

# Jervois

MINING LIMITED

ABN 52 007 626 575

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ASX Code: JRV

## Positive Results from Microwave Technology

In October 2012 the Company received a request from JPM Silicon GmbH Laboratories (JPM Silicon) in Braunschweig Germany for a 2-kg nickel/cobalt laterite sample. JPM Silicon specializes in Microwave Smelting and Silicon production. (There are a number of microwave furnaces used around the world to smelt a variety of metals and alloys).

Requests for sample are not unusual, and Jervois was able to supply JPM Silicon with a drill sample from the Young NSW nickel/cobalt resource from storage in Melbourne.

In two tests carried out on the drill sample provided, results showed that the Young, NSW, nickel/cobalt laterites can be smelted in a microwave furnace to produce a mixture of ferronickel/ ferrochrome alloy.

The photographs below show the 'prills' produced using the microwave smelting process.



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Details of the microwave device and the experimental details must remain confidential.

JPM Silicon claim that compared with direct current arc technology, microwave technology will save energy and improve manufacturing efficiency, which could cut production costs by as much as 50%.

It is further claimed that microwave technology is more environmentally friendly and releases less greenhouse gases, with no sulphur dioxide emissions, compared with hydrothermal treatment.

Microwave heating does however present challenges:-

- Scaling up the technology to a commercial size
- Most microwave smelters operate on 'batch' mode, although there are attempts to make operation continuous
- Optimisation of the microwave smelting may be difficult
- The conditions inside the microwave furnace are still not fully understood

Nevertheless, Microwave Smelting was successful for the two Jervois tests and demonstrated that metallic ferronickel can be made directly by heating Young laterite with or without the addition of fluxing material. Further tests are scheduled for May 2013 in Germany on a larger sample size.

This is an exciting new development for the treatment of lateritic nickel ores and the assistance of JPM Silicon in these tests is greatly appreciated by the Board.

By order of the Board.

Duncan Pursell.  
Managing Director.