



## GRIFFIN MINING LIMITED

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3<sup>rd</sup> April 2019

### **78.5% INCREASE IN MINERAL RESOURCE FOR ZONE III**

**2.051 MILLION TONNES OF ZINC METAL (from 1.244 million tonnes)**  
**885,000 OUNCES OF GOLD (from 574,000 ounces)**  
**33.6 MILLION OUNCES OF SILVER (from 20 million ounces)**

### **\$7.8 BILLION METAL IN SITU IN ZONE III**

Griffin Mining Limited (“Griffin” or the “Company”) is extremely pleased to announce a substantial resource upgrade to the operating mine area at Zone III at its Caijiaying Mine. The Measured, Indicated and Inferred Mineral Resources has increased to 48.7 million tonnes at 4.2% Zinc, 0.2% Lead, 21.4 grammes/tonne Silver and 0.6 grammes/tonne Gold, a 78.5% increase in tonnes from the previously reported Measured, Indicated and Inferred Mineral Resources of 27.3 million tonnes at 4.6% Zinc, 0.2% Lead, 22.9 grammes/tonne Silver and 0.7 grammes/tonne Gold. The results lift the estimate of the contained metal at Zone III from approximately 1.22 to 2.051 million tonnes of zinc metal, from 0.574 to 0.885 million ounces of gold and from 20 to 33.6 million ounces of silver.

Relevant details are set out in the memorandum received from CSA Global in Appendix 1 to this announcement.

It should be stressed that this new resource is not the total “global resource” for the Caijiaying tenement area. The big increase in resources at Zone III has been due to the combination of additional drilling and a far improved understanding of the controls and the distribution of ore within the deposit. Modelling of the resources of the other “zones” at Caijiaying has been progressing with work well advanced on a revised Zone II resource model as well as the maiden estimate for Zone VIII (the recently identified northern resource extension of the Zone III deposit). Resource announcements for those zones should be forthcoming in the near future.

**Chairman Mladen Ninkov commented** “This is truly an outstanding result for the Company and its shareholders. The new resource statement reaffirms the world class size of the current Zone III orebody. One only wonders what the revised resource statements for Zone II and Zone VIII will reveal and the size of the increase to the global resource at Caijiaying. Stay tuned.”

Further information

GRIFFIN MINING LIMITED

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This announcement contains inside information for the purposes of Article 7 of Regulation (EU) No 596/2014.

Griffin Mining Limited's shares are quoted on the Alternative Investment Market (AIM) of the London Stock Exchange (symbol GFM).

The Company's news releases are available on the Company's web site: [www.griffinmining.com](http://www.griffinmining.com)



**Appendix 1**

**CSA Global**

**Mining Industry Consultants**

**MEMORANDUM**

**To:** Mladen Ninkov

**Cc:**

**Date:** 2<sup>nd</sup> April 2019

**From:** Steve Rose

**CSA Global Report N<sup>o</sup>:** R206.2019

**Re:** **Caijiaying Zone III Mineral Resource estimate 31<sup>st</sup> December 2018**

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**SUMMARY**

Griffin Mining Ltd (Griffin) requested CSA Global Pty Ltd (CSA Global) to prepare an updated Mineral Resource estimate as at December 31<sup>st</sup>, 2018 for Zone III of their Caijiaying Zinc-Gold deposit (Caijiaying), located in Hebei Province, People's Republic of China.

The new Mineral Resource estimate totals 48.7 Mt at 4.2% Zn and 0.6 g/t Au, and contains approximately 2,051 kt of zinc metal and 885 koz of gold metal. This is an increase of 21.5 Mt, 807Kt contained zinc and 311 kOz of contained gold since the Zone III Mineral Resources were last reported on 31<sup>st</sup> December 2017.

The updated Mineral Resources for Zone III of the Caijiaying deposit as at December 31<sup>st</sup>, 2018 are shown in Table 1. The Mineral Resource estimates are reported in accordance with The JORC Code (Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC)).

The Mineral Resource estimate is based on 3,754 underground diamond drill holes and 169 surface drill holes. 2,016 new underground diamond drill holes have been completed since the last Mineral Resource estimate. Mineralisation wireframes were interpreted by CSA Global in consultation with Griffin geologists using a nominal 1% Zn cut-off grade ("Zinc Domains") or a nominal 0.5 g/t Au cut-off grade ("Gold Domains"). The Zinc and Gold Domains are reported separately in Table 1. The mineralisation wireframes were used to domain samples, and to then constrain estimation within a 3D block model. Grade interpolation was carried out by ordinary kriging methods.

The Mineral Resource has been depleted using a three-dimensional survey "As Built" wireframe which represents the mined-out voids as at 31<sup>st</sup> December 2018. The Mineral Resource estimate also includes 19,039 t of surface stockpiles. The stockpile estimates are based on actual survey and mine production data.

Table 1: Caijiaying Zone III Mineral Resource estimate December 31<sup>st</sup>, 2018. 1% Zn cut-off grade adopted for Zinc Domains, including surface stockpiles, and 0.5 g/t Au cut-off grade adopted for Gold Domains.

Caijiaying Zone III Mineral Resources December 31 2018									
Zinc Domain Grade Tonnage Reported above a Cut-off Grade of 1.0% Zn									
Category	Tonnes (Mt)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Zn Metal (kt)	Pb Metal (kt)	Ag Metal (kOz)	Au Metal (kOz)
<b>Measured</b>	19.9	4.6	0.2	23.0	0.7	917	44	14,739	413
<b>Indicated</b>	10.1	4.0	0.2	18.2	0.6	404	17	5,907	187
<b>Inferred</b>	18.0	4.0	0.2	21.5	0.4	724	36	12,455	211
<b>Sub-Total</b>	<b>48.0</b>	<b>4.3</b>	<b>0.2</b>	<b>21.5</b>	<b>0.5</b>	<b>2,045</b>	<b>98</b>	<b>33,100</b>	<b>812</b>
Caijiaying Zone III Mineral Resources December 31 2018									
Gold Domain Grade Tonnage Reported above a Cut-off Grade of 0.5 g/t Au									
Category	Tonnes (Mt)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Zn Metal (kt)	Pb Metal (kt)	Ag Metal (kOz)	Au Metal (kOz)
<b>Measured</b>	-	-	-	-	-	-	-	-	-
<b>Indicated</b>	-	-	-	-	-	-	-	-	-
<b>Inferred</b>	0.8	0.8	0.1	19.9	3.0	6	1	483	73
<b>Sub-Total</b>	<b>0.8</b>	<b>0.7</b>	<b>0.1</b>	<b>19.9</b>	<b>3.0</b>	<b>6</b>	<b>1</b>	<b>483</b>	<b>73</b>
Caijiaying Zone III Total Mineral Resources									
Category	Tonnes (Mt)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Zn Metal (kt)	Pb Metal (kt)	Ag Metal (kOz)	Au Metal (kOz)
<b>Measured</b>	19.9	4.6	0.2	23.0	0.6	917	44	14,739	413
<b>Indicated</b>	10.1	4.0	0.2	18.2	0.6	404	17	5,907	187
<b>Inferred</b>	18.7	3.9	0.2	21.5	0.5	730	37	12,938	284
<b>Total</b>	<b>48.7</b>	<b>4.2</b>	<b>0.2</b>	<b>21.4</b>	<b>0.6</b>	<b>2,051</b>	<b>99</b>	<b>33,584</b>	<b>885</b>

Note: rounding errors may occur

## COMPETENT PERSONS STATEMENT

The information in this report that relates to Mineral Resources is based on information compiled by Mr. Steve Rose. Mr. Steve Rose is a full-time employee of CSA Global Pty Ltd and is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr. Steve Rose holds share options in Griffin Mining Ltd. Mr. Steve Rose has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Persons as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr. Steve Rose consents to the disclosure of the information in this report in the form and context in which it appears.

## Appendix 2

### Glossary of key terms

Competent Person	<p>A minerals industry professional who is a Member or Fellow of The Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a 'Recognised Professional Organisation' (RPO), as included in a list available on the JORC and ASX websites. These organisations have enforceable disciplinary processes including the powers to suspend or expel a member.</p> <p>A Competent Person must have a minimum of five years relevant experience in the style of mineralisation or type of deposit under consideration and in the activity which that person is undertaking.</p>
CSA	<p>CSA Global Pty Ltd. A private consulting firm providing technical and management services to the global resources industry.</p>
cross-section	<p>A two dimensional geologic diagram which views the earth as if it were cut open and seen from the side.</p>
cut-off	<p>The lowest grade, or quality, of mineralised material that qualifies as economically mineable and available in a given deposit. May be defined on the basis of economic evaluation, or on physical or chemical attributes that define an acceptable product specification.</p>
Indicated	<p>An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.</p> <p>Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered.</p> <p>An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve.</p>
Inferred	<p>An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.</p> <p>An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.</p>
JORC Code	<p>Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy,</p>

Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

Kriging

Kriging is an advanced geostatistical procedure that generates an estimated surface from a scattered set of points with z-values

Measured

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve of under certain circumstances to a Probable Ore Reserve.