

# ASX ANNOUNCEMENT

1 July 2010



## Drilling Update from Flinders Mines' flagship Pilbara Iron Ore Project, WA

Pilbara Iron Ore Project (PIOP), Western Australia

### highlights

- New significant ore-grade intersections on edges of resource areas are expected to lead to an increase in Indicated and Inferred Resources
- Excellent assay results also mean increases of higher-quality resources
- Results likely to lead to higher annual throughput or longer-life mining options
- First phase of drilling (493 holes for 21,705 metres) completed under budget and three weeks ahead of schedule



Tenements E47/882 (Blacksmith) and E47/1560 (Anvil)

Flinders Mines Limited (FMS) 100%

#### SIGNIFICANCE OF RESULTS

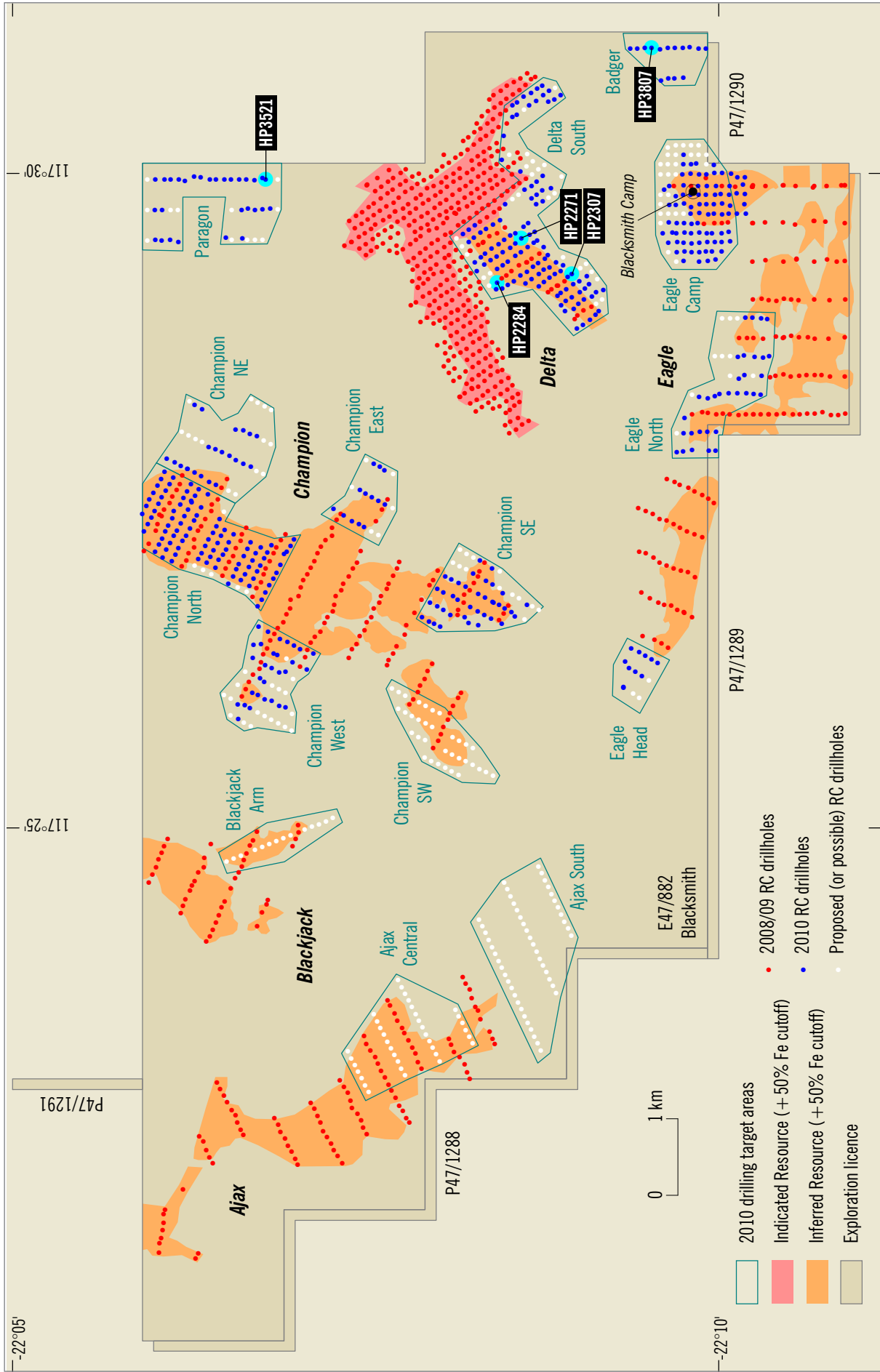
New ore-grade intersections have been obtained on the margins of eight resource areas and in two previously undrilled areas (Figure 1). These intersections will lead to larger surface areas of mineralisation which the Company expects will ultimately lead to increased resources. The results at Delta South and Champion North will lead to increases in the Indicated Resource category. The new intersections were drilled in areas where higher-quality mineralisation was suspected — and results confirm this. Therefore, the additional resources are also likely to be of higher-quality resources. The overall implication is that the current ongoing Prefeasibility Study will be able to consider either increases in proposed mine life or annual throughputs above 15 Mtpa — or both.

#### DRILLING STRATEGY

The 2010 Flinders Mines Limited (ASX: FMS, Flinders) drilling strategy at its flagship Pilbara Iron Ore Project in Western Australia aims to extend the current resource base to provide for larger tonnage options in the pre-feasibility study.

The latest results are from the just-completed first phase of an extensive 2010 drilling program on Flinders Mines' Pilbara Iron Ore Project which already has a global JORC compliant Indicated and Inferred Resource of 658.3 million tonnes @ 55.4% Fe, including a 347.7 Mt at 57.4% Fe higher-quality Indicated and Inferred Resource.

The new drilling is specifically targeting higher quality iron mineralisation in partially tested and untested channel areas outside the Delta deposit. The strategy also aims to convert additional Inferred resource to Indicated status.



**Figure 1** Showing the location of proposed and completed RC drillholes from the Phase 1 2010 campaign and the location of pre-2010 drillholes, Pilbara Iron Ore Project.

Table 1: Pilbara Iron Ore Project significant reverse circulation drilling intersections from Phase 1, 2010.

| Hole   | Area        | From | To | Interval | Fe   | CaFe* | SiO <sub>2</sub> | Al <sub>2</sub> O <sub>3</sub> | P    | LOI  |
|--------|-------------|------|----|----------|------|-------|------------------|--------------------------------|------|------|
| HP2250 | Delta South | 30   | 42 | 12       | 57.5 | 59.6  | 7.7              | 5.4                            | 0.08 | 3.4  |
| incl   |             | 32   | 40 | 8        | 59.4 | 61.1  | 5.9              | 5.3                            | 0.08 | 2.8  |
| HP2252 | Delta South | 30   | 40 | 10       | 61.4 | 63.4  | 5.3              | 3.0                            | 0.07 | 3.1  |
| HP2258 | Delta South | 22   | 36 | 14       | 59.5 | 64.9  | 2.9              | 3.1                            | 0.12 | 8.3  |
| HP2267 | Delta South | 26   | 36 | 10       | 58.0 | 63.3  | 5.7              | 2.3                            | 0.12 | 8.4  |
| HP2270 | Delta South | 18   | 36 | 18       | 58.2 | 60.5  | 7.3              | 4.8                            | 0.08 | 3.7  |
| HP2271 | Delta South | 6    | 36 | 30       | 59.2 | 65.3  | 2.5              | 2.8                            | 0.12 | 9.3  |
| HP2278 | Delta South | 20   | 42 | 22       | 57.2 | 59.3  | 8.6              | 5.1                            | 0.05 | 3.5  |
| HP2284 | Delta South | 2    | 44 | 42       | 58.8 | 65.7  | 2.4              | 2.3                            | 0.13 | 10.4 |
| HP2292 | Delta South | 14   | 30 | 16       | 59.1 | 62.6  | 6.6              | 2.6                            | 0.08 | 5.6  |
| HP2293 | Delta South | 4    | 22 | 18       | 57.5 | 63.7  | 5.0              | 2.4                            | 0.08 | 9.7  |
| HP2298 | Delta South | 6    | 40 | 34       | 58.3 | 61.3  | 7.2              | 3.7                            | 0.08 | 4.8  |
| incl   |             | 12   | 40 | 28       | 59.4 | 62.8  | 5.4              | 3.4                            | 0.08 | 5.4  |
| HP2301 | Delta South | 8    | 20 | 12       | 58.0 | 62.6  | 6.0              | 2.8                            | 0.07 | 7.3  |
| HP2302 | Delta South | 12   | 40 | 28       | 56.9 | 59.9  | 7.8              | 4.9                            | 0.08 | 4.9  |
| incl   |             | 24   | 40 | 16       | 59.6 | 63.8  | 4.2              | 3.2                            | 0.11 | 6.7  |
| HP2303 | Delta South | 8    | 38 | 30       | 59.6 | 62.3  | 5.8              | 3.9                            | 0.08 | 4.4  |
| incl   |             | 16   | 30 | 14       | 62.4 | 63.7  | 4.0              | 4.0                            | 0.05 | 2.1  |
| HP2304 | Delta South | 6    | 22 | 16       | 60.2 | 63.5  | 5.0              | 3.0                            | 0.07 | 5.1  |
| HP2306 | Delta South | 6    | 30 | 24       | 59.8 | 63.3  | 5.1              | 3.0                            | 0.07 | 5.5  |
| incl   |             | 10   | 22 | 12       | 62.4 | 64.5  | 3.9              | 2.6                            | 0.06 | 3.3  |
| HP2307 | Delta South | 0    | 24 | 24       | 58.3 | 63.6  | 6.1              | 1.4                            | 0.08 | 8.5  |
| HP2311 | Delta South | 8    | 24 | 16       | 60.8 | 62.3  | 6.4              | 3.3                            | 0.05 | 2.4  |
| HP2316 | Delta South | 6    | 34 | 28       | 61.8 | 62.8  | 6.0              | 3.1                            | 0.05 | 1.7  |
| HP2317 | Delta South | 20   | 28 | 8        | 60.4 | 61.3  | 6.6              | 4.1                            | 0.06 | 1.5  |
| HP2323 | Delta South | 8    | 26 | 18       | 60.6 | 61.8  | 7.7              | 2.8                            | 0.06 | 1.8  |
| HP2330 | Delta South | 0    | 10 | 10       | 59.7 | 61.1  | 6.1              | 4.2                            | 0.06 | 2.4  |
| HP2336 | Delta South | 0    | 22 | 22       | 58.7 | 63.1  | 4.3              | 3.7                            | 0.12 | 7.0  |
| incl   |             | 4    | 12 | 8        | 63.9 | 66.6  | 1.5              | 1.9                            | 0.11 | 4.1  |
| HP2340 | Delta South | 8    | 24 | 16       | 58.5 | 64.5  | 3.1              | 3.1                            | 0.11 | 9.3  |
| HP2341 | Delta South | 2    | 14 | 12       | 54.8 | 61.2  | 5.8              | 4.5                            | 0.13 | 10.5 |
| HP4000 | Eagle Camp  | 8    | 34 | 26       | 56.7 | 59.6  | 9.3              | 3.8                            | 0.07 | 4.8  |
| incl   |             | 16   | 30 | 14       | 59.1 | 62.6  | 5.3              | 3.7                            | 0.07 | 5.6  |
| HP3500 | Paragon     | 3    | 29 | 26       | 59.4 | 64.4  | 4.3              | 2.1                            | 0.08 | 7.7  |
| HP3501 | Paragon     | 6    | 24 | 18       | 55.8 | 58.5  | 9.7              | 5.0                            | 0.06 | 4.7  |
| incl   |             | 10   | 20 | 10       | 58.6 | 60.8  | 6.7              | 4.9                            | 0.06 | 3.6  |
| HP3503 | Paragon     | 20   | 40 | 20       | 58.0 | 62.4  | 6.0              | 3.0                            | 0.12 | 7.0  |
| HP3512 | Paragon     | 12   | 24 | 12       | 56.2 | 62.1  | 7.5              | 2.0                            | 0.09 | 9.6  |
| HP3516 | Paragon     | 20   | 50 | 30       | 57.9 | 61.6  | 6.6              | 3.8                            | 0.08 | 5.9  |
| HP3521 | Paragon     | 0    | 34 | 34       | 60.7 | 65.6  | 2.6              | 2.3                            | 0.10 | 7.5  |
| HP3522 | Paragon     | 0    | 32 | 32       | 58.5 | 60.9  | 6.6              | 3.9                            | 0.08 | 4.0  |
| incl   |             | 8    | 24 | 16       | 62.7 | 64.7  | 2.3              | 2.7                            | 0.09 | 3.0  |
| HP3802 | Badger      | 10   | 40 | 30       | 58.0 | 61.1  | 7.4              | 3.4                            | 0.09 | 5.0  |
| HP3803 | Badger      | 16   | 32 | 16       | 57.4 | 63.5  | 4.1              | 3.5                            | 0.10 | 9.6  |
| HP3807 | Badger      | 4    | 28 | 24       | 58.9 | 64.7  | 3.8              | 2.3                            | 0.11 | 9.0  |
| HP3808 | Badger      | 12   | 32 | 20       | 57.4 | 63.9  | 3.9              | 3.0                            | 0.14 | 10.2 |

\* Calcined iron, estimated on a LOI-free basis, CaFe = Fe%/(100 - LOI).

## DRILLING ACTIVITY

Up to three reverse circulation (RC) drill rigs have been operating at the project since April 2010 and have just completed the first phase program. A total of 493 holes have been completed for 21,705m (Figure 1). Drilling has been completed at Delta South, two new areas on the eastern margin of the tenement and areas within both Champion and Eagle. All drilling has ceased and will recommence in the third quarter of 2010. Assays have been received for a total of 156 drillholes and significant intersections are listed in Table 1.

## DRILLING RESULTS

### Delta

At Delta South, good continuity of mineralisation has been identified and, from previous experience, Flinders expect a very good conversion of Inferred resource to Indicated. Some thick, high-grade intersections have been made outside the current resource boundary; including HP2284 with 42m @ 58.8% Fe (65.7% calcined), HP2307 with 24m @ 58.3% Fe (63.6% calcined) and HP2271 with 30m @ 59.2% Fe (65.3% calcined) (shown on Figure 1). Mineralisation remains open in places, particularly the Bedded Iron Deposit (BID) mineralisation, and this will require further drillholes.

### Paragon and Badger

At Paragon (previously Little A), there have been a number of excellent intersections of Channel Iron Deposit (CID) and BID, particularly in the southern arm, including HP3521 with 34m @ 60.7% Fe (65.6% calcined). This mineralisation is still open to the south. At Badger (previously Little B), excellent intersections of CID and BID include HP3807 with 24m @ 58.9% Fe (64.7% calcined). Both Paragon and Badger are new untested areas and have not been included in any previous resource estimates.



2010 Phase 1 reverse circulation drilling at Pilbara Iron Ore Project.

## Eagle and Champion (based on visual estimates)

Extensional drilling at Eagle Camp and Champion has intersected good thicknesses of high-quality lower CID and BID material at shallow levels, outside the current resource boundary. No assays have been received yet for these areas.

## ONGOING WORK

The drilling during 2010 has been carried out faster than anticipated partly because holes on the margin of the deposits were shallower than anticipated. Drilling advancement rates have also been faster this year. These factors have aided in completing the first phase program three weeks ahead of schedule and under budget. Work has commenced on interpreting the assay results as they come to hand, prior to updating the resource estimates.

## LOGISTICS AND APPROVALS

An additional Heritage survey was completed over several areas highlighted by the recent global resource as having potential for higher grade mineralisation. An additional Program of Works has been submitted to the Department of Mines & Petroleum in line with these additional areas.

## PREFEASIBILITY STUDY

The Prefeasibility study remains on track and an update will be provided in the June 2010 quarterly report.

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## JORC compliance

The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Dr K J A Wills (who is a Fellow of the Australasian Institute of Mining and Metallurgy) and Mr N Corlis (who is a member of the Australian Institute of Geoscientists). Dr Wills and Mr Corlis are employees of Flinders Mines Limited. Both have sufficient experience that is relevant to the style of mineralisation and types of deposit under consideration and consent to inclusion of the information in this report in the form and context in which it appears. Dr Wills and Mr Corlis qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".