

## STOCK EXCHANGE ANNOUNCEMENT

16 February 2012

### **Additional Limonite Testwork Begins at Barnes Hill**

### ASX Release Stock Code: PRW

In addition to ironstone beneficiation testing, Proto Resources & Investments Ltd ("Proto", "the Company) is pleased to announce that it has commenced analytical work on the upgrading of the limonitic iron ore also found at Barnes Hill. This previously drilled material sits in the laterite and limonite domains below the ironstone cap. Limonite has had a long history as a source of iron ore and is still mined in Western Australia. Proto believes that it will form an increasingly important part of iron ore production in the future.

#### **Executive Summary**

- Work has commenced on the commercial scoping and associated process testwork for the upgrading and sale of limonitic iron ore found at Barnes Hill.
- Limonite is present across a number of domains and particularly in the laterite and limonite zones that sit above the more nickel rich saprolite domain. This additional source of iron ore complements the ironstone found at Barnes Hill that is already undergoing beneficiation testing.

#### Barnes Hill Limonite Scoping and Testwork Programme

Proto is pleased to announce that it has commenced analytical work on the upgrading of limonitic iron ore found at Barnes Hill. This already drilled material sits in the laterite and limonite domains below the ferruginous caprock and was previously drilled in 2010 during Proto's 50m by 50m spaced drilling program (641 drill holes). This pre-existing database (which also includes 73 historic drill holes) will allow rapid definition of a limonitic iron ore resource once satisfactory upgrading and sales channels are demonstrated.

Limonitic material has had a long history as a source of iron ore and Proto firmly believes that limonite will in the future again form an important element of Australian iron-ore production. Chinese producers dominate current limonite mining and have developed well-established technology for processing it.<sup>1</sup> In Australia there are several miners looking to develop limonite resources, and Robe River Iron Associates (53% owned by Rio Tinto) already mines pisolitic limonite ore deposits at Mesa A near Pannawonica in WA.<sup>2</sup> Initial desktop assessment has focused on processing technologies that draw on the magnetic and

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<sup>&</sup>lt;sup>1</sup> <u>http://en.cnki.com.cn/Article\_en/CJFDTOTAL-ZGKA200605013.htm</u>

<sup>&</sup>lt;sup>2</sup> http://www.australianminesatlas.gov.au/education/fact\_sheets/iron.html



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paramagnetic characteristics of these iron species including Wet High Intensity Magnetic Separation (WHIMS) and SLon magnetic separators. The substantial amount of limonitic iron material present at Barnes Hill and raw grades can be seen from Table 1 below, which is reproduced from the reportable JORC-compliant nickel resource estimated at Barnes Hill in 2010.

#### Table 1 – Barnes Hill Reportable Mineral Resource at a 0.0% Nickel Cut-off Grade<sup>3</sup>

Resource Classification	Volume ('000 m3)	Tonnage (kT)	Ni (%)	Co (%)	MgO (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	SiO <sub>2</sub> (%)
Cutoff grade of 0.0% Ni - Laterite Domain							
Measured	498,098	846,757	0.147	0.018	1.03	46.72	17.37
Indicated	156,937	266,789	0.151	0.023	1.83	39.06	26.88
Inferred	134,222	228,173	0.174	0.017	1.97	32.91	37.63
Total	789,255	1,341,718	0.152	0.019	1.35	42.85	22.71
Cutoff grade of 0.0% Ni - Limonite Domain							
Measured	1,017,438	1,526,154	0.367	0.106	1.14	53.81	15.39
Indicated	312,446	468,666	0.350	0.099	1.76	48.92	21.21
Inferred	219,965	329,940	0.345	0.061	1.82	41.89	29.99
Total	1,549,848	2,324,760	0.361	0.098	1.36	51.14	18.64
Cutoff grade of 0.0% Ni - Transitional Domain							
Measured	-	-					
Indicated	326,133	456,584	0.525	0.080	3.36	39.66	29.22
Inferred	8,043	11,260	0.617	0.110	3.85	46.97	25.63
Total	334,177	467,843	0.527	0.081	3.37	39.84	29.13
Cutoff grade of 0.0% Ni - Saprolite Domain							
Measured	2,736,322	3,557,201	0.806	0.055	11.26	26.74	38.93
Indicated	877,920	1,141,289	0.728	0.065	11.44	30.54	35.16
Inferred	636,110	826,938	0.650	0.075	9.70	34.35	35.34
Total	4,250,346	5,525,416	0.788	0.057	11.25	27.63	38.15
Cutoff grade of 0.0% Ni - Saprock Domain							
Measured	0	0					
Indicated	1,190,891	2,619,940	0.558	0.022	27.95	12.70	41.93
Inferred	624,785	1,374,513	0.458	0.020	24.94	14.45	43.22
Total	1,815,681	3,994,455	0.523	0.022	26.92	13.30	42.37

<sup>&</sup>lt;sup>3</sup> For estimation details, see: Proto (2010) "Barnes Hill Reserve Statement", p 7-13, available at: <u>http://www.protoresources.com.au/sites/default/files/101123 - Barnes Hill Reserve Statement.pdf</u>.



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Proto is also continuing testwork on the ironstone cap that lies above the limonite across parts of Barnes Hill. Importantly, Table 1 does not include this caprock material. Proto has already drilled an area containing 3,040,076 tonnes of that material and plans to estimate and release a JORC-compliant resource on it once beneficiation testwork is completed. The testwork aims to rigorously show that commercial grades can be achieved and that gangue waste rock can be efficiently separated out.

If these planned studies indicate that a sufficiently attractive product can be produced, then Proto will aim to have an ironstone resource estimated by mid-year, which would be followed later by a limonite resource estimation program later in the year.

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#### **Competent Persons Statement**

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves, together with any related assessments and interpretations, is based on information reviewed by Mr Peter Peebles a full-time employee of Darlington Geological Services Pty Ltd. Mr Peebles is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Peebles consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.