

## ISTHMUS REGION LUMP : FINE DROP TEST RESULTS AND ASSAYS RECEIVED

### DAVIS TUBE CONCENTRATES FROM HARDSTAFF PENINSULA ASSAY > 70% Fe WITH LOW SILICA

**December 22<sup>ND</sup>, 2010, Melbourne:** The Directors of Pluton Resources Limited ("Pluton") (ASX:PLV) are pleased to announce that the drop tower test work results and assays from recently completed diamond drill hole 10DDH028 located at the Isthmus Region have been received. In addition, test results from the characterisation work completed on Yampi Member composites from the Hardstaff Peninsula have also been received.

### HIGHLIGHTS

#### Isthmus Region

- Drop tower tests have shown that the high grade mineralised sandstones produce a minimum lump : fine product split of 70:30.
- Impurities apart from silica remain universally low.

#### Hardstaff Peninsula

- Assaying of the Davis Tube concentrates from the characterisation test work return greater than 70% Fe and less than 2.5% silica.
- The Yampi Member magnetite liberates from the gangue at a coarse grind size of 75 microns.

### Metallurgical Testwork

#### Isthmus Region

Drill hole 10DDH028 (PQ diameter, end of hole 40.80m) was drilled at the Isthmus Region as a metallurgical hole to provide material to Amdel Mineral Laboratories in Perth, Western Australia to investigate the lump : fine potential of the high grade iron material.

Three composite samples were collected down hole, two representing the higher grade mineralised sandstones (Comp\_1 and Comp\_2) and a third sample (Comp\_3) representing the mineralised quartz conglomerate.

#### Pluton Resources Limited

Level 4, 468 St Kilda Rd Melbourne Vic 3004  
PO Box 255 Seddon West Victoria 3011  
Ph: (03) 9820 3802 • Fax: (03) 9867 8587  
ABN: 12 114 561 732



Drop tower test results have shown that the high grade mineralised sandstones (Comp\_1 and Comp\_2) will produce a minimum 70% lump and 30% fines product. The lump material is defined as 70% of the material being coarser than 6.3mm diameter and the fines material being defined as 30% of the material being finer than 6.3mm.

Assaying of the lump material from the mineralised sandstones (Comp\_1 and Comp\_2) have returned iron grades up to 60% Fe with impurity levels for all elements apart from silica remaining universally low. Assaying of the fines material returned iron grades in the vicinity of 58% Fe and similar levels of impurities.

Drop tower test results have initially shown that the iron mineralised quartz conglomerates (Comp\_3) did not produce a satisfactory lump product. However, test results for the corresponding fines fraction were encouraging and have returned iron grades in the vicinity of 56% Fe.

Additional test work on the three composite samples is now being investigated to further reduce the silica content.

The results from the drop tower test work including assays are given in the following table.

**Table 1: Drop Tower Test Work Results and Assays from Diamond Drill Hole 10DDH028, Isthmus Region, Irvine Island.**

Sample No	Drill Hole	Interval		Rock Type	Product	% Mass	%Fe	%SiO <sub>2</sub>	%Al <sub>2</sub> O <sub>3</sub>	%P	%S	LOI
		From (m)	To (m)									
Comp_1	10DDH028	0.00	14.60	Sandstone	Lump	70.05	60.27	12.3	0.20	0.01	0.01	1.04
					Fines	29.95	57.97	14.5	0.91	0.01	0.01	1.08
					Head	100	59.58	13.0	0.41	0.01	0.01	1.05
Comp_2	10DDH028	14.60	28.80	Sandstone	Lump	74.42	59.10	14.6	0.20	0.01	0.01	0.54
					Fines	25.58	57.40	16.6	0.57	0.01	0.01	0.39
					Head	100	58.66	15.1	0.30	0.01	0.01	0.50
Comp_3	10DDH028	28.80	40.00	Conglomerate	Lump	67.17	48.17	30.50	0.23	0.01	0.00	0.25
					Fines	32.83	56.22	18.25	0.55	0.02	0.00	0.40
					Head	100	50.81	26.48	0.34	0.01	0.00	0.30

### Hardstaff Peninsula

Composited ore sample material selected from the Yampi Member in drill holes ID-6A, ID-6B, ID-29 and ID-33 completed at the southern area of the Hardstaff Peninsula have been submitted to Ammtec Limited in Perth, Western Australia. The aim of the test work was to determine the sample preparation

and optimum grind characteristics for Davis Tube analysis that will be undertaken on all previously assayed drill core samples at the Hardstaff Peninsula.

Test results from the characterisation work completed on three composite samples from the Yampi Member at the Hardstaff Peninsula have now been received. Results show that the percentage iron content increases and is accompanied by a reduction in silica as the grind size decreases. The Yampi Member magnetite liberates from the gangue at a coarse grind size of 75 microns. The Davis Tube concentrate assays have been shown to contain greater than 70% Fe and less than 2.5% silica.

The assay results from the three composites are given in the following table:

**Table 2: Hardstaff Peninsula, Yampi Member Composites Weight Recovery, % Fe and % SiO<sub>2</sub> at 75 Micron Grind Size**

	Wt. Rec	%Fe	%SiO <sub>2</sub>
Composite 1	45.0	70.2	2.5
Composite 2	57.6	70.8	1.7
Composite 3	59.4	71.0	1.5

Drill hole 10DDH039 (PQ diameter, end of hole 132.40m) was drilled at the south of the Hardstaff Peninsula as a metallurgical hole in late October 2010 to provide material for Ammetec Limited in Perth, Western Australia to undertake additional metallurgical test work.

Tests to be conducted on the core include unconfined compressive strength (UCS), crushing work index (CWI), bond work index (BWI), semi-autogenous grind (SAG) mill competency and other tests as deemed appropriate for process design purposes.

The drill site was selected due to the higher grade, near surface development of the Yampi Member and Wonganin Sandstone in the south of the Hardstaff Peninsula.

### Comments

Managing Director Tony Schoer said: "It is particularly encouraging to receive the results from the lump:fine test work from the Isthmus which confirms our belief that we could produce a marketable product with the only impurity of any significance being silica. It is also important to note that a lump product would normally command a higher price on market than a fines product. We continue to be pleased with the results of our intersections to date from the area and we look forward to releasing our maiden resource for the Isthmus.

In addition, the high iron and low silica values returned from the assays of the Yampi Member Davis Tube concentrates indicate that we may be able to produce a concentrate of exceptionally high quality that would command an additional premium on market."

For more information contact Managing Director, Mr. Tony Schoer, on 0411 232 711 or [tschoer@plutonresources.com](mailto:tschoer@plutonresources.com).

Tony Schoer  
Managing Director and Chief Executive Officer

*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'*

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**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](http://www.plutonresources.com).