A s Lake Resources NL prepares to launch a PFS on its Kachi project, managing director Steve Promnitz has urged investors to take a closer look at why he believes his company is operating in what he dubbed the "best address" for lithium brines in Argentina.

Lake has three lithium brine projects - Kachi, Cauchari, Olaroz - plus the Paso pegmatite project in its portfolio, comprising one of the largest lithium exploration plays in Argentina.

While a prolific tenement package of about 200,000ha is a key selling point for any explorer, it is Lake's position amongst a plethora of larger players in South America's Lithium Triangle that Promnitz believes should have investor tongues wagging.

"If anybody felt it wasn't the best address, no-one else has suddenly produced the largest defined lithium brine in the world, only 400m away from where we are [at Cauchari] and there's multi-billion deals happening there every few months," he told Paydirt.

"We had POSCO pay $US280 million for the northern half of Galaxy's [Resources Ltd] Sal da Vida resource; we've now had Ganfeng, the world's No.2 lithium producer, pay nearly $US160 million [after paying $US237 million] for 50% of the Cauchari project and in January we had LSC Lithium [Corp] acquired by an oil and gas company for $US111 million. I don't see that happening elsewhere except for some of the major spodumene projects in Western Australia."

Lake is coming off an impressive first year on the ground at Kachi during which it defined a maiden resource of 4.4Mt of lithium carbonate equivalent with an exploration target of 8-17Mt, placing it among the top 10 reported lithium brine resources globally.

With an engineering company to soon be appointed to drive the Kachi PFS, Promnitz has pencilled in October for its completion. It will build on the results of last year's engineering report which proved up a direct extraction process patented by Lilac Solutions Inc.

"We're looking at 25,000 tpa of lithium carbonate equivalent using direct extraction on site and then producing either lithium carbonate or lithium hydroxide at a separate plant down the hill where you've got grid power, gas, and more people," he said.

"Now we may add to that, we may also produce a brine concentrate for export, but that's our base for now.

"The reason for going down the direct extraction path is not only do we think it cuts off at least a year to production, it's at much lower production cost and most importantly it produces a very high quality end product. And we've found in our discussions with battery makers that is what everyone is focused on."

Promnitz hopes the PFS will begin to unlock the value he sees in Kachi which covers almost the entire salt lake hosted in Argentina's Catamarca province.

Recent corporate transactions in the region have implied an acquisition cost of $US50-110 million per 1Mt of lithium carbonate resources.

One of the challenges Promnitz is still contending with is changing the attitude of investors who query Kachi's lower grade, when compared to some of the neighbouring projects and operations. However, Lilac's direct extraction process has successfully demonstrated recoveries of 85-90% and lithium brine concentrates in excess of 25,000 mg/L.

"We were of the same view when we first started drilling here, but what's interesting is it's about the recovered grade," Promnitz said. "Using this direct extraction method we're going to get a recovered grade of 25,000 mg/L and that produces a very high cash margin. And because it selectively takes out the lithium and doesn't bring any other deleterious elements, it produces an extremely high quality product.

"It's also interesting that the sector understands it. When we talk to battery makers and cathode makers, they understand that process, but the investment market has still yet to appreciate the difference.

"Investors often say to me, 'oh but the grade is too low' and I say 'yeah, but if I was in gold and I gave you a low grade project, but I had really high recoveries of 85-90% and I was able to do it at a low cost, you would think that would be much better than something that was higher grade, but maybe refractory because I'd only get half the gold out'. It's exactly the same here."

Lake will be funded for the PFS after receiving a timely funding boost from a North American investor who recently tipped in $1.65 million, with the option of increasing that facility to $5 million.

The company continues to engage with US-based consultancy firm RB Milestone Group to broaden its access to North American investors who have an appetite for lithium brine projects.

Meanwhile, Lake has added a diamond rig to its drilling fleet at Cauchari, in the Jujuy province, in a bid to drill deeper and hit a representative sample.

"Even though the drilling companies performed well at Kachi, it's different drilling conditions here, with much higher fluid pressures," Promnitz said.

"If we can produce one hole with good results, with representative numbers, then that will be an outstanding result, because we're drilling in the same basin next to the largest defined lithium brine resource in the world."

Promnitz said once that result was achieved, a rig would immediately be moved to the neighbouring Olaroz project which should soon be approved for drilling.

- Michael Washbourne