

# Orocobre – The Next Low Cost Lithium Producer

Investor Presentation
October 2011



# **Cautionary Notes**

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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 risks associated with investments in publicly listed companies, such as the Company; risks associated with general economic conditions; the risk that further funding may be required, but unavailable, for the ongoing development of the Company's projects; changes in government regulations, policies or legislation; unforeseen expenses; fluctuations in commodity prices; fluctuation in the exchange rate of the Argentine peso, the Australian dollar, the Canadian dollar or the United States dollar; litigation risk; restrictions on the repatriation of earnings by the Company's subsidiaries; conflicts of interest of certain directors of the Company; inability to effect service of



# Cautionary Notes (Cont'd)

process or to enforce judgments within Canada upon and against the directors and officers of the Company; the inherent risks and dangers of mining exploration and operations in general; risk of continued negative operating cash flow; the possibility that required permits may not be obtained; environmental risks; uncertainty in the estimation of mineral resources and mineral reserves; risks that the current inferred resource at the Company's Olaroz project will not be converted to a sufficient amount of indicated or measured resources to warrant development; general risks associated with the feasibility and development of each of the Company's projects; the risk that a definitive joint venture agreement with Toyota Tsusho Corporation may not be completed; risks that the new process being developed by the Company will take longer to develop than anticipated or that it will not be successfully developed; risks of being unable to sell production in the event of the development of a project; foreign investment risks in Argentina; changes in Argentinean laws or regulations; future actions by the Argentinean government; breach of any of the contracts through which the Company holds property rights; defects in or challenges to the Company's property interests; uninsured hazards; disruptions to the Company's supplies or service providers; reliance on key personnel; retention of key employees; absence of dividends; competition; absence of unitization or reservoir management rules; and the Company's dependence on an open border between Argentina and Chile. See the section titled "Risk Factors" in the Company's prospectus dated June 9, 2010, which is available for review under the Company's profile at <a href="https://www.sedar.com">www.sedar.com</a>.

Forward-looking information is based on the reasonable assumptions, estimates, analysis and opinions of management of the Company made in light of their experience and their perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. The Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable. Assumptions have been made regarding, among other things: the Company's ability to carry on its exploration and development activities, the timely receipt of required approvals, the prices of lithium and potash, 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.

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# **Investment Highlights**

### Portfolio of attractive projects in renowned lithium-potash producing region of Argentina

- Attractive infrastructure port, rail, road and gas pipeline
- Drilling and DFS results highlight strong project fundamentals
- Key milestones already achieved across all projects

### Flagship Olaroz project

- DFS confirms high grade, low production costs, significant JORC/NI43-101 resource (6.4 million tonnes LCE, 19.3 million tonnes potash)
- Battery grade lithium carbonate is being produced for product qualification
- First commercial production targeted for mid 2013
- Partnered with Toyota Tsusho (strategic/ financial support for project)

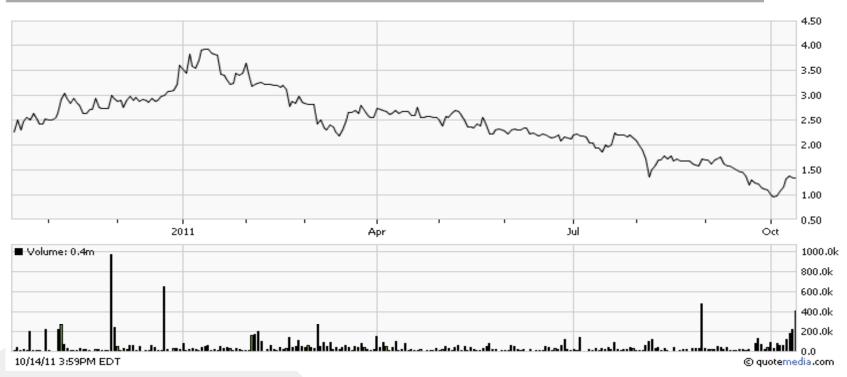
### Near term share price catalysts

- Olaroz
  - Final provincial government approval -Q4/2011\*
  - Completion of financing package with Toyota Tsusho, JOGMEC and Japanese banks - Q1/2012\*
- Salinas Grandes 1) Drilling results and 2) Resource estimate Q4/2011\*
- Cauchari Drilling results Q4/2011\*



# Capital Markets Snapshot





(TSX:ORL, ASX: ORE)

TSX 1 yr. Range:	C\$0.93 - C\$4.00 per share		
Shares O/S	103.1 million		
Options O/S	1.0 million		
Market Cap	-C\$138 million		
Cash	~C\$38 million (30 June 2011)		
Share price	C\$1.34 (TSX, 14 October 2011)		



# The Right People

#### Talented Board of Directors

 The right mix of experience including local Argentinian, Australian, Canadian and international business leaders, public and private company experience, resource development, energy technology etc.

### Strong local team

- Extensive experience with lithium brine development and production
- Team is leading local workforce with additional workers to support from San Salvador de Jujuy and Salta City

### Project partners

- Toyota Tsusho (Olaroz Project) offers important financial (project funding) and strategic (marketing of products) experience
- Will consider partners for other projects

### Engineers

 SKM (Olaroz Project) - significant industry experience, including the design and construction management of a lithium brine operation



### **Projects Overview**



### Salar de Olaroz

- Flagship lithium project
- Toyota Tsusho partner
- DFS highlights strong fundamentals
- Significant resource long project life
- Low operating costs

# Salinas Grandes / Cangrejillo

- Lithium-Potash project
- Drilling shows high grades, excellent chemistry
- Resource estimate expected Q4/2011

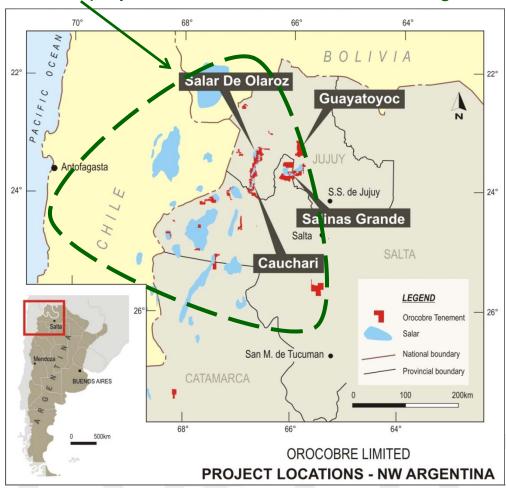
### Cauchari

- 30,000 ha lithium-potash property immediately south of Olaroz
- Key properties in close proximity to the high grade part of another company's resource
- Drilling to commence soon

# Guayatoyoc

Potassium discovery

### All projects located in "The Lithium Triangle"





# Flagship Olaroz Project



- DFS highlights strong project fundamentals and long project life for flagship Salar de Olaroz lithium-potash project
- Very large JORC/NI43-101 resource with high lithium grade, of 690 mg/l Li and low Mg/Li ratio of 2.4 (see Appendices for resource statement)
- Very low operating costs
- Process development complete with battery grade lithium carbonate being produced for product qualification purposes
- Agreement with Toyota Tsusho
- High quality DFS results both technically and commercially sound – sets high standard for the industry
- Environmental and government approvals received, awaiting final provincial government approvals
- US\$207m project development on track to commence in early 2012





### Established Partner - Olaroz



- Under terms of agreement, following the provision of funding towards the DFS, Toyota Tsusho can purchase a 25% interest in the Olaroz Project (based on the project NPV)
- To do so, Toyota Tsusho must secure a low-interest debt facility guaranteed by JOGMEC (Japanese Government) for at least 60% of project Capex
- Negotiations with Toyota Tsusho and Japanese government regarding entry price, final JV and funding are progressing well
- Toyota Tsusho leading marketing effort of Olaroz lithium carbonate



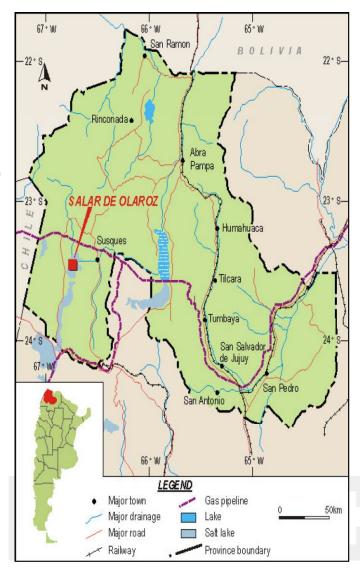




# **Very Low Operating Costs**



- Solid project fundamentals = low operating costs
  - High grade brine JORC/NI43-101 resource
  - Good chemistry allows simple low cost processing
  - Existing infrastructure including sealed road to port, gas pipeline and railway
  - Local workforce with additional support from San Salvador de Jujuy and Salta City
- Total Net Operating Cost of US\$1512/t LCE (US\$1230/t with potash credits)
- Project to be competitive with existing brine producers
- Operating costs are materially less than hard rock mineral projects





# Flagship Olaroz Project – What's New?

- Due diligence process by Toyota Tsusho and JOGMEC has been completed without material issues arising
- Terms of arrangements with Toyota Tsusho expected to be completed in 4Q 2011, with banking/JOGMEC early in 2012
- Approval received from UGAMP on EIS addenda, updating previously approved EIS and DFS results
- Strong support for project is evident, Orocobre actively engaged to obtain final provincial government approval
- Detail engineering work continues with SKM
- Project development to commence in early 2012 as planned







# Second Major Project - Salinas Grandes (Cangrejillo)



# Strong landholding located in renowned "Lithium Triangle"

- 85% interest via South American Salars, a JV with local interests
- Orocobre holds largest land position including +13,500 hectares in the salar nucleus
- Located in Salta Province
- Good access to key infrastructure including port, gas pipeline, road and rail

# **Synergies with flagship Olaroz Project**

 Salinas Grandes is 70 km south-east of Olaroz and has potential to be partly integrated into the flagship Olaroz Project



Drill rig at Salinas Grandes, Salta Province

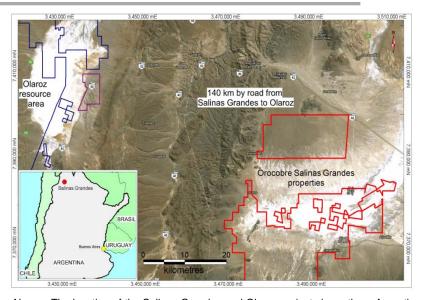


# Salinas Grandes (Cangrejillo)

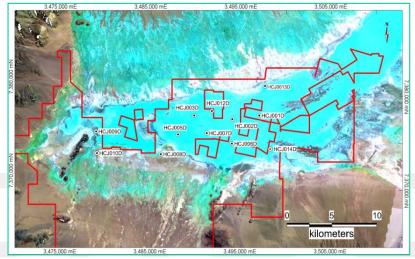
- Drilling confirms two brine bodies with good grades and significant exploration potential
- Very attractive brine chemistry
  - Low sulphate
  - Low magnesium: lithium ratio
  - High potassium: lithium ratio
- High potassium and lithium recoveries expected
- Simple processing, low operation costs

### What's next?

- Results from auger drilling
- JORC resource estimate expected in Q4/2011
- Results from pumping tests



Above:: The location of the Salinas Grandes and Olaroz projects in northern Argentina

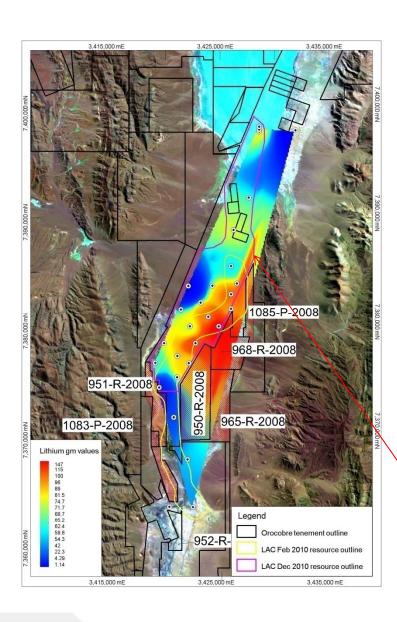


Above: The location of drill holes at Salinas Grandes within the Orocobre tenements



# Other Projects - Salar de Cauchari





# Promising project located immediately south of Orocobre's flagship Olaroz project

- Over 30,000 hectares of properties immediately south of Salar de Olaroz held by 85% South America Salars
- Li/K grades lower than Olaroz but still attractive

### **Significant synergy potential with Olaroz**

- Possible additional brine source for Olaroz?
- Potential for brines to be pumped to future Olaroz processing facilities
- Similar chemistry but with higher sulphate
- Should be amendable for treatment concurrently with Olaroz brine

### **Drilling due to commence**

 Richest part of resource interpreted to extend south-east onto Orocobre properties

Purple boundary – LAC resource 11/10 Yellow Boundary LAC resource area 3/10



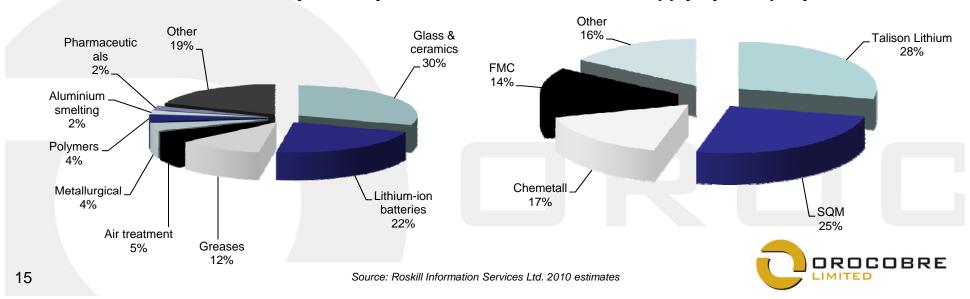
# Lithium Market Dynamics



- Lithium demand fundamentals are relatively well understood with demand forecast to rise strongly to between 300,000 tpa and 500,000 tpa by 2025 (Chemetal, Jan 2011). vs. 120,000 t (est.) in 2010
- Driven by growth in lithium batteries demand for consumer products, electrification of transport and electrical storage
- The supply side of the story is less understood, Orocobre believes:
  - Supply response from spodumene producers is only relevant to China demand
  - Japanese and Korean consumers will look to brine sourced suppliers for new supply
  - Some market forecasters overestimating brine sourced supply response, as existing producers have both more limited & slower expansion capacity - coupled with declining grades as expansion occurs

#### **Current Lithium Demand by Industry**

### **Current Lithium Supply by Company**



### Potash Market

- World potash production comes from underground deposits or Salars
- Potash has strong long-term pricing outlook and significant growth potential underpinned by:
  - crop science
  - strength in agricultural economics
- Potash is an irreplaceable element enabling increased global agricultural production
- One of the growing markets for Potash is neighbouring Brazil with its booming agricultural sector
- Orocobre's projects (Salinas Grandes and Guayatoyoc) are geographically well placed to supply this market









# Near Term Share Price Catalysts



#### **Olaroz**

- Final project approvals expected Q4/2011\*
  - EIS approvals have been received, awaiting local provincial government approvals
- Completion of financing package with Toyota Tsusho, JOGMEC and Japanese banks - Q1/2012\*
  - Arrangements with partner Toyota Tsusho and Japanese banking and government departments are progressing well

#### Salinas Grandes

- Auger drill results Q4/2011\*
- JORC Resource Estimate Q4/2011\*

### Salar de Cauchari

- Drilling program commencement
- Drilling results Q4/2011\*







<sup>\*</sup>Target Dates



Detailed DFS Results – Flagship Olaroz Project

# **APPENDICES**



# **DFS - 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)

					Concentration			Tonnes of Contained Metal		
Resource Category	Area	Thickness	Mean specific yield	Brine volume	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
Measured and Indicated Resource	93	197	9.6%	1.75	690	5730	1050	1.21	10.10	1.85

Measured and Indicated Resources of 1.75 cubic kilometres at 690mg/ lithium, 5,730 mg/l potassium and 1050mg/l boron from surface to 197m depth estimated by John Houston, Consulting Hydrogeologist. The information in this report that relates to Exploration Results or Mineral Resources is based on information prepared by, or under the supervision of Mr Richard Seville who is a member of the Australasian Institute of Mining and Metallurgy. Mr Seville is a Director of Orocobre Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves,' and as a "qualified person" under NI 43-101. Mr Seville consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. 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







Capital Cost Estimate - 16,400 tpa Lithium  Carbonate				
Direct Costs	US\$million			
Brine Production Wells and				
Pipelines		7.1		
Evaporation Ponds		38.0		
Processing Plant		26.5		
Utilities (Power Station, Gas,				
Water, Communication)		27.3		
Infrastructure		11.9		
Contrators Distributables		15.0		
Sub-Total Direct Costs		125.7		
Indirect Costs				
EPCM		22.6		
Third Party Services including				
freight, construction camp,				
catering etc		18.3		
Owners Costs to Production		17.9		
Sub-Total Indirect Costs		58.8		
Total Capital		184.5		
Contingency		22.1		
Total Capital including Contingency		206.7		
Potash Plant Option		14.5		



- Capital cost estimate allows for production of battery grade product
- Allows for detailed engineering design, EPCM and working capital
- Capital costs may be reduced by optimisation in design and alternative methodology
- Estimated by Sinclair Knight Merz



# DFS – Very Low Operating Cost Estimates



	US\$million	US\$/t Lithium
Fixed Costs	per annum	Carbonate
Personnel Charges	5.5	335
Other	2.4	147
Variable Costs		
Supplies and Reagents	15.6	951
Energy	1.1	78
Materials Handling	0.0	0
Total Operating Costs	24.8	1,512
Incremental cost for Potash Option	1.3	79
Incremental benefit for Potash Option	5.9	361
Total Net Operating Cost	20.2	1,230



**Lithium only** 

- Materially less than hard rock mineral projects
- Competitive with existing brine producers





# DFS – Key Economic Findings



Economic Modelling - Olaroz Project						
		Lithium	With Potash By			
		Carbonate Only	Product			
Modeled Project Life	Years	40	40			
Production Rate	TPA	16400	10000			
Capital Cost	US\$million	207	221			
Payback	Years	3	3			
Cash Operating Cost	US\$/t Li C	1512	1230			
IRR after tax, 60% debt	%	52%	56%			
IRR after tax, no debt	%	26%	27%			
NPV, after tax, ungeared						
Discount Rate 7.5%	US\$million	415	449			
Discount Rate 10%	US\$million	273	298			
Discount Rate 15%	US\$million	121	136			



<sup>\*</sup> Modeling does not consider cost inflation and assumes constant exchange rate of US\$1 – ARG\$4

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

The information in this report that relates to Exploration Results and Mineral Resources is based on information prepared by or under the supervision of Mr Richard Seville who is a member of the Australian Institute of Mining and Metallurgy. Mr Seville is a Director of Orocobre Ltd and has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which they are undertaking 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', and as a "qualified person" under National Instrument 43-101 – Standards of Disclosure for Mineral Projects. Mr Seville consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Additional information relating to the Company's projects is available in the technical reports entitled "Technical Report – Salar de Olaroz Project, Argentina" dated April 30, 2010 (the "Olaroz Report"), "Technical Report – Salinas Grandes Project" dated April 30, 2010 and "Technical Report – Salar de Cauchari Project, Argentina" dated April 30, 2010 (collectively, the "Technical Reports"), respectively, which have each been prepared by John Houston, Consulting Hydrogeologist, together with, in the case of the Olaroz Technical Report, Peter Ehren, Consulting Processing Engineer, in accordance with NI 43-101.

The Technical Reports use the definitions, classifications system and guidelines of the Australasian Code for Reporting of Mineral Resources and Ore Reserves prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Mineral Council of Australia (the "JORC Code"). The resource and reserve classification system of the JORC Code is directly comparable to the resource and reserve classification system of the CIM Standards on Mineral Resources and Mineral Reserves of the Canadian Institute of Mining, Metallurgy and Petroleum.

Reference should be made to the full text of the Technical Reports, which have been filed with certain Canadian securities regulatory authorities pursuant to NI 43-101 and are available for review under the Company's profile on SEDAR at www.sedar.com.

