



Investment Ideas

7 February 2017

PepinNini Minerals: with cash on hand, now it gets exciting

Emerging lithium explorer PepinNini Minerals (ASX:PNN) announced today that it had raised some A\$600,000 (pre-costs) via a share placement of 50m shares at A\$1.2cps. The proceeds will take PNN's cash position to over A\$1m (A\$675,000 cash balance as at the end of December 2016). We believe that this level of funding should be enough to allow PNN to establish a maiden lithium Resource at its Salta Lithium Project in the "Lithium Triangle" NW Argentina, within 12 months.

Expected near-term news flow

- ✓ February 2017: assessment and interpretation from vertical electrical sounding surveys ("VES") carried out in the December quarter on tenements at four salars (salt pans) – Salar de Pular, Salar de Pocitos, Salar de Arizaro, and the majority of Salinas Grandes.
- ✓ March/April 2017: commencement of sub-surface aquifer drilling based on VES results.
- ✓ April 2017: release of drilling and lithium brine assay results.
- ✓ Potential VES surveys on tenements not surveyed in 2016.
- ✓ Potential new tenement acquisitions in priority areas / disposal of non-core tenements.
- ✓ **Initial Maiden Resource targeted for end calendar year 2017/beginning 2018.**

Investment case – a potential world-class lithium Resource

- Planning and submission of environmental approvals for sub-surface aquifer drilling (based on VES results) is underway. Management is targeting to commence drilling in March/April and have assay results available for publication in April. Because of the geology of lithium brine deposits (depth, continuity), we believe that PNN is in a position to establish a significant maiden lithium Resource by the end of 2017/beginning of 2018 for a relatively modest cost of just A\$1m.
- ***The initial drilling and assay results (targeted for April 2017) will provide key data on aquifer thickness and brine composition (specifically the lithium grade in mg/L). This data could act as a powerful share price catalyst as it will give investors - for the first time - some idea of the potential grade and size of the Resource at PNN's Salta Lithium Project.***
- While it is not possible to quantify a Resource at this early stage, we have tabulated below potential Resource outcomes based on a range of Li grade and brine volume scenarios. Note: our base-case Resource estimate of 3.2Mt lithium carbonate equivalent (LCE) is based on PNN's total tenement package of 32,665 ha. The Maiden Resource will be estimated on a more limited (i.e. drilled) area, but could be between 1.0-1.5Mt LCE.
- At the current spot lithium carbonate price of US\$20,000/t, our base-case Resource estimate has an in-situ (ground) value of ~US\$65bn. At a forecast long-term price of US\$10,000/t, the estimated in-situ value is closer to US\$32bn. Thus, one can see the potential value uplift to PNN's share price.
- As a comparative, Orocobre's (ASX: ORE) flagship producing Salar de Olaroz Resource is some 6.4 Mt of LCE. We believe a Resource of (at least) 3 Mt LCE could be attractive to a number of potential LCE processors. Our understanding is that PNN has been approached by several industry players, with discussion progress dependent on Resource development.

Salta Lithium Project –Indicative Resource - Lithium Carbonate Equivalent (Mt)

		Brine yield (%)				
		8.50%	8.00%	7.50%	7.00%	6.50%
Average Li grade (mg/L)	600	4.39	4.13	3.87	3.62	3.36
	550	4.03	3.79	3.55	3.31	3.08
	500	3.66	3.44	3.23	3.01	2.8
	450	3.29	3.1	2.91	2.71	2.52
	400	2.93	2.76	2.58	2.41	2.24

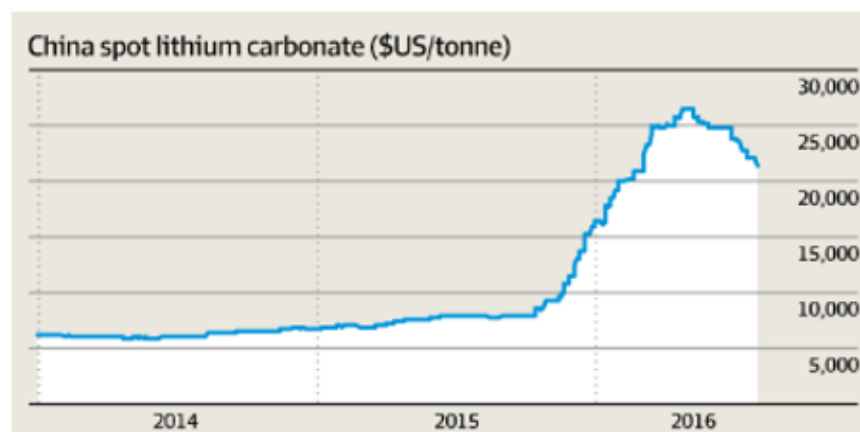
Our base-case estimated Resource of 3.23Mt LCE has an in-situ value of US\$65bn at the current spot lithium carbonate price (US\$20,000/t) and US\$32bn at a forecast long term price of US\$10,000/t....illustrates potential uplift to PNN share price as the Resource delineation advances.

Source: State One Stockbroking forecasts

Assumptions: 1) potential brine area = 66% of total tenement area, average deposit thickness = 75m, base-case brine yield = 7.5%, base-case lithium grade = 500mg/L, conversion ratio: 1t Li = 5.29t Li₂CO₃.

Note: We believe our base-case assumptions are conservative relative to Orocobre's (ASX:ORE) Salar de Olaroz Resource which has a deposit thickness ranging from 54-143m, a brine yield of 9.6%, and an average lithium concentrate of 690mg/L.

Lithium carbonate price



Source: AFR

While the spot lithium carbonate price has rolled over recently, it is still at an attractive US\$20,000/t.

Many industry analysts assume a long-term or normalised lithium carbonate price closer to US\$10,000/t.

Tenement value – not reflected in PNN's market capitalisation

- PNN has been exploring in the Salta Province of NW Argentina since 2010 and continues to hold a portfolio of properties covering the Santa Ines and Chivinar Cu-Au Projects. Through strong local connections, and being "on-the-ground" when tenements were relinquished by small private holders, PNN has - for relatively modest outlays - successfully accumulated thirteen mining leases (mina) prospective for lithium brine over the past 6-8 months. As at end December 2016, PNN's total tenement holding was 32,665ha.
- Looking at recent transactions, we calculate that mining leases prospective for lithium brine in NW Argentina are changing hands for ~US\$1,025/ha. See table overleaf. At this price, PNN's holding of 32,665ha has an indicative value of US\$33.5m. Even at the lower of the transaction price ranges (US\$534/ha), PNN's tenement value could be worth some US\$18m.
- We suggest that the US\$/ha considerations current being paid for lithium brine mining leases in the region indicate that PNN's tenements are significantly undervalued. We note that **PNN's current market capitalisation is (only) A\$4.6m.**
- Successfully establishing a lithium Resource, could further increase PNN's upside potential.

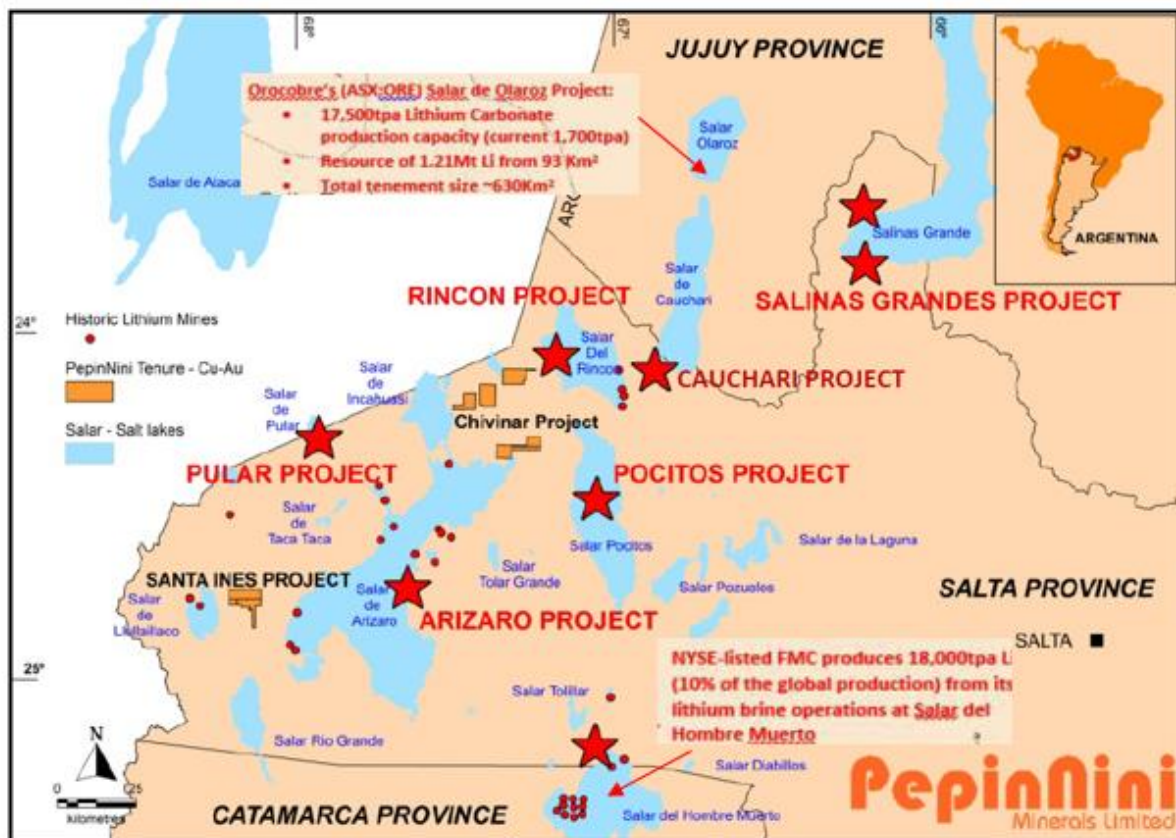
Tenement transaction prices - NW Argentina

Date	Buyer	Seller	Asset (ha)	Price (US\$m)	Location	Price (US\$/ha)	Comments
May-16	Argosy Minerals (ASX:AGY)	Ekeko S.A. (private)	4,279	4.6	Salar de Pocitos and Mina Teresa (Argentina)	1,075	
Jul-16	Argosy Minerals (ASX:AGY)	Dr Pablo Alurralde (Private)	654	2.3	Salar de Rincon (Argentina)	3,440	Earn-in up to 90% in Project / requires building pilot plant and further development
Sep-16	Millennial Lithium (CVE:ML)	Jorge Moreno (Private)	1,219	4.3	Salar de Pastos Grandes (Argentina)	3,527	Includes US\$1.6m in exploration activities
Sep-16	Millennial Lithium (CVE:ML)	Private	2,990	6.5	Salar de Cauchari East (Argentina)	2,187	Includes CA\$4m in exploration activities
Nov-16	Advantage Lithium (TSX:AAL)	Orocobre (ASX: ORE)	78,600	42.0	Various salars in the lithium triangle (Argentina)	534	US\$37m in scrip plus US\$5m in cash, plus ORE to get 1% royalty on Cauchari
Jan-17	Pure Energy Minerals (TSXV:PE)	Private	13,000	7.2	Salar de Pocitos (Argentina)	554	US\$4m, 6m shares in PE, US\$200k final plus additional payments 6m, 12m, 24m
Weighted average consideration (US\$/ha)						1,025	
Indicative PNN tenement value (US\$m)						33.5	

Note: PNN's tenement holding in the Salta Lithium Project is 32,665ha

Source: Companies, compiled by State One Stockbroking

PNN's Lithium Project - Salta Province, Argentina



Source: Company, State One Stockbroking

- PNN also has **16 tenements in central Australia** covering 16,608km² (Musgrave and Mozart Projects) prospective for nickel, copper, PGE, and diamonds. Capital demands here are at a minimum, but give investors “free” exposure to any increase in the base metal price environment.



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Note: State One Stockbroking was lead manager for PNN in a A\$1m capital raising in July 2016 and A\$0.6m capital raising in February 2017.

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