Orocobre Limited Olaroz Project Large Exploration Target Defined

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Perth, Australia (ABN Newswire) - Orocobre Ltd. (ASX:ORE) (TSE:ORL) ("Orocobre" or "the Company") is pleased to advise progress regarding the quantification of additional lithium brine within the Olaroz salar that may contribute to additional expanded production at a lower brine supply development cost than the current phase 1 development.

Deeper Lithium Brine Exploration Target

Geological Background

The 2011 resource estimate at Olaroz was based on relatively shallow drilling to a depth of approximately 200m. The drilling intersected an interbedded sequence of sand, silt, clay and halite layers, as described in detail in the NI43-101 compliant Technical Report document dated May 13 2011. The resource has an average free draining porosity of 10% and the sediments are generally relatively low permeability units resulting in a borefield design of production wells with average flow rates of approximately 10 l/s as set out in the aforementioned technical report. Geophysics (gravity surveying) conducted by Orocobre in 2009 suggested the Olaroz salar sediments extend to approximately 600 metres below surface. Electrical geophysics (a Magneto Telluric survey) and drilling by Lithium Americas Corp. to 450m depth on adjacent properties strongly suggested that brine continues below the base of the current Olaroz resource. Of particular interest, was the potential for sand units intersected below 200m in the narrow Cauchari basin to extend north into the much wider Olaroz basin.

Taking into account these observations and the presence of sand beneath halite units at similar depths in the company's drilling in Cauchari properties Orocobre has always considered the potential high for significant additional brine resources beneath those defined to date by the company.

Borefield Development

The Olaroz project currently consists of two borefields with 200 metre deep bores with well screens over the majority of their lengths, to maximize brine inflows which extract brine from the current resource to 197m. The design of the borefields was to provide flow at 180l/s with two bores offline at any one time. The location of these borefields is shown in Figure 1, in the north east and south west of the Olaroz salar (salt lake). These bores pump brine to a series of tanks where the flows are combined before being transferred to the evaporation ponds.

n order to increase the peak flow rate to above 230l/s and to allow a faster build up of lithium brine stock, the company has drilled two additional bores, P301 and P302. Additionally, in order to test the exploration potential beneath the current resource, these bores were drilled to 304m and 323m respectively rather than the normal 200m. The first hole, P301 was designed to allow the installation of 8 inch internal casing and a 6 inch diameter pump as for previous bores, whilst the second hole, P302 was designed to allow the installation of 10 inch internal casing and higher flow 8 inch pump after the results of P301.

Drilling Results and Significance

Hole P301 was drilled to a depth of 304 m below surface in April 2014, with an installed casing depth of 290m. This hole encountered the expected sequence from 0-200m and then intersected a sand unit from 255 m, with continuous sand from 275m to the end of the hole, confirming the extension of sandy units intersected in Cauchari into Olaroz.

Because of the results of P301, P302 was designed to be drilled to a depth of 350m to further evaluate the sand unit encountered in P301 along strike and to greater depths and at a larger diameter to allow a higher pumping rate. The hole intersected a continuous sand unit from 220m to 323m before being terminated due to hole instability caused by intersecting gravel beds. Bore P302 was installed to a depth of 309m, with screen intervals beginning at 102 m from surface.

These results are highly significant as this thick sand sequence may extend laterally beneath much of the defined brine resource and also to greater depths. Sands of this type have free draining porosity of between 20 and 25% based on previous testwork, and the sand unit could hold significant volumes of lithium-bearing brine which could be added to the resource base by future drilling. In addition, due to the thickness of the sand, any production bore drilled into this unit will be high yielding compared to bores only in the top 200m.

Bore Construction and Pump Testing

Bore P301 was drilled with a diameter of 14 inches, with pipe and filters of 8 inches installed to a depth of 200 metres. Below this depth the pipe and filters were installed with a 6 inch diameter and a telescopic reduction to a total depth of 290.25 metres. A gravel pack of 1-3 mm material was installed around the screens, which have a 0.75 mm slot width. A three stage step test conducted on this bore shows that the bore is high yielding and highly efficient (95-98% over the range tested). However, due to the limitation of the pump size to 6 inches within the 8 inch well casing this hole is "construction and pump limited" and the current pump rate is approximately 18l/s. Bore P301 averaged 762 mg/l Li during October, with a low Mg/Li ratio of 2.2.

P302 (Figure 2 in link below) was drilled with a larger diameter to establish what flow the deeper sand aquifer is capable of, as the diameter of bore P301 limited the overall flow. P302 has a 14 inch external diameter, with 10 inch stainless steel casing installed to a depth of 150 metres, to allow for the installation of a larger diameter and higher capacity 75 hp pump in this upper part of the hole. The lower part of the bore, to an installed depth of 309 metres, was constructed with 6 inch diameter stainless steel pipe (Figure 3 in link below).

An attempt was made to carry out a step test on the hole with an installed pump with 65 hp capacity. The well flowed at 31 l/s during the test, but it was not possible to reduce the flow sufficiently with this pump to conduct a viable step test. On this basis the company is evaluating the requirements for a pump to conduct a new step test at rates of 40 l/s or more. This is the highest flow rate of any well currently installed in the Olaroz or Cauchari salars and it is expected the bore could yield up to 50l/s when finally equipped.

Sampling of the bore since connection to the production pipeline has given an average lithium concentration of 650 mg/l Li, with a low Mg/Li ratio of 2.1, similar to that of the operating borefield brine.

Geology and Sedimentology

The salars (salt lakes) developed in the Puna region of Argentina contain a mixture of clastic sediments (gravel, sand, silt and clay) from transport of sediments into the salar basin from the surrounding hills and from rivers flowing into the salar basins. Sediments typically become finer grained towards the centre of the salars, which are a lower energy depositional environment. The salars also contain chemical sediments (predominantly halite, with some carbonates and gypsum) that accumulated during periods of lower clastic sedimentation. Over geological time the distribution of sediments within the salars changes, as rivers and alluvial fans contributed different levels of sediment and in response to wetter and drier climatic periods influencing the deposition of chemical sediments.

The Olaroz borefields are developed within predominantly finer grained sediments deposited within the top 200m of the salar. The deeper sand unit intersected in drilling P301 and P302 is interpreted to represent coarser alluvial fan sedimentation within the salar basin, preceding the deposition of the finer grained sediments. This coarser sedimentation is interpreted to be sourced from the western side of the salar, and possibly represent an older equivalent to the extensive Archibarca alluvial fan that exists in this area today (see Figure 1 in link below).

The thick sand unit identified in holes P301 and P302 is interpreted to be a lateral equivalent to the older alluvial fan deposits identified in third party drilling in Cauchari, to the south of Olaroz. Those sands host an important part of the third party resource in the Cauchari salar. It is uncertain how far the sand units extend into the centre of the Olaroz salar and the borefield areas, but they may conceivably extend across the salar, with coarser sediments also deposited from the eastern side of the salar at an equivalent depth.

P301 encountered the top of the sand unit at 255 metres, with the unit extending beyond the end of the hole at 304 m. P302 intersected the top of the sand unit at 220 metres, with the sand (and some gravel) extending below the base of drilling at 323 metres, a thickness of >100 metres. A conceptual cross section through the salar is shown in Figure 4 in link below.

Exploration Target Definition

Orocobre considers discovery of the thick (>100 metres) deeper sand unit in P301 and P302 (separated by 1.2 km) is strategically important for the company, as it provides a potentially high flow rate additional brine supply for future development reducing the capital cost. The contained lithium potential of this sand unit has led the company to define an exploration target that will require further drilling to evaluate. At this stage the exploration target is being confined to the interval from 197m to the 323m total depth of P302, but there is clearly potential for further targets to the bottom of the basin at approximately 600m.

This exploration target extends beneath the existing resource defined by Houston (Technical Report On The Salar De Olaroz Lithium-Potash Project, May 13 2011) and is outlined in Table 1 of this announcement.

The relationship of an exploration target to the CIM and JORC resource definitions is shown in Figure 5 in link below.

It must be stressed that an exploration target is not a mineral resource. The potential quantity and grade of the exploration target is conceptual in nature, and there has been insufficient exploration to define a Mineral Resource in the volume where the Exploration Target is outlined. It is uncertain if further exploration drilling will result in the determination of a Mineral Resource in this volume, however information from P301 and P302 suggests this is likely.

The exploration target is where, based on the available geological evidence, there is the possibility of defining a mineral resource. In keeping with Clause 17 of the JORC Code and CIM requirements the exploration target defined at Olaroz is:

- Not to be considered a resource or reserve,
- Based on information summarized below.

To view figures, please visit:
http://media.abnnewswire.net/media/en/docs/ASX-ORE-824650.pdf

About Orocobre Limited:

Orocobre Ltd. is listed on the Australian Securities Exchange and Toronto Stock Exchange (ASX:ORE) (TSE:ORL), and is building a substantial Argentinian-based industrial minerals company through the construction and operation of its portfolio of lithium, potash and boron projects and facilities in the Puna region of northern Argentina. The Company is building in partnership with Toyota Tsusho Corporation the first large-scale, "greenfield" brine based lithium project in 20 years at its flagship Salar de Olaroz resource, with projected production of 17,500 tonnes per annum of low-cost battery grade lithium carbonate scheduled to commence at the end of Q2, 2014. The Company also wholly-owns Borax Argentina, an important regional borate producer. Orocobre is included in the S&P/ASX 300 Index and was named 2012 Mining Company of the Year by Argentine mining magazine Panorama Minero and the Fundacion para el Desarrollo de la Mineria Argentina ("Fundamin" or Foundation for Development of Argentina Mining).

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