



**Fortescue Metals Group Ltd**

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19 September 2008

The Companies Officer  
Australian Securities Exchange Ltd.  
Exchange Plaza  
2 The Esplanade  
PERTH WA 6000

Dear Sir

**1,625 Million Tonne Ore Reserve Estimate  
Representing a 54% increase**

- Total Project Ore Reserves now at 1,625 Million Tonnes being a 572 Million Tonne Ore Reserve Upgrade
- 143 Million Tonnes Proved Ore Reserve estimate for studies at Cloudbreak and Christmas Creek
- 1,482 Million Tonnes Probable Ore Reserve estimate for studies at Cloudbreak and Christmas Creek
- Study conversion rate of 87.6% from Measured and Indicated Resources to Proved and Probable Reserve

Fortescue Metals Group Ltd ("Fortescue") advises the results of its latest Ore Reserve study wherein a total Reserve estimate for the Cloudbreak and Christmas Creek area has been increased by 54% to a total of 1,625 Million Tonnes. This estimate includes a Proved Reserve of 143 million tonnes ("Mt") and Probable Reserve of 1,482 Mt.

The study has been concluded following the review of further drilling and assay results, more detailed pit modelling and additional metallurgical testwork. The additional information brought about an increase of approximately 474 Mt in the Measured and Indicated Resource to a combined total of 1,855 Mt for Cloudbreak and Christmas Creek (Feb 2006 Christmas Creek and March 2006 Cloudbreak Resource models).

Fortescue has also been able to incorporate into the study a greater understanding of its mining methodology, given it has been operating for over 6 months. A number of variables used in the previous (2006) mine study have been better defined given the experience of actual operations, where over 7.5 Mt of product has now been shipped.

**The New Force in Iron Ore**

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Similarly, further metallurgical testwork has enabled areas previously excluded from the resource to be included in the indicated resource used in this study.

The Ore Reserve study, which covered the Measured and Indicated Resource at the Cloudbreak and Christmas Creek deposits, was estimated from information prepared by the Resource Geology, Long Term Planning and Resource Strategy departments of Fortescue and the Competent Persons statement has been compiled by Mr Mark Glassock, Senior Resource Geologist, Mr Geoffrey Bull, Principal Mining Engineer and Dr John Clout, Head of Resource Strategy, at Fortescue.

The study was based on the Cloudbreak March 2006 and Christmas Creek February 2006 Resource block models prepared by Snowden Mining Industry Consultants and updated by Fortescue's resource geology department. The Resource upgrade provided for a total Mineral Resource Estimate for Cloudbreak of 763 Mt split between the JORC classifications of Measured at 144 Mt, Indicated at 517 Mt and Inferred at 102 Mt and a total Mineral Resource Estimate for Christmas Creek of 1,503 Mt split between the JORC classifications of Measured at 6 Mt, Indicated at 1,189 Mt and Inferred at 308 Mt.

This latest Ore Reserve study was specifically focused on the 1,855 Mt of the Measured and Indicated Resource estimate. The delineation of a Proved and Probable Ore Reserve estimated of 1,625 Mt represents a conversion rate of 87.6%.

Details of the Ore Reserve study are provided in the attached Competent Person report. A table is presented which delineates the total Proved and Probable Reserve, including a High Grade domain of 307 Mt with a Fe grade of 60.56% Fe at Cloudbreak and 394 Mt with a Fe grade of 60.47% Fe at Christmas Creek.

Yours sincerely

**Fortescue Metals Group Ltd**

**Rod Campbell**

Company Secretary

Attached: Summary Ore Reserve Statement Cloudbreak and Christmas Creek Deposits

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**SUMMARY ORE RESERVE STATEMENT  
CLOUDBREAK AND CHRISTMAS CREEK DEPOSITS  
19 September 2008**

### **Introduction**

This update is a result of additional Resource drilling, more detailed pit modelling, a better understanding of the mining methodology, given that Fortescue Metals Group Ltd ("Fortescue") have been operating the Cloudbreak Mine for over 6 months now, and additional metallurgical testwork, all of which has contributed to an increase in the Ore Reserves.

Fortescue has prepared an updated Ore Reserve statement in accordance with the JORC Code based on the February 2006 update of the Christmas Creek Deposit and the March 2006 update of the Cloudbreak Deposit Resource models. Two Run-Of-Mine ('ROM') types were considered with the following parameters.

- High Grade ROM with a target fines grade of 60.20% Fe and lump grade of 61.10% Fe. This was to be drawn from the high grade domains of the Resource model.
- Medium grade ROM suitable to be upgraded through a beneficiation process with a target "Rocket"\* fines product grade of 59.0% Fe. This was to be drawn from the remaining high grade and medium grade domains of the Resource model.

An Expansion Study, to increase production from Cloudbreak and Christmas Creek is in progress and the updated Ore Reserve estimate will form a basis for the Expansion Study.

### **Project Location**

The Cloudbreak and Christmas Creek deposits are located in the east Pilbara region of Western Australia, approximately 110km north of Newman and ranging from 250km to 325km southeast of Port Hedland. The Project is located in favourable terrain and Cloudbreak is serviced by a purpose built heavy haul rail line to Port Hedland, a 2.4km airstrip and road access from the Great Northern Highway. Christmas Creek is approximately 40kms to the east of the Cloudbreak mine processing plant and the existing rail line will be extended to link up this deposit.

### **Basis of Design**

Fortescue resource geology, long term mine planning and resource strategy personnel compiled a list of design parameters and issued a basis for the Cloudbreak and Christmas Creek Ore Reserve Estimation document which has been reviewed and agreed by Fortescue.

### **Mineral Resources**

The information and development of the geological model was initially generated jointly by the geological departments of Snowden and Fortescue.

*\*Fortescue Rocket Sinter Fines™*

This was done in accordance with the Australasian Code for Reporting of Mineral Resources and Ore Reserves (“JORC Code”), prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia, effective December 2004.

The Christmas Creek Feb 2006 and Cloudbreak March 2006 Measured and Indicated Resource block models by Fortescue have been used in the development of the Proved and Probable Ore Reserve estimate. The Resource models that have been compiled and the classifications used are in accordance with the JORC code.

### **Description of Operations**

Mining at Cloudbreak and the proposed mine plan at Christmas Creek are both based on open pit mining programs. The mining method is strip mining which progressively opens new pits and backfills old ones to minimize costs and environmental impact. The mining systems were selected based on the characteristics of the individual stratigraphic units of the material to be mined. Ore will be transported to the processing plants by way of overland conveyors. The conveyor systems will extend along the full strike length of the Cloudbreak and Christmas Creek deposits. Crushing and screening takes place at the mine to produce separate lump (-31.5 to 8mm) and fines (-8 +0mm) products, while a port materials handling facility will in future re-screen lump prior to ship loading. Only high grade run of mine ore will be processed into lump and fines. The medium grade ROM will be screened and crushed into fines and the natural fines portion beneficiated, to upgrade it to Rocket Fines which has a target Fe grade of 59%.

### **Cut-off Parameters**

The Resource has been subdivided into two categories based on processing characteristics. The High Grade and medium grade components are considered in the Ore Reserve estimate.

- High Grade material with a target fines grade of 60.20% Fe and lump grade of 61.10% Fe. This was to be drawn from the high grade domains of the resource model. Cutoffs were determined to be  $\text{Al}_2\text{O}_3 < 3.0\%$ ,  $\text{SiO}_2 < 6.0\%$ , and  $\text{MnO} < 2.0\%$  (Fe >58.0% by difference) at Cloudbreak and Christmas Creek.
- Medium grade ROM suitable to be upgraded to Rocket Fines specifications given a range of acceptable processing parameters. This was to be drawn from the remaining high grade and mid grade domains of the resource model. The cutoffs were determined to be  $\text{Al}_2\text{O}_3 < 3.5\%$ ,  $\text{SiO}_2 < 7.0\%$  and  $\text{MnO} < 10.0\%$  (Fe >50.0% by difference) at Cloudbreak and Christmas Creek.

### **Metallurgical Factors or Assumptions**

The high grade run-of-mine ore will be dry crushed and screened to produce lump (-31.5 mm +8mm) and fines (-8 +0mm) products. High grade lump fines ratios have been established from samples taken from PQ diamond drill core and Bauer drill core, then subjected to the standard industry drop testing and conditioning. Dust extinction moisture levels for high grade lump and fines have been determined from test work using Australian Standard AS-4156.6-2000. Extensive pilot scale metallurgical test work (derived from 31 bauer holes of 1 metre diameter) has defined a recovery factor of 85% for both deposits.

The medium grade run-of-mine (ROM) will undergo the same upgrading process as for producing Rocket fines at Cloudbreak (see ASX release 29/4/07). Medium grade ROM is scalped at 8mm and the oversize dry crushed and screened to fines (-8mm) whilst the natural -8 +0mm fines portion will be beneficiated. The beneficiation involves four processes: wet 1mm screens, hydrocyclones, up-flow classifiers and spirals.

The Christmas Creek flowsheet for producing Rocket Fines is similar to Cloudbreak except air pulsed jigs are also included to upgrade the natural fines fraction. This beneficiation technology is well-proven, used in the Australian iron ore industry. Fortescue has carried out extensive pilot scale test work involving these beneficiation processes, from which yield factors have been established for upgrading Cloudbreak and Christmas Creek medium grade ROM to a single blended product in excess of the Rocket Fines specification of 59.0% Fe. Previous Christmas Creek Fines beneficiation test results (ASX release 15<sup>th</sup> June 2005) were for upgrading to high grade fines (60.2% Fe).

### **Market Assessment**

Fortescue's high grade lump, high grade fines and Rocket fines products are a Marra Mamba iron ore sourced from the Cloudbreak and Christmas Creek deposits. The high grade lump quality and fines sintering characteristics are very competitive compared to similar Australian iron ore products. The beneficiation of the medium grade resource to Rocket fines is designed to improve the iron content and reduce the contaminants to levels similar to its Marra Mamba peers. Initial test work based on pilot scale testing suggests that a product of greater than 59% Fe (uncalcined) or >64.5% Fe calcined can be produced from the current published reserve grades. Sinter testing of Christmas Creek fines at CSIRO and Central South University (PRC) has shown good tumble strength and fast sintering speed, similar to Cloudbreak.

The revenue factors were adopted from the forecasts by Metalytics Resource Sector Economics, 2008 forecast and the published 2008 Hamersley Benchmark prices for Australian iron ores.

### **Ore Reserve Estimate**

The estimation of the Proved and Probable Ore Reserves has used data made available from many sources. From this data the following were developed:

- Costs expressed as \$/t mined for the Life of Mine operation;
- Indicative pit shells by using optimisation to generate final pit limits; and
- Tonnages and grade of the ore contained within the indicative pit shells.

It has been assumed that based on the similarities between the Cloudbreak and Christmas Creek ore bodies, the sensitivity to economic factors will be consistent across the entire resource. There is a relative consistency in ore types, ore mineralogy, geological structure and metallurgical characteristics between the two ore bodies. The Ore Reserve Estimate includes dilution. Dilution has been applied directly to the resource block model prior to importation into the pit optimizer for the reserve calculation. The information gathered for model reconciliation was used to determine the amount of dilution to be applied.

The Proved and Probable Ore Reserve estimates for the Cloudbreak and Christmas Creek deposits are presented in the following table:

The Reserve was derived from a Measured and Indicated Resource of 1.86 Mt suggesting a conversion rate of 87.6%.

**Cloudbreak (CB) and Christmas Creek (CC) Proved & Probable Ore Reserves  
September 2008**

<b>Category</b>	<b>Tonnes (Mt)</b>	<b>Fe</b>	<b>SiO<sub>2</sub></b>	<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>P</b>	<b>LOI</b>
Proved CB & CC	142.7	59.69	3.52	1.87	0.051	8.19
Probable CB & CC	1,482.2	58.76	4.23	2.39	0.057	7.62
Total CB & CC	1,624.9	58.85	4.16	2.35	0.056	7.67
<b>Including a High grade Domain</b>						
Total High Grade	701.0	60.51	3.18	1.92	0.053	7.33

**Declaration in accordance with the JORC Code (2004)**

The development of the Cloudbreak and Christmas Creek Ore Reserve model was carried out in accordance with the Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"), prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia, effective December 2004.

The information in the report to which this statement is attached is based on information compiled by Mark Glasscock and Geoffrey Bull, who are Members of the Australasian Institute of Mining and Metallurgy and John Clout who is a Fellow of the Australasian Institute of Mining and Metallurgy .

Mr Glasscock, in his capacity as Senior Resource Geologist, Mr Bull, in his capacity as Principal Mining Engineer and Dr Clout, in his capacity as Head of Resource Strategy, have reviewed this information and have satisfied themselves that the values quoted and the parameters used in the study are reasonable and accurately reflect the operations involved.

Mr Mark Glasscock, Mr Geoffrey Bull and Dr John Clout are full-time employees of Fortescue Metals Group Ltd and hold the position of Senior Resource Geologist, Principal Mining Engineer, and Head of Resource Strategy respectively.

Messrs Glasscock, Bull and Clout have sufficient experience which is relevant to the style of mineralization and type of deposit under consideration to qualify as Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Messrs Glasscock, Bull and Clout consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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**Competent Person Detail****Mark Glassock, Senior Resource Geologist, Fortescue Metals Group Ltd**

Mr Glassock joined Fortescue in August 2004 and has 20 years experience as a geologist and has been a resource geologist for over 13 years, being involved in numerous feasibility and mine planning studies. Mr Glassock has a BSc in geology from the University of Sydney and is a member of the AusIMM.

**Geoffrey Bull, Principal Mining Engineer, Fortescue Metals Group Ltd**

Mr Bull joined Fortescue in April 2007 and has over 35 years experience in open pit and underground mining. Prior to joining Fortescue Mr Bull spent 14 years as a mining engineering consultant preceded by 21 years in the corporate sector. Mr Bull has completed numerous feasibility studies for a wide range of companies and has conducted technical and financial reviews of a large number of feasibility studies on behalf of various banks including Standard Chartered Bank, Macquarie Bank, Royal Bank of Scotland and ABSA Bank. Mr Bull has been intimately associated in many mineral commodities, including, iron, industrial minerals, base metals and precious metals. Mr Bull has a BSc Engineering in Mining Engineering from the University of Witwatersrand in South Africa and is a Member of the AusIMM, a Member of the IMMM and a Chartered Engineer.

**John Clout, Head of Resource Strategy, Fortescue Metals Group Ltd**

Dr Clout joined Fortescue in 2004 and has over 28 years experience in mine geology and metallurgy as well as iron ore mineral processing research. Dr Clout is an internationally recognised expert in the field of iron ore characterisation, beneficiation, sintering and high temperature processing of iron ores and blending. Dr Clout has over 16 years experience in pilot-scale beneficiation and sinter testing of iron ores. Dr Clout has a BSc (Hons) in geology from the University of Sydney and a PhD in science from Monash University and is a Fellow of the AusIMM.