



21 June 2011

Drilling Update from Pilbara Iron Ore Project

WESTERN AUSTRALIA

highlights

- *Measured resource drilling on schedule. Excellent intersections to date.*
- *New target BID DSO zones – high quality BID results from 2010 provide for targeted Q3 2011 drill program.*
- *Over 50 km of drilling completed since the previous resource update.*



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

Flinders Mines Limited (FMS) 100%

DRILLING STRATEGY

The primary objective of Flinders Mines Limited (ASX: FMS) drilling strategy, at the Company's flagship Pilbara Iron Ore Project (PIOP) in Western Australia, is to provide sufficient Measured resource to complete the recently approved Definitive Feasibility Study (DFS). In addition, the drilling aims to extend the resource of high quality direct shipping ore (DSO) through drill testing of newly identified Brockman Iron Deposit (BID) zones.

DRILLING ACTIVITY

Reverse circulation (RC) drill rigs have been operating at the project since the previous resource estimate in October 2010 to complete the program of Indicated and Measured status infill drilling as well as the initial testing of newly identified BID zones. Since October 2010 a total of 963 holes have been completed for 50,467 m (Figure 1). Of these holes, 688 holes have been drilled in the 2011 drilling campaign to define the Measured

resource in the Delta deposit. This brings the number of RC holes drilled at the project to 2,465 for a total of 122,531 m.

One of the two RC rigs currently onsite is scheduled to depart at the end of June 2011 coinciding with the Measured resource drilling campaign nearing completion. A single RC will remain on site for the remainder of the year testing high quality DSO target zones. Based upon the success of the BID drilling in the second half of 2011 additional rigs will be brought in as required.

DRILLING RESULTS

Measured

The majority of assays have now been received from drilling on the north arm of the Delta deposit. Validation of the results and geology is underway and indications

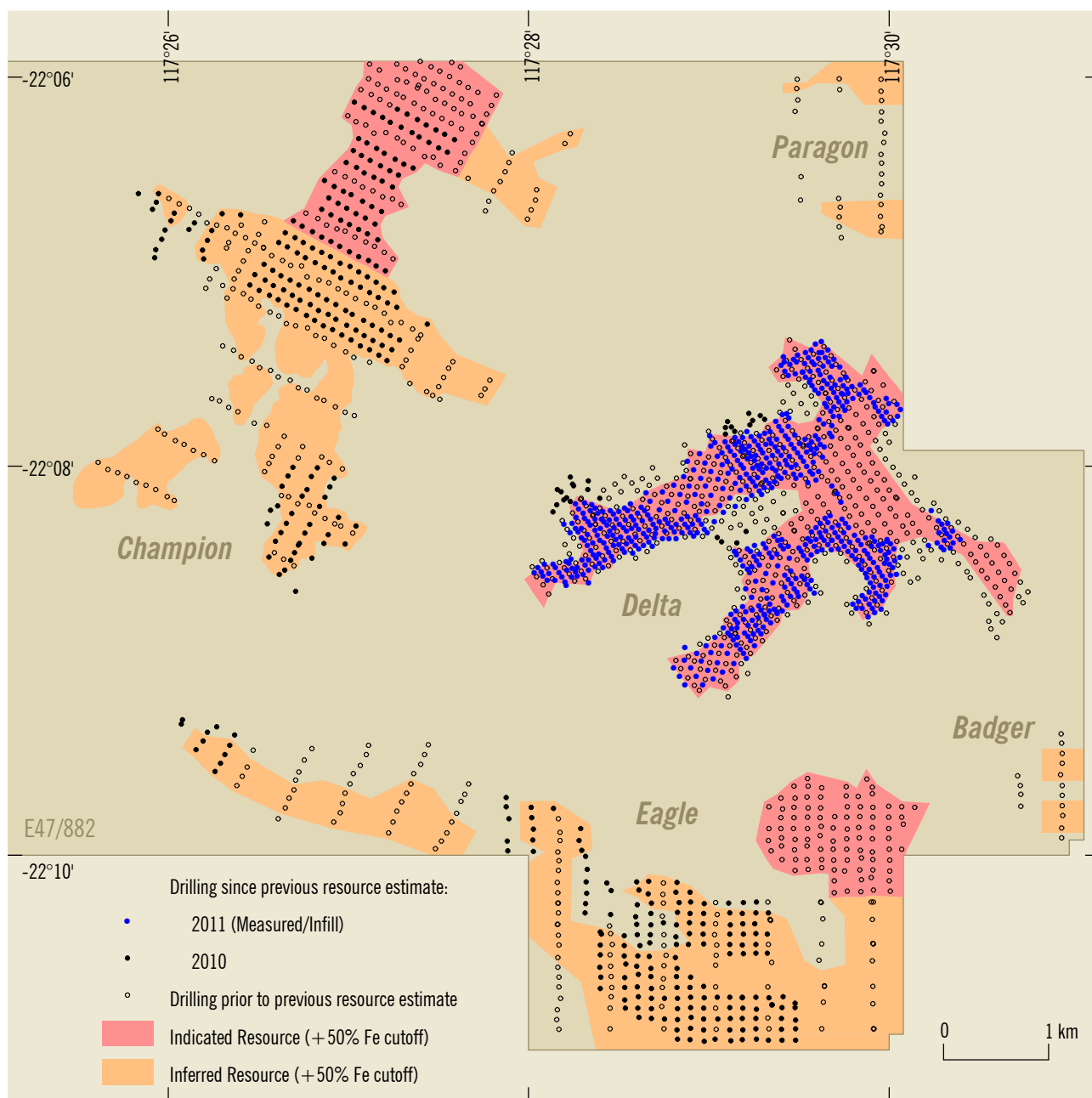


Figure 1 Completed RC drillholes from the 2010 and 2011 campaigns, and the location of pre-October 2010 resource estimate drillholes, Pilbara Iron Ore Project, Western Australia.

are that the infill drilling to Measured resource status is consistent with the distribution of known mineralisation. This confirms the robust nature of the geological and resource models which saw the conversion of the Inferred mineralisation in Delta to Indicated status at an exceptional 98%.

Based on the assays received to date, the significant intersections are shown in Table 1. Highlights include 70 m @ 59.9% Fe (65.4% CaFe), 66 m @ 59.7% Fe (64.8% CaFe) and 60 m @ 60.6% Fe (65.8% CaFe). With such high iron contents the corresponding combined silica and alumina levels of these intersections is around 6%.



Reverse circulation drilling at the Pilbara Iron Ore Project, March 2011.

Table 1 Pilbara Iron Ore Project Measured resource: significant reverse circulation drilling intersections.

Hole	From	To	Interval	Fe	CaFe*	SiO ₂	Al ₂ O ₃	P	LOI
HPRC3245	4	28	24	57.5	63.6	4.8	2.7	0.11	9.6
HPRC3184	12	40	28	58.2	62.9	5.9	2.8	0.09	7.3
HPRC3185	18	42	24	58.7	62.6	5.8	3.1	0.09	6.2
HPRC3186	28	48	20	58.3	62.9	5.8	2.6	0.13	7.3
HPRC3188	18	52	34	58.3	62.5	6.1	2.8	0.15	6.8
HPRC3189	26	50	24	60.0	64.7	3.5	2.2	0.16	7.3
HPRC3190	6	56	50	59.6	63.8	4.8	2.4	0.13	6.5
HPRC3221	0	58	58	58.0	63.5	5.4	2.1	0.14	8.7
HPRC3210	6	54	48	59.8	64.3	3.8	2.6	0.12	7.0
HPRC3191	8	70	62	59.8	65.3	3.2	2.0	0.01	8.1
HPRC3192	4	74	70	59.9	65.4	3.1	2.1	0.15	8.6
HPRC3193	2	32	30	59.5	65.0	4.2	1.5	0.12	8.4
HPRC3211	4	56	52	60.6	64.8	3.6	2.4	0.11	6.5
HPRC3212	6	66	60	60.6	65.8	2.5	2.1	0.15	7.8
HPRC3213	6	64	58	60.5	66.3	2.1	1.9	0.14	8.9
HPRC3179	14	54	40	60.0	65.1	3.1	2.3	0.14	7.8
HPRC3180	4	30	26	59.1	64.1	4.5	2.5	0.09	7.8
HPRC3209	10	46	36	60.2	64.2	4.4	2.4	0.10	6.3
HPRC3197	14	44	30	58.9	62.3	6.4	2.9	0.11	5.5
HPRC3198	8	54	46	60.7	64.4	4.3	2.2	0.13	5.8
HPRC3199	8	74	66	59.7	64.8	3.8	2.3	0.14	7.8
HPRC3170	22	50	28	58.3	63.1	5.2	3.0	0.14	7.5
HPRC3171	6	54	48	58.0	63.4	5.0	2.8	0.12	8.5
HPRC3159	8	38	30	58.0	63.3	5.1	2.7	0.11	8.5
HPRC3162	10	54	44	59.5	64.3	3.9	2.9	0.12	7.6
HPRC3118	28	48	20	58.3	65.3	3.4	1.8	0.11	10.7
HPRC3156	12	60	48	60.1	65.5	3.1	2.3	0.10	8.1
HPRC3296	16	48	32	60.0	65.4	2.3	2.8	0.12	8.3
HPRC3297	4	28	24	59.1	64.9	3.1	2.6	0.09	8.8
HPRC3310	38	60	22	61.2	65.2	2.9	2.2	0.13	6.2
HPRC5108	52	72	20	59.5	64.6	3.7	2.5	0.16	7.8
HPRC3309	26	46	20	59.9	65.6	2.7	2.1	0.10	8.8
HPRC5306	48	58	30	60.2	64.6	3.4	2.9	0.16	6.8
HPRC3332	30	56	26	60.6	64.8	3.2	2.6	0.13	6.6
HPRC5072	44	66	22	60.0	64.3	3.9	2.7	0.15	6.8
HPRC5231	24	48	24	57.6	62.9	5.7	2.7	0.10	8.5
HPRC3214	0	40	40	61.7	66.7	2.6	1.2	0.12	7.4

* CaFe = Fe/(100 – LOI)*100.

ONGOING ACTIVITY

Measured resource drilling – on schedule and on budget

The drilling during 2011 has been carried out on schedule and on budget and is due for completion in mid-July 2011. A total of 688 RC holes have been completed from 830 holes planned, representing 83% completion. Work has commenced on interpreting the assay results as they come to hand, prior to updating the resource estimate.

BID drilling

Since the discovery hole was drilled at the project late in 2008, drilling on the tenements has focussed on the iron mineralisation in the channels and these channels



Geological logging at the Pilbara Iron Ore Project, March 2011.

cover only 30% of the Company's tenement area. In 2010, Flinders Mines recognised BID on the flanks of the channels and has been investigating the potential for BID DSO mineralisation over the remaining unexplored 70% of the tenements. Late in 2010, several holes were drilled on the flanks of the valleys targeting high quality BID mineralisation. The results were outstanding, intersecting thick, near-surface BID mineralisation (Table 2**).

Based on the success and significance of that BID drilling undertaken late last year, Flinders Mines is currently investigating a range of potential targets on the flanks of the PIOP's known mineralisation (Figure 2). These targets are based on proximity to known BID mineralisation beneath the valleys, relationship with known structural zones and anomalous geophysical signatures.

A mapping program in the hills has been implemented, not only in Delta, but across the whole tenement, in the areas that may be prospective for high quality BID mineralisation. This mapping has identified areas of BID mineralisation in the hills in addition to that already tested in Delta late in 2010. Work is underway to prioritise these targets for drilling to test the extent and quality of this mineralisation as soon as necessary approvals and clearances can be obtained. The mineralisation identified on the flanks of the hills last year remains open and will be the focus of further investigation and drilling during the second half of 2011.

RESOURCE ESTIMATE IN Q4 2011

Measured resource drilling is anticipated to be completed in July 2011. Validation work has already commenced on the assays received and the Company expects to provide a Measured resource for the project in Q4 2011, in line with the timing of the DFS.

Table 2 Pilbara Iron Ore Project BID: significant reverse circulation drilling intersections.

Hole	From	To	Interval	Fe	CaFe*	SiO ₂	Al ₂ O ₃	P	LOI
HPRC3052	0	16	16	58.9	65.9	2.5	2.0	0.12	10.6
HPRC3056	0	54	54	57.2	62.7	5.5	3.4	0.11	8.6
HPRC3058	0	30	30	59.5	65.7	2.4	2.4	0.11	9.3
HPRC3060	0	28	28	56.9	63.2	5.0	2.9	0.11	10.0
HPRC3065	0	30	30	59.7	65.5	3.5	1.6	0.11	8.8
HPRC3066	0	38	38	59.0	64.0	4.9	2.1	0.10	7.8
HPRC3069	0	34	34	60.2	64.8	3.7	2.4	0.11	7.1
HPRC3072	26	40	14	59.0	64.4	4.4	2.1	0.16	8.4

* $CaFe = Fe / (100 - LOI) * 100$.

Note: These results have been previously announced in Company Quarterly Reports

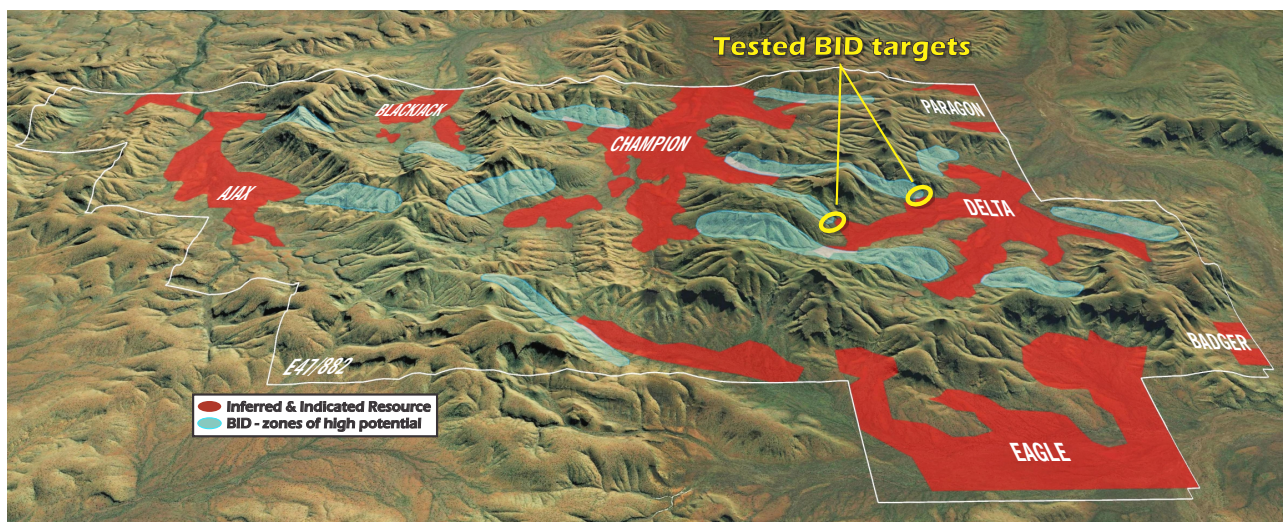


Figure 2 BID target zones, E47/882 (Blacksmith), Pilbara Iron Ore Project, Western Australia.

MR GARY SUTHERLAND
MANAGING DIRECTOR

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For further information please contact:

Mr Gary Sutherland
Ph: 08 8132 7950 or 0419 851 608
Email: gsutherland@flindersmines.com

Duncan Gordon – Investor relations,
Ph: 08 8232 8800 or 0404 006 444
Email: dgordon@adelaideequity.com.au

QUALIFYING STATEMENTS JORC compliance

The information in this report that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Mr N Corlis (who is a member of the Australian Institute of Geoscientists) and Dr G McDonald (who is a member of the Australasian Institute of Mining and Metallurgy). Mr Corlis and Dr McDonald 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. Mr Corlis and Dr McDonald qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves".

Forward-looking statements

This release may include forward-looking statements. These forward-looking statements are based on Flinders Mines Limited's expectations concerning future events. Forward-looking statements are subject to risks, uncertainties and other factors, many of which are outside the control of Flinders Mines Limited and the Company makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release.

Today's drilling update follows the announcement last month that Flinders Mines has progressed to a Definitive Feasibility Study (DFS) for its cornerstone Pilbara Iron Ore Project in Western Australia.

The DFS – being undertaken by WorleyParsons – is scheduled for completion in Q2 2012 which maintains the current project timeline of first production from the Pilbara operation during 2014.

The focus of the DFS is a proposed annual production rate of 15 Mtpa from start-up which is the higher of two options found to be economic by a Prefeasibility Study (PFS) completed in January this year by WorleyParsons.

The focus for production is the Pilbara Project's Blacksmith tenement, one of two of the Company's close-proximity tenements in WA's West Pilbara province.

Blacksmith contains the cornerstone Delta deposit targeted for first mining. The tenement is located between Rio Tinto's Calingina North iron ore resource, Fortescue Metals' Solomon iron ore hub, API's West Pilbara Iron Ore Project to the West, and to the South, Rio's Brockman 2 and 4 iron operations.

The Pilbara Iron Ore Project, 175 kilometres south of Dampier, contains a current global Indicated and Inferred Resource of 748 million tonnes (Mt) at an average grade of 55.4% Fe.