

**ASX ANNOUNCEMENT**

**31 JULY 2009**

**QUARTERLY REPORT OF OPERATIONS  
FOR THE PERIOD ENDED 30 JUNE 2009**

The April quarter saw Orocobre Limited (ASX code: ORE) make steady progress on its projects in Argentina and planning for the proposed spin-out of the non-lithium interests.

**OLOROZ – LITHIUM/POTASH**

- Scoping study completed
- Potential to develop a long life operation with production of 15,000 tpa lithium carbonate and 36,000 tpa potash.
- Excellent chemistry with attractive lithium and potassium grades, low magnesium: lithium ratios and attractive sulphate levels.
- Conventional processing routes applicable with low technical risk.
- Capital costs estimated to be in the range of US\$80m-US\$100m.
- Low cash operating costs and strong operating margins indicated. An operation would be competitive with current low cost brine producers.
- Company to undertake a Bankable Feasibility Study which is expected to cost approximately US\$2m and be completed in mid-2010.

**CORPORATE**

- Completion of a placement to a strategic investor to raise A\$2.6m and a 1 for 8 rights issue to raise A\$2.8m;
- Appointment of James D Calaway as a Director of the Company;
- Announced plans to spin-off its non-salar assets into a new ASX company.
- Activities included discussions with potential candidates for senior management appointments, and preparation of Independent Accountant's and Geologist's reports.

## OLAROZ LITHIUM - POTASH ROJECT

During the quarter, the results of the scoping study were announced. The study has considered all technical aspects of the Olaroz Project including:

- geology, hydrogeology and resources
- exploration potential
- brine chemistry
- climatic conditions
- solar evaporation test work and two stages of batch test work
- consideration of various processing routes
- infrastructure requirements
- transport routes
- labour requirements
- capital and operating costs.

During the process, particular emphasis has been put on scoping the requirements of further work to be undertaken during a Bankable Feasibility Study.

### Geology and Resources.

The geological sequence is a recent sedimentary sequence composed of poorly consolidated fluvial and lacustrine clastic sediments. These inter-bedded sands, silts, clays, and minor halite units occur beneath the current halite crust.

Within the top 55m from surface, an inferred resource of **350 million kL of brine at 800g/kL lithium and 6,600 g/kL potassium** has been estimated by independent consultants Geos Mining. This is equivalent to **1.5 million tonnes of lithium carbonate and 4.1 million tonnes of potash** 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

The resource estimate extends to an average depth of 55m. Further details are given in the table below together with lower and higher estimates of brine volume.

|                           | <b>Brine Kilolitres (kL) (millions)</b> | <b>Lithium (g/kL)</b> | <b>Potassium (g/kL)</b> | <b>Lithium Carbonate equivalent (Million tonnes)</b> | <b>Potash (KCl) equivalent (Million tonnes)</b> | <b>Zone 1 Average Specific Yield</b> | <b>Zone 2 Average Specific Yield</b> |
|---------------------------|---|-----------------------|-------------------------|--|---|--------------------------------------|--------------------------------------|
| <b>Preferred Estimate</b> | <b>350</b>                              | <b>800</b>            | <b>6,600</b>            | <b>1.49</b>  | <b>4.40</b>                                     | <b>11.5%</b>                         | <b>8.3%</b>                          |
| Higher Estimate           | 415                                     | 800                   | 6,600                   | 1.76   | 5.22  | 13.3%                                | 9.9%                                 |
| Lower Estimate            | 255                                     | 800                   | 6,600                   | 1.09   | 3.23  | 9.0%                                 | 6.0%                                 |

### Exploration Potential

Typical halite-dominated salar sequences have highly predictable hydrogeological properties. Specific yield (the amount of free draining brine) within the near-surface (0-15m) environment in recently deposited halite is in the range of 8-12%. However, specific yields decline rapidly

beneath this level, due to overburden pressure and salt crystallisation, to values of around 3%-5% at 40-50m depth. This results in halite-rich salar deposits having an overall specific yield of around 6-8% in the top 40-50m.

Olaroz is different as it is not dominated by halite. The specific yield of sand and sandstones do not decline nearly as rapidly with depth and thus the zone beneath the clay layer (used as a lower boundary in the current resource estimate) is an exciting exploration target. This zone has already been intersected by three drill holes that have identified a number of potential sandy aquifer horizons. Drilling has also shown the salt lake to be at least 200m deep, the depth of the deepest drill hole.

### **Potential Production Rate**

Subject to the current resource being upgraded to measured and indicated resources of a similar size and grade, the current resource will support a development of a long life operation producing, in the first stage, 15,000 tonnes per annum of lithium carbonate and 36,000 tonnes of potash (potassium chloride). A boric acid by-product is also been considered. The resource is also of sufficient size to allow for potential significant expansion and the exploration potential provides further upside over the long term.

### **Brine Chemistry**

The brine chemistry is very attractive.

- The average lithium grade of 800g/kl is similar to the Hombre Muerto Operation and approximately double the grade of the Silver Peak Operation and the Rincon Salar .
- The Mg:Li ratio is also low (which is desirable for processing) at around 2.8 compared to Atacama , Rincon and Uyuni at 6.4, 8.6 and 19 respectively. Only Silver Peak and Hombre Muerto are lower at 1.4.
- The sulphate levels are such that soda ash may not be required for magnesium or calcium removal which is of considerable cost benefit.

The grade distribution throughout the deposit indicates the potential for the first 5 to 10 years of an operation to benefit from grades significantly higher than the average grade.

### **Climate**

The project is at approximately 3,900m. The average temperature is approximately 8 degrees centigrade. Precipitation is less than 100mm/annum. Average wind velocity is approximately 25km/hr. These conditions and low cloud cover make it suitable for solar evaporation processes. The project is very close to the Hombre Muerto Operation which uses solar evaporation up to very high concentration levels and has been in production since 1996.

### **Processing Route**

Batch test work was undertaken to investigate a number of processing routes. Assisted by detailed phase chemistry, it is concluded that the brines can be processed by a number of conventional processing routes. All of the potential processing options involve using solar evaporation and precipitation of waste products with or without other reagents, followed by potash recovery via differential flotation and production of lithium carbonate with soda ash.

The indicated processing routes do not require the use of high risk novel technology such as nano-filtration or new processes and as such has a lower level of technical processing risk.

## **Infrastructure**

The project is located on the main road from northern Argentina to the major port of Antofagasta, approximately 550 kms by road to the west. This will provide the export route for production. Approximately 40kms to the north of the salar is a major gas pipeline. The operation is supported by the provincial capital of San Salvador de Jujuy and Salta, 270kms and 400kms by road to the east.

## **Capital Costs**

Capital costs for an operation producing 15,000 tpa lithium carbonate are estimated in the range of US\$80m-US\$100m including contingency.

## **Operating Costs and Operating Margin**

The study indicates an operation would have low operating costs and strong operating margins and be competitive with established brine producers.

## **Bankable Feasibility Study**

The scoping study indicates that the Olaroz Project has the potential to be a highly attractive project with strong investment returns and low technical risks. With such positive conclusions, the Company has committed to undertaking a Bankable Feasibility Study into the development of an operation at Olaroz. The study is expected to cost approximately US\$2m and be completed in mid 2010.

## **SOUTH AMERICAN SALARS**

The company has rights to acquire up to 85% of joint venture company South American Salars Pty Ltd. Preliminary appraisal work has commenced on a number of the exploration targets.

## **SANTO DOMINGO PROJECT - COPPER/GOLD PORPHYRY, BRECCIA PIPE AND EPITHERMAL TARGETS**

No reportable work was undertaken during the quarter.

## **LA PAMPA**

The company withdrew from the Pampa 7 and Pampa 8 projects in La Pampa province.

## **CORPORATE**

### **Funding**

Cash reserves at the end of the quarter stood at approximately A\$ 6.9 million

During the quarter, a placement of 6,800,000 shares at 38 cents each was made to Lithium Investors LLC, raising \$2.6m. In addition, eligible shareholders were offered the opportunity to subscribe for shares at the same price as the placement through a 1:8 non-renounceable

rights issue also at 38c. This will raise an additional \$2.8m (before costs), raising a total of \$5.4m. The issue was underwritten by Patersons Securities Ltd which has also been appointed as Corporate Advisor to the Company.

Lithium Investors' President, James D. Calaway, was appointed a Non-Executive Director of Orocobre and subsequently elected Chairman.

### **Corporate Strategy**

At the time of the funding announcement, a change in strategy for the company was also announced. This will result in the creation of two highly focused companies:

- A Lithium - Potash focused company, holding all the salar assets of Orocobre, and with a focus on the development of the Olaroz Lithium –Potash Project.
- A copper-gold focussed new company that will hold the company's highly prospective copper-gold projects. Existing Orocobre shareholders will benefit by being shareholders in the new company via an in specie distribution.

The company has commenced work on this restructuring immediately and is planning to have the new copper-gold focused company separately listed on the ASX before the end of the year.

Activities included interviews with a range of potential candidates for senior appointments including the Chief Executive Officer, Company Secretary, and Senior Corporate and Project Geologists. Announcements regarding key appointments will made during the September quarter.

The company has also approached a number of parties to produce Independent Expert Reports required for the preparation of the Prospectus including the Independent Geologist's Report and Independent Accountant's Report. Hemming & Hart Lawyers in Brisbane have been retained as Solicitors.

For and on behalf of the Board

Paul Crawford  
Company Secretary

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#### **COMPETENT PERSONS STATEMENT**

The information in this report that relates to Exploration Results is based on information compiled by Messrs Richard Seville and Neil Stuart who are members of the Australasian Institute of Mining and Metallurgy. Messrs Seville and Stuart are Directors of Orocobre Ltd and have 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.' Messrs Seville and Stuart consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.