

ASX ANNOUNCEMENT

27 April 2010



2010 Drilling Commences at Flinders' Pilbara Iron Ore Project

Pilbara Iron Ore Project (PIOP) – Western Australia

highlights

- 2010 drilling campaign commenced
- Drilling strategy to increase size and quality of resource base by testing remaining undrilled channel and bedrock mineralised areas
- Minimum of 700 reverse circulation (RC) drillholes planned for 35,000m – Heritage and Department of Mines approvals obtained



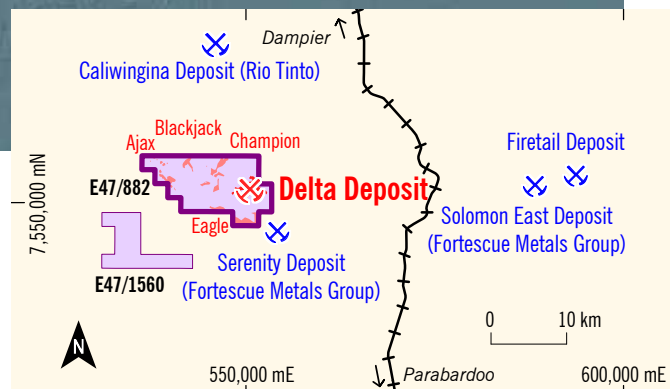
Tenements E47/882 and E47/1560

Flinders Mines Limited (FMS) 100%

2010 DRILLING STRATEGY

Flinders Mines Limited (ASX: FMS) is pleased to announce that its 2010 drilling campaign commenced on Friday 23rd April at the Company's Pilbara Iron Ore Project (PIOP) in Western Australia (Figure 1).

As previously reported, the resource currently considered in the Prefeasibility Study (PFS) being undertaken by Worley Parsons, is at Flinders' Delta deposit only. This 2010 drilling program now under way is designed to increase the tonnage of higher quality zones for the PFS by extending Indicated category resources outside of the Delta deposit. The new campaign is testing both open intersections and higher grades from existing drilling or areas completely untested by drilling.



Flinders Mines Iron Ore Deposits

- Indicated Resource
- Inferred Resource

Other companies

- Iron ore deposit
- Rio Tinto Railway

Figure 1 Regional location of Flinders Mines' Pilbara tenements in the Central Hamersley CID Province.

A first phase will initially drill these areas to Inferred status and establish if they contain higher quality material. The areas which do will then be drilled to a more detailed density to increase the higher quality Indicated Resource tonnage.

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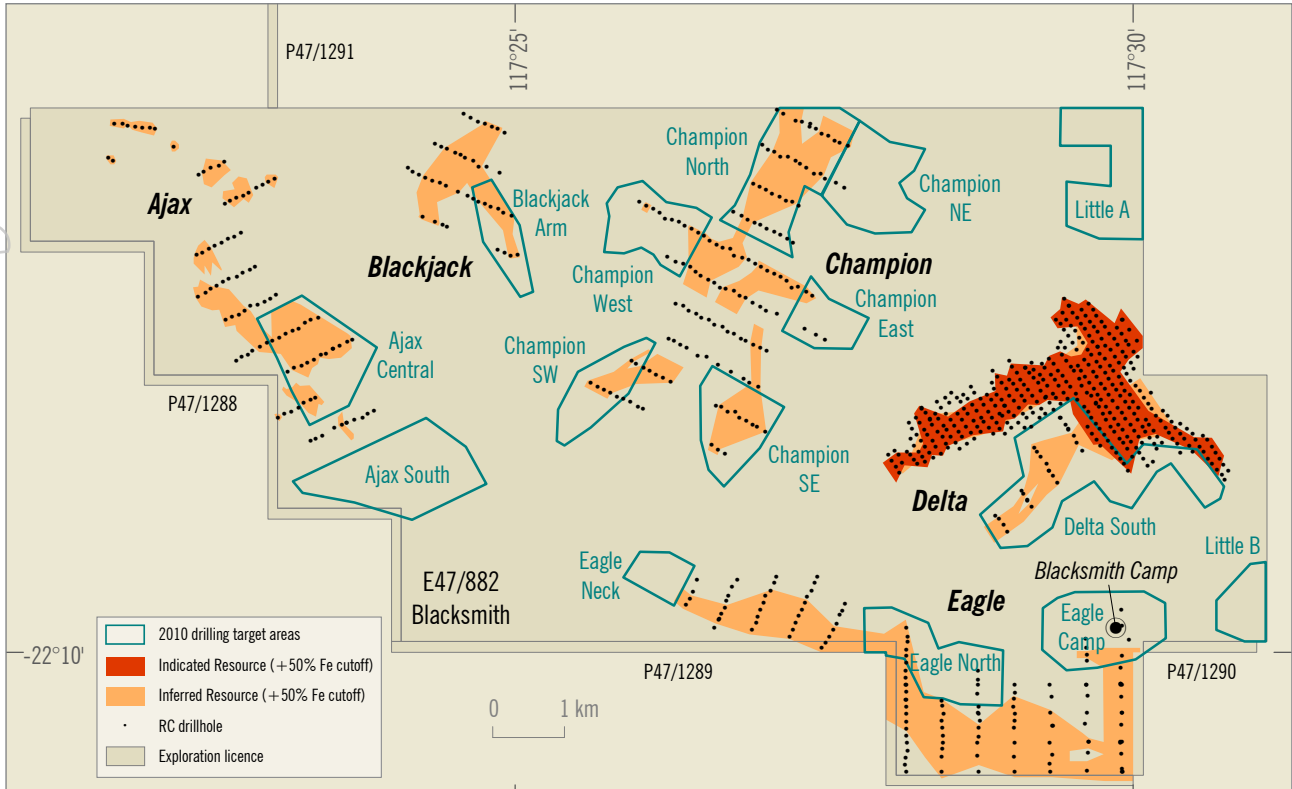


Figure 2 Areas to be drill tested during the 2010 campaign, and the location of existing RC drillholes, at the Pilbara Iron Ore Project.

PROGRAM DETAILS

FMS has secured two RC drill rigs from McKay Drilling and a third RC rig from Boart Longyear. Drilling will commence on the Delta South area to complete the Indicated Resource at Delta. A minimum of 700 drillholes has been planned for 35,000m, although the final number will depend on initial results and the number of areas requiring Indicated status drilling. Heritage surveys and Department of Mines & Petroleum approvals have already been obtained for these planned holes.

PROPOSED DRILLING AREAS

Figure 2 illustrates the extensive areas which are planned to be tested during the 2010 campaign. It also shows the location of existing RC drillholes and the current Indicated and Inferred resources. The figure highlights the paucity of drilling data within many of the proposed drilling areas. Areas for testing have been chosen because they have open mineralisation, nearby grades of interest or are completely untested.

The work currently being carried out under the PFS has highlighted specific high-priority mineralised zones which may provide a DSO product or a saleable product through minor processing. The specific mineralisation targeted is the Channel Iron Deposit (CID), at the base of the channel, and the usually underlying Bedded Iron Deposit (BID) material.

HYPOGENE HEMATITE

The search for hypogene hematite (or hematite BID mineralisation) is based on exploration concepts which require further geological interpretation to be fully developed. Drilling commenced late in 2009 with initial experimental drilling of several geological structures for hypogene hematite. BID hematite mineralisation was intersected but not of ore grade. Geological mapping has confirmed that the mineralisation extends outside the channel areas and its location appears to be controlled by geological structures. Further mapping and interpretation from channel drilling is necessary to provide several zones for evaluation later in 2010.

DR KEVIN WILLS
MANAGING DIRECTOR

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For further information please contact:

Kevin Wills on 08 8132 7950 or 0419 850 997
Email: kwills@flindersmines.com

Duncan Gordon - Investor relations on
08 8232 8800 or 0404 006 444
Email: dgordon@adelaideequity.com.au