

**26 March 2013**

Company Announcements Office  
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Sydney NSW 2000

## **BARNES HILL OPTIMISED FEASIBILITY STUDY COMPLETED**

### **HIGHLIGHTS**

- **Optimised feasibility study completed**
- **Project NPV**                    **\$143.6m**
- **Construction capital**        **\$ 78.4m**
- **Capital Intensity**            **\$7.50/lb<sup>1</sup>**
- **Mine site cash costs**        **\$ 5.75/lb<sup>1</sup>**
- **Annual revenue**                **\$<sup>+</sup>100m**
- **Average annual EBITDA**    **\$<sup>+</sup>30m**
- **JV to finalise permitting**

### **Summary**

Proto Resources & Investments Limited ("Proto") is pleased to announce with Metals Finance Limited ("MFC") the completion of the Optimised Feasibility Study at the Barnes Hill Nickel and Cobalt project in Tasmania. The Optimised Feasibility Study was completed through MFC's wholly owned subsidiary Nickel Developments Limited (the **Company, NDL**) The Project is a 50:50 joint venture between NDL and Proto (ASX: **PRW**).

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<sup>1</sup> Based on nickel equivalent production that is inclusive of nickel and cobalt

The advancements made during the optimisation study confirms the Project is economically robust and endorses the Company's innovative ability to maximise the economic potential of an undeveloped nickel laterite deposit by delivering a low operating cost structure along with highly efficient use of capital.

The Project is a 500,000 tpa ROM nickel and cobalt operation producing 4,800 tonnes of Ni equivalent per annum. Once developed, the Project offers the joint venture partners sustainable cash flow over the modelled 10 year period.

Modelling of the base case parameters for the Project, reports an NPV of A\$143.6m (@ 12.5% discount rate) yielding a 51% IRR. The optimisation study has confirmed the projects economic metrics with a capital intensity, equivalent to \$7.50/lb annual production, and operating costs of \$5.16/lb in the first 5 years and \$5.75/lb over the first 10 years.

The Joint Venture partners will continue to work collaboratively to finalise the permitting of the project and to secure funding options for construction and development of the Project, based on this final study.

## **Background**

The Company completed feasibility study work on the 500,000 tonnes per annum vat leach and nickel production plant in June 2012. The study was completed on the basis of capital and operating cost savings which could be achieved through the use of the nearby 3<sup>rd</sup> party infrastructure and utilities.

Since issuing the June 2012 feasibility study, NDL has undertaken further engineering studies aimed at optimising the project economics. A number of opportunities have been identified that are advantageous to the project economics. In addition, NDL has recommended that a stand-alone operation be referenced as the base case with possible upside in the event synergies can be achieved by utilising 3<sup>rd</sup> party infrastructure and utilities.

## **Optimising the feasibility study**

The Optimisation Phase has identified value adding options for the Project. These options are described below:

Optimisation	Proposition	Advantages
Leaching Vessels	Employ an agitated tank system	Reduce footprint of leach vessel and increase confidence in nickel recovery
Leach Temperature	Increase leach temperature to 80°C	Reduce residence time in leach from 120 days to 8 hours
Water Medium	Utilise saline water in the process flow sheet	Reduce operating cost by reducing water unit charge rates and acid consumption
Plant Relocation	Reposition the processing facility	Reduce site establishment capital by locating plant closer to existing road infrastructure
Power Options	Connect to existing distribution system	Reducing total power demand enables connection to nearby power system
Increase Strip Ratio	Maximises extraction of resource from deposit	Ensures total resource recovery and maximises potential mine life.

### Construction Capital

Total construction capital for the Project is \$78.4m. Capital is apportioned 75% for direct capital costs and 25% for indirect capital costs.

70% of direct capital costs are allocated for the main processing activities of:

- Leaching,
- Ion Exchange,
- Electrowinning, and
- Tailings treatment.

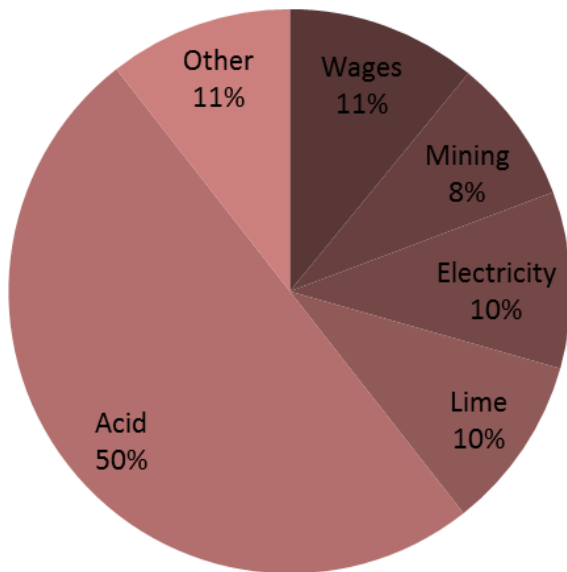
Indirect Costs are evenly divided between Engineering, Procurement and Construction expenses and percentage based line items including escalation and contingencies.

The Project has a capital intensity of \$7.50 per pound of annual Ni<sub>equiv</sub> production, positioning the project as a capital efficient nickel laterite project when compared to peers.

**Mine Site Cash Costs**

Total mine site cash costs are dominated by the acid requirements of the project. Other key categories are shown in the adjacent figure.

The project economics are most sensitive to sulphuric acid pricing. NDNL has engaged with acid suppliers to substantiate that the acid pricing and volume requirements can be achieved. The Company has modelled higher than prevailing acid pricing to provide the project with upside to the current scenario.



The other 5 major areas that comprise mine site cash costs are evenly distributed between; Lime - used for neutralisation, Electricity - used for electrowinning the nickel cathode production, Mining – for both ore and waste movement, Wages – for all staff, and other mine site cash costs.

The Project has a mine site cash cost of \$5.16/lb of nickel equivalent for the first 5 years of operation and \$5.75/lb for the modelled 10 year period.

**Revenue and EBITDA**

Sales of nickel cathode and cobalt sulphate are projected to generate annual revenue of approximately \$105m annually. Revenue is based on commodity pricing of \$10/lb Ni and \$13/lb Cobalt with foreign exchange parity. Allowing for operating and marketing costs, the average annual EBITDA is approximately \$30m, inclusive of capital repayment and exclusive of project financing costs.

**Project Economics**

The Optimisation study has provided confidence to the number used in evaluating the economic potential of the Project. The Project provides the joint venture partners with immediate cash flow and has the capability to retire project funding within two years of commencing production under the modelled parameters. Key operational and financial highlights include:

<b>Barnes Hill Project</b>	<b>Base</b>
Capital cost (\$ millions)	78.4
Project ROM tonne throughput (million t)	500,000
Nickel grade first 5 yrs (%)	1.01%
Nickel grade second 5 yrs (%)	0.73%
Nickel recovery (%)	90%
Life of mine nickel price US\$/lb	10.00
Foreign Exchange USD:AUD	1:1
Total revenue (\$ millions)	1,045
<b>Indicated NPV 12.5% (\$ millions)</b>	<b>143.7</b>
<b>Indicated IRR%</b>	<b>51%</b>

Under variously modelled scenarios, the Barnes Hill nickel laterite project is economically robust with the opportunity to provide favourable returns to investors and shareholders.

### **Ongoing Activities**

During the Optimisation Phase, NDL has been cognisant to minimise the environmental disturbance of the Project and maintain the biodiversity in the area. As a core part of NDL's corporate social responsibility, NDL will continue to pursue options that promote the preservation of the environment in and around the Project. NDL and PRW will continue to work with regulatory authorities to successfully finalise the Project's permitting requirements.

**FOR FURTHER INFORMATION CONTACT:**

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**About Proto Resources & Investments Limited**

Proto Resources & Investments Limited is an ASX listed resources company with a three pronged approach to add value to shareholders. Including advancing the **Exploration** targets in Western Australia and the Northern Territory, **Developing** the near term projects such as Barnes Hill and focusing on strategic **Investments** including the Barrier Bay processing technology.

**About Metals Finance Limited**

Metals Finance develops mineral assets in partnership with other exploration and mining companies, rather than purchasing them. MFC applies the extensive experience of its executives, board and consultants on geologically defined resources to establish appropriate treatment processes, to undertake detailed feasibility studies and to promote the development of projects. It is currently working with three ASX-listed partners at Lucky Break in Queensland and Barnes Hill in Tasmania and Homeville in New South Wales. MFC is also seeking new opportunities, and is reviewing the development of gold and nickel projects in South America and Europe

### **Competent Person**

*Information within this announcement which pertains to mineralisation or resources is based on information compiled by Mr Tony Treasure who is a full time employee of Metals Finance Limited and is a Member of the Australasian Institute of Mining and Metallurgy. Mr Treasure has sufficient experience in the fields under consideration to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore reserves and consents to the inclusion of this information in the form and context of which it appears in this report.*

Unless otherwise stated, all currency values are in Australian dollars.