

<b>James Calaway</b>	Non-Executive Chairman
<b>Richard Seville</b>	Managing Director & CEO
<b>John Gibson Jr</b>	Non-Executive Director
<b>Frederico Nicholson</b>	Non-Executive Director
<b>Fernando Oris de Roa</b>	Non-Executive Director
<b>Courtney Pratt</b>	Non-Executive Director
<b>Robert Hubbard</b>	Non-Executive Director

*More details provided on page 35*

## Shareholders

Executives and Directors	~10.3%
Acorn	6.0%
Institutions	~50%

## Investor Relations Contacts

David Hall <i>Business Development Manager</i>	Tel. +61 7 3871 3985 M: +61 407 845 052 dhall@orocobre.com
James Calaway <i>Chairman</i>	M: +1 (713) 818 1457 jcalaway@orocobre.com



## **Olaroz Lithium Operations**

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# Olaroz Lithium Project Summary

For more information on Olaroz

<b>Location</b>	<ul style="list-style-type: none"> <li>Salar de Olaroz, Argentina</li> </ul>
<b>Large resource</b>	<ul style="list-style-type: none"> <li>Large measured and indicated resource of 6.4 Mt LCE, 19.3 Mt KCl &amp; 1.85Mt B to only 197m depth</li> <li>High lithium resource grade of 690mg/l Li, Low Mg/Li ratio of 2.4</li> <li>Exploration target of 1.6 and 7.5 million metric tonnes of lithium carbonate equivalent between 197m and 323m depth in thick continuous sand sequences. Depth potential of 600m</li> </ul>
<b>Capex</b>	<ul style="list-style-type: none"> <li>Low US\$229.1m CAPEX, capital efficient project</li> </ul>
<b>Production</b>	<ul style="list-style-type: none"> <li>Stage 1 of 17,500tpa battery-grade lithium carbonate</li> <li>Optional 20,000tpa KCL</li> <li>Potential for boric acid production via solvent extraction</li> </ul>
<b>Excellent economics</b>	<ul style="list-style-type: none"> <li>Site cash operating cost of ~US\$2,000/t of lithium carbonate<sup>1</sup></li> <li>long term expected pricing of ~US\$5,000-\$7,000/t</li> <li>Brine offers material operating cost advantage vs hard rock</li> </ul>
<b>High specification battery-grade LCE</b>	<ul style="list-style-type: none"> <li>“Olaroz process” produces 100% high purity product</li> <li>Pilot plant production for 4 years for product qualification</li> </ul>
<b>Life of mine and expansion</b>	<ul style="list-style-type: none"> <li>40 year mine life utilises only ~15% of existing resources</li> <li>Sustainable long life project with expansion potential for lithium carbonate, potash and boron</li> <li>Expansion for Li at 40% discount per tonne of capacity compared to original capital cost</li> </ul>
<b>Ownership</b>	<ul style="list-style-type: none"> <li>Orocobre 66.5%, Toyota Tsusho Corporation (TTC) 25%, and JEMSE (provincial government) 8%</li> <li>TTC also facilitated debt financing through Mizuho &amp; JOGMEC and is acting as marketing agent</li> </ul>

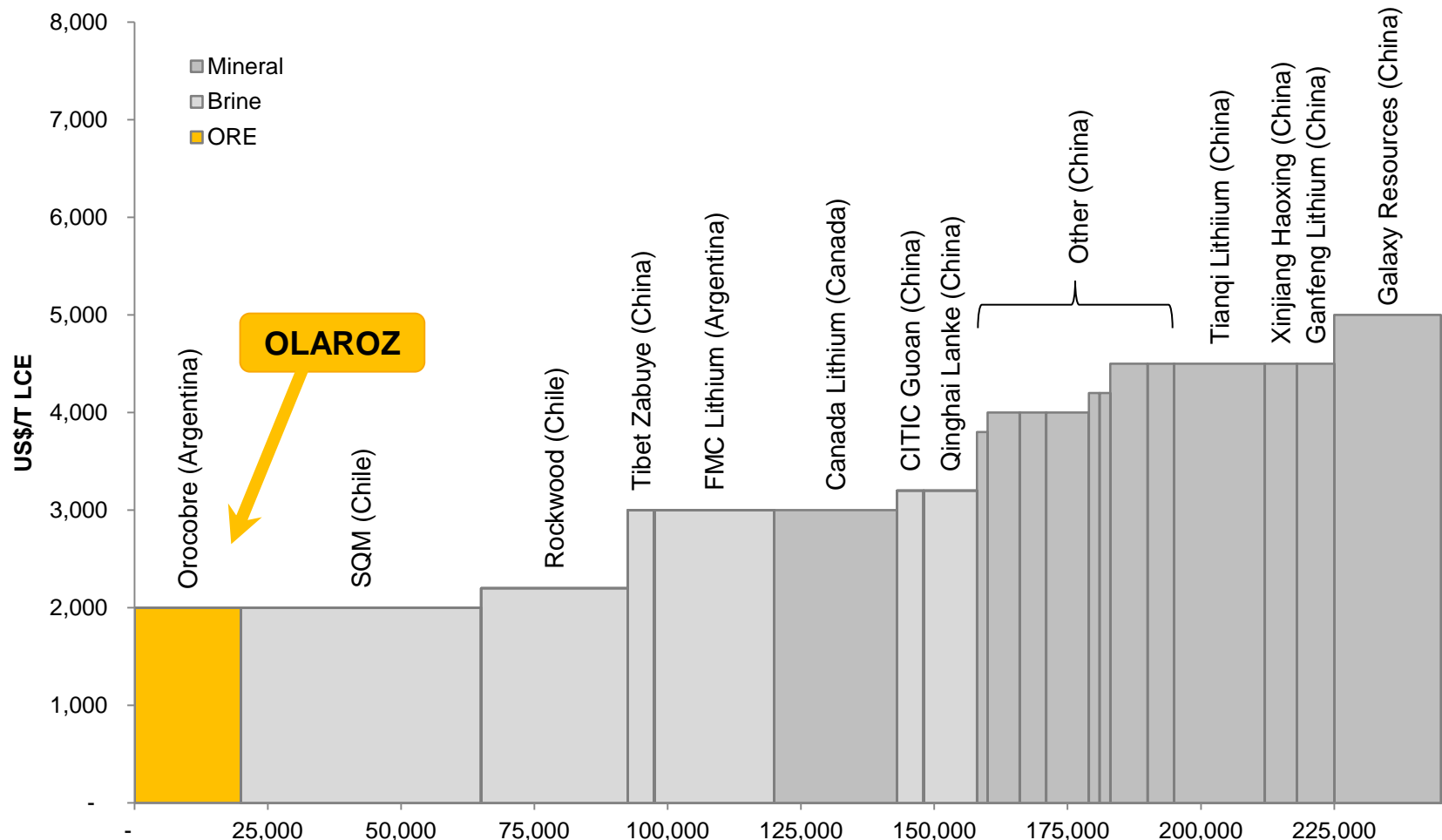
## Orocobre's portfolio of mines, processing plants & exploration brines in Argentina



1. At full production (excluding any potash or boron credits)

# Operating Cost Comparison with Existing Producers

The Olaroz Project is forecast to have a bottom quartile unit cost of production at nameplate capacity



Source: Roskill estimates 2013

Notes: Includes carbonate, hydroxide and chloride

Canada Lithium no longer in production. Galaxy operations no longer include mining and purchase concentrates



# Lithium – Orocobre: Right Place, Right Time....

## Lithium - Multiple industrial applications:

- Demand for lithium in batteries, ceramics and glass are driving strong growth

## The market is currently in balance:

- The market demand in 2013 is estimated at approximately 165,000tpa with an anticipated CAGR of ~10%
- But demand is forecast to outstrip supply from 2017 in China and 2016-17 for the rest of the world

## Current producers face supply challenges:

- Declining volumes
- High cost hard rock lithium extraction
- 20KT Rockwood expansion remains on hold subject to environmental approvals

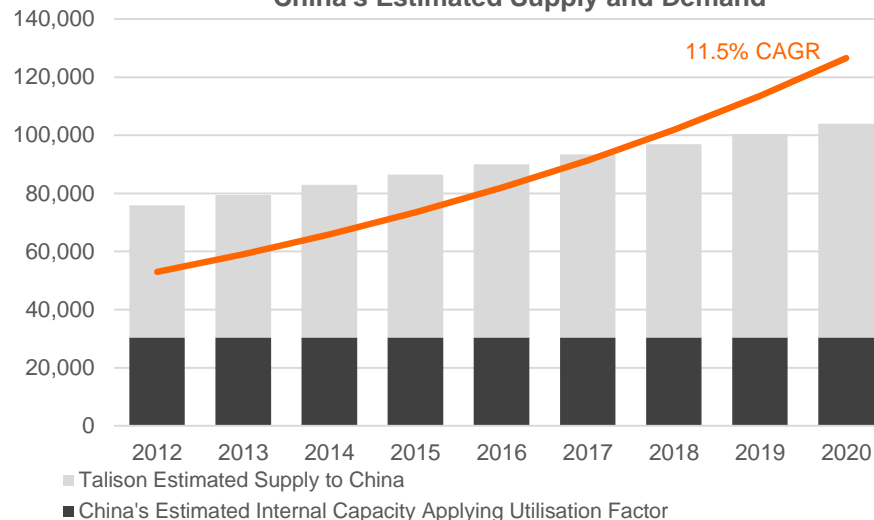
## Limited sources of new supply:

- Limited number of economically extractable lithium resources
- Very concentrated global production : ~80% of world supply from Chile (SQM, Rockwood), Argentina (FMC) & Australia (Talison)
- Majority of Talison supply goes straight to China
- **Orocobre has developed the first large scale lithium brine mine in 20 years**
- In the short term, new supply will only come from Olaroz and Rockwood (subject to licence approvals)

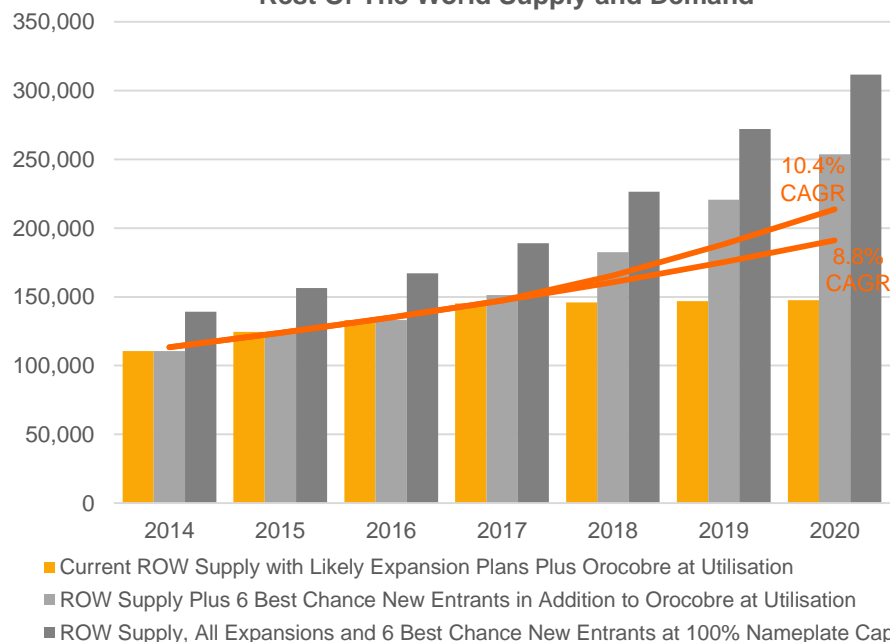
***Orocobre has a large, low cost, expandable resource and a strategy to expand in line with market growth***

Source: Company websites, analyst reports and Orocobre estimates.  
Utilisation factors applied @ 85% for ROW and 60% for China

China's Estimated Supply and Demand



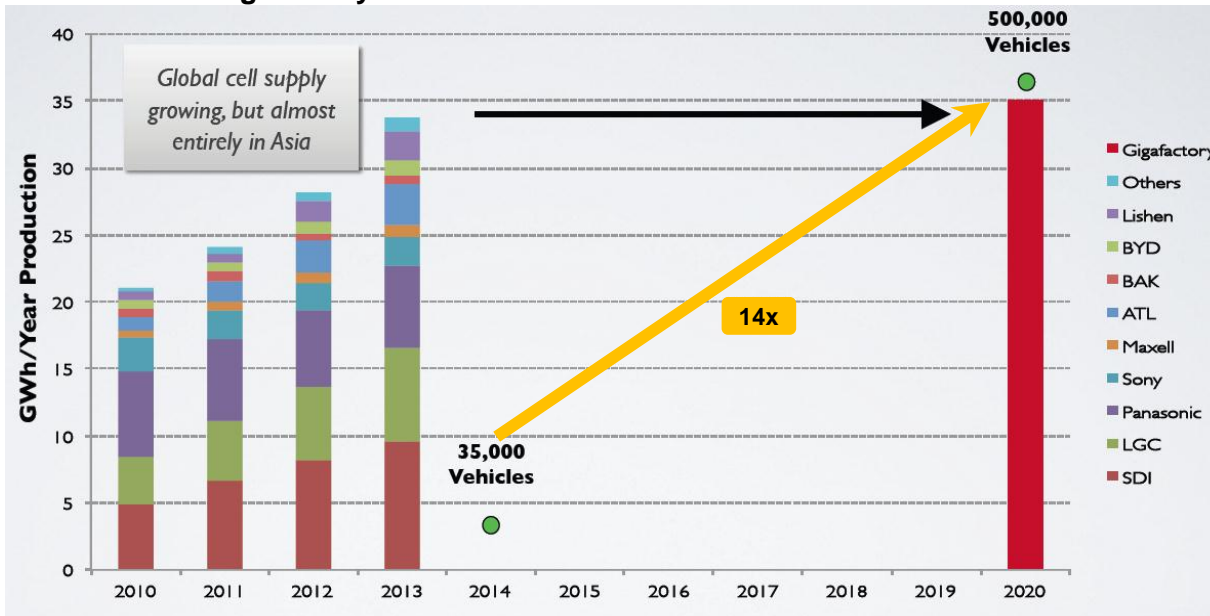
Rest Of The World Supply and Demand



# Lithium Market Outlook – In the words of key Lithium players

## TESLA COMMENTARY ON LITHIUM DEMAND & THE GIGAFACTORY

### Planned 2020 Gigafactory Production Exceeds 2013 Global Production



Source: IIT Takeshita 2013

- “The Gigafactory is planned to produce 35GWh of cells and 50GWh of packs per year by 2020”<sup>1</sup> - that would equate to ~22k tonnes of lithium carbonate equivalent demand
- “The Gigafactory is designed to reduce cell costs much faster than the status quo and, by 2020, produce more lithium ion batteries annually than were produced worldwide in 2013”<sup>2</sup>
- Forecast growth in vehicles of 14 times between now and 2020

## COMMENTS BY KEY LITHIUM PRODUCERS ON MARKET GROWTH, PRICING AND SUPPLY

**Rockwood:** “....worldwide, the demand for lithium products will probably grow by 15% to 20%. The issue for Rockwood is going to be, can we actually supply it?”<sup>3</sup>

**FMC:** “Lithium Demand Growth of 9% CAGR expected through 2020”<sup>4</sup>

**FMC:** As at December 1 2014: “...will increase global pricing for all grades of lithium carbonate....by 10 percent”<sup>5</sup>

**SQM:** “Lithium market demand should grow between 8-10% in 2014.”<sup>6</sup>

1. Panasonic and Tesla Sign Agreement for the Gigafactory, Tesla Motors, July 30, 2014  
 2. Tesla Motors March 2014  
 3. Rockwood 03 March 2014 Conference Call

4. FMC Investor Marketing Dec 2013  
 5. PRN Newswire 4th November 2014  
 6. SQM Media release 04 April 2014

# The Beginning





# Construction Begins





# Empty Evaporation Pond





## First Pumping of Brine – August 2013





# Liming Plant





## Evaporation pond post magnesium removal/lime addition





## Lithium Carbonate Plant – primary and purification circuits



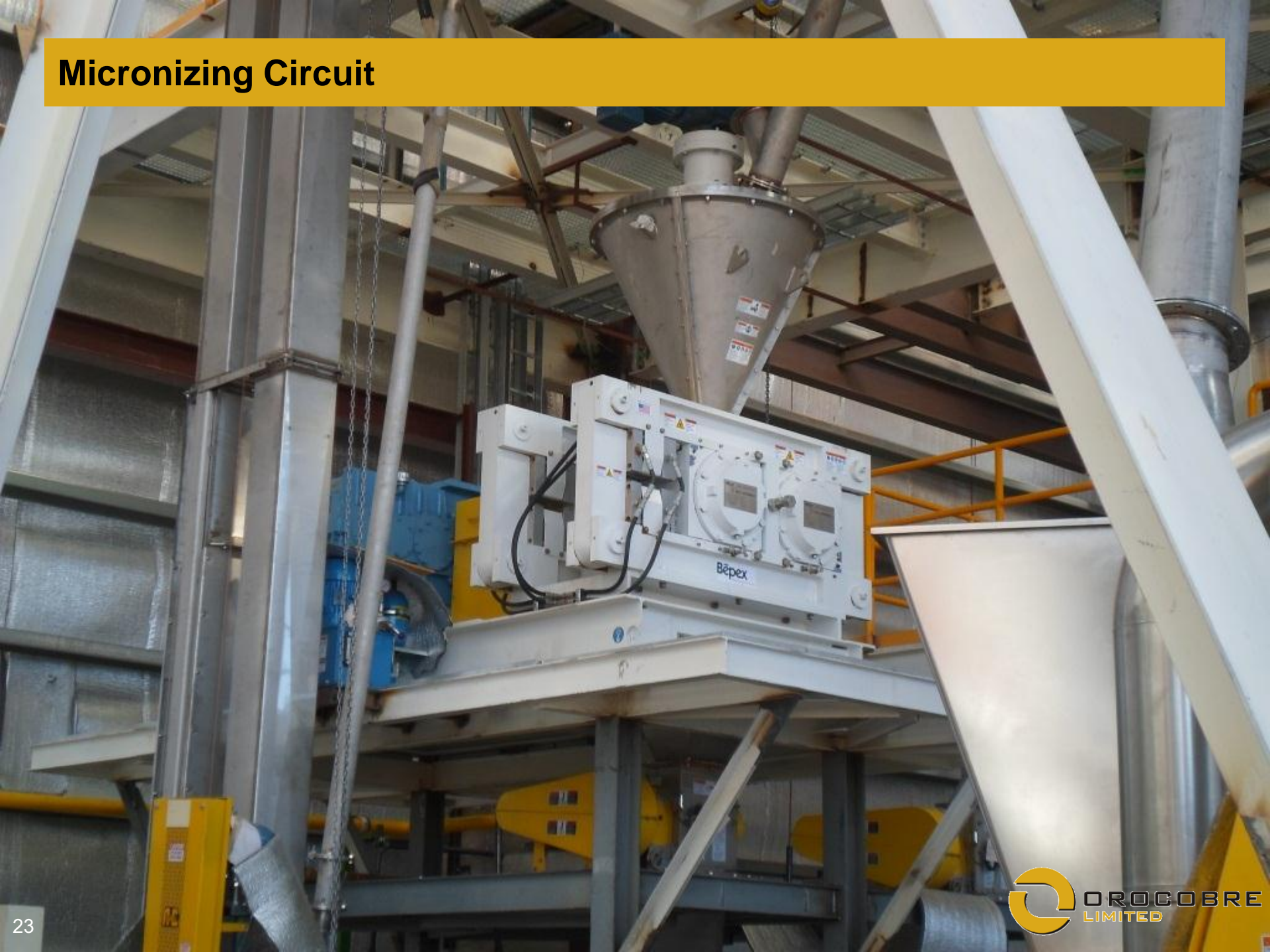


## Lithium Carbonate Paste





## Micronizing Circuit



# Bagging of Lithium Carbonate

- The final two circuits are now commissioned
- The plant is operating in continuous mode with purification and micronizing circuits integrated with the primary circuit
- Producing product for supply to over 30 battery and industrial customers in Asia, Europe and the United States in order to complete the final stage of the product qualification and approval process
- Currently, there is approximately 20,000 tonnes of lithium carbonate equivalent in the pond system at various stages of concentration.
- At current well pumping rates, lithium inventory is being added at approximately 2,100 tonnes of lithium carbonate equivalent per month
- Over the coming months the operation will ramp-up production reaching nameplate monthly production of 1,450 tonnes per month (17,500 tpa) in Q4 2015





## Olaroz Opening Ceremony – December 2014





## Awarded Argentinian Mining Company of the Year in 2012 & 2014





## **Borax Argentina & Other Operations**

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# Borax Argentina summary

- Acquired Borax Argentina in August 2012 from Rio Tinto for US\$8.5m (US\$5.5m paid upfront, then US\$1m for 3 years)
- Has been operating for over 50 years as a boron minerals & refined chemicals producer
- Proximity to Olaroz excellent – achieved aim of diversification to industrial mineral and chemicals company
- Goal: to turn around performance and invest to grow business  
Achievements so far:
  - A\$1.5m EBITDA in FY14, a \$4.6m improvement over FY13
  - 6% sales growth over FY13
- Annual production in excess of 40,000t of boron chemicals & mineral concentrates
- Three product streams: borax, boric acid and boron minerals
- Operations include three open pit mines and concentration plants in Tincalayu, Sijes & Porvenir
- Refinery operations at Campo Quijano have historically produced various boron chemical products
- Reliable supplier of high quality products with long-term relationships with key South American industrial and agricultural customers
- Substantial JORC compliant resources at Tincalayu and Porvenir and historical estimates on other deposits (RTM)
- Sijes is the next location to be upgraded from a historical estimate to a JORC compliant resource





# Borax Argentina Products & Markets

with a variety  
of market uses  
**GROWING**  
on average  
**4-6%** pa

**EVERYTHING**

from what we **eat**  
  
to where we **live**  
**RELIES ON**  
quality supply of  
**boron** products

## Borate Minerals

Global Market B2O3 equivalent -  
803kt global trade in 2013



Ceramics  
Agriculture

## Borax

Global Market B2O3 equivalent -  
1,578kt global trade in 2013

Glass  
Fluxes  
Ceramics  
Fertilisers  
Fibreglass



## Boric Acid

Global Market B2O3 equivalent -  
825kt global trade in 2013

Glass  
Fluxes  
Ceramics  
Fertilisers  
Wood preservatives



# Borax Argentina – Current Production & Growth Initiatives

Product streams	Production per annum	Orocobre Initiatives to Grow Borax	Use	Pricing	Approx. Size of global market B2O3 equiv.	Key competitors
<b>Borax</b>	Plant capacity: >30,000tpa of borax decahydrate equivalent (currently 60% utilised)	Relocation of Bx10 refining plant from Campo Quijano to Tincalayu mine completed June 2014  Marginal cut-off of 2.8% B2O3 , appropriate for a possible expanded production rate of 100,000tpa borax decahydrate - Indicated and Inferred Resource of 17.8 million tonnes at 11% B2O3.	Glass, ceramics, technical grade fibreglass, insulation grade fibreglass, fluxes & fertilisers	Different for each product.  Price range approx. US \$550-1100/t FOB	1,578k t global trade in 2013	Eti RTM SVM Russian Bor
<b>Boric acid</b>	Current plant capacity: 9,000tpa  PFS completed on a 25,000tpa plant at Olacapato	Current plant capacity: 9,000tpa  PFS completed on a 25,000tpa plant at Olacapato	Glass, ceramics, fertilisers and wood preservatives	Price range approx. US\$750/t to \$1,250/t CIF over the past 5 years (industrial grade)	825k t global trade in 2013	Eti RTM Russian Bor MSR INKABOR QUI BORAX
<b>Borate minerals</b>	25,000tpa processed borate minerals	Upgrading the Sijes hydroboracite deposit from historical estimates to JORC compliance  Life of Mine Study planned for Tincalayu	Ceramics and agriculture	Price range approx. US \$200-\$600/t FOB dependent on quality/specification/ application	803k t global trade in 2013	Eti Russian Bor

# Depth in additional mines and projects

## Cauchari (Li, K, B) - Exploration

- Lithium-potash-boron property immediately south of Olaroz plant
- Inferred (shallow) Resource 470Kt LCE, 1.6Mt KCL & 122Kt B
- Similar chemistry to Olaroz though lower grade and higher  $\text{SO}_4/\text{Li}$  and  $\text{Mg}/\text{Li}$  ratios
- Incremental production for Olaroz
- Deeper resource definition drilling and pumping tests planned for CY15

[For more information on Cauchari](#)

## Salinas Grandes/Cangrejillos (K, Li, B) - Exploration

- Li-K project -Drilling shows excellent grades & chemistry
- Inferred Resource 240,000t LCE, 1.0Mt KCL & 12Kt B
- Synergies with nearby Olaroz

[For more information on Salinas Grandes](#)



The conversion rate used is 5.32 tonnes of lithium carbonate equates to 1 tonne of lithium metal and 1.91 tonnes of muriate of potash equates to 1 tonne of potassium metal.





## Conclusion

# Conclusions

- ✓ Flagship Olaroz lithium project has achieved first production
- ✓ Final circuits of the lithium carbonate plant commissioned and now ramping up to Stage 1 production of 17,500tpa by Q4 CY15
- ✓ First production of battery grade Lithium to supply to customers as final stage qualification and approval process
- ✓ Strong lithium market conditions – supply constraints and market growth rate leading to price increases
- ✓ Olaroz is a high margin/low cost and long life operation with significant expansion potential
- ✓ Large Boron operations, with over 40,000tpa production of boron chemicals & mineral concentrates
- ✓ Borax Argentina turn around in place – growth initiatives currently underway in borax products and minerals and profitability achieved in FY14
- ✓ Additional value/growth in Li, KCL and B in brines and minerals (Cauchari, Salinas Grandes, Borax Argentina)
- ✓ Long-term lithium, borates and potash markets look very strong







**Additional Information**

# Board & Management



**James Calaway**  
Non-Executive Chairman

Mr Calaway is a respected business and civic leader in Houston, Texas. He has considerable experience and success in building young companies into successful commercial enterprises. Mr Calaway and his family have played major roles in the development of both public and private companies in the United States, including companies engaged in oil and gas exploration and production, and commercial wind-farm development. Mr Calaway currently serves as Chairman of the Board of DataCert Inc, the global leader in legal operations management, and has served as a Director on several other U.S. corporate boards. Mr. Calaway currently serves as the Chairman of the Board of the Center for Houston's Future, the Houston region's "think tank".



**Richard Seville**  
Managing Director & CEO

Mr Seville is a mining geologist and geotechnical engineer with over 30 years' minerals sector experience covering exploration, mine development and mine operations. He has had significant corporate experience, having had many years in the role of Operations Director and/or CEO in ASX/AIM listed mining companies. Mr Seville is a graduate of the Royal School of Mines, Imperial College and James Cook University North Queensland. He is presently a Non-executive Director of ASX and AIM listed Leyshon Resources Limited.



**John Gibson Jr**  
Non-Executive Director

Mr Gibson has more than 25 years of global energy experience. Mr. Gibson currently serves as the President and Chief Executive Officer of Tervita Corporation, a major Canadian environmental and oil field services company. Prior to joining Tervita, Mr Gibson served as Chief Executive Officer of an enterprise software solutions company and has held senior positions with the Halliburton Group of Companies. Mr Gibson serves on the Boards of Directors for Tervita, Blue Spark Energy Inc., and I-Pulse Inc. He is a member of the University of Houston Energy Advisory Committee, and Houston Baptist University Board of Trustees.



**Frederico Nicholson**  
Non-Executive Director

From 1991, Mr. Nicholson has served as Executive Director of Ledesma S.A.A.I. (Ledesma), a diversified Argentine agro-industrial producer. Mr. Nicholson was Vice President of the Argentine Industrial Union (UIA), the country's leading business advocacy group, from 1999-2013 and currently serves as President of the Argentine North Regional Sugar Centre.



**Fernando Oris de Roa**  
Non-Executive Director

Mr Oris de Roa is a highly successful business leader with a history of developing and operating large enterprises in Argentina. Mr Oris de Roa began his 23 year career with large trading company Continental Grain in 1970, working in USA, Spain, Switzerland, Brazil and Argentina and rose through the ranks to be responsible for all of Latin America. As Chief Executive, he is credited with turning S.A. San Miguel into the largest and most profitable lemon products company in the world. Mr Oris de Roa was Chief Executive of Avex S.A. from 2004 to 2012. He was also a Director of Patagonia Gold Ltd.



**Courtney Pratt**  
Non-Executive Director

Mr Pratt has enjoyed a 40-year career at the helm of some of Canada's top industrial businesses, particularly in the energy, minerals, and mining sectors. From 2004 to 2006, he was President and CEO of Stelco, a major Canadian steel producer, and served as Stelco's Chairman until the company's sale to the US Steel Corporation in 2007. Earlier, Mr Pratt was the President and CEO of Toronto Hydro, North America's largest municipally owned electricity distributor and also served as President and subsequently as Chairman of Noranda Inc. - in this capacity he served as a Director of a number of companies. Mr Pratt served as Chairman and Chief Executive Officer of the Toronto Region Research Alliance to March 2010. He is also Chairman of Knightsbridge Human Capital and a Director of Moosehead Breweries Limited, 407 International Inc. and CMA Holdings. Mr Pratt was awarded the Order of Canada in January 1999. He is Lead Independent Director, Chairman of the Remuneration Committee and was previously a member of the Audit Committee.



**Robert Hubbard**  
Non-Executive Director

Mr Hubbard brings a wealth of experience and pertinent knowledge to the Orocobre Board, having served for over 20 years as a partner at PricewaterhouseCoopers. During his time as a PwC partner, he served as auditor for some of Australia's largest resource companies with activities throughout Australia, Papua New Guinea, West Africa and South America. His experience has covered a range of commodities including base metals, gold, oil and gas and thermal and metallurgical coal. Mr. Hubbard also serves as a non-executive Director in various community and commercial focussed organisations. He is currently Chairman of Opera Queensland and Multiple Sclerosis Australia and a Director of UQ Health Care Pty Ltd, MS Research Australia, MS International Federation and Council member of the University of the Sunshine Coast. Mr Hubbard is also a non-executive Director of Bendigo and Adelaide Bank Ltd. Mr. Hubbard is also a member of the board of ASX listed company Primary Health Care. Mr Hubbard chairs the Company's Audit Committee.



# Environment and Sustainability: A Low Environmental Footprint

## Olaroz has a very low environmental footprint

- 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 overall resource recovery.
- The process route is designed with a zero liquid discharge design. All 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 process use a limited number of common, low environmental impact reagents
- The technology developed has a very low maximum fresh water consumption of <20 l/s, which is low by industry standards.

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

Panoramic view showing ponds, liming plant and lithium carbonate plant





## **Key Risks Foreign Selling Restrictions Resource Statements**



# Key Risks

This section discloses some of the key risks attaching to an investment in Orocobre. Before investing or increasing your investment in Orocobre, you should consider whether this investment is suitable for you having regard to publicly available information and your personal circumstances and following consultation with your professional advisors. The risks in this section are not, and should not be considered to be or relied on as, an exhaustive list of the risks relevant to an investment in Orocobre. The risks are general in nature in that regard has not been had to the investment objectives, financial situation, tax position or particular needs of any investor.

## Operating and Development Risks

- The ability of Orocobre to achieve production targets, or meet operating and capital expenditure estimates on a timely basis cannot be assured. For example, development and expansion projects may require approvals, permits or licences that may not be received on a timely basis. In addition, decisions regarding development and expansion projects may be subject to the successful outcome of operational reviews, test work, studies and trial mining.
- The assets of Orocobre, as any others, are subject to uncertainty with resource tonnes, grade, recovery, ground conditions, operational environment, funding for development, regulatory changes, accidents and other unforeseen circumstances such as unplanned mechanical failure of plant or equipment, storms, floods, bushfires or other natural disasters. If faced by Orocobre, these circumstances could result in Orocobre not realising its operational or development plans or in such plans costing more than expected or taking longer to realise than expected. Any of these outcomes could have an adverse effect on Orocobre's financial and operational performance.

## Funding Risks

- In the ordinary course of operations and development, Orocobre is required to issue financial assurances, particularly insurances and bond/bank guarantee instruments, to secure statutory and environmental performance undertakings and commercial arrangements. Orocobre's ability to provide such assurances is subject to external financial and credit market assessments, and its own financial position.
- Subject to successful completion of the capital raising, it is expected that Orocobre will have sufficient funding to support its operations.

## Market Fluctuation Risks

- Substantially all of Orocobre's revenues and cash flows are derived from the sale of lithium carbonate and borax products. Therefore, the financial performance of Orocobre is exposed to fluctuations in these items. Product prices may be influenced by numerous factors and events which are beyond the control of Orocobre.

## Risks to Achieving Increased Production

- Whilst Orocobre considers there to be a reasonable basis for the production forecasts, the forecasts are subject to a number of factors, many of which cannot be foreseen and are beyond the control of Orocobre. These factors may cause the production forecasts not to be achieved or to be achieved later than expected.

# Key Risks

## Labour Market Risks

- Orocobre is dependent upon a number of key management personnel and executives to manage the day-to-day requirements of its businesses. The loss of the services of one or more of such key management personnel could have an adverse effect on Orocobre.
- Orocobre needs to be able to recruit appropriately skilled and qualified individuals. There can be no guarantee that personnel with the appropriate skills will be available.

## Government Policy Changes

- Government policies are subject to review and changes from time to time. Such changes are likely to be beyond the control of Orocobre and may affect industry profitability as well as Orocobre's capacity to explore and mine. At present, Orocobre is not aware of any reviews or changes that would affect its tenements. However, changes in community attitudes on matters such as taxation, competition policy, environment and lands right issues may bring about reviews and possibly changes in government policies. There is a risk that such changes may affect Orocobre's plans or its rights and obligations in respect of its tenements. Any such government action may also require increased capital or operating expenditures and could prevent or delay certain operations by Orocobre.

## Environmental Risk

- The operations of Orocobre are subject to laws and regulations concerning the environment. As with most exploration projects and mining operations, Orocobre's activities are expected to have an impact on the environment, particularly in relation to mining and production. It is Orocobre's intention to conduct its activities to the highest standard of environmental obligation, including compliance with all environmental laws.

## Estimate Risk

- The Mineral Resources for Orocobre's assets are estimates only and no assurance can be given that any particular recovery level of copper will in fact be realised. Orocobre's estimates comply with the JORC Code, however Mineral Resources and Ore Reserves are expressions of judgement based on knowledge, experience and industry practice, and may require revision based on actual production experience. Estimates that are valid when made may change significantly when new information becomes available.

## Costs Risks

- Orocobre has significant commodity and energy requirements and it relies on being able to fulfil those requirements at a cost which does not negatively impact on its cash flows. A number of factors (such as rising oil prices, macro-economic factors such as inflationary expectations, interest rates, currency exchange rates (particularly the strength of the US dollar), as well as general global economic conditions and political trends) may lead to an increase in commodity and energy costs which may materially adversely affect the earnings of Orocobre.

## No Geographical Diversification

- Orocobre's projects are all located in Argentina. Any circumstance or event which negatively impacts Argentina could materially affect the financial performance of Orocobre's and more significantly than if it had a geographically diversified asset base.



# Key Risks

## Sovereign Risk

- Possible sovereign risks associated with operating in Argentina include, without limitation, changes in the terms of mining legislation, changes in the foreign ownership requirements in Argentina, changes to royalty arrangements, changes to taxation rates and concessions, expropriation by the government or private entities and changes in the ability to enforce legal rights.
- Any of these factors may, in the future, adversely affect the financial performance of Orocobre and the market price of its shares. No assurance can be given regarding future stability in Argentina or any other country in which Orocobre may, in the future, have an interest.

## Discretion in use of Capital

- The board and management of Orocobre have discretion concerning the use of Orocobre's capital resources as well as the timing of expenditures. Capital resources may be used in ways not previously anticipated or disclosed. The results and the effectiveness of the application of capital resources are uncertain. If they are not applied effectively, Orocobre's financial and/or operational performance may suffer.

## Exploration Risks

- Exploration activities are speculative by nature and therefore are often unsuccessful. Such activities also require substantial expenditure and can take several years before it is known whether they will result in additional mines being developed. Accordingly, if the exploration activities undertaken by Orocobre do not result in additional reserves, this may have an adverse effect on the company's financial performance.

## Foreign Exchange Rate Risk

- Orocobre is an Australian business that reports in Australian dollars. Revenue is derived from the sale of products in US dollars, therefore movements in the US\$/A\$ exchange rate or the Argentinian Peso/A\$ may adversely or beneficially affect Orocobre's cash flows.

# Foreign Selling Restrictions

## International Offer Restrictions

This document does not constitute an offer of new ordinary shares ("New Shares") of the Company in any jurisdiction in which it would be unlawful. In particular, this document may not be distributed to any person, and the New Shares may not be offered or sold, in any country outside Australia except to the extent permitted below.

## United States

This document does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States. Any securities described in this document have not been, and will not be, registered under the US Securities Act of 1933 and may not be offered or sold in the United States except in transactions exempt from, or not subject to, the registration requirements of the US Securities Act and applicable US state securities laws.

## Hong Kong

WARNING: This document has not been, and will not be, registered as a prospectus under the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong, nor has it been authorised by the Securities and Futures Commission in Hong Kong pursuant to the Securities and Futures Ordinance (Cap. 571) of the Laws of Hong Kong (the "SFO"). No action has been taken in Hong Kong to authorise or register this document or to permit the distribution of this document or any documents issued in connection with it. Accordingly, the New Shares have not been and will not be offered or sold in Hong Kong other than to "professional investors" (as defined in the SFO).

No advertisement, invitation or document relating to the New Shares has been or will be issued, or has been or will be in the possession of any person for the purpose of issue, in Hong Kong or elsewhere that is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to New Shares that are or are intended to be disposed of only to persons outside Hong Kong or only to professional investors (as defined in the SFO and any rules made under that ordinance). No person allotted New Shares may sell, or offer to sell, such securities in circumstances that amount to an offer to the public in Hong Kong within six months following the date of issue of such securities.

The contents of this document have not been reviewed by any Hong Kong regulatory authority. You are advised to exercise caution in relation to the offer. If you are in doubt about any contents of this document, you should obtain independent professional advice.

## New Zealand

This document has not been registered, filed with or approved by any New Zealand regulatory authority under the Financial Markets Conduct Act 2013 (the "FMC Act"). The New Shares are not being offered or sold in New Zealand (or allotted with a view to being offered for sale in New Zealand) other than to a person who:

- is an investment business;
- meets the investment activity criteria specified in clause 38 of Schedule 1 of the FMC Act;
- is large within the meaning of clause 39 of Schedule 1 of the FMC Act;
- is a government agency; or
- subscribes, or has subscribed, for securities that have a minimum amount payable of at least NZ\$750,000.



# Foreign Selling Restrictions

## Singapore

This document and any other materials relating to the New Shares have not been, and will not be, lodged or registered as a prospectus in Singapore with the Monetary Authority of Singapore. Accordingly, this document and any other document or materials in connection with the offer or sale, or invitation for subscription or purchase, of New Shares, may not be issued, circulated or distributed, nor may the New Shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore except pursuant to and in accordance with exemptions in Subdivision (4) Division 1, Part XIII of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), or as otherwise pursuant to, and in accordance with the conditions of any other applicable provisions of the SFA.

This document has been given to you on the basis that you are (i) an existing holder of the Company's shares, (ii) an "institutional investor" (as defined in the SFA) or (iii) a "relevant person" (as defined in section 275(2) of the SFA). In the event that you are not an investor falling within any of the categories set out above, please return this document immediately. You may not forward or circulate this document to any other person in Singapore.

Any offer is not made to you with a view to the New Shares being subsequently offered for sale to any other party. There are on-sale restrictions in Singapore that may be applicable to investors who acquire New Shares. As such, investors are advised to acquaint themselves with the SFA provisions relating to resale restrictions in Singapore and comply accordingly.

## United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Conduct Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended ("FSMA")) has been published or is intended to be published in respect of the New Shares. This document is issued on a confidential basis to "qualified investors" (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the New Shares may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances which do not require the publication of a prospectus pursuant to section 86(1) FSMA. This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the New Shares has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply to the Company.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 ("FPO"), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together "relevant persons"). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

# Foreign Selling Restrictions

## Canada (British Columbia, Ontario and Quebec provinces)

This document constitutes an offering of New Shares only in the Provinces of British Columbia, Ontario and Quebec (the "Provinces") and to those persons to whom they may be lawfully distributed in the Provinces, and only by persons permitted to sell such New Shares. This document is not, and under no circumstances is to be construed as, an advertisement or a public offering of securities in the Provinces. This document may only be distributed in the Provinces to persons that are "accredited investors" within the meaning of NI 45-106 – Prospectus and Registration Exemptions, of the Canadian Securities Administrators.

No securities commission or similar authority in the Provinces has reviewed or in any way passed upon this document, the merits of the New Shares or the offering of New Shares and any representation to the contrary is an offence.

No prospectus has been, or will be, filed in the Provinces with respect to the offering of New Shares or the resale of such securities. Any person in the Provinces lawfully participating in the offer will not receive the information, legal rights or protections that would be afforded had a prospectus been filed and receipted by the securities regulator in the applicable Province. Furthermore, any resale of the New Shares in the Provinces must be made in accordance with applicable Canadian securities laws which may require resales to be made in accordance with exemptions from dealer registration and prospectus requirements. These resale restrictions may in some circumstances apply to resales of the New Shares outside Canada and, as a result, Canadian purchasers should seek legal advice prior to any resale of the New Shares.

The Company, and the directors and officers of the Company, may be located outside Canada, and as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon the Company or its directors or officers. All or a substantial portion of the assets of the Company and such persons may be located outside Canada, and as a result, it may not be possible to satisfy a judgment against the Company or such persons in Canada or to enforce a judgment obtained in Canadian courts against the Company or such persons outside Canada.

Any financial information contained in this document has been prepared in accordance with Australian Accounting Standards and also comply with International Financial Reporting Standards and interpretations issued by the International Accounting Standards Board. Unless stated otherwise, all dollar amounts contained in this document are in Australian dollars.

Statutory rights of action for damages or rescission

Securities legislation in certain of the Provinces may provide purchasers with, in addition to any other rights they may have at law, rights of rescission or to damages, or both, when an offering memorandum that is delivered to purchasers contains a misrepresentation. These rights and remedies must be exercised within prescribed time limits and are subject to the defenses contained in applicable securities legislation. Prospective purchasers should refer to the applicable provisions of the securities legislation of their respective Province for the particulars of these rights or consult with a legal adviser.



# Foreign Selling Restrictions

## Canada (British Columbia, Ontario and Quebec provinces) (continued)

The following is a summary of the statutory rights of rescission or to damages, or both, available to purchasers in Ontario. In Ontario, every purchaser of the New Shares purchased pursuant to this document (other than (a) a "Canadian financial institution" or a "Schedule III bank" (each as defined in NI 45-106), (b) the Business Development Bank of Canada or (c) a subsidiary of any person referred to in (a) or (b) above, if the person owns all the voting securities of the subsidiary, except the voting securities required by law to be owned by the directors of that subsidiary) shall have a statutory right of action for damages and/or rescission against the Company if this document or any amendment thereto contains a misrepresentation. If a purchaser elects to exercise the right of action for rescission, the purchaser will have no right of action for damages against the Company. This right of action for rescission or damages is in addition to and without derogation from any other right the purchaser may have at law. In particular, Section 130.1 of the Securities Act (Ontario) provides that, if this document contains a misrepresentation, a purchaser who purchases the New Shares during the period of distribution shall be deemed to have relied on the misrepresentation if it was a misrepresentation at the time of purchase and has a right of action for damages or, alternatively, may elect to exercise a right of rescission against the Company, provided that (a) the Company will not be liable if it proves that the purchaser purchased the New Shares with knowledge of the misrepresentation; (b) in an action for damages, the Company is not liable for all or any portion of the damages that the Company proves does not represent the depreciation in value of the New Shares as a result of the misrepresentation relied upon; and (c) in no case shall the amount recoverable exceed the price at which the New Shares were offered.

Section 138 of the Securities Act (Ontario) provides that no action shall be commenced to enforce these rights more than (a) in the case of any action for rescission, 180 days after the date of the transaction that gave rise to the cause of action or (b) in the case of any action, other than an action for rescission, the earlier of (i) 180 days after the purchaser first had knowledge of the fact giving rise to the cause of action or (ii) three years after the date of the transaction that gave rise to the cause of action. These rights are in addition to and not in derogation from any other right the purchaser may have.

Certain Canadian income tax considerations. Prospective purchasers of the New Shares should consult their own tax adviser with respect to any taxes payable in connection with the acquisition, holding or disposition of the New Shares as any discussion of taxation related matters in this document is not a comprehensive description and there are a number of substantive Canadian tax compliance requirements for investors in the Provinces.

Language of documents in Canada. Upon receipt of this document, each investor in Canada hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the New Shares (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. Par la réception de ce document, chaque investisseur canadien confirme par les présentes qu'il a expressément exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières décrites aux présentes (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rédigés en anglais seulement.

# Olaroz – Resource Estimate Summary

Combined Measured and Indicated Resource of 6.4 million tonnes of lithium carbonate, 19.3 million tonnes of potash (potassium chloride) and 1.85 million tonnes of boron

Resource Category	Area	Thickness	Mean specific yield	Brine volume	Concentration			Tonnes of Contained Metal		
					Lithium	Potassium	Boron	Lithium	Potassium	Boron
	sq. kms	metres	%	cubic kms	mg/L	mg/L	mg/L	Million Tonnes	Million Tonnes	Million Tonnes
Measured Resource	93	54	8.4%	0.42	632	4930	927	0.27	2.08	0.39
Indicated Resource	93	143	10.0%	1.33	708	6030	1100	0.94	8.02	1.46
<b>Measured and Indicated Resource</b>	<b>93</b>	<b>197</b>	<b>9.6%</b>	<b>1.75</b>	<b>690</b>	<b>5730</b>	<b>1050</b>	<b>1.21</b>	<b>10.10</b>	<b>1.85</b>

The resource model and brine resource estimation on the Salar de Olaroz was undertaken by John Houston who is a Chartered Geologist and a Fellow of the Geological Society of London. John Houston has sufficient relevant experience to qualify as a competent person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He is also a "Qualified Person" as defined by Canadian Securities Administrators' National Instrument 43-101.

The conversion rate used is 1 tonne of lithium metal produces 5.32 tonnes of lithium carbonate and 1 tonne of potassium produces 1.91 tonnes of muriate of potash

Exploration target between 1.6 and 7.5 million tonnes of lithium carbonate equivalent between 197m and 323m depth. Basin potentially 600m deep and additional targets to the north and the south of the exploration target area.

Area km <sup>2</sup>	Thickness m (to 323 m depth)	Mean specific yield %	Brine volume million m <sup>3</sup>	Li mg/l	Contained Li million metric tonnes	Lithium carbonate million metric tonnes	K mg/l	Contained K million metric tonnes	Potash million metric tonnes	B mg/l	Boron million metric tonnes
<b>UPPER ASSUMPTION ESTIMATE</b>											
80	126	20%	2,000	700	1.4	7.5	5400	10.9	20.8	1,200	2.4
<b>LOWER ASSUMPTION ESTIMATE</b>											
80	126	6%	605	500	0.3	1.6	4000	2.4	4.6	900	0.5

The information in this table that relates to exploration target at the Olaroz project was prepared by Mr Murray Brooker. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. 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



# Salinas Grandes Resource Estimate Summary

An inferred resource has been estimated for the shallow brine body to approximately 13m as 56.5 million cubic metres of brine at 795 mg/L lithium and 9,550 mg/L potassium which is equivalent to 239,200 tonnes of lithium carbonate and 1.03 million tonnes of potash (potassium chloride) based on 5.32 tonnes of lithium carbonate being equivalent to 1 tonne of lithium and 1.91 tonnes of potash being equivalent to one tonne of potassium as shown in the table.

	Brine body parameters				Average resource concentrations			Tonnes contained metal		
Resource Category	Area km <sup>2</sup>	Average thickness m	Mean specific yield %	Brine volume Million m <sup>3</sup>	Lithium mg/l	Potassium mg/l	Boron mg/l	Lithium	Potassium	Boron
Inferred resource	116.2	13.3	4.1%	56.5	795	9,547	283	44,960	539,850	12,100

The resource estimate was prepared by Murray Brooker. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Murray has sufficient relevant experience to qualify as a competent person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He is also a “Qualified Person” as defined by Canadian Securities Administrators’ National Instrument 43-101.

# Salar de Cauchari Resource Estimate Summary

An inferred resource has been estimated in two adjoining areas of the salar, with a total 230 million cubic metres of brine at 380 mg/L lithium and 3,700 mg/L potassium. This is equivalent to 470,000 tonnes of lithium carbonate and 1.6 million tonnes of potash (potassium chloride) based on 5.32 tonnes of lithium carbonate being equivalent to 1 tonne of lithium and 1.91 tonnes of potash being equivalent to one tonne of potassium.

	Brine body parameters				Average resource concentrations			Tonnes contained		
Inferred Resource Area	Area km2	Average thickness m	Mean specific yield %	Brine volume Million m3	Lithium mg/l	Potassium mg/l	Boron mg/l	Lithium	Potassium	Boron
North 170 m deep	19.69	170	6.1%	204.5	399	3,833	547	81,497	783,829	111,901
South 50 m deep	11.35	50	4.6%	26.0	264	2,502	421	6,851	64,932	10,916
Combined	31.04			230.4	383	3,683	533	88,348	848,761	122,817
LCE/potash Equivalent								470,009	1,621,134	

The resource estimate was prepared by Murray Brooker. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Murray has sufficient relevant experience to qualify as a competent person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He is also a "Qualified Person" as defined by Canadian Securities Administrators' National Instrument 43-101.



# Porvenir Resource Estimate Summary

A measured and indicated resource of 2.3 million tonnes at 20.4% B<sub>2</sub>O<sub>3</sub> is estimated at the current 16% mining cut off grade. The resource extends to a maximum depth of 2.9m and is easily exploited by low cost strip mining. A measured and indicated resource of 6.9 million tonnes of 14.9% B<sub>2</sub>O<sub>3</sub> is estimated at a 9% B<sub>2</sub>O<sub>3</sub> mining cut off grade.

Classification	Cut-off grade	Tonnes	Grade% B <sub>2</sub> O <sub>3</sub>	Tonnes B <sub>2</sub> O <sub>3</sub>
Measured	9%	4,907,877	14.5	710,672
Indicated	9%	1,942,433	16.0	310,517
<b>Measured &amp; Indicated</b>	<b>9%</b>	<b>6,850,000</b>	<b>14.9</b>	<b>1,020,000</b>

Classification	Cut-off grade	Tonnes	Grade% B <sub>2</sub> O <sub>3</sub>	Tonnes B <sub>2</sub> O <sub>3</sub>
Measured	16%	1,474,341	20.0	295,117
Indicated	16%	804,595	21.0	168,776
<b>Measured &amp; Indicated*</b>	<b>16%</b>	<b>2,278,937</b>	<b>20.4</b>	<b>463,992</b>

The resource estimate was prepared by Murray Brooker. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Murray has sufficient relevant experience to qualify as a competent person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He is also a “Qualified Person” as defined by Canadian Securities Administrators’ National Instrument 43-101.

# Tincalayu Resource Estimate Summary

An Indicated and Inferred resource of 6.5 million tonnes at 13.9% B<sub>2</sub>O<sub>3</sub> at the a marginal cut-off of 5.6% B<sub>2</sub>O<sub>3</sub>, which increases to 17.8 million tons of 11.0 % B<sub>2</sub>O<sub>3</sub> , at a marginal cut-off grade of 2.8 % B<sub>2</sub>O<sub>3</sub>.

	Current production 30 Ktpa			Expanded Production 100 Ktpa		
	Cut-off	Tonnes (Mt)	Soluble B2O3 (%)	Cut-off	Tonnes (Mt)	Soluble B2O3 (%)
Global Resource (not limited to a pit shell) - with Marginal Cut-off						
Indicated	5.6	6.9	13.9	2.8	6.9	13.8
Inferred	5.6	9.9	10.2	2.8	13.8	8.5
Indicated + Inferred	5.6	16.8	11.7	2.8	20.7	10.3
Maximum DCF In-pit Resource - with Marginal Cut-off						
Indicated	5.6	5.1	14.7	2.8	6.8	13.8
Inferred	5.6	1.4	11.0	2.8	11.0	9.3
Indicated + Inferred	<b>5.6</b>	<b>6.5</b>	<b>13.9</b>	<b>2.8</b>	<b>17.8</b>	<b>11.0</b>

The resource estimate was prepared by Murray Brooker. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Murray has sufficient relevant experience to qualify as a competent person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He is also a "Qualified Person" as defined by Canadian Securities Administrators' National Instrument 43-101.



# Historical Borax Argentina Resources

Mine/Project	Material	Historical Estimate	Tonnes	Grade% B2O3	Tonnes B2O3
<b>Current Soft Rock mines</b>					
<b>Sijes - Hydroboracite</b>	Hidroboracite	Measured	<b>3,099,998</b>	<b>22.8</b>	<b>706,800</b>
<b>Sijes – Colemanite</b>	Colemanite	Inferred	<b>200,000</b>	<b>20.0</b>	<b>40,000</b>
<b>Total &amp; average</b>			<b>3,299,998</b>	<b>22.6</b>	<b>746,800</b>
<b>Undeveloped Ulexite Deposits in Salt Lake Sediments</b>					
<b>Ratones</b>	Ulexite	Indicated	<b>364,663</b>	<b>18.0</b>	<b>65,639</b>

The historical estimate at Diablillos is not being re-stated as the raised phreatic surface caused by 3rd party drilling may affect the ability to mine some of this mineralisation.

Footnotes: The historical estimates are in equivalent categories to those used by the JORC and CIM reporting codes. However, these estimates did not satisfy either current JORC or CIM/NI 43-101 requirements for the reporting of resources and were considered to be historical resources (see Orocobre ASX/TSX announcement August, 2012).

**A qualified person did not do sufficient work to classify the historical estimates as current mineral resources or mineral reserves, and the Company did not treat the historical estimates as current mineral resources or mineral reserves. It is uncertain whether following evaluation and/or further exploration any of the historical estimates will ever be able to be reported as current estimates in accordance with the JORC code or NI 43-101.**

There is no new information that impacts on these historical estimates. Note that material mined in 2012-2014 is not accounted for as depletion in the figures above, with approximately 35,000 tonnes at Sijes the estimated annual production of mineralised material at the time this information was originally released in 2012.

**Relevant reports from which the above summary of historical estimates is drawn include the following:**

## **Sijes:**

- July 1998; Borax Argentina S.A.; Environmental and Operational Studies, Phase 1, Initial Geotechnical Appraisal; Knight Piesold Limited, England. Includes a Historical estimates Chapter;
- July 1998; Borax Argentina S.A.; Environmental and operational Studies, Phase 2; Geotechnical Appraisal; Knight Piesold Limited, England;
- May 1999; Borax Argentina S.A.; Hidroboracite Project, Raul Gutierrez Solis; August 1999, Borax Argentina S.A.; Sijes, Monte Amarillo 2 Mine. Historical Estimation, Mine Design & Planning Report. Knight Piesold Limited, England.

## **Ratones:**

The project was acquired by Borax Argentina circa 1987. The previous owners had conducted an estimate of contained mineralised material. This has not been validated by Borax Argentina, who consider the status of this material to be of the indicated category.

# Competent Person's and Qualified Person's Statement & Technical Information

The resource estimation of the Salar de Olaroz stated in this report was undertaken by John Houston who is a Chartered Geologist and a Fellow of the Geological Society of London. John Houston has sufficient relevant experience to qualify as a competent person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. He is also a "Qualified Person" as defined by Canadian Securities Administrators' National Instrument 43-101("NI 43-101").

The Feasibility Study on the Olaroz project was prepared by Mr. Houston (Consulting Processing Engineer) and Peter Ehren (Consulting Processing Engineer), together with Sinclair Knight Merz and the Orocobre technical group. Mr. Houston and Mr. Gunn prepared the technical report entitled "Technical Report – Salar de Olaroz Lithium-Potash Project, Argentina" dated May 30, 2011 (the "Olaroz Report") under NI 43-101 in respect of the Feasibility Study, and each of Messrs. Houston and Gunn was a Qualified Person under NI 43-101, and independent of the company, at the date such report was prepared. Mr Peter Ehren is a Member of the Australasian Institute of Mining and Metallurgy and Chartered Professional and is a consulting mineral processing engineer with significant experience in lithium brine deposits. Mr Gunn is a Member of the Australian Institute of Mining and Metallurgy and is consulting mineral processing engineer with approximately forty years' experience.

The technical information relating to Salinas Grandes and Cauchari has been prepared by Murray Brooker in conjunction with Mr Peter Ehren regarding Salinas Grandes. Murray Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Murray has sufficient relevant experience to qualify as a competent person as defined in the 2004 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. Mr Peter Ehren is a Member of the Australasian Institute of Mining and Metallurgy and Chartered Professional and is a consulting mineral processing engineer with significant experience in lithium brine deposits. He has acted as a consultant on the company's Olaroz and Cauchari lithium projects as well as consulting extensively for other clients. Mr Ehren is responsible for the mineral processing and metallurgical testing statements in section 15 of the Technical Report on the Salinas Grandes Lithium Project effective April 16th 2012. This report was reviewed and updated to include a statement of Peter Ehren's responsibilities on August 12th 2013 as a result of a review by the Ontario Securities Commission and refiled on [www.sedar.com](http://www.sedar.com) with an accompanying media release over the Canadian disclosure network on August 23rd 2013. Mr Ehren is also a "Qualified Person" as defined in NI43-101.

The information in this report that relates to mineralisation at Borax Argentina sites has been prepared by Mr Murray Brooker. Murray Brooker, an independent consultant to Orocobre, is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. The other information in this report relating to the boric acid plant pre-feasibility study has been approved by Mr. Peter Ehren. Peter Ehren, an independent consultant to Orocobre at the date of the announcement, is also a Consulting Processing Engineer. Each of Mr. Brooker and Mr. Ehren 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 and as a "Qualified Person" as defined in NI 43-101.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the references above and that all material assumptions and technical parameters underpinning the resource estimates continue to apply and have not materially changed. The Company also confirms that the form and context in which the Competent Person's findings are presented have not been materially modified. The Company also confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

A previous announcement was made on the 21/08/12 regarding the superseded historical resources at Porvenir and Tincalayu. 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 of 21/08/12 continues to apply and has not materially changed.

Additional information relating to the Company's projects is available in the Olaroz Report; the "Technical Report – Salar de Cauchari Project, Argentina" dated April 30, 2010, which was prepared by John Houston, Consulting Hydrogeologist; and the "Technical Report on the Salinas Grandes Lithium Project" dated April 16, 2012, which was prepared by Mr. Brooker. These are available on [SEDAR.com](http://SEDAR.com) or the Company's website.

Additional information relating to the Company's projects is available on the Company's website.





# Orocobre Limited

**Investor Update**  
**February 2015**

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