

IRVINE RESOURCE UPGRADE – TARGETING UP TO 108Mt @ 66% IRON CONCENTRATE

June 4th, 2010, Melbourne: The Directors of Pluton Resources Limited (“Pluton”) (ASX:PLV) are pleased to announce an upgrade of the Inferred Mineral Resource reported in accordance with the JORC Code¹, for the Hardstaff Peninsula on Irvine Island incorporating the latest available Phase II drilling results.

HIGHLIGHTS

Yampi Member

- Existing Inferred Mineral Resource of 54Mt @ 49% Fe at a cut-off grade of 30% Fe (ASX announcement, August 23rd, 2009) has been upgraded to **90 Mt @ 46% Fe** using a cut-off grade of 30% Fe.
- The Inferred Mineral Resource for the Yampi Member includes a higher grade component of **50 Mt @ 52 % Fe** using a cut-off grade of **50% Fe**.

Wonganin Sandstone

- Maiden Inferred Mineral Resource for the Wonganin Sandstone of **204 Mt @ 23% Fe**

Managing Director Tony Schoer said: “We are not yet half-way through the current drilling programme in total metres drilled, so to be able to announce an upgraded Inferred Mineral Resource of 294 Mt of quality feed to target production of up to 108 Mt of high grade concentrate at 66% iron is a fantastic result.”

“With expected capital costs of around A\$350 million for open-cut mining, which includes beneficiation plants and ship loading facilities; and total cash operating costs (including royalties) of around A\$37/tonne on-ship, it is expected that a final product of 66% iron concentrate will produce tremendous profits and cash-flow for Pluton for many years forward.” he said.

Inferred Mineral Resource

An updated resource estimate for the Hardstaff Peninsula at Irvine Island has been completed by AMC Consultants Pty Ltd, Melbourne. The resource model incorporates all available geological and assay data contained in thirteen diamond drill holes totaling approximately 2,865m advance drilled at the Hardstaff Peninsula only during 2009 and 2010. Drilling is continuing at the project and further mineral resource upgrades will be announced as drilling progresses.

¹Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2004 Edition, prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia.

The total Inferred Mineral Resource for the Hardstaff Peninsula has been increased to **294 Mt** based on updated resource estimates for both the Yampi Member and Wonganin Sandstone. The existing Yampi Member Inferred Mineral Resource of 54 Mt @ 49% Fe, at a cut-off grade of 30% Fe (ASX announcement, August 23rd, 2009) has been upgraded to **90 Mt @ 46% Fe** using a cut-off grade of 30% Fe.

This also includes a higher grade component of **50 Mt @ 52 % Fe** using a cut-off grade of 50% Fe for the Yampi Member.

In addition, the Company is also pleased to announce its maiden Inferred Mineral Resource for the Wonganin Sandstone of **204 Mt @ 23% Fe**.

A resource statement has been prepared by AMC Consultants Pty Ltd of Melbourne and is summarised in Tables 1 and 2.

Table 1: Yampi Member Inferred Mineral Resource, Hardstaff Peninsula, Irvine Island, Western Australia (E04/1172)

Classification	Tonnage (M)	CoG Fe (%)	Fe (%)	SiO ₂ (%)	Al ₂ O ₃ (%)	S (%)	P (%)
Inferred >40% iron (Lens 1)	5	40	43	35.2	1.45	0.18	0.03
Inferred >50% iron (Lens 2)	50	50	52	24.7	0.40	0.06	0.01
Inferred >30% and <50% iron (Lens 2)	35	30	38	43.1	0.97	0.20	0.02
Total Inferred	90		46	32.4	0.68	0.12	0.02

Table 2: Wonganin Sandstone Inferred Mineral Resource, Hardstaff Peninsula, Irvine Island, Western Australia (E04/1172)

Classification	Tonnage (M)	CoG Fe (%)	Fe (%)	SiO ₂ (%)	Al ₂ O ₃ (%)	S (%)	P (%)
Inferred	204	-	23	59.0	3.94	0.10	0.03
Total Inferred	204	-	23	59.0	3.94	0.10	0.03

Notes

1 The Mineral Resource is reported in accordance with the JORC Code¹

2 All resources have been rounded to the nearest 1 million tonnes

3 CoG is defined as cut-off grade

4 No cut-off grade has been applied to the Wonganin Sandstone Inferred Mineral Resource estimation

The current Inferred Mineral Resource does not include outcropping iron mineralisation from the Isthmus region of Irvine Island. One drill hole at the Isthmus region intersected 8m @ 62.5% Fe from 10m below the drill hole collar (ASX announcement, February 9th, 2009). The Isthmus region will undergo extensive drilling later in the current programme.

Previously completed CSIRO pilot scale test work has shown that magnetic separation can produce a concentrate with an iron content of 66% iron (Fe) and 2.49% SiO₂ with an iron recovery of 83.7% from the Wonganin Sandstones, which overlie the Yampi Member (ASX announcement, February 5th, 2010).

The sandstones were originally considered as waste but now represent an important additional mineral resource. The prefeasibility study will further examine the potential benefit of the Wonganin Sandstone mineral resource to project economics and development scenarios.

Ongoing Exploration

The Phase II drilling programme on the Hardstaff Peninsula is continuing.

The diamond drill rig has moved further to the north on the western side of the Hardstaff Peninsula and is currently drilling site 18. Drilling has been completed at site 16 and two holes, ID16A and ID16B are being logged, cut and prepared for dispatch to Ultra Trace Laboratories in Perth for analysis.

Additional helicopter transportable accommodation units have been ordered and existing camp infrastructure is being upgraded in preparation for the mobilisation of a second drill rig to Irvine Island in July 2010.

Said Managing Director Tony Schoer – “Our exploration approach is to continue to build our mineral resource base on the Hardstaff Peninsula with one of the diamond drill rigs. The intention is to have the second drill rig commence exploration on the Isthmus region to target up to 30 Mt DSO from the outcropping iron mineralisation. We are aiming to have sufficient drilling completed on the Isthmus region by the end of the year to enable us to commence compiling our first resource estimate for the area in early 2011”.

For more information contact Managing Director, Mr. Tony Schoer, on 0411 232 711 or tschoer@plutonresources.com.

Tony Schoer
Managing Director and Chief Executive Officer

The information in this statement that relates to mineral resource estimates prepared by AMC Consultants Pty Ltd for the Irvine Island Iron Ore Deposit, is based on information compiled by Miss T L Burrows, who is a member of the Australasian Institute of Geoscientists and Mr R L Webster, who is a member of The Australasian Institute of Mining and Metallurgy, both are full time employees of the AMC Consultant Pty Ltd. The estimates were based on exploration data provided by Pluton Resources Limited which is responsible for its accuracy and completeness. Mr Webster has sufficient experience relevant to the style of mineralisation and type of deposit 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 Exploration Results, Mineral Resources and Ore Reserves'

The information in this statement relates to Exploration Results and Targets for the Irvine Island Project is based on information compiled by Mr A Griffith, who is a Member of the Australasian Institute of Mining and Metallurgy and is a full-time employee of the Company. Mr A Griffith has sufficient experience which is relevant to the style of mineralisation and type of deposit 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 Exploration Results, Mineral Resources and Ore Reserves'

About Pluton: Pluton Resources Limited is listed on the Australian Stock Exchange (ASX Code “PLV”). Pluton has assembled a diversified portfolio of interests in tenements in Western Australia and Tasmania. Tenements in Western Australia are 100% owned by Pluton, which includes the Irvine Island iron ore project. Tenements located in Tasmania are prospective for high grade or bulk tonnage copper, gold and silver. Further details on Pluton can be found at www.plutonresources.com.
