Neometals signs agreement for ELi®Lithium Process

Neometals Ltd (ASX: NMT) and Mineral Resources (ASX: MIN)

Jointly announced that their 70:30 co-owned company, Reed Advanced Materials Pty Ltd has entered into a binding Co-operation Agreement with Portugal's largest chemical producer Bondalti Chemicals, S.A. to commercialise the sustainable ELi lithium process to produce lithium hydroxide.

| Neometals | ASX : NMT | |
|------------|---|--|
| Stage | Production + development | |
| Metals | Titanium + Vanadium + lithium + nickel | |
| Market cap | A\$609 m @ A\$1.11 | |
| Location | Western Australia, Germany | |



Neometals ELi process explained

Neometals and Mineral Resources Co-Operation agreement with Bondalti to commercialise their sustainable ELi® Lithium Process.

Neometals Ltd (ASX: NMT) ("Neometals") and Mineral Resources Limited (ASX: MIN) ("MIN" — via its wholly owned subsidiary Process Minerals International) are pleased to jointly announce that their 70:30 co-owned company, Reed Advanced Materials Pty Ltd** ("RAM") has entered into a binding Co-operation Agreement ("Co-operation") with Portugal's largest chemical producer Bondalti Chemicals, S.A. ("Bondalti").

** RAM is the holding company for the ELi® processing technology ("ELi®").

HIGHLIGHTS

- Reed Advanced Materials Pty Ltd ("RAM") (Neometals 70% and Mineral Resources Ltd 30%) has agreed terms with Bondalti Chemicals, S.A. to evaluate commercialisation of its ELi® lithium process in Europe;
- The proposed 25,000tpa lithium refinery in Portugal will be the first ELi® deployment to produce battery quality lithium hydroxide and lithium carbonate;

- ELi® replaces conventional, carbon-intensive chemical conversion of lithium chloride solutions with electrolysis to produce lithium chemicals, potentially utilising renewable energy;
- Bondalti and RAM will co-fund construction and operation of a pilot plant at Estarreja and complete evaluation studies over 18 months at a shared cost of US\$4 million; and
- The pilot plant, and proposed commercial refinery, will be integrated with Bondalti's existing chlor-alkali operations, which share significant processing commonalities with the ELi® process.

The Co-operation contemplates the co-funding of certain evaluation activities required for a decision to forma 50:50 incorporated joint venture ("JVCo") to construct and operate a lithium refinery ("Refinery") at Bondalti's extensive chloralkali operations in Estarreja, Portugal.

The evaluation activities will include the construction and operation of a pilot plant in Portugal and completion of an AACE Class 2 Front End Engineering and Design Study ("FEED Study"). Completion is targeted for 30 June 2023 at a shared cost of approximately US\$4 million.

Under the Co-operation RAM and Bondalti have established a Steering Committee with equal representation from both parties to oversee the conduct of the evaluation activities and establishes a framework of terms for JVCo formation.

The proposed Refinery will be the first commercial operation to use RAM's ELi® Process which has successfully produced battery quality lithium hydroxide from operating spodumene and brine operations.

ELi® is a process for purifying an aqueous lithium solution (lithium chloride) to produce lithium hydroxide in conventional chlor-alkali (electrolysis) cells. ELi® uses

commercially

available chlor-alkali equipment and has been tested for reliability in 100 and 200hr duration continuous mini-pilot scale trials.

A feasibility study for the application of the ELi® technology in a Malaysian plant was completed in 2016 (for further details see Neometals announcement titled "Positive Lithium Downstream Processing Feasibility Results" dated 11th July 2016).

This Co-operation is a significant step towards ELi® commercialisation with an industry leading partner that operates similar equipment for shared markets at industrial scale. The technology, which radically reduces the requirement for (and transport of)

reagents represents the opportunity for a step change in environmental sustainability, operating and capital costs for both spodumene and brine lithium projects.

ELi® feedstock flexibility enables domestic production of lithium chemicals from the

conversion of both European hard rock and imported brine concentrates ensuring an ethical and resilient local lithium supply chain for the EV battery industry.

Neometals management comments

"We are eager to take another step towards commercialising our ELi® process and building a globally competitive, high purity 'battery quality' lithium chemical facility.

"Bondalti is a highly credentialed chemical producer and

operator of chlor-alkali facilities which use electrolysis to produce sodium hydroxide. Moreover, Bondalti's existing by-product hydrogen and chlorine gases provide a ready market for the by-products of the ELi® Process.

"The synergies of first-class technical skills and infrastructure at Estarreja maximise the probability of technical success in the full scale pilot plant trials and enhance the potential financial metrics of its first commercial application.

"This is another demonstration of our ability to secure strong operating partners to co-fund the commercialisation of our project pipeline.

"The Co-Operation is an exciting milestone for Neometals and its ELi® co-owner, Mineral Resources Ltd, who have been steadfast supporters of this potentially game-changing technology since its genesis in 2012."

Chris Reed, Managing Director, Neometals

For brevity, this summary has been redacted, to read the full news release, please click HERE

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Mining Review Sunday Update 19th September

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The story of the week again, sadly, was the falling gold price, into the mid 1700's, due to better than expected US retail figures, and a strengthening US dollar.

Iron ore is another casualty, but for a different reason. Coking coal is roofing it as supply is tight, bring companies like Colonial Coal into investor focus.



Kootenay Silver Columba drill camp, Mexico

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Iron ore is another casualty, but for a different reason, the Chinese government is limiting steel production for the remainder of 2021, causing a sharp drop in demand for iron ore.

Coking coal is roofing it as supply is tight, bring companies like **Colonial Coal** into investor focus. The price has more than doubled in a few short months.

Stocks on our watchlist making news this week

Orla Mining - Placed 8th in the TSX30 for stock price performance over three years.

Wesdome Gold - <u>Placed 10th in the TSX30 for stock price</u> <u>performance over three years.</u>

Apollo Consolidated — <u>Defined some robust gold zones at Lake</u> <u>Rebecca</u>

Fiore Gold — <u>Amended their Pan Mine Technical Report</u>

Neometals — <u>The Primobius JV have started phase 2 of their</u> <u>battery recycling project</u>

Gold Road — Reported a net profit and a dividend

Bardoc Gold — <u>Highlighted the potential to grow the Zorastrian</u> <u>deposit</u>

Market Data

Precious metals

| Gold | 1755 | - 2% |
|-----------|-------|------|
| Silver | 22.4 | -6% |
| Palladium | 2015 | -8% |
| Platinum | 943 | - 1% |
| Rhodium | 14500 | -6% |

Gold got thumped by some unexpectedly good US retail numbers, and fell sharply back through to around \$1,760. Silver took an ever harder beating, losing 6% in 5 trading days.

Palladium was knocked back on lower car production due to a shortage of micro chips, and reports that some manufacturers are switching to platinum due to the lower cost.

Base metals

| Copper | 4.22 | 0% |
|--------|-------|------|
| Nickel | 9 | - 2% |
| Zinc | 1.39 | 0% |
| Tin | 15.85 | 3% |

Energy Metals

| Cobalt | 22.19 | - 1% |
|-----------|-------|------|
| Manganese | 2.87 | - 1% |
| Lithium | 22941 | +16% |
| Uranium | 44 | +9% |

Lithium is roaring away as supply concerns are forcing battery companies to try and secure supply at ever higher prices.

Uranium is rising rapidly due to the actions of the Sprott Physical Uranium Trust buying a significant quantity on the spot market to warehouse, thus driving up prices. Sprott has just announced it is raising another \$1 billion for uranium purchases. I wonder if Sprott is related to the Hunt brothers?

Bulk commodities

| Iron Ore | 102 | -25% |
|-------------|-----|------|
| Coking Coal | 359 | +22% |

Quite an extraordinary divergence here, with iron ore slumping due to Chinese steel production limitations at the same time as a real coking coal supply crunch.

Miscellaneous

| GDX | 30.58 | - 3% |
|------|-------|------|
| GDXJ | 40.48 | - 1% |
| Sil | 37.46 | - 4% |
| SILJ | 12.46 | - 3% |

| GLD | 163.77 | - 2% |
|----------------|--------|------|
| Au / Ag Ratio | 75.94 | +1% |
| 10 yr Tbond | 1.371 | 2% |
| US index (DXY) | 93.26 | 1% |
| HUI | 237.63 | - 2% |

The precious metal ETF's had predicable falls, given the losses on the other precious metals, as the US dollar strengthened.

The gold / silver ratio is widening again just as it seemed to be returning to a more normal level.

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At the time of writing the author holds shares in Bardoc Gold, Colonial Coal, Gold Road Resources, and Orla Mining.

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