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Mining financier Stephen Dattels banks on lithium, backs LSC Lithium



Lithium carbonate. Credit: Sociedad Quimica y Mineral.

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Many people in the industry will remember Stephen Dattels as the founder of UraMin, a company he set up in 2005 that owned exploration and development uranium properties in Africa, and which he sold in 2007 to Areva for about \$2.5 billion in cash. The legendary top-of-the-market deal made Dattels and his partner Michael Beck and their shareholders very rich.

But the mining financier has hit other home runs since kicking off his career in mining at **Barrick Gold** (TSX: ABX; NYSE: ABX), where he was one of the company's key executives, and reportedly Peter Munk's protege, from 1982 to 1987.

A few of his other success stories include co-founding Emerging Metals in 2007, which became a significant investor in Kalahari Minerals, and whose stake was sold in 2010 to Itochu Corporation for £33 million. (In 2011, Emerging Metals picked up iron ore interests in Sierra Leone and Cameroon and changed its name to **West African Minerals** [LSE: WAFM].) He also co-founded Oriel Resources with Russian mining entrepreneur Sergey Kurzin, with nickel and chrome assets in Kazakhstan, which was later sold to the Mechel Steel Group for around \$1.5 billion.

Now Dattels is banking on lithium and, along with longtime business partner Beck, has founded **LSC Lithium** (TSXV: LSC), which has been quietly acquiring lithium brine projects in northern Argentina since 2015, and today holds or has under option a land package of about 270,000 hectares of prospective lithium salars in the “Lithium Triangle”—an area straddling Argentina, Chile and Bolivia, where the world’s most abundant lithium brine deposits are found.

The company’s four flagship properties are Salar Rio Grande in southwestern Salta province; Salar Pastos Grandes, also in Salta; the Salar Salinas Grandes in both Salta and Jujuy provinces; and Salar Jama in Jujuy. In addition the company has an option on the Pozueos salar in Salta.

In July 2016, LSC Lithium entered into a strategic collaboration with Enirgi Group Corp., a privately held diversified industrial and specialty chemicals company that manufactures and exports everything from lithium carbonate and sodium bicarbonate to lead and lead concentrate. It also operates a used lead acid battery recycling plant.

Enirgi, which is wholly owned by The Sentient Group, an independent private equity firm specializing in the global resources industry with more than US\$2.7 billion in resource assets under management, wants to build a global lithium business. It owns the Salar del Rincon project in Salta and is building a demonstration plant there to test a technology that could dramatically reduce the time it takes to process brines into lithium carbonate products.

The technology — called Direct Xtraction Process (DXP) — was developed in cooperation with the Australian Nuclear Science and Technology Organization (ANSTO) in Australia, where Energi’s pilot plant at the ANSTO facility demonstrated recoveries in the range of 75%-85%. Enirgi is now building a new demonstration plant in Argentina at its Salar del Rincon, which it expects to start commissioning in the first half of 2017. If the pilot plant works well at high altitudes, the company intends to build a commercial- scale plant that could process 50,000 tonne per year as early as 2019.

“We’ve been developing our own technology over the last three years and have sunk about \$240 million acquiring all the property and delivering what we think will be a game changer,” Wayne Richardson, who is president and CEO of both Enirgi Group and now LSC Lithium.

“The standard process of producing lithium takes about a year, from extraction of the brine through the evaporation pond system into a plant and into the bag,” he explains in a telephone interview from Brisbane, Australia. “In our process, it comes out of the brine into the plant and then into the bag in under 24 hours.”

“We did all of our development work under the auspices of ANSTO with them looking over our shoulder to make sure we weren’t drinking our own Kool-Aid,” he says. “Now we’re actually putting it on the site and have invested about \$30 million on building a demonstration plant.”

Richardson explains that DXP is “disruptive technology” that involves producing lithium carbonate directly from unconcentrated raw brine in less than a day. The technology not only eliminates the need for mega-evaporation pond infrastructure, he says, but it also reduces dependency on external reagents that would otherwise have to be shipped to site, and reduces a project’s environmental footprint. The process is also amenable to production of lithium hydroxide.

Under the strategic plan of cooperation between the two companies, Enirgi Group agreed to assign all of its non-Rincon lithium properties, or salars, to LSC Lithium in exchange for an 18.2% equity stake in the junior, and pledged management and board support to oversee LSC Lithium’s development. Under the partnership, LSC Lithium will have exclusive access to Enirgi’s DXP technology, which it says will minimize capex and opex requirements because it eliminates the need to build expensive solar evaporation ponds on its properties. Under the agreement, LSC Lithium will ship brine to a regional processing facility for final production. Dattels sits on LSC Lithium’s board and holds about 7 million shares in the company.

“The opportunity emerged for us to create, in partnership with Stephen Dattels and others, a real exploration arm,” Richardson says. “So we have put our foot on other salars through LSC, and LSC gives us extra feed stock for the plant ... LSC really does give us that extra footprint to expand well beyond 50,000 tonnes per year ... Altogether, between Enirgi and LSC, we have our foot on about 560,000 hectares of property, and we have a significant team of over 100 people in Argentina. We have technology which is a game changer and we sit today with, we believe, the capacity not only to deliver substantial new and sustainable supply to the market, but it’s expandable and very scalable.”

Richardson adds that because Enirgi Group has a large engineering division, it is already well advanced with the design of the proposed 50,000-tonne per year commercial plant.

When pressed for details on how the DXP technology actually works, Richardson would only say how Enirgi got to the point of developing it. “Enirgi has a brine extraction plant in the United States for baking soda, so that’s the reference point,” he said. “We doubled the footprint of our soda operation in North America through a \$35 million operation. We extract about 250,000 tonnes of baking soda from what is the world’s largest naturally occurring nacholite. It’s like a soft rock; it’s like a compacted dirt; and it’s a solid bed. You drill through hot water and turns it into a brine, and then you extract the brine and clean it out and dry it out. So because we have these operating companies and run real businesses, it means our engineers are used to building things, and this gives them a leg up in terms of developing our DXP business.”

As for lithium demand, Richardson says it’s only going up, given rising demand for lithium-consuming products such as consumer electronics, electric and hybrid vehicles, grid storage and batteries. In a presentation LSC Lithium cites November 2016 statistics from Morningstar that forecast demand for lithium will grow 16% annually from 175,000 tonnes in 2015 to 775,000 tonnes in 2025.

“We have a whole generation of 13-40 year-olds who expect to drive electric vehicles,” he says, “and in places like China they don’t have a choice. They’ve got to do something about pollution.”

As of Feb. 27, LSC Lithium had cash and equivalents of \$34.5 million and no debt.