# MINERAL RESOURCES AND ORE RESERVES

BC Iron has a substantial Mineral Resource and Ore Reserves base across a portfolio of operating and development projects in the Pilbara region of Western Australia. The Company's Mineral Resources and Ore Reserves are summarised in the following tables and further details are provided below.

#### MINERAL RESOURCES

Project	Cut-off % Fe	Mt	Fe %	CaFe %	Al <sub>2</sub> O <sub>2</sub> %	SiO. %	Р%	LOI %
Iron Valley	50	229 9	58.4	62.8	3.2	5.2	0.17	7.0
Buckland	50	283.3	56.5	61.4	2.7	7.8	0.17	8.1
Total – Hematite	50	513.1	57.4	62.1	2.9	6.6	0.16	7.6
Maitland River	26	1,106.0	30.4	30.8	2.3	44.0	0.06	1.2

### **ORE RESERVES**

	Cut-off							
Project	% Fe	Mt	Fe %	CaFe %	$Al_2O_3$ %	SiO <sub>2</sub> %	Р%	LOI %
Iron Valley	54	113.0	58.7	63.3	3.0	4.8	0.18	7.3
Buckland	54	134.3	57.6	62.6	2.4	6.5	0.15	8.0
Total	54	247.3	58.1	62.9	2.7	5.7	0.16	7.7

#### **IRON VALLEY**

Mineral Resource and Ore Reserve estimates for Iron Valley as at 30 June 2017 are set out below, with a comparison to 30 June 2016 figures. The estimates have been completed by MIN, the operator of the Iron Valley mine. Mineral Resources have been depleted according to mining undertaken at Iron Valley during the year and reduced by 8.7Mt. Ore Reserves reduced by 10.2Mt during the year, due to depletion of Mineral Resources as well as a re-optimisation based on latest assumptions.

## Iron Valley Mineral Resource Estimate (100% BC Iron, subject to iron ore sale agreement with MIN)

Classification	Cut-off % Fe	Mt	Fe %	CaFe %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Р%	LOI %
Measured	50	20.8	59.5	63.9	2.9	4.4	0.18	6.9
Indicated	50	170.6	58.4	63.1	3.1	4.9	0.18	7.4
Inferred	50	38.6	57.8	61.0	3.9	7.0	0.14	5.3
Total as at 30-Jun-17	50	229.9	58.4	62.8	3.2	5.2	0.17	7.0
Total as at 30-Jun-16	50	238.7	58.4	62.8	3.2	5.2	0.17	7.0

### Iron Valley Ore Reserve Estimate (100% BC Iron, subject to iron ore sale agreement with MIN)

	Cut-off							
Classification	% Fe	Mt	Fe %	CaFe %	$Al_2O_3\%$	SiO <sub>2</sub> %	P %	LOI %
In-situ Proved	54	12.9	60.5	64.8	2.5	3.7	0.19	6.6
In-situ Probable	54	99.5	58.5	63.2	3.1	4.8	0.18	7.4
Stockpiles Proved	54	4.6	56.4	60.4	3.3	8.6	0.13	6.5
Total as at 30-Jun-17	54	113.0	58.7	63.3	3.0	4.8	0.18	7.3
Total as at 30-Jun-16	54	123.2	58.8	63.3	3.0	4.8	0.18	7.1

#### Notes.

- Tonnages are dry metric tonnes and have been rounded. Small difference in totals may exist due to rounding.
- CaFe means "calcined Fe" and equals Fe% / (1- LOI%).
- Ore Reserve stockpiles have been converted to dry metric tonnes based on a 7% moisture content.
- Stockpiles include 1.6Mt of post-process lump and fines products and 3.0Mt of pre-process ore.

### **BUCKLAND**

Mineral Resource and Ore Reserve estimates for Buckland as at 30 June 2017 are set below, with a comparison to 30 June 2016 figures. There were no changes to the Mineral Resource and Ore Reserve estimates during the year.

## **Buckland Mineral Resource Estimate (100% BC Iron)**

Deposit	Classification	Cut-off % Fe	Mt	Fe %	CaFe %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	Р%	LOI %
Bungaroo South	Measured	50	30.9	57.4	62.1	3.0	6.7	0.15	7.6
Area	Indicated	50	224.0	56.6	61.6	2.4	7.8	0.15	8.1
	Inferred	50	3.4	54.7	59.4	3.0	10.2	3.8 0.11	7.9
Regional Satellite	Indicated	50	11.1	55.4	59.5	4.0	8.8	0.11	6.9
Deposits	Inferred	50	13.8	54.8	59.9	4.2	7.8	0.15 0.15 0.13	8.6
Sub-total	Measured	50	30.9	57.4	62.1	3.0	6.7	0.15	7.6
	Indicated	50	235.1	56.5	61.5	2.5	7.9	0.14	8.1
	Inferred	50	17.2	54.8	59.8	4.0	8.3	0.11	8.4
Total as at 30-Ju	n-17	50	283.3	56.5	61.4	2.7	7.8	0.14	8.1
Total as at 30-Jur	1-16	50	283.3	56.5	61.4	2.7	7.8	0.14	8.1

## **Buckland Ore Reserve Estimate (100% BC Iron)**

		Cut-off							
Deposit	Classification	% Fe	Mt	Fe %	CaFe %	$\text{Al}_{_2}\text{O}_{_3}$ %	SiO <sub>2</sub> %	P %	LOI %
Bungaroo South Area	Proved	54	23.2	58.3	62.9	2.9	5.8	0.15	7.4
	Probable	54	106.7	57.5	62.6	2.3	6.6	0.15	8.1
Total as at 30-Ju	ın-17	54	134.3	57.6	62.6	2.4	6.5	0.15	8.0
Total as at 30-Jui	n-16	54	134.3	57.6	62.6	2.4	6.5	0.15	8.0

#### Notes:

- Bungaroo South Area is Bungaroo South and Dragon. Regional Satellite Deposits are Rabbit, Rooster and Snake.
- Tonnages are dry metric tonnes and have been rounded. Small difference in totals may exist due to rounding.
- CaFe means "calcined Fe" and equals Fe% / (1-LOI%).

## **MAITLAND RIVER**

The Mineral Resource estimate for Maitland River as at 30 June 2017 is set out below, with a comparison to 30 June 2016 figures. There were no changes to the Mineral Resource and Ore Reserve estimates during the year.

## Maitland River Mineral Resource Estimate (100% BC Iron)

Classification	Cut-off % Fe	Mt	Fe %	CaFe %	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	P %	LOI %
Measured	_	-	-	-	_	-	-	_
Indicated	-	-	-	-	-	-	-	-
Inferred	26	1,106.0	30.4	30.8	2.3	44.0	0.06	1.2
Total as at 30-Jun-17	26	1,106.0	30.4	30.8	2.3	44.0	0.06	1.2
Total as at 30-Jun-16	26	1,106.0	30.4	30.8	2.3	44.0	0.06	1.2

#### Notes

- Tonnages are dry metric tonnes and have been rounded. Small difference in totals may exist due to rounding.
- CaFe means "calcined Fe" and equals Fe% / (1- LOI%).
- The Mineral Resource estimate is for beneficiable feed ore, which requires beneficiation (upgrading).
- Indicative Davis Tube Recovery (grind size, P80 25µ) test work produced a beneficiated magnetite concentrate with weight yields ranging from 13-28%.

ANNUAL REPORT 2017 73

## MINERAL RESOURCES AND ORE RESERVES GOVERNANCE

BC Iron's Mineral Resources and Ore Reserves as at 30 June 2017 are reported in accordance with JORC (2012) guidelines except for the Maitland River Mineral Resource estimate, which is reported in accordance with JORC (2004) guidelines on the basis that the information has not materially changed.

In relation to Buckland and Maitland River, the Mineral Resource and Ore Reserve estimates are completed by or under the guidance of a suitably qualified BC Iron or independent Competent Person. The estimates are based on industry standard techniques and standard company practices for public reporting.

In relation to Iron Valley, the Mineral Resource and Ore Reserve estimates are completed by or under the guidance of a suitably qualified MIN or independent Competent Person. BC Iron is satisfied with the procedures MIN has advised it has in place for Mineral Resource and Ore Reserve estimation. Suitably qualified BC Iron personnel have also reviewed the documentation and are comfortable with the methodologies used by MIN.

The Mineral Resources and Ore Reserves statement included in the Annual Report is reviewed and approved by a suitably qualified BC Iron Competent Person prior to its inclusion

## **COMPETENT PERSONS STATEMENTS**

The Mineral Resources and Ore Reserves statement in this report has been approved by Mr Rob Williams who is an employee of BC Iron and a Member of the Australasian Institute of Mining and Metallurgy. Mr Williams consents to the inclusion in this report of the Mineral Resources and Ore Reserves statement in the form and context in which it appears.

The information in this report that relates to the Mineral Resource estimates at Iron Valley and Buckland is based on, and fairly represents, information which has been compiled by Mr Lynn Widenbar, who is a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Widenbar and Associates. Mr Widenbar has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Widenbar consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this report that relates to the Ore Reserve estimate at Iron Valley is based on, and fairly represents, information which has been compiled by Mr Ross Jaine, who is a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Mineral Resources Limited. Mr Jaine has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jaine consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this report that relates to the Ore Reserve estimate at Buckland is based on, and fairly represents, information which has been compiled by Mr Alan G. Cooper, who is a Member of the Australasian Institute of Mining and Metallurgy and was a full-time employee of Snowden Mining Industry Consultants Pty Ltd at the time the estimate was completed. Mr Cooper has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Cooper consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this report that relates to the Mineral Resource estimate at Maitland River is based on, and fairly represents, information which has been compiled by Mr Lynn Widenbar, who is a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Widenbar and Associates. Mr Widenbar has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken 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 Widenbar consents to the inclusion in this report of the matters based on his information in the form and context in which they appear. It has been not been updated to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.