

QUARTERLY ACTIVITIES REPORT – MARCH 2010

Highlights

- Latest drilling visuals confirm thickening of the Yampi Member and higher grades.
- Flotation testing produces high grade concentrate from low grade feed.
- A second drill rig to be mobilised to Irvine.
- Management in discussions on the commercialisation of the Universal Drilling Platform (UDP).
- Drilling at Cethana expected to commence in May.

Irvine Island – Western Australia (E04/1172) – Pluton 100%

Drilling on the 8,000+ metre diamond hole program continued for the March quarter. For the quarter, and up until time of writing, seven holes have been completed and drilling of the eighth hole is close to completion. The following table summarises the work program for the quarter:

Hole Number	Site Number	Metres Drilled	Status
ID33	2	160	Assays Announced
ID22B	3	360	No Mineralisation
ID22W	3	138	Water Bore
ID12A	4	313	Assays Announced
ID12B	4	310	Assays Pending
ID6B	5	247	Assays Pending
ID6C	5	283	Cutting in Progress
ID6A	5	275	Drilling in Progress
Total		2,086	

The rate of drilling has been pleasing given the program is operating during the wet season. Lost drilling time as a result of cyclone and storm activity has been as expected.

With the end of the wet season approaching, the rate of drilling is expected to increase. A second LF70 series diamond core rig will be mobilised to Irvine Island during the dry season to further increase the rate of drilling.

Drilling at sites 4 and 5 are outside the envelope of the current JORC Inferred Resource of 54Mt from the Yampi Member alone. These holes are critical in meeting Pluton's targeted resource increase to >100Mt for Hardstaff Peninsula.

Assay results for hole ID12A (site 4) released to ASX on the 22nd April, and visual examination of the core from ID12B (site 4), ID6B (site 5) and ID6C (site 5) have provided management with great confidence that the <100Mt target will be met.

In addition, visual examination of the core from ID6B (as announced to ASX on the 16th April) confirms management's belief that the Yampi Member is thickening and grades are improving as we move west along Hardstaff Peninsula. Hole ID6B intersected 60 metres of iron mineralisation within the Yampi Member, with 24 metres appearing to contain higher grade ore that potentially may be suitable for direct shipping. Assay results for this hole are pending.

Upon receipt of assay results from holes ID12B, ID6B and ID6C, it is management's intention to calculate an updated JORC compliant resource. At this stage, and wholly dependant on the timely receipt of assay results, the resource model will be updated by the end of May 2010. Further updates to the resource model will be made as drilling progresses.

At time of writing, drilling on hole ID6A is within the Yampi Member. It is expected that the rig will be moved to site 6 over the next few days.

On the 5th February 2010, Pluton announced positive flotation test results from low-grade feed. Testing was performed by CSIRO's iron ore unit in Brisbane.

Flotation proved effective in rejecting silica in both the lower grade parts of the Yampi Member and the Wonganin Sandstones.

Flotation of material generated from the lower grade portions of the Yampi Member by magnetic separation produced a final concentrate assaying 66.24% iron (Fe) and 3.21% silica (SiO₂), with an iron recovery of about 81%.

CSIRO tests on Wonganin Sandstone samples after magnetic separation produced a final concentrate assaying 65.62% iron (Fe) and 2.49% silica (SiO₂), with an iron recovery of 83.7%.

Importantly, high grade concentrates were produced from the Wonganin Sandstones irrespective of initial feed grade.

Up until the receipt of the flotation test results, the Wonganin Sandstones were considered to be waste. However, based on magnetic separation and flotation test results, the sandstones are now considered to be a legitimate exploration target.

It is expected that a separate resource for the Wonganin Sandstones, in addition to the Yampi Member, will be calculated and declared as drilling continues. A resource from the sandstones will be over and above the targeted tonnage of >100Mt for Hardstaff Peninsula.

Pluton will benefit from processing tonnage previously thought to be overburden. This also means that the final stripping ratio decreases and hence adds further value to the Yampi Member.



Iron concentrate produced from Wonganin Sandstones, Irvine Island.

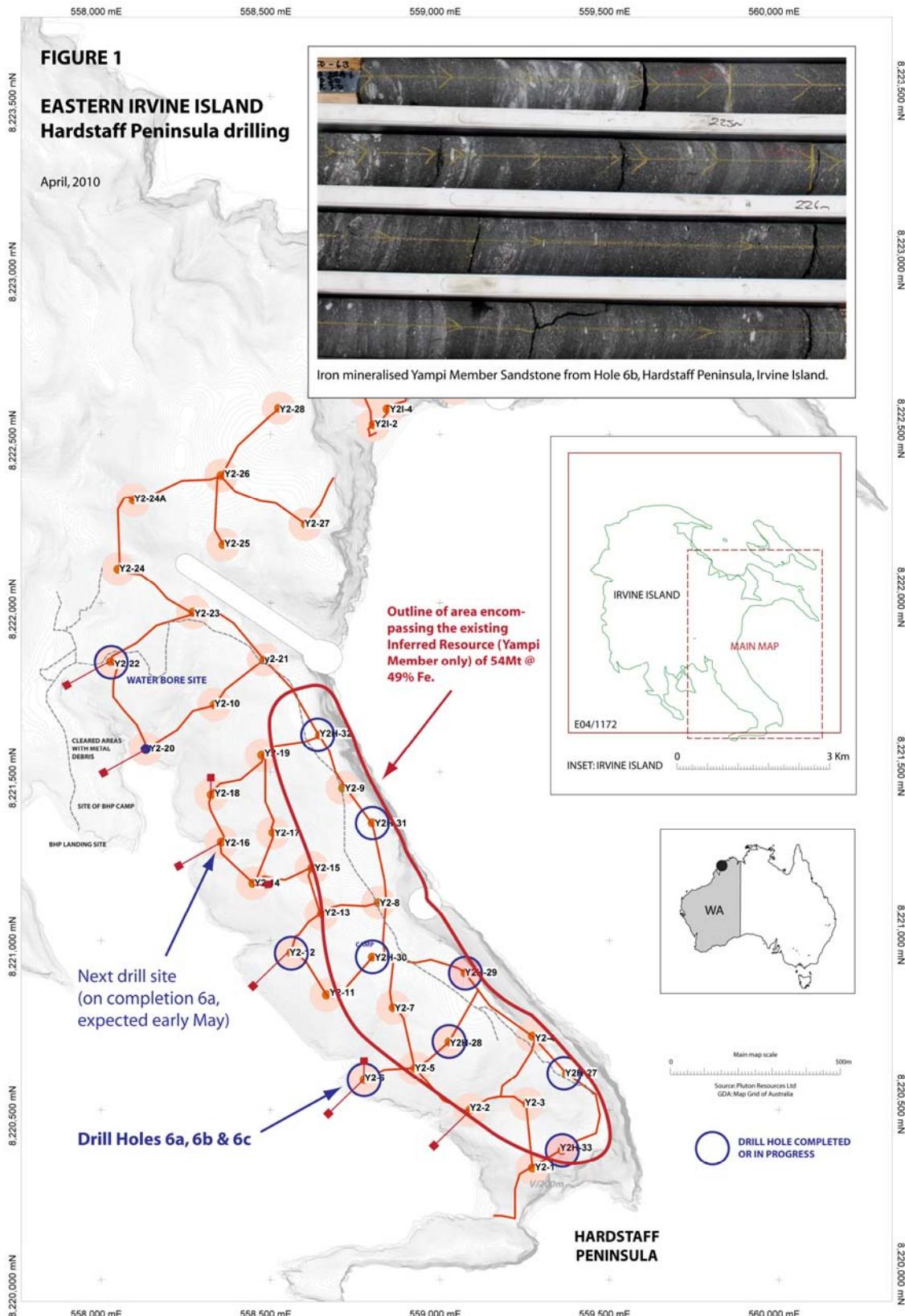


Figure 1. Drilling plan of Hardstaff Peninsula, showing extension of drilling and iron mineralisation outside of the area of the current inferred Resource for the Yampi Member.

Cethana – Tasmania (EL29/2006) – Pluton earning 60%

Pluton will be commencing a one to two diamond drill hole program (second hole dependant on visual results from the first hole) in the first week of May.

The program targets the large high-magnetic geophysical anomaly identified in March 2008.

Botanical clearance of the drill sites has been submitted to Mineral Resources Tasmania, and final approval for the work program is imminent.

A tracked diamond drill rig has been secured and will be mobilised early May with drilling to commence shortly thereafter.

Corporate Activity

Pluton management are currently assessing the most appropriate way to commercialise the patented Universal Drilling Platform (UDP).

Discussions have been held with various parties and there appears to be considerable interest in its potential. Discussions are on-going.

Funding

At the end of March 2010 Pluton had \$12.69 million cash on hand. In addition, a GST refund of \$1.3 million resulting from the purchase of the additional 50% of Irvine Island is due to be received in May.

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

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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 prospective for iron ore, with the 100% owned Irvine Island iron ore project progressing to the resource definition stage. 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.