ASX ANNOUNCEMENT

15 October 2009

Iron Ore Activities Report – No 29

Pilbara Project - Western Australia

highlights

- Infill drilling commenced at Delta Deposit towards first Indicated Resource at Pilbara Project
- Metallurgical diamond drilling (DD) commenced in Delta Deposit
- 526 reverse circulation (RC) holes completed since 23rd May for 23,774m
- Drilling completed at Anvil tenement, with first Global Inferred Resource for the project expected next month

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

Flinders Mines Limited (FMS) 100%

DRILLING STATISTICS

Table 1 Pilbara Project drilling statistics.

Target Area	2008 No of Holes	2008 Metres Drilled	2009 No of Holes	2009 Metres Drilled
Ajax	0	0	92	3,180
Blackjack	34	1,208	11	480
Champion	103	5,027	39	2,118
Delta	67	3,011	125	6,526
Eagle	97	5,793	19	984
Anvil	0	0	240	10,486
Total	**301**	**15,039**	**526**	**23,774**

Number of samples sent for assay	11,425
Number of assays received to date	9,499
Number of samples awaited	1,926
List of received assayed intersections since Activities Report No 28.	Table 2

DRILLING ACTIVITY

Flinders Mines Limited's (ASX:FMS) Pilbara Iron Ore Project in WA comprises several target areas on tenements E47/882 and 1560 (see Figure 1).

Since the previous report on 20th August the following drilling activities have occurred:

- Indicated Resource RC drilling commenced at Delta Deposit
- Metallurgical drilling commenced at Delta Deposit
- Inferred Resource reverse circulation (RC) drilling completed at Anvil tenement

Hypogene Hematite Drilling

In addition to the above program, FMS aims to complete RC drilling of at least three locations targeting hypogene BID. This mineralisation style differs from the BID intersected to date, with typically higher iron grades and low contaminant concentrations. Hypogene BID is often referred to as "massive hematite" similar to that mined at Mt Tom Price.

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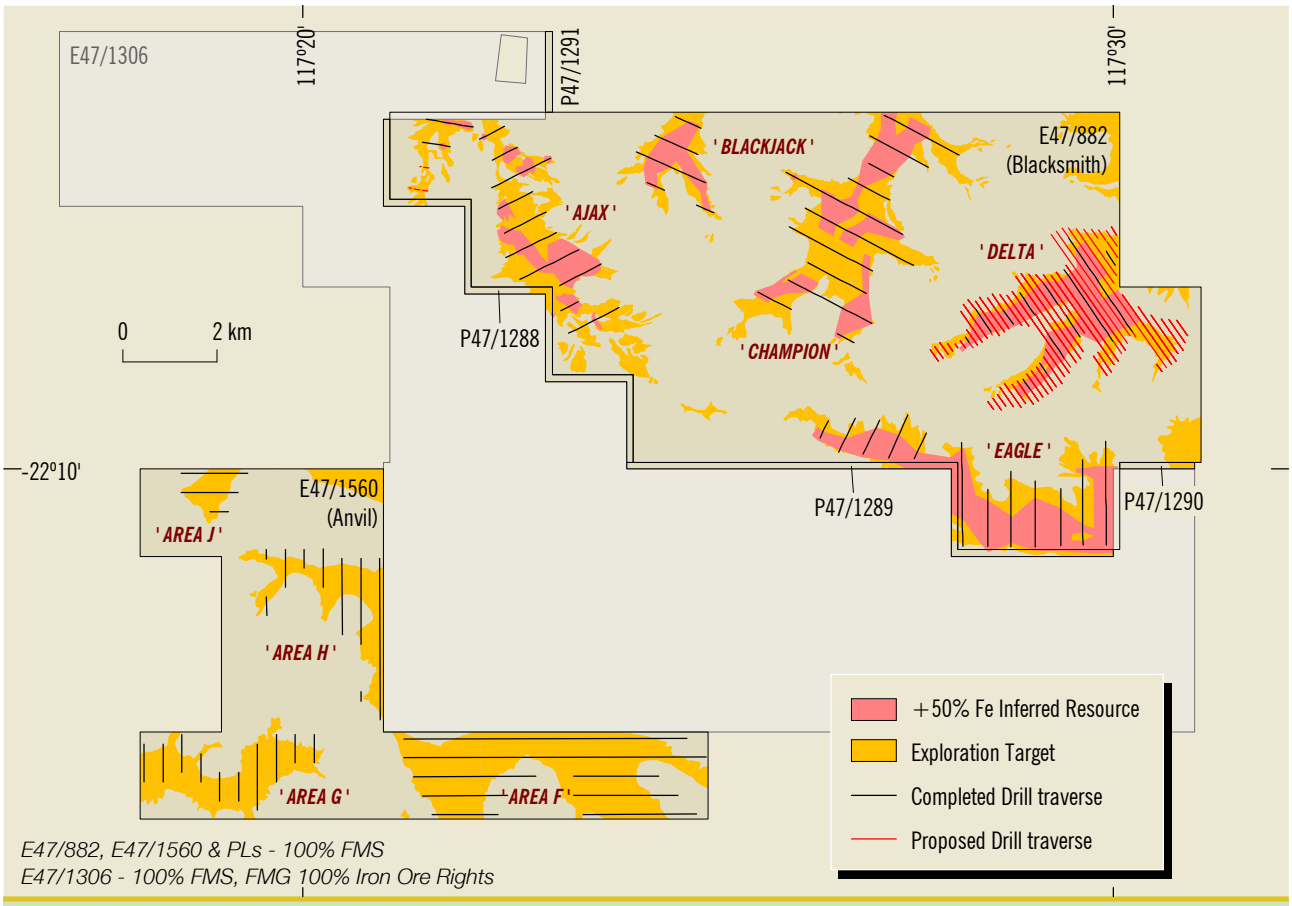

Figure 1 *E47/882 (Blacksmith) and E47/1560 (Anvil).*

Geological interpretation and subsequent checking on the ground has located this style of mineralisation in at least three key areas in Delta. This will be the first drilling to test for the presence of this style of mineralisation in the bedrock.

Forward Program

Drilling will continue at the Pilbara project until late November/early December 2009 and recommence in 2010 as soon as the weather allows.

Delta
Indicated Resource Drilling

Infill drilling commenced at Delta early in September aiming to define an Indicated Resource. The Scoping Study clearly identified Delta as the best area to commence mining due to better iron grades, lower deleterious element concentrations as well as low stripping ratios. Previous drill spacing used in estimating the Inferred Resource was 500m by 100m. The current drilling density has been increased to a drill spacing of 125m by 100m to improve confidence in the mineralisation types and their continuity which will later allow the resource to be classified as Indicated.

To date, a total of 101 RC holes have been completed for 5,188m (Figure 2). This almost completes the northern arm of Delta. There have been some delays trying to obtain heritage clearances for the drilling, due to a lack of available archaeological consultants. A final heritage clearance is planned for later this month, with the aim of attempting to complete all new Indicated Resource drilling in Delta by the end of 2009.

METALLURGICAL DRILLING

In order to enhance our understanding of the resource, an extensive metallurgical testwork program has been developed. This work will assist in the development of our understanding of the ore characteristics, and assist in definition of our potential products.

Diamond drilling commenced at Delta in September to obtain appropriate samples. 14 large diameter (PQ) drill holes have been completed and will be sent to Perth for metallurgical testwork which is being overseen by Mineral Engineering Technical Services Pty Ltd (METS). A further 21 holes in Champion, Delta and Eagle are planned to be completed by the end of 2009. Results of this testwork are anticipated during the first quarter 2010.

Key components of that program are:

- 35 Diamond drill holes (PQ3) will be completed across Delta (20 holes), Champion (10 holes) and Eagle (5 holes), yielding excellent samples for testwork (Figure 3)

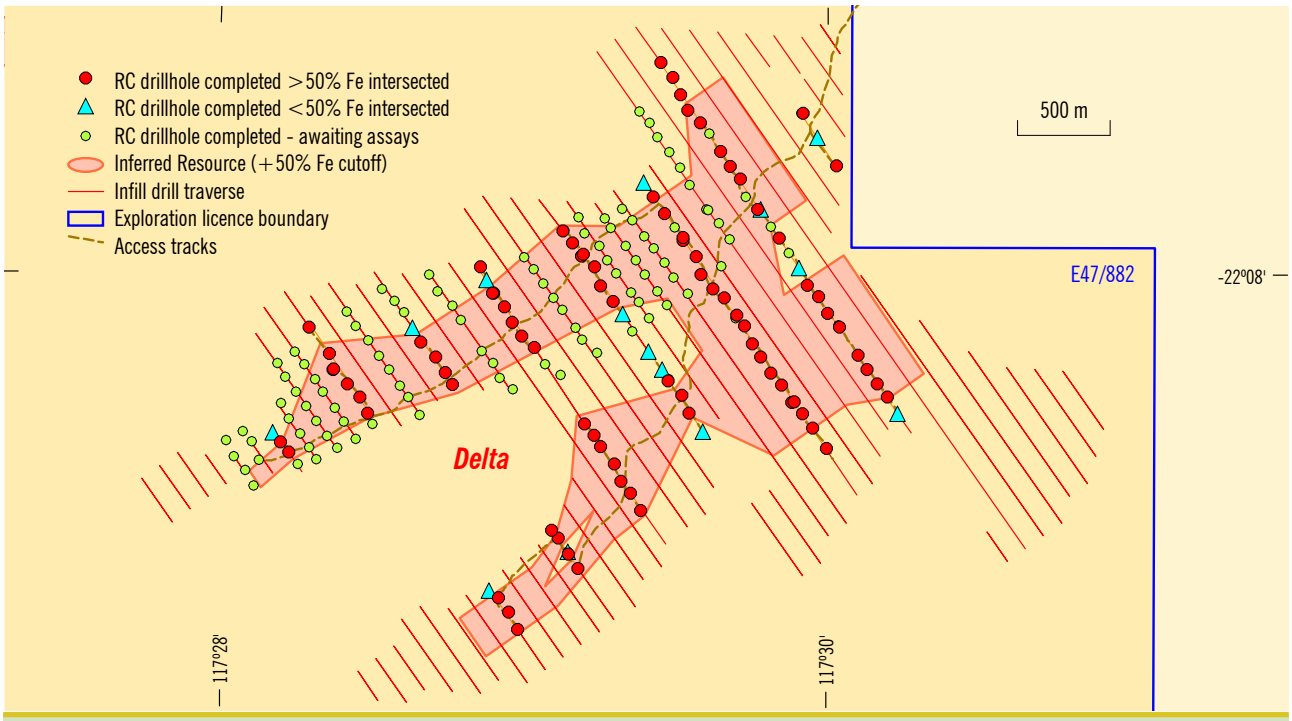

Figure 2 *Interpreted CID mineralisation in Delta Target Area.*

- The first phase of testwork will encompass examination of the ore's physical properties such as hardness, mineralogy, lump/fines ratio, wet and dry sizings, bulk density and other handling properties and engineering testwork comprising Unconfined Compressive Strength (UCS) and Crushing Work Index(CW)

- The second phase of the program will examine the ability of each of the different mineral types (CID and BID) to be upgraded via different beneficiation processes

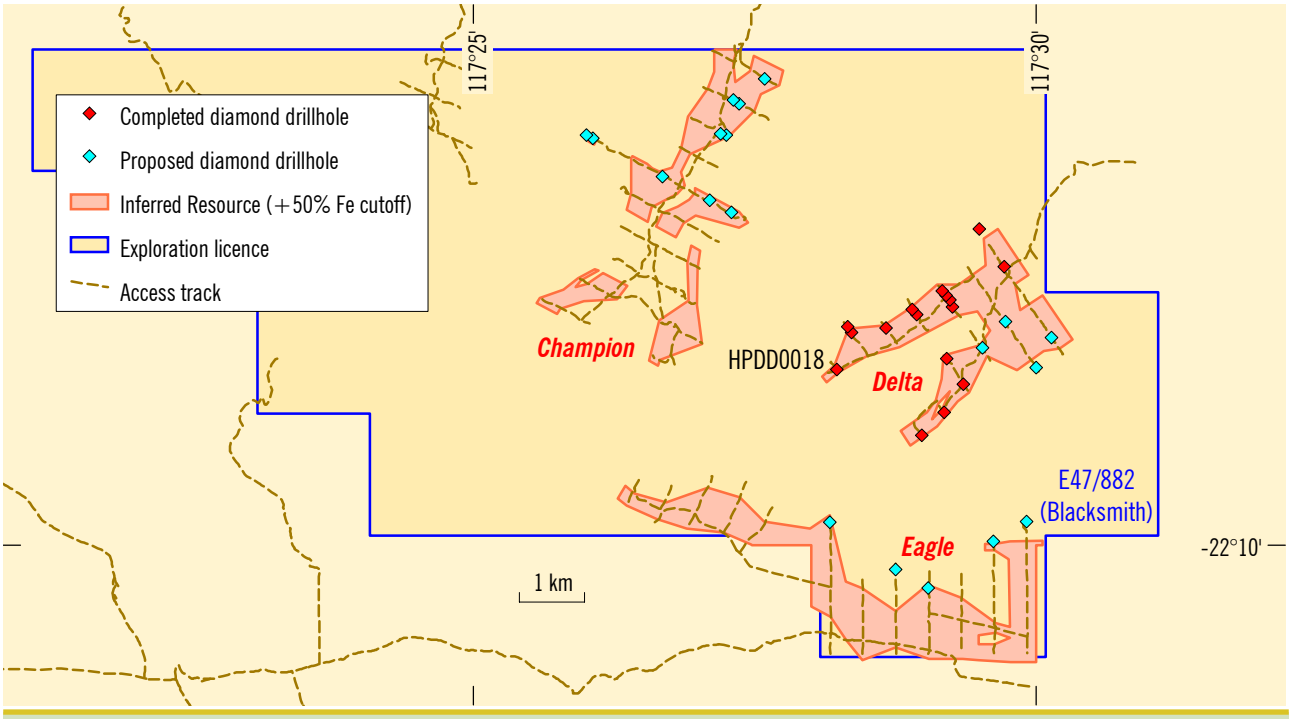

Figure 3 *Location of Metallurgical diamond drillholes.*

Figure 4 *Core trays from diamond drillhole HPDD0018 in Delta Prospect showing examples of CID and BID mineralisation to be used for metallurgical testing (see Figure 4).*

Table 2: List of significant reverse circulation drillhole intersections (assays received).

Hole ID	From (m)	To (m)	Interval (m)	Fe %	Al_2O_3 %	SiO_2 %	P %	LOI %	Target Area
ARC1	8	22	14	55.4	2.5	8.9	0.10	8.1	Anvil
incl	8	16	8	57.3	2.7	7.0	0.08	6.7	Anvil
ARC23	2	20	18	56.4	2.4	7.2	0.10	8.9	Anvil
ARC24	10	34	24	57.1	5.0	7.9	0.06	4.4	Anvil
incl	18	28	10	61.4	3.9	5.0	0.05	2.0	Anvil
ARC123	20	32	12	57.4	3.2	9.9	0.07	3.3	Anvil
ARC208	10	30	20	55.5	4.2	7.4	0.12	7.8	Anvil
incl	14	22	8	59.7	3.1	4.2	0.12	6.2	Anvil
ARC214	6	26	20	56.1	1.6	7.6	0.11	9.1	Anvil
ARC218	0	12	12	55.7	3.3	8.8	0.07	7.2	Anvil
incl	2	10	8	57.4	2.9	6.3	0.08	7.7	Anvil
ARC222	10	20	10	55.6	1.5	8.1	0.09	10.1	Anvil

NB: These intersections are based on an Fe cut-off grade of 50%, with no top cut, and a maximum internal dilution of 2m.
Analysis via XRF fusion at Ultratrace Laboratories.
LOI = Loss on ignition.

ANVIL (E47/1560)

A total of 240 RC holes have been completed at Anvil at a spacing of 400m by 200m allowing for an Inferred Resource to be estimated. Visual estimates from the drilling indicate that the iron mineralisation is not as extensive as at Blacksmith (E47/882), but does include both channel iron deposit (CID) and bedded iron deposit (BID) mineralisation. Not all assays have yet been received for the drilling at Anvil, but these are anticipated to be received in October. Once these assays have been received the mineralisation will be interpreted and an Inferred Resource calculated.

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JORC STATEMENT

The information relating to the terms “iron ore” and “exploration target” should not be misunderstood or misconstrued as an estimate of Mineral Resources and Reserves as defined by the JORC Code (2004) and therefore the terms have not been used in this context. It is uncertain if further exploration or feasibility studies will result in the determination of a Mineral Resource or Mining Reserve.

The information that relates to the drilling data and geological interpretations is based on information compiled Dr K J A Wills who is a Fellow of the Australasian Institute of Mining and Metallurgy and by Mr Nick Corlis who is a Member of The Australian Institute of Geoscientists and Exploration Manager of the Company. The section of this report relating to the Pilbara Project Resource Estimate has been compiled by Mr Stephen Godfrey of Golder Associates Pty Ltd. Mr Godfrey is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Dr Wills, Mr Godfrey and Mr Corlis have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that they are undertaking to qualify as a Competent Persons as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Dr Wills, Mr Corlis and Mr Godfrey consent to the inclusion of information in this report in the form and context in which it appears.

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.