

13 March 2013

The Companies Officer  
ASX Limited  
2 The Esplanade  
Perth WA 6000



Dear Sir

### **Increase in Nyidinghu Resource to 2.46 Billion Tonnes**

Fortescue Metals Group (ASX: FMG, Fortescue) is pleased to announce an increase of 450 million tonnes ("Mt") in the Nyidinghu Resource estimate taking the total to 2.46 billion tonnes ("Bt") using a cut-off grade of 52% Fe. The estimate includes Measured Resources of 23 Mt at 59.6% Fe and Indicated Resources totalling 580 Mt at an average grade of 58.1% Fe. The remaining 1.86 Bt is classified as Inferred. Further details relating to the Resource estimate are supplied in the Appendix attached to this announcement.

Nyidinghu is only 35 km south of Fortescue's existing Cloudbreak operation in the Chichester Hub and mineralisation remains open, particularly to the north. The Fortescue Exploration team is confident that ultimately the Resource at Nyidinghu will exceed 3.0 Bt when all resource definition drilling has been completed.

An estimate has also been completed using a cut-off grade of 59% Fe. This gives a total of 735 Mt at an average Fe grade of 60.6%. Of this amount some 15 Mt is classified as Measured (average Fe 61.1%), 237 Mt is classified as Indicated (average 60.7% Fe) and 483 Mt (60.6% Fe) is classified as Inferred. This higher grade Resource is virtually all bedded iron mineralisation hosted within the Brockman Iron Formation, the most prolific source of high grade bedded iron ore in the Pilbara region.

Fortescue CEO Nev Power said the substantial quantity of high grade resources and the 2.46 Bt of total resource provides Fortescue a number of attractive development options for future consideration.

Yours sincerely

**Fortescue Metals Group**

Mark Thomas  
**Company Secretary**

**Media contact:**

Yvonne Ball  
Mobile: +61 (0) 417 937 904  
Email: yball@fmgl.com.au

For personal use only

## APPENDIX

### **Nyidinghu Deposit Geological Summary**

The Nyidinghu deposit is located approximately 100km northwest of Newman in the central Pilbara. Mineralisation within the Nyidinghu project is a mixture of Brockman Iron Formation bedded deposits (BID), Channel Iron Deposits (CID) and Detrital Iron Deposits (DID). The bedded stratigraphy is broken up into fault blocks controlled by two generations of northeast and northwest striking faults which show vertical displacements in the order of 50-100m. The majority of the mineralisation is associated with the BID and occurs as a supergene zone near the base of the overburden. The CID mineralisation overlies the majority of the BID material and generally trends northeast. The mineralisation extends to eastern, western and southern tenement boundaries, resulting in mineralisation dimensions of approximately 7km in a northwest southeast direction and 4.5km in the northeast southwest direction. The mineralisation remains open to the north. Mineralisation occurs from surface and extends to depths of up to 300m.

### **Sampling and Data**

A total of 90,642 two metre composites from 1,528 Reverse Circulation drill holes were used in the Nyidinghu estimate. The drilling rigs that were utilised are high air capacity (greater than 1000 psi, 500 cfm) rigs enabling the samples to be dry throughout the majority of the drill hole, and they utilised cone splitters throughout the project. 100 diamond drill holes also completed on the project were used for validation, metallurgical and geotechnical data. The Measured Resources are based on a drill pattern of 25m x 25m. The Indicated Resources are based on a drill pattern of 50m x 100m. Inferred Resources are generally based on a drill pattern of 100m x 200m.

Detailed geological logging captured the following qualitative and quantitative information: mineralogy, sample quality, colour and numerous physical characteristics. This data is relevant for both Mineral Resource estimation and future mining and processing planning.

All samples were analysed by SGS or Genalysis Laboratories in Perth using XRF techniques. QA/QC is measured through regular submission of field and laboratory standards, plus field duplicates. Rig or coarse field standards are added to lab submissions, at an average of 1 field standard per 100 samples submitted to the laboratory. Laboratory pulp standards are inserted at a rate of 1 sample per batch. Duplicate samples are taken at a frequency of 3 in every 100.

All drill hole information used for these estimations was captured in a digital format using Toughbook computers, and is stored in a validated Acquire database.

Drill hole collar locations have been surveyed using Survey grade Dual frequency GPS receivers (Post Processed Kinematic GPS technique) for all the drill holes. 690 downhole surveys have been carried out on the drill holes. Most drill holes are vertical and less than 300 metres deep. Due to the drill hole spacing and the sub-horizontal ore body, any deviation of these vertical holes would have minimal impact upon the interpretation or the Resource. Collar survey data is validated against planned co-ordinates and topography surface.

The sampling process has been previously audited by an independent party.

### **Modelling Approach**

Stratigraphic units have been identified and modelled in 3D, using Vulcan™ software, for use in sample compositing and block model construction.

The definition of mineralised zones within each stratigraphic unit was accomplished using an indicator approach. The probability of any zone being mineralised was estimated using appropriate geochemical indicator cut-offs for Fe, SiO<sub>2</sub> and Mn for the individual stratigraphic units. These cut-offs were based on data population statistics and visual validation. A 'geozone' code was assigned to each sample, defined by the stratigraphic unit and mineralisation.

Variography was performed on the resultant 'geozone' groups utilising Supervisor software. This variography was used to determine the estimation parameters for the grade modelling.

The Nyidinghu block model was built using a range of block sizes from 25m x 25m x 2m blocks up to 100m x 200m x 2m depending on the drill spacing of each domain. Sub blocking down to 5m x 5m x 0.25m was used along domain boundaries to better define the domain interface. Grade estimation was conducted using Vulcan™ software and the Ordinary Kriging estimation technique for all geological domains. Orientations were determined from interpreted stratigraphy and data continuity was estimated from variogram maps created for each domain. Geostatistical analysis was conducted on each identified domain for the purposes of data and model validation. Median density values obtained from down hole geophysical density logging vary between 2.43 and 2.84 depending on geological unit and appropriate values were used for each unit.

The block model was validated visually and statistically against the composited samples, including the use of trend analysis graphs which were generated as composited slices in Northing, Easting and RL orientations.

Resources are compiled by Fortescue's Estimation department and are subject to external audits on a regular basis. Resource classification was determined on the basis of geological understanding and domain continuity, drill hole spacing, grade continuity and estimation quality. All current Nyidinghu resources are classified as Measured, Indicated and Inferred based on these parameters.

Total Resource (52% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
Measured	23	59.6	3.56	2.21	8.05	0.139
Indicated	580	58.1	4.52	2.95	8.55	0.148
Inferred	1,860	57.2	5.00	3.36	8.84	0.147
<b>Total</b>	<b>2,463</b>	<b>57.4</b>	<b>4.88</b>	<b>3.26</b>	<b>8.77</b>	<b>0.147</b>

N.B. Tonnage figures have been rounded and as a result the figures may not add up to the totals quoted.

Measured (52% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
BID	22	59.8	3.38	2.07	8.07	0.141
CID	1	56.8	5.04	3.38	8.97	0.108
DID	1	54.8	8.45	6.09	5.74	0.095
<b>Total</b>	<b>23</b>	<b>59.6</b>	<b>3.56</b>	<b>2.21</b>	<b>8.05</b>	<b>0.139</b>

N.B. Tonnage figures have been rounded and as a result the figures may not add up to the totals quoted.

Indicated (52% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
BID	481	58.6	4.09	2.77	8.45	0.158
CID	90	55.6	6.33	3.65	9.48	0.101
DID	9	54.7	9.30	5.60	5.01	0.089
<b>Total</b>	<b>580</b>	<b>58.1</b>	<b>4.52</b>	<b>2.95</b>	<b>8.55</b>	<b>0.148</b>

N.B. Tonnage figures have been rounded and as a result the figures may not add up to the totals quoted.

Inferred (52% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
BID	1,253	58.1	4.32	3.18	8.37	0.169
CID	589	55.3	6.33	3.72	9.97	0.101
DID	18	55.7	8.99	4.80	5.28	0.104
<b>Total</b>	<b>1,860</b>	<b>57.2</b>	<b>5.00</b>	<b>3.36</b>	<b>8.84</b>	<b>0.147</b>

N.B. Tonnage figures have been rounded and as a result the figures may not add up to the totals quoted.

High Grade Resource (59% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
Measured	15	61.1	2.60	1.67	7.59	0.140
Indicated	237	60.7	2.87	2.00	7.56	0.154
Inferred	483	60.6	3.10	2.31	7.20	0.167
<b>Total</b>	<b>735</b>	<b>60.6</b>	<b>3.02</b>	<b>2.20</b>	<b>7.32</b>	<b>0.163</b>

N.B. Tonnage figures have been rounded and as a result the figures may not add up to the totals quoted.

Measured (59% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
BID	15	61.1	2.6	1.67	7.59	0.140

Indicated (59% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
BID	237	60.7	2.87	2.00	7.56	0.154

Inferred (59% Fe cut off)

Ore Type	Tonnes mT	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%	P%
BID	480	60.6	3.09	2.30	7.23	0.168
DID	3	60.8	5.32	3.70	2.89	0.103
<b>Total</b>	<b>483</b>	<b>60.6</b>	<b>3.10</b>	<b>2.31</b>	<b>7.20</b>	<b>0.167</b>

N.B. Tonnage figures have been rounded and as a result the figures may not add up to the totals quoted.

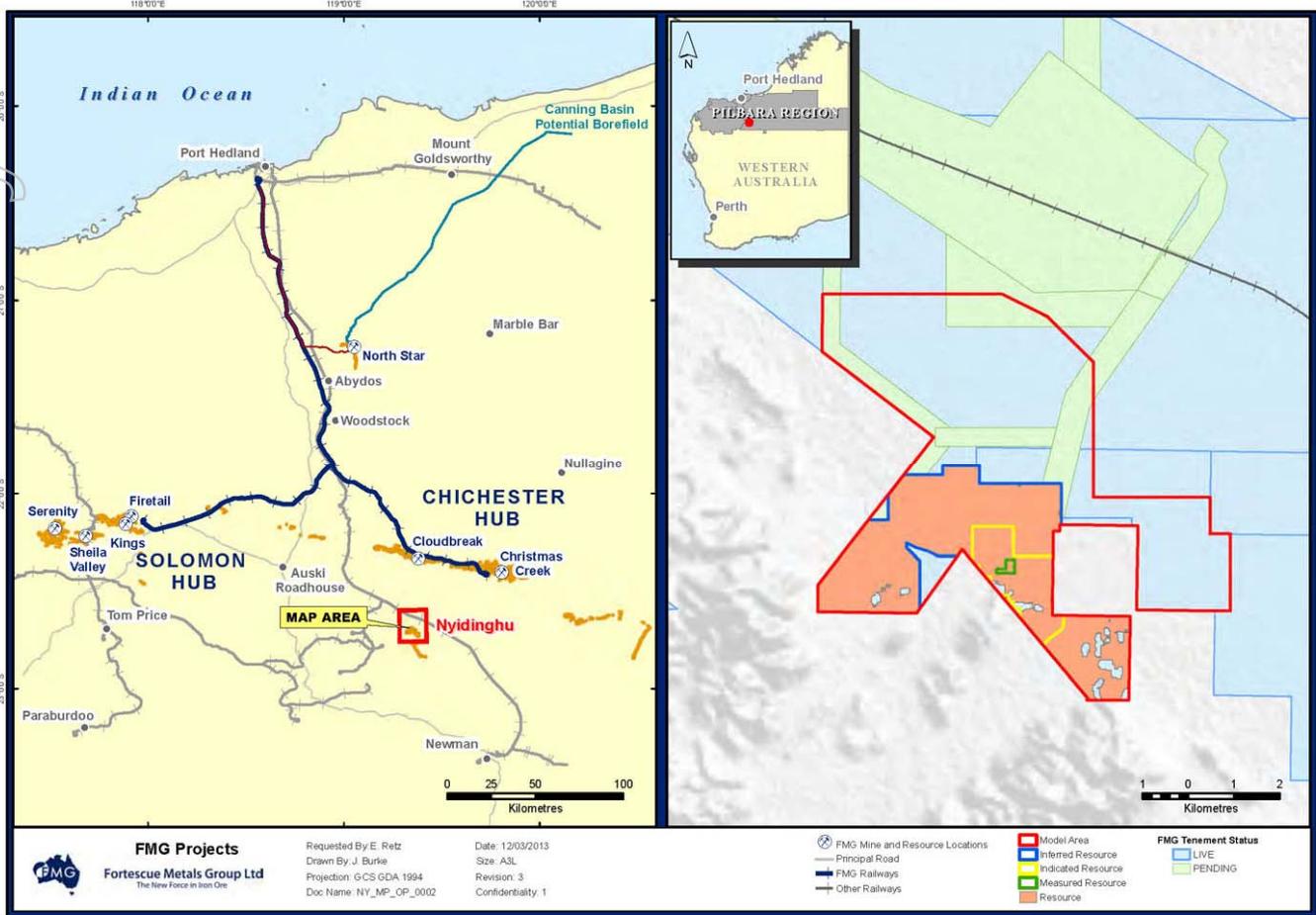
## Nyidinghu Risk Assessment (JORC Table 1)

Criteria	Explanation	Risk
<b>Sampling Techniques and Data</b>		
Sampling techniques	Samples used in this model were taken on 1m and 2m intervals from reverse circulation drill holes. A sample weighing between 3 and 5 kg was collected from each metre and sent for minor element and analytical work.	L
Drilling techniques	140mm diameter reverse circulation drilling was used in this model.	L
Drill sample recovery	Drill cuttings are directly returned into a rig mounted/trailer cyclone. Consistent sample sizes have been reported both on site and at the assay laboratories. Minimal loss of fines was achieved through the use of an automated sample collection and splitting system.	M
Logging	Detailed geological logging captured the following qualitative and quantitative information: mineralogy, sample quality, colour and numerous physical characteristics. This data is relevant for both mineral resource estimation and future mining and processing.	M
Sub-sampling techniques and sample preparation	Multiple samples are collected in labelled calico bags from each 1m or 2m of drilling, which are stored onsite or sent for analysis. These samples are collected using a cone splitter installed directly beneath the cyclone. Wet samples are collected using the same technique as dry samples, with thorough cleaning of gear between samples. Wet samples are allowed to dry before being processed. Larger samples are collected and later split at the laboratories.	M
Quality of assay data and laboratory tests	XRF (fusion disc) was used to analyse for a suite of major and minor elements at a Certified Australian commercial laboratory. Duplicates are taken every 30 samples using the second off take on the cyclone. Analysis of the duplicate samples gives satisfactory repeatability and precision, with no evidence of significant bias. Standards are inserted in the sample stream, approximately 1 every 100 submitted samples. Standards consist of the same type of material as the mineralised material being drilled. Major and minor analysis standard results show satisfactory precision.	L
Verification of sampling and assaying	Independent assay checks are regularly performed by way of round robin testing using several umpire labs.	L
Location of data points	Drill hole collar locations have been surveyed using Survey grade Dual frequency GPS receivers (Post Processed Kinematic GPS technique), with an accuracy of +/- 3 cm x, y and +/- 4 cm in RL, for all the drill holes. 690 downhole surveys have been carried out on the drill holes. Most drill holes are vertical and less than 300 metres deep. With the drill hole spacing and the fact the ore body is essentially horizontal (flat lying) any deviation of these vertical holes would have minimal to no impact on the geological interpretation or the Resource. Collar survey data is validated against planned coordinates and topographic surface.	L
Data spacing and distribution	Drill hole data nominally 50 x 100 metre for assays and geology, with some 100 x 100 metre and minor 100 x 200 metre in places. The drilling is on imprecise grid spacing. This level of data density is sufficient to define geological and grade continuity for a mineral Resource estimate.	M
Orientation of data in relation to geological structure	Most drill holes have been drilled as vertical holes in grid orientations perpendicular to the local bearing of the mineralisation. 20 holes were drilled at an inclination. This results in no significant sampling bias.	L
Audits or reviews	FMG has had a sampling audit by Snowden. Similar rigs and splitter systems were utilised in the model area.	L

### Estimation and Reporting of Mineral Resources

Database integrity	Sample data is stored using a customized Acquire database, which includes a series of automated electronic validation checks. Only trained personnel perform further manual validation which passes on the data in order to confirm results reflect field collected information and geology. In order to ensure integrity of the database, any changes to the database only occur after a review of the suggested changes are authorised, and these changes can only be performed by a single person. Prior to modelling, further validation was performed on the dataset being used. No issues were uncovered in this final validation step.	L
Geological interpretation	Logging and geological interpretation was done by geologists experienced in iron ore mineralisation. Geology over the majority of the deposit is relatively straight forward. Primary consideration during interpretation was given to logged data.	M
Dimensions	The mineralised zone has a strike length up to 7km in length and around 4.5km in width. BID mineralisation extends to depths of up to 300m.	M
Estimation and modelling techniques	Mineralised zones within each stratigraphic unit were defined using an indicator approach based on geochemical indicator cut-offs for Fe, SiO <sub>2</sub> and Mn. Ordinary kriging into a range of parent cell sizes from 25mE by 25mN by 2mRL up to 100mE by 200mN by 2mRL, which reflected local drill spacing and orientation. Estimation was conducted using Ordinary Kriging for all domains. Grades were top cut for estimation based on high coefficient of variation values as well as other statistical characteristics of the distributions. Kriging parameters were derived from semi-variograms. Search distances were based on drill hole spacing and iterative testing. Process of validation included visual inspection and statistical comparisons.	M
Moisture	No moisture corrections have been applied. The model is coded wet or dry based on logging data and downhole geophysics.	M
Cut-off parameters	The cut off used in reporting the Nyidinghu resource is 52% Fe.	L
Mining factors or assumptions	A block height of 2m was chosen in order to properly convey the resolution of the grade distribution. Open cut mining utilising standard FMG mining fleet equipment is assumed.	M
Metallurgical factors or assumptions	Metallurgical work is underway. Initial test work shows metallurgical characteristics comparable with existing Pilbara operations. Current resource cut offs applied are current economic cut offs.	L
Bulk density	Density was assigned to individual units and was based on down hole gamma gamma geophysical measurements. The densities uses are similar to known densities for current and historic mines, of similar geology and mineralisation, across the Pilbara.	L
Classification.	The resource is classified as Measured, Indicated and Inferred. This takes into account drill spacing and data integrity, geological complexity, and estimation quality (kriging efficiency etc.), risk and mineralisation continuity based on the semi-variogram ranges of influence.	M
Audits or reviews	None	L

Figure 1 – Nyidinghu project area



### Competent Persons Statement

The information in the report to which this statement is attached that relates to Mineral Resources is based on information compiled by Mr Stuart Robinson and Mr Lucas Tuckwell who are both Members of The Australasian Institute of Mining and Metallurgy. The information in the report to which this statement is attached that relates to Exploration Results is based on information compiled by Mr Stuart Robinson and Mr Nicholas Nitschke who are both Members of The Australasian Institute of Mining and Metallurgy.

Mr Stuart Robinson, Mr Nicholas Nitschke and Mr Lucas Tuckwell are full time employees of Fortescue Metals Group Ltd and provided geological interpretations for Mineral Resource calculations and compiled the exploration results. Mr Robinson, who is a Fellow of The Australasian Institute of Mining and Metallurgy, and Mr Nitschke and Mr Tuckwell, who are Members of The Australasian Institute of Mining and Metallurgy have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Robinson, Mr Nitschke and Mr Tuckwell consent to the inclusion in this report of the matters based on this information in the form and context in which it appears.