

29 November 2013

**ASX ANNOUNCEMENTS**

**AUSTRALIAN STOCK EXCHANGE**

**RE: COMPANY PRESENTATION ( AGM & LONDON)**

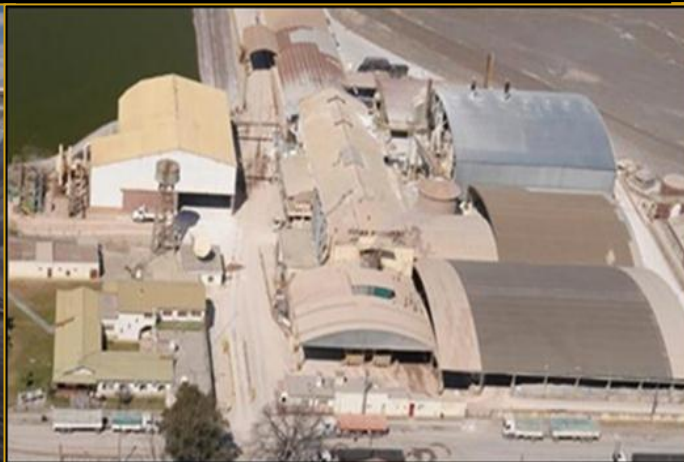
Attached is a company presentation to be given by Managing Director Richard Seville at the Company's Annual General Meeting on 29 November 2013 and by Chairman James Calaway to institutional investors and brokers in London in the period 2-6 December 2013.



Neil Kaplan  
Company Secretary

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# Orocobre Limited

**BUILDING A SUSTAINABLE INDUSTRIAL MINERALS COMPANY**

**Investor Update**  
**November/December 2013**

# 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 drawing down of project finance from Mizuho Corporate Bank, the completion of construction at 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 carbon 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 results of the Olaroz feasibility study, 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 Information Form for the year ended June 30, 2012 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.

# Investment Highlights

## Flagship Olaroz lithium project under construction

Fully funded to commercial production – stage 1 production of 17,500t pa to commence in Q2, 2014

- Construction underway – on schedule and within budget
- Low operating cost & high margin project: Forecast annual EBITDA of ~US\$70m for stage 1 lithium carbonate production rate
- Large world-class JORC/NI 43-101 resource (6.4mt LCE, 19.3mt KCL, 1.85mt B) enables significant expansion potential
- Sustainable long life project. Feasibility Study considered 40 yrs with only 15% resources extracted
- Battery grade lithium carbonate has been produced at the Olaroz pilot plant for approximately 3 years
- Key partnerships with Toyota Tsusho Corporation and Jujuy provincial government mining company

## Borax Argentina operations

- Acquired from Rio Tinto in August 2012: 35,000-40,000t of production of boron chemicals & mineral concentrates
- Large asset base of 3 mines, 2 concentrate plants and a refinery operation with significant upside from existing assets
- Boron used in fertiliser as a micronutrient, ceramic frits, glazes and tile bodies, wood treatments, polymer additives, detergents, soaps and personal care products (buffering, source of active oxygen)
- Long-established Borax workforce in Jujuy and Salta Provinces provides valuable support in developing key lithium-potash assets
- 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, borates and potash 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

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

## Capital Structure (26th November, 2013)

<b>Shares on issue</b>	<b>132,041,911</b>
Options on issue	1,901,092
<b>Share price ASX/TSX</b>	<b>A\$2.12/C\$2.05</b>
<b>Market Capitalisation</b>	<b>A\$279.9m/C\$270.7m</b>
Cash*	A\$37m
52 week share price range (close):	
ASX	A\$1.05-A\$2.51
TSX	C\$1.15-C\$2.48

\* Free cash net of all funding obligations for Olaroz as at 30 September 2013 plus \$30m from November capital raising.

## Shareholders

Executives and Directors	11%
Acorn	8.50%
Institutions	50%

## ORE - 1 year share price & volume chart



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# Orocobre: Strong Broker Coverage and Consensus “Buy”

## Strong “BUY” recommendation by covering research analysts

- The covering analysts below have published “BUY” target prices for ORE averaging **A\$2.95/share**

### Research coverage

Broker	Analyst	Rating	Target price	Rating date
	Luke Smith, (Melbourne)	Buy	\$3.41	11 Nov 2013
	Rob Brierley (Perth)	Top Pick (Buy)	\$2.80	Sep 2013
	Levi Spry (Sydney)	Buy	\$2.85	3 Sep 2013
	Edward Otto (Toronto)	Top Pick (Buy)	C\$3.15	3 Sep 2013
	Mansur Khan (Toronto)	Buy	C\$2.80	5 Nov 2012
	Jonathan Lee (Toronto)	Spec Buy	C\$2.55	7 Dec 2012

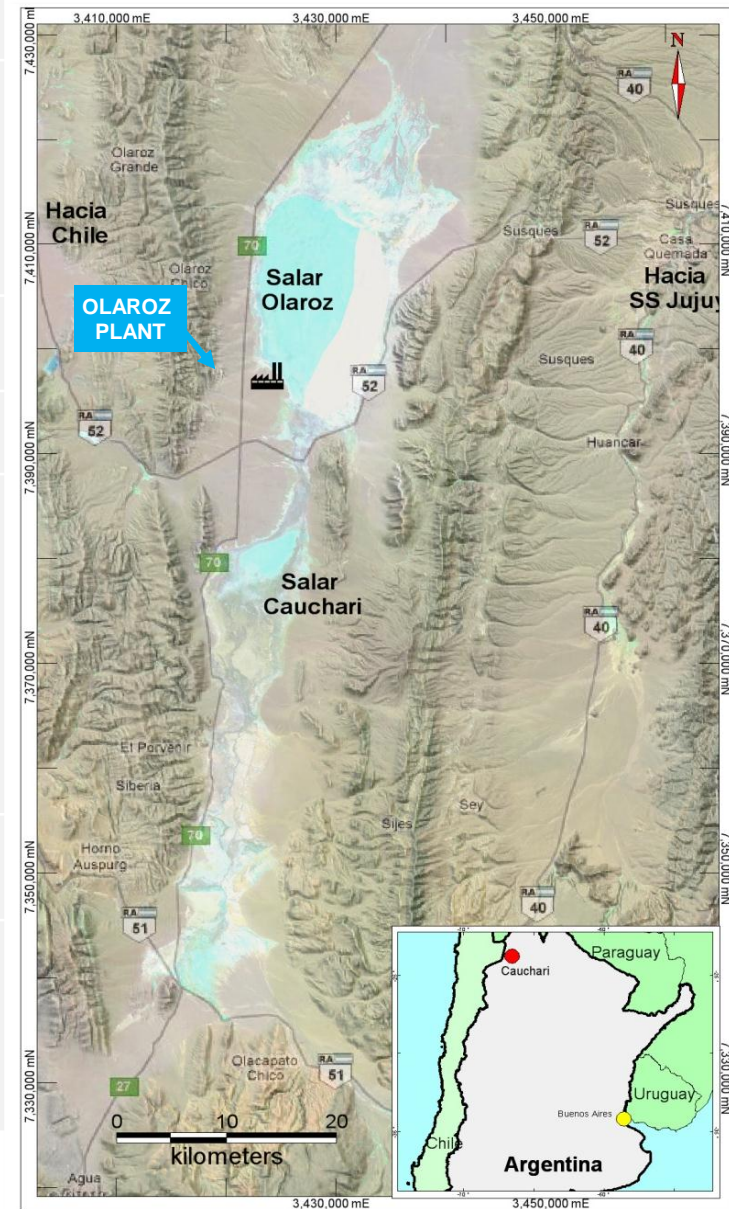
OROC



# Olaroz 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 :                             <ul style="list-style-type: none"> <li>6.4 Mt LCE , 19.3 Mt KCl &amp; 1.85mt B to 200m</li> <li>depth potential of 600m</li> </ul> </li> <li>High lithium resource grade of 690mg/l Li</li> <li>Low Mg/Li ratio of 2.4</li> </ul>
<b>Capex</b>	<ul style="list-style-type: none"> <li>Fully funded through to production</li> <li>Low US\$207m CAPEX plus \$22.1m contingency</li> </ul>
<b>Production</b>	<ul style="list-style-type: none"> <li>Stage 1 of 17,500tpa battery-grade lithium carbonate</li> <li>Optional 20,000 tpa KCL</li> </ul>
<b>Excellent economics</b>	<ul style="list-style-type: none"> <li>Strong EBITDA margins of ~US\$4,000/t LCE excluding potash credits</li> <li><b>Estimated annual EBITDA of US\$70m at production of 17,500tpa lithium carbonate</b></li> <li>Operating cost \$/t LCE of &lt;US\$2,000/t (excluding any potash credits) vs current LCE pricing of ~\$5,500-\$6,000/t</li> <li>Material operating cost advantage - hard rock operating costs are significantly higher than brine production costs</li> </ul>
<b>High specification battery-grade LCE</b>	<ul style="list-style-type: none"> <li>Lithium carbonate produced on-site for approximately 3yrs</li> <li>Product exceeds minimum battery-grade specification</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. Expandable production rates 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>Infrastructure</b>	<ul style="list-style-type: none"> <li>Excellent infrastructure: Road, gas pipeline, water</li> <li>Local workforce</li> </ul>



# Strong Partners - Government

## Government Agreements

- June 2012: The Olaroz Project was presented to the Argentine President along with the Governor of Jujuy and various Provincial and National Government officials
- It was announced that Orocobre had entered into an agreement with provincial government owned Jujuy Energía y Minería Sociedad del Estado ("JEMSE") and that the Olaroz Project had been approved. Key terms of the JEMSE agreement:
  - JEMSE granted 8.5% equity interest in Olaroz
  - JEMSE's share of construction financing to be loaned by Orocobre and repayable out of 33.3% of dividends received by JEMSE

## Mining Lease granted and EIS approved

- July 2012: Jujuy Government formally approved the Olaroz Project and the mining leases were issued
- The EIS Addenda was approved by the Director of Mines following recommendation by UGAMP in 2011



Ministerial approval for the Olaroz Project



# Strong Partners - Toyota Tsusho, JOGMEC, Mizuho - Fully Funded

<b>Project Capital Cost</b>	<ul style="list-style-type: none"> <li>US\$229.1 million including \$22.1m contingency</li> </ul>
<b>Equity Financing</b>	<ul style="list-style-type: none"> <li>Orocobre 66.5%, TTC 25%, JEMSE 8.5% (funded by Orocobre)</li> <li>Total project equity of US\$82.8 million</li> </ul>
<b>Debt Financing</b>	<ul style="list-style-type: none"> <li>US\$146.3 million based on US\$229.1 million CAPEX</li> <li>US\$45.6 million additional facilities</li> <li>~4.5% fixed rate, term of 10 years after grace period</li> <li>Dividends payable twice yearly after debt service</li> </ul>
<b>Guarantees / Commitments</b>	<ul style="list-style-type: none"> <li>JOGMEC guarantee for 82.4% of drawn debt post completion</li> <li>Additional guarantees from TTC</li> </ul>



## Toyota Tsusho partnership

- Toyota Tsusho Corporation ("TTC") is 22% owned by Toyota Motor Corporation & 11% owned by Toyota Industries, and is one of Japan's leading global trading houses
- Definitive Shareholders Agreement executed in October 2012 for a JV to develop the Olaroz Project
- The effective Olaroz Project equity interest by TTC is 25.0%
- Low cost financing package from Japan facilitated through TTC and arranged by Mizuho Corporate Bank ("Mizuho")
- Debt package covers 70% of CAPEX - guaranteed by the Japanese government's Japan Oil, Gas and Metals National Corporation ("JOGMEC")
- TTC has agency rights (on a commission basis) for lithium carbonate production from the first stage



# Strong Partners – Local Business and Community

## EPCM implementation

- International design and procurement with SKM
- Strong Jujuy based owners team
- Argentine construction management company



## “Jujuy First” strategy

- Working closely with local suppliers and contractors to provide the best results to maximise local involvement, employment and economic impact in the local economy
- Working with the community to provide health and education services

## Benefits of local focus

- Benefits of strong local management and utilisation of local companies include:
  - Knowledge of local laws, requirements and procedures expedites progress and ensures we minimise procurement and construction risks
  - Knowledge of local producers ensures the engineering design is suited to support local industry and reduces lead times for materials
  - Knowledge of local conditions and possible problems allows forward planning to occur to prevent delays.



***Managing and partnering with local companies reduces our risk exposure and gives us greater confidence in achieving our goal of delivering the Olaroz project on time and within budget.***

## Strong Partners – Local Business and Community





# Olaroz Construction Progress

## Flagship Olaroz lithium project on time and within budget

### ***Construction is proceeding to plan***

- In terms of physical progress the construction program is approximately 65% complete
- First brine pumped in August (4 weeks ahead of schedule)
- Evaporation pond construction is ahead of schedule (Earthworks are over 90% complete)
- All brine bores have been drilled. Bore equipment and infrastructure for brine supply is over 90% complete
- Evaporation pond lining is on schedule
- Water supply wells have been completed
- Camp has been completed and is operational
- The laboratory has been completed
- Lime plant is approximately 80% complete
- Engineering design of the lithium carbonate plant has been completed and the lithium carbonate plant is under construction
- The gas supply and distribution system is over 90% complete
- The final stage of road works is nearing completion



*Continuing to make progress on time and within budget*

## Olaroz Project Construction Progress – Pumping Brine



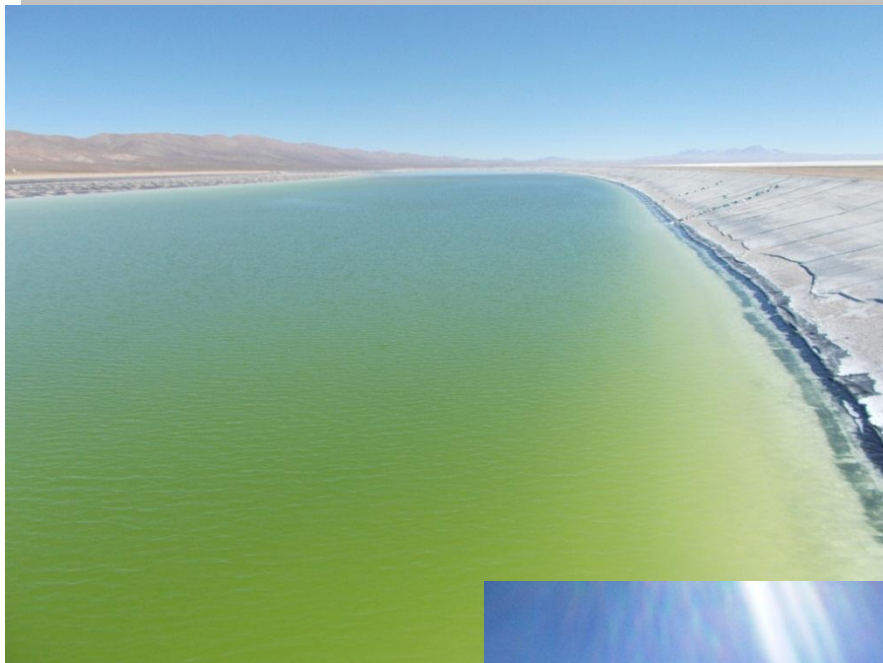


# Olaroz Project Construction Progress – Evaporation Pond Lining





## Olaroz Project Construction Progress – Pond Filling & Lining



# Olaroz Project Construction Progress – Structures



ROCK



# Olaroz Project Construction Progress – Plant & Equipment



# Lithium

- Lithium and its chemical compounds exhibit a broad range of beneficial properties including:
  - The highest electrochemical potential of all metals
  - An extremely high co-efficient of thermal expansion
  - Fluxing and catalytic characteristics
  - Acting as a viscosity modifier in melts



As a result of these properties, lithium is used in numerous applications including batteries, ceramics and glass, greases, aluminium production, air treatment and others.

Battery technology in development such as lithium metal polymer, lithium sulfur and lithium air all require lithium.



15 g



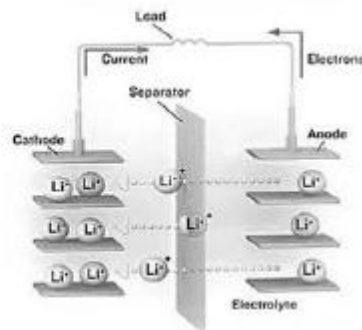
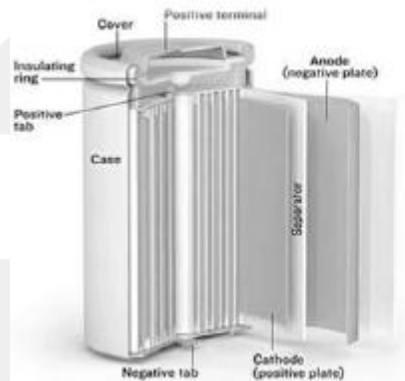
10-15 g



50-80 g



100 g



Liquid electrolytes in lithium-ion batteries consist of lithium salts, such as:

- Lithium hexafluorophosphate ( $\text{LiPF}_6$ )
- Lithium tetrafluoroborate ( $\text{LiBF}_4$ )
- Lithium hexafluoroarsenate ( $\text{LiAsF}_6$ )
- Lithium trifluoromethane sulfonate ( $\text{LiCF}_3\text{SO}_3$ )
- Lithium iodide ( $\text{LiI}$ )
- Lithium bis(trifluoromethanesulfonyl) imide  $\text{LiN}(\text{CF}_3\text{SO}_2)_2$
- Lithium bis(perfluoroethylsulfonyl) imide  $\text{LiN}(\text{CF}_3\text{CF}_2\text{SO}_2)_2$
- Lithium perchlorate  $\text{LiClO}_4$
- Lithium bis(oxalato) borate  $\text{LiB}(\text{C}_2\text{O}_4)_2$

Source: POSCO



# Lithium – Strong Market Fundamentals

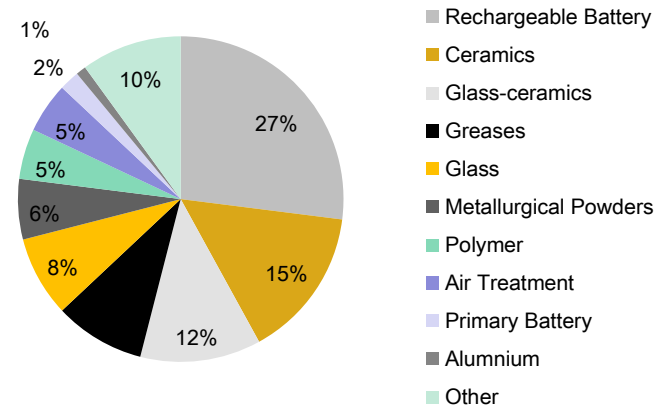
## Lithium uses – batteries, ceramics and glass driving growth

- Lithium has experienced significant market growth:
  - It is increasingly in demand for its electrochemical properties in batteries, however there has been significant growth in other markets such as ceramics, glass and greases
  - The CAGR since 2000 has been 6.8% including the impact of the economic downturn of 2008-09.
- Use of battery-grade lithium portable electronic devices has grown at ~20% per year since 2000.
- Mass production of hybrid and electric vehicles represents the most significant “step change” for lithium demand

## Lithium supply is limited

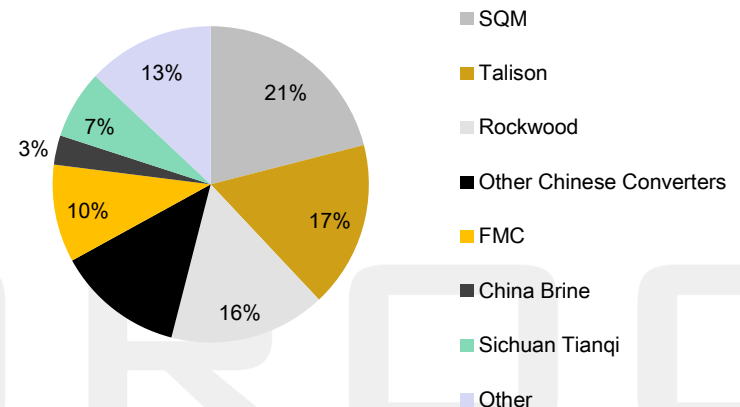
- Limited number of known economically extractable lithium resources
- Global production highly concentrated: ~80% of world supply comes from Chile (SQM and Rockwood), Argentina (FMC Corp) & Australia (Talison)
- Commercial lithium production comes from two sources:**
  - Brines & Minerals (Hard rock) - Production from brines is typically much lower cost than hard rock (~half)
- Supply response from existing brine producers is constrained by development challenges and declining grades
- Orocobre will be the first developer of a large scale lithium brine mine in 20 years***
- Large end users are actively seeking supply alternatives to meet rapidly growing needs

Current Lithium Demand by Market



Source: Roskill Information Services Ltd, 2013 estimates

Current Lithium Supply by Company

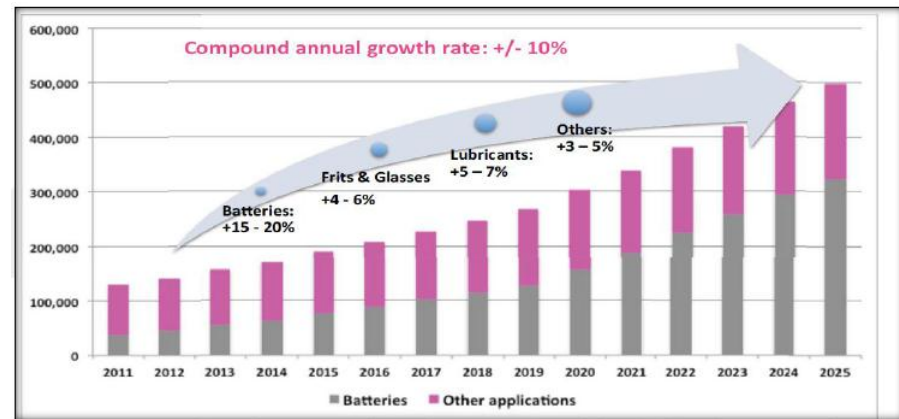


Source: Roskill Information Services

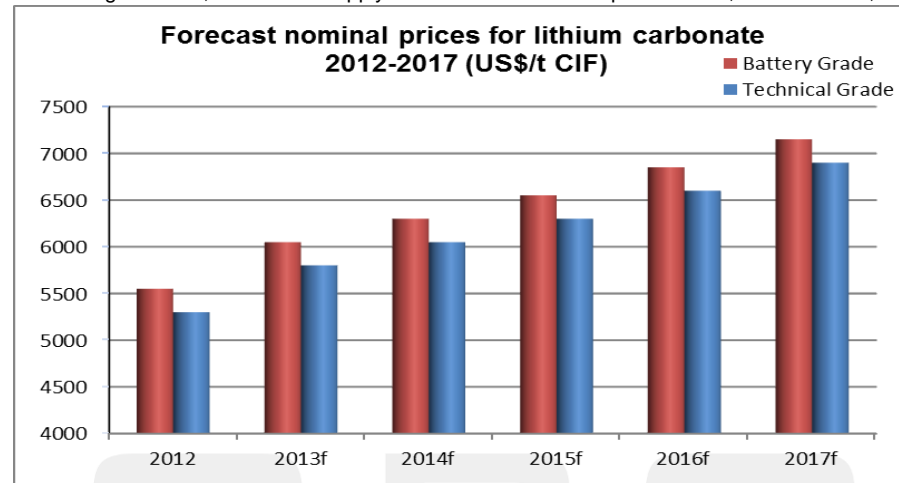
# Lithium – Strong Demand & Strong Pricing

## Lithium demand strong

- Lithium demand (t LCE) is forecast to grow from a current level of 150,000 tpa to 238,000 tpa<sup>1</sup> by 2017 and 500,000 tpa by 2025<sup>2</sup>
- Future lithium demand is projected to grow at 9.7% pa with the battery market forecast to grow at 21% pa<sup>1</sup>
- Growth could be considerably higher depending on the uptake in demand from the electrification of the transportation sector<sup>1</sup>
- Substantially more supply capacity is required to meet the forecast rise in demand



Source: signumBOX, 4<sup>th</sup> Lithium Supply & Markets Conference presentation, Buenos Aires, January 2012



Roskill Forecast 3

## Lithium prices

### Orocobre can achieve attractive margins

- Price growth in lithium carbonate is evident with a 19% increase in import values from 2011 to 2012<sup>1</sup>
- At current pricing levels ORE margins would be ~\$4,000/t LCE
- There is no exchange traded market for lithium. Prices are set by negotiation between producer and customer

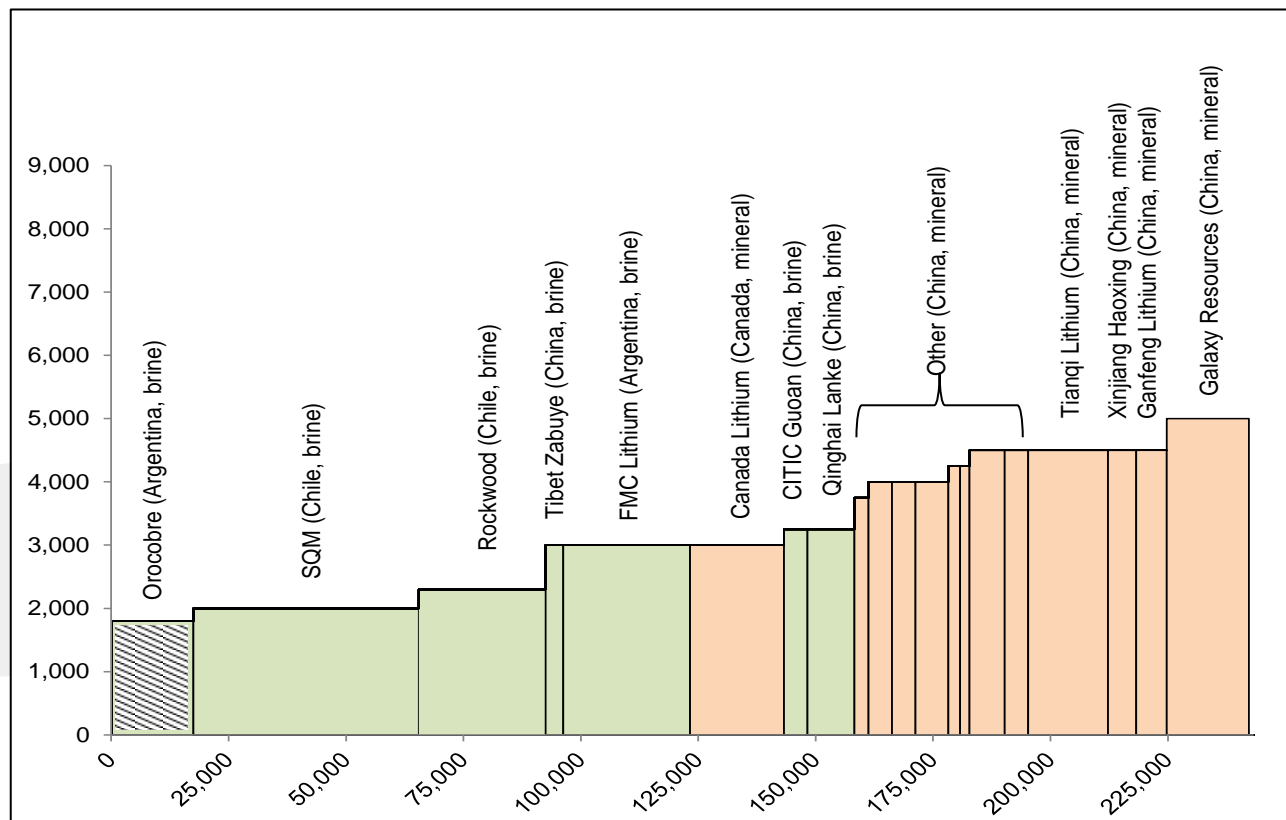
1. Roskill Information Services,

2. Signum Box

3. Roskill nominal technical grade data with assumption of US\$250/t premium for battery grade

# Operating cost comparison with existing producers

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



Source: Roskill estimates

Notes: Includes carbonate, hydroxide and chloride

Orocobre will not produce any significant volume of lithium compounds in 2013 and is included for comparative purposes only

# Borax Argentina Operations

- Acquired in August 2012 from Rio Tinto – Borax Argentina is a long established (50+ years) boron minerals & refined chemicals producer, and owns one of the few important borate deposits globally
- Annual production of 35,000-40,000t of boron chemicals & mineral concentrates
- 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, including boric acid, borax decahydrate, borax pentahydrate and anhydrous borax.
- Reliable supplier of high quality products & has long-term relationships with key South American industrial and agricultural customers
- “Historical estimates” of significant boron mineralisation including mineral deposits at Diablillos and Ratones which are essentially undeveloped.
- **Initiatives:**
  - (1) Relocation of the borax chemical plant from Campo Quijano to the Tincalayu Mine
  - (2) Pre-Feasibility Study on the construction of a boric acid plant near the Porvenir Mine



*There are three different product streams within the business.*

## **Borax Chemical Products**

- This product group includes borax decahydrate, borax pentahydrate and borax anhydrous. These products are produced from tincal mineral mined and concentrated at Tincalayu and transported 350 klms to Campo Quijano for refining. The refining plant at Campo Quijano is in the process of being relocated to the Tincalayu mine and modified to treat run of mine mineralisation. The capacity of the plant is 25,000 tpa of borax decahydrate equivalent and is currently only 60% utilised. The relocation of the refining plant will result in more efficient mineral utilisation and lower cost per unit of production.

Please refer to “Orocobre Announces Borax Plant Relocation” ASX announcement dated 1<sup>st</sup> July 2013 for further details.

## **Boric Acid**

- Currently, Borax Argentina produces boric acid from a 9,000 tonnes per annum plant at Campo Quijano near Salta city, processing ulexite mineralisation mined from Porvenir which is located 300kms away. The plant is designed to treat a high grade feed of ulexite mineralisation which has been selectively mined and then upgraded by drying and hand sorting. The Company announced a pre-feasibility study (4<sup>th</sup> November, 2013) to assess the feasibility of constructing a boric acid plant with a production capacity of 16-24,000 tpa boric acid at Olacapato, 40 kms from the Porvenir mine. The plant flowsheet will be designed to allow treatment of lower grade run of mine mineralisation than is currently being processed and with the aim of obtaining higher recoveries and reduced operating costs. Based on earlier internal company scoping studies, the estimated capital cost of the boric acid plant is in the range of US\$13-17million including 35% contingency.
- There are potential advantages to the construction of a new and larger facility at Olacapato. In particular, by being able to process lower grade “run-of-mine” mineralisation the costly and time consuming process of drying and hand sorting would be eliminated and the mining and processing recovery of mineralisation increased. In addition, the long cartage by road transport would be eliminated and the increased production rate would provide economies of scale compared to current operations.
- Boric acid is used in a wide variety of applications including glass, ceramics, fertilisers and wood preservatives. The market has a growth profile above world GDP growth. For standard and agricultural grade boric acid, pricing has ranged approximately between US\$750/t to \$1,250/t CIF over the past 5 years.

Please refer to the “Boric Acid Prefeasibility Study” ASX announcement dated 4th November 2013 for further details.



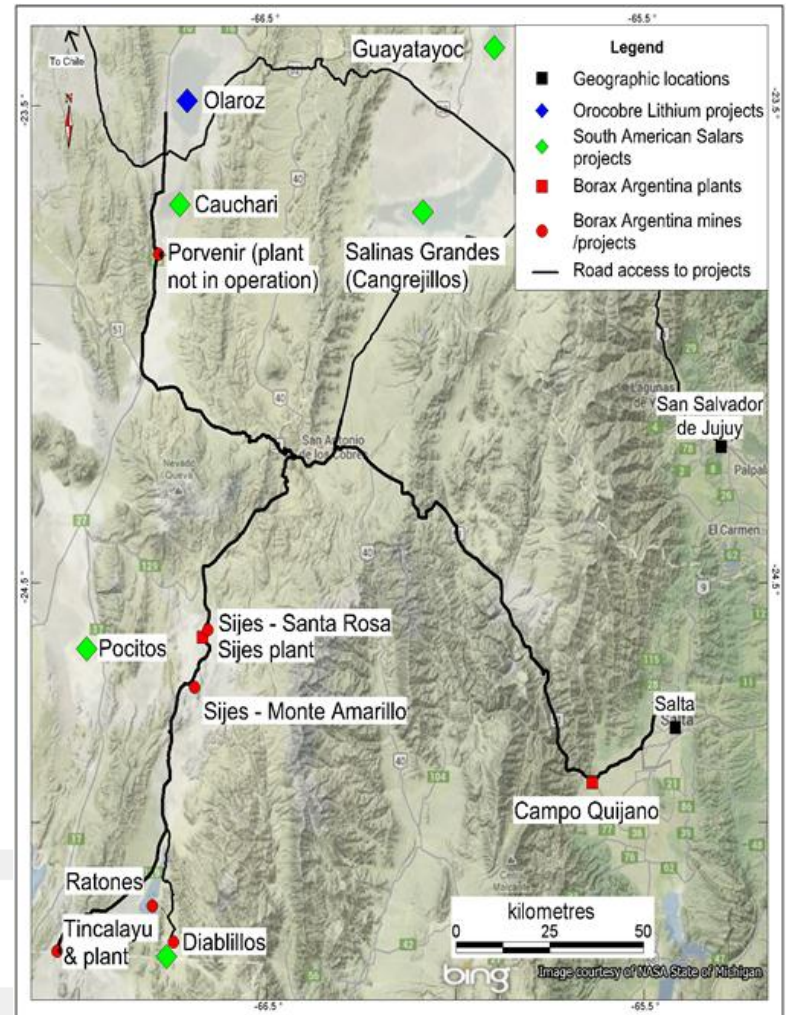
# Borax Argentina Operations

## Borate Minerals

- The centre of minerals production is at Sijes where there are open cut mines and a concentrator. The minerals produced are principally hydroboracite and colemanite. Hydroboracite is a mineral almost entirely found in Argentina and possesses some performance characteristics that make it attractive for use in certain applications in the ceramic and agriculture markets. Colemanite is supplied predominantly into the ceramic market.
- Orocobre considers that Borax Argentina has promising organic growth prospects given its large asset base, strong production infrastructure and capable management team.

## Historical Estimate for JORC Compliant Resource Conversion Programme

- The Company is currently undertaking a program of upgrading the historical estimates of mineralisation to JORC compliant resources.
- The first to be completed is expected to be for the Porvenir Mine where ulexite is mined. Ulexite, is used to make boric acid currently at the chemical plant in Campo Quijano. This is expected during the December quarter 2013. The second is expected to be the Tincalayu Mine where tincal is mined for the production of borax chemicals. This is expected in Q1 2014.
- Once the conversion programme is completed at Tinacalyu and Porvenir, work will commence on the Sijes hydroboracite deposit and the other salar hosted ulexite deposits at Diablillos and Ratones.



# Borax Argentina – Complements Lithium Focus

- Extensive operations and landholdings provide platform for potential increased financial and production performance
  - Near-term – potential to materially improve performance via process recovery & asset utilization
  - Longer-term – potential to increase operational scale through use of available mineralisation
- Boron minerals and chemicals production complements Orocobre's core lithium developments with synergies in potential future boron chemicals production from brines at Olaroz and elsewhere
- Aligns with Orocobre's salar focused industrial minerals development strategy & maintains Jujuy and Salta provinces as the region of activities
- Well-established regional operating presence & skills complements existing Orocobre management
- Demand growth outlook for boron products remains strong, both regionally and globally





# Depth in additional mines and projects

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

- Lithium-potash-boron property immediately south of planned Olaroz plant
- Inferred Resource 470Kt LCE, 1.6Mt KCL & 122Kt B
- Incremental production for Olaroz

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

## Guayatoyoc & Others (Li, K, B) - Exploration

- Includes “K” discoveries – not yet drilled

For more information on Guayatoyoc



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

- **Olaroz Project construction is on time and within budget**
- **Strong long term partnerships**
  - Government
  - TTC, JOGMEC, Mizuho Corporate Bank
  - Local Business and Community
- **Minimising and managing risk through the Jujuy First strategy**
- **Olaroz is a high margin, sustainable, expandable, low cost business**
- **Attractive high growth markets for lithium carbonate**
- **Additional value/growth in Li, KCL and B in brines and minerals (Cauchari, Salinas Grandes, Borax Argentina)**



## Tesla Model S

Range of 300 miles (480 km)

Recharge time:

- Battery swap in 90 seconds
- “Supercharge” 50% of battery capacity in 30 minutes
- “High Power” wall charge (240V, 80A) 4 hours 43 minutes

Source: Tesla Motors Website



## APPENDIX 1 – RESOURCE STATEMENTS

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# Olaroz – Resource Estimate Summary

- Olaroz Project has very large resource base which has potential to support long project life
- Combined Measured and Indicated Resource of:
  - 6.4 million tonnes of lithium carbonate
  - 19.3 million tonnes of potash (potassium chloride)

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



# Salinas Grandes Resource Estimate Summary

- An inferred resource has been estimated for the shallow brine body to approximately 13 m 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.

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# 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.

Inferred Resource Area	Brine body parameters				Average resource concentrations			Tonnes contained		
	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.

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

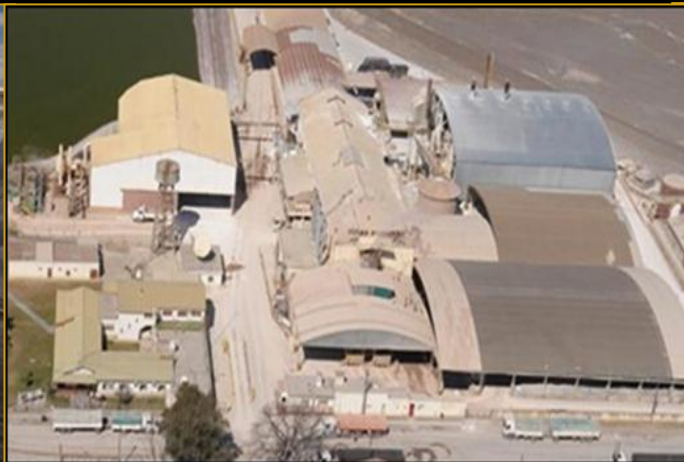
The resource estimate on the Olaroz Project described in this presentation was undertaken by John Houston who is a Chartered Geologist and a Fellow of the Geological Society of London. John Houston is a hydrogeologist and has sufficient relevant experience to qualify as a "Competent Person" as defined 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, Peter Ehren (Consulting Processing Engineer), 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. Additional information has since been prepared by Mr Peter Ehren who is a Member of the Australasian Institute of Mining and Metallurgy and a Charter Professional. Mr Ehren 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.

In addition, the information relating to the Olaroz Project has been reviewed by Mr Neil Stuart, who is a geologist and is a Fellow of Australasian Institute of Mining and Metallurgy and a Member of the Australian Institution of Geoscientists. Mr Stuart is a former Director of the Company and currently acts as a consultant to the Company. Mr Stuart has reviewed and approved the contents of this presentation relating to the Olaroz Project. Mr Stuart 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.

The technical information in this presentation relating to the Salinas Grandes and Cauchari Projects has been prepared by Murray Brooker. Mr. Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Mr. Brooker 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. Brooker has reviewed and approved the contents of this presentation relating to the Salinas Grandes and Cauchari Projects.

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 or the Company's website.





# Orocobre Limited

**BUILDING A SUSTAINABLE INDUSTRIAL MINERALS COMPANY**

**Investor Update  
December 2013**