

## IRVINE ISLAND

### 3mm DRY MAGNETIC SEPARATION TESTWORK RESULTS

**November 3<sup>rd</sup>, 2011, Melbourne:** The Directors of Pluton Resources Limited ("Pluton") (ASX:PLV) are pleased to advise that positive results have been received from additional dry magnetic separation test work completed at a coarse 3mm grind size on drill core composite samples taken from the Hardstaff Peninsula and Isthmus Region.

The production of a +40% iron pre-concentrate at a 3mm grind size is expected to offer a significant advantage by reducing capital and operating costs, as well as processing benefits.

#### HIGHLIGHTS

- Results from a total of nineteen (19) composite drill core samples from the Wonganin Sandstone at the Hardstaff Peninsula confirm the head Fe grade required to produce a +40% pre-concentrate is 28% Fe at 3mm grind size. The mass recovery is 52.7%.
- Results from a total of seven (7) composite drill core samples from the Yampi Member at the Hardstaff Peninsula indicate the head Fe grade required to produce a +40% pre-concentrate is 26% Fe at 3mm grind size.
- Results from a total of twelve (12) composite drill core samples from the Yampi Member at the Isthmus Region indicate the head Fe grade required to produce a +40% pre-concentrate is 34% Fe at 3mm grind size.
- The test work results, updated capital and operating costs will be incorporated into the next Ore Reserve update and Stage 2 project valuation.

#### Comments

Managing Director Tony Schoer said: "The results of the dry magnetic separation test work at a 3mm grind size are significant. They demonstrate that Pluton can produce a pre-concentrate with grades above +40% iron at coarser grind sizes. This has the potential to offer significant cost benefits to the Project in terms of reduced capital and operating expenditure given that grinding to 1mm is not required".

"Also encouraging from this latest round of test results is that the mass recovery for the iron mineralisation in the Wonganin Sandstone averages 52.7%. This compares favorably with the 50% mass recovery value that was used in the economic valuation studies in the Pre-Feasibility Study, announced on 6<sup>th</sup> June 2011".

"Based on these results, it is our intention to review our process and materials handling designs that were compiled during our Pre-Feasibility Study, in conjunction with our Chinese partners Timeone Holdings Limited. We will therefore incorporate any capital and operating improvements into our current Stage 2 valuation studies and Ore Reserve update for the Project".

#### 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



GOLDEN GECKO  
Awards for Environmental Excellence  
2010 AWARD RECIPIENT

## Metallurgical Test Work Objectives

Pluton's Pre-Feasibility Study selected the production of a dry pre-concentrate on Irvine Island with final third-party off-island processing to a high grade concentrate as the preferred case for development of the Irvine Island project. This was also considered to offer the best environmental solution at Irvine Island.

Dry magnetic separation tests were previously conducted at 1mm, 2mm and 3mm grind sizes on a representative sample of the Wonganin Sandstone (PLV\_8) collected from drill hole 10DDH039 located at the southern end of the Hardstaff Peninsula (Figure 1). The test work results confirmed that the sample could upgrade to a +40% pre-concentrate at a coarser grind size of 2mm and 3mm.

Based on this positive result, Pluton commenced 3mm bench scale variability testing by dry magnetic separation methods on Wonganin Sandstone and Yampi Member drill core composites samples from both the Hardstaff Peninsula and the Isthmus Region.

The test work samples were selected at varying drill hole depths and at a range of iron (Fe) and iron oxide (FeO) grades (including low grade material) to examine the resultant final iron concentrate and impurity grades and mass recoveries.

This information is to be incorporated into the next Ore Reserve determination and Stage 2 valuation studies for the Irvine Island Project.

This announcement details the procedure and test work results for the samples submitted for variability test work at a 3mm grind size by dry magnetic separation methods.

## Test Work Samples

Variability testing was completed on a total of thirty-eight (38) diamond drill core composite samples collected from the Irvine Island iron ore deposit as follows:

- Six (6) composite samples collected from within the Wonganin Sandstone at the northern area of the Hardstaff Peninsula.
- Thirteen (13) composite samples collected from within the Wonganin Sandstone at the southern area of the Hardstaff Peninsula.
- Seven (7) composite samples collected from within the Yampi Member at the Hardstaff Peninsula at both the northern and southern areas of the Hardstaff Peninsula.
- Twelve (12) composite samples collected from within the Yampi Member at the Isthmus Region at both the eastern and western areas of the deposit.

Details of the drill holes sampled including depth from, depth to and sample weights collected are given in the following Tables 1 to 4.

Hole ID	Sample ID	Depth from (m)	Depth to (m)	Weight (kg)
10DDH021	VAR01	37	47	74.5
10DDH022	VAR02	20	30	69
10DDH025	VAR03	113.56	122.16	32
10DDH023	VAR04	152.34	161	37
10DDH018	VAR05	105	115	32.5
10DDH041	VAR06	129	139	33

**Table 1: Wonganin Sandstone Drill Composites – Northern Hardstaff Peninsula.**

Hole ID	Sample ID	Depth from (m)	Depth to (m)	Weight (kg)
10DDH020	VAR07	9	19	68
ID6A	VAR08	29	39	73
ID12A	VAR09	44	54	35
10DDH045	VAR10	63.8	74.3	32.5
11DDH053	VAR11	126	135.05	37
ID12B	VAR12	74	84	37
10DDH050	VAR13	11.5	21	70.5
11DDH058	VAR14	36	43.92	56.5
ID16B	VAR15	81	91	36
ID31	VAR16	51	61	38.5
ID16A	VAR17	160	170	41.5
ID6B	VAR18	113	121	31.5
10DDH048	VAR19	13.8	22	57

**Table 2: Wonganin Sandstone Drill Composites – Southern Hardstaff Peninsula.**

Hole ID	Sample ID	Depth from (m)	Depth to (m)	Weight (kg)
ID31	VAR20	147	157	32.5
10DDH020	VAR21	230	239	36.5
ID12A	VAR22	231	242	47
10DDH048	VAR23	64	73	38.5
ID16B	VAR24	206	216	42.5
10DDH048	VAR25	75.51	84.84	47.5
ID16A	VAR26	253	264	44

**Table 3: Yampi Member Drill Composites – Hardstaff Peninsula.**

Hole ID	Sample ID	Depth from (m)	Depth to (m)	Weight (kg)
11DDH074	VAR28	5	15.1	57
10DDH031	VAR29	94	106.65	36
11DDH071	VAR30	49	62	86.5
10DDH046	VAR31	122	132.3	36
11DDH072	VAR32	12	22	73
11DDH081	VAR33	36	48	67.5
10DDH035	VAR34	60.17	71.11	83.5
11DDH065	VAR35	50.15	60	81.5
11DDH057	VAR36	47	56.63	74
10DDH049	VAR37	103.66	114	48.5
11DDH071	VAR38	34.9	46.2	99
11DDH057	VAR39	6	16.1	84

**Table 4: Yampi Member Drill Composites – Isthmus Region.**

All samples were crushed to 3mm with one-quarter (¼) of the material further crushed to simulate High Pressure Grinding Roll (HPGR) product distributions. The 3mm material was fed to a dry Low Intensity Magnetic Separation (LIMS) machine set at 1000 gauss which collected a magnetic concentrate with the tails being sent to a dry Rare Earth Magnetic Separation (REMS) machine set at 6000 gauss. This collected a magnetic concentrate, a middlings and a tails. All streams were assayed.

Material was weighed initially and all products were weighed, with the difference being dust losses. Overall dust losses made up approximately 3% of the feed.

The LIMS magnetic concentrate and REMS magnetic concentrate were combined mathematically to give the final product weight recovery and %Fe grade. The REMS middling fraction did not achieve sufficient grade to be included in the calculations.

## Results

The results from the dry magnetic separation test work at a 3mm grind size is summarised in Figure 1.

The graph plots the head iron (Fe%) grade vs concentrate iron (Fe%) for the drill core composite samples from the Wonganin Sandstone (blue) and Yampi Member (magenta) from the Hardstaff Peninsula and the Yampi Member (red) from the Isthmus Region.

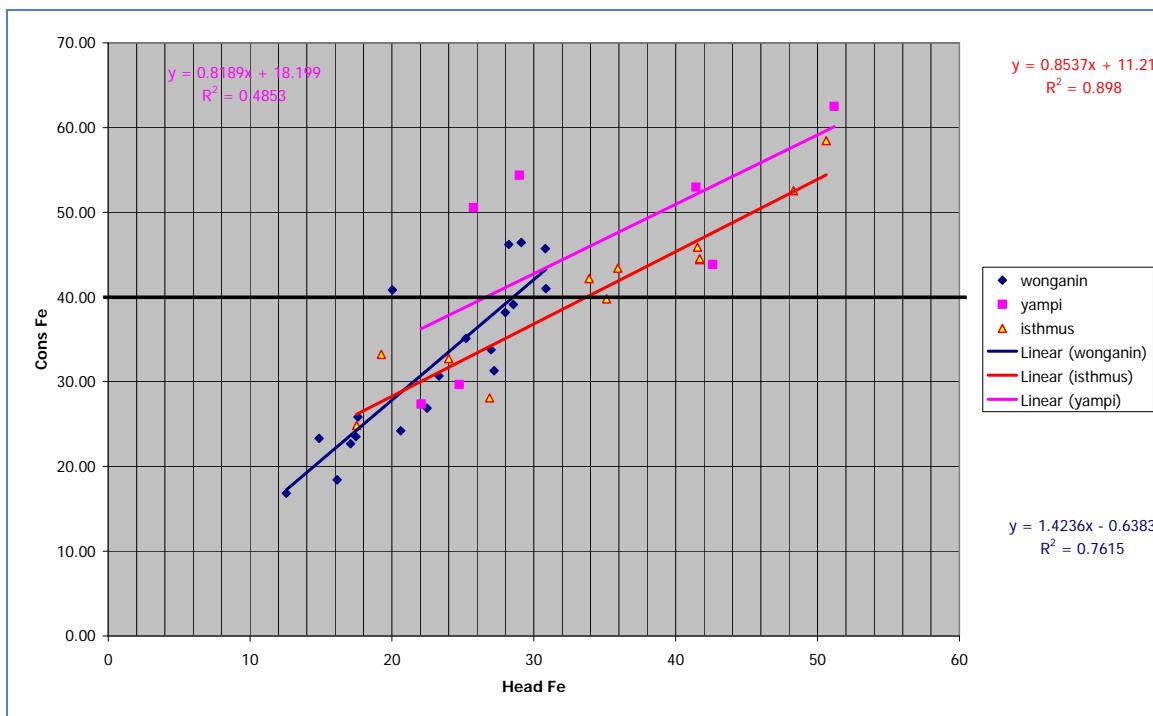


Figure 1 : Head Fe vs Concentrate Fe Recovery at 3mm Grind Size.

A total of nineteen (19) samples were collected from the Wonganin Sandstone at the Hardstaff Peninsula. Six (6) were collected from the northern area and a total of thirteen (13) were collected from the southern area. Head iron (Fe%) ranged from 12.5 Fe% to 30.8 Fe% and iron oxide (FeO) ranged from 0.0 FeO% to 8.7 FeO%.

The graph indicates that for the **Wonganin Sandstone**, a head iron (Fe%) grade of **28%** is required to produce a **+40% iron pre-concentrate**.

A total of seven (7) samples were collected from the Yampi Member at the Hardstaff Peninsula. Head iron (Fe%) ranged from 22.0 Fe% to 51.2 Fe% and iron oxide (FeO) ranged from 0.5 FeO% to 12.4 FeO%.

The graph indicates that for the Yampi Member at the Hardstaff Peninsula, a head iron (Fe%) grade of **26%** is required to produce a **+40% iron pre-concentrate**.

A total of twelve (12) samples were collected from the Yampi Member at the Isthmus Region. Head iron (Fe%) ranged from 17.5 Fe% to 50.6 Fe% and iron oxide (FeO) ranged from 0.7 FeO% to 10.3 FeO%.

The graph indicates that for the Yampi Member at the Isthmus Region, a head iron (Fe%) grade of **34%** is required to produce a **+40% iron pre-concentrate**.

The location of the drill holes used during the test work program is given in Figures 2 and 3 respectively.

*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'*

---

**For more information please contact:**

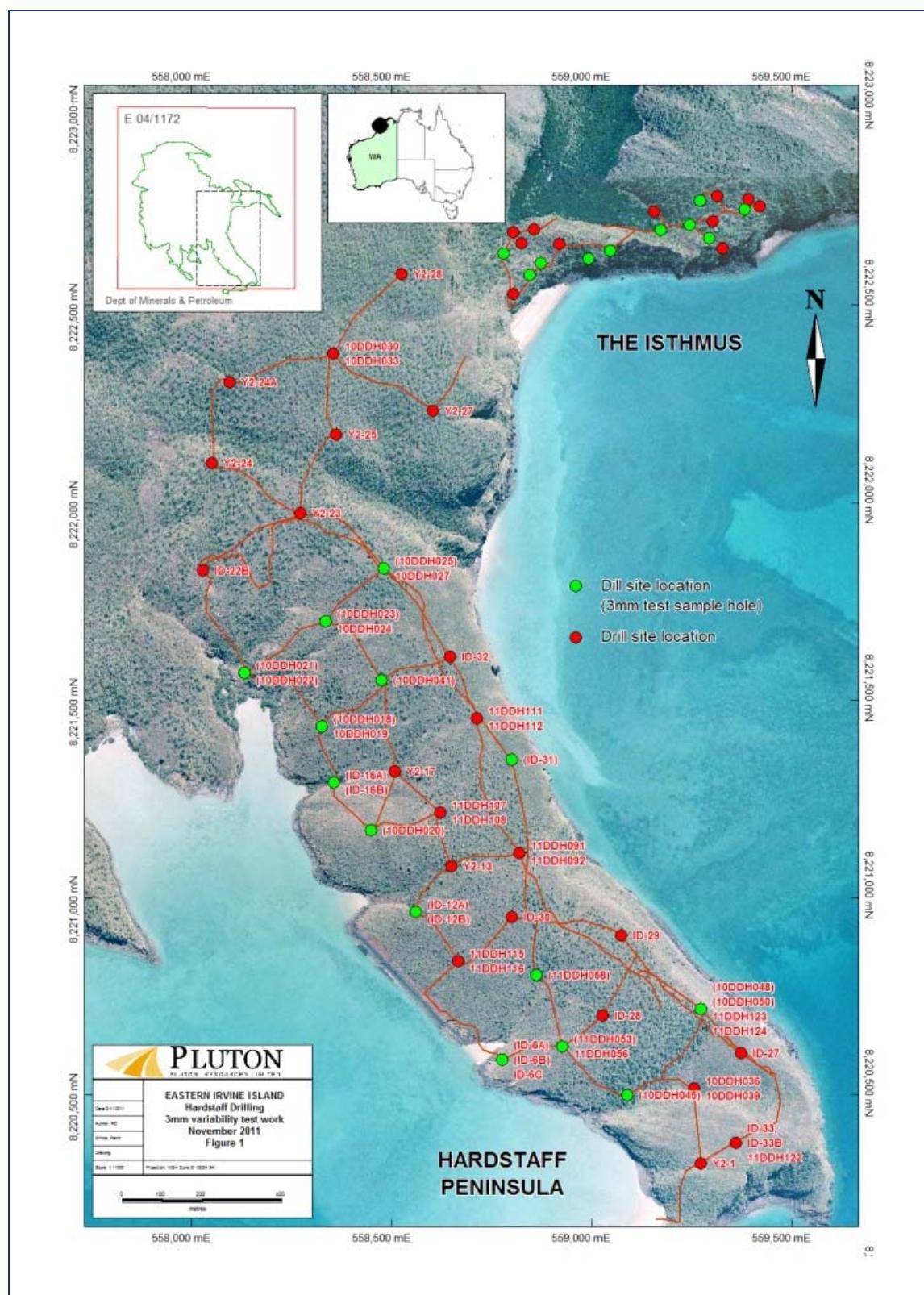
**Investors and Analysts**

Tony Schoer, Managing Director      0411 232 711

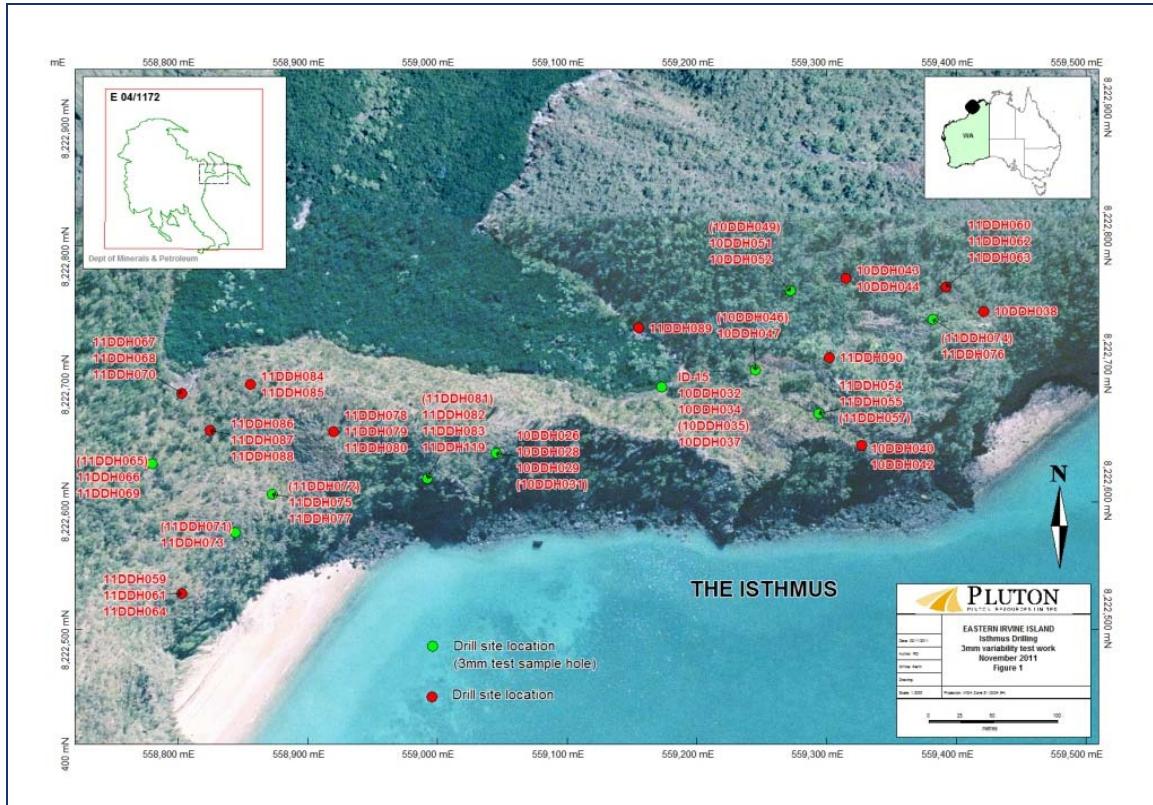
---

**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).

---



**Figure 2: Drill Holes Used for Metallurgical Testwork, Hardstaff Peninsula, Irvine Island Project, Western Australia.**



**Figure 3: Drill Holes Used for Metallurgical Testwork, Isthmus Region, Irvine Island Project, Western Australia.**