GRIFFIN MINING LIMITED

NEW TOTAL GLOBAL MINERAL RESOURCE STATEMENT

50% INCREASE IN MINERAL RESOURCE AT CAIJIAYING ZINC-GOLD MINE TO 101.5 MILLION TONNES

US$17.7 BILLION METAL IN SITU[1]

18TH FEBRUARY 2021

Griffin Mining Limited ("Griffin" or the "Company") is pleased to announce the new Global Mineral Resource estimate for it's Caijiaying Zinc-Gold Mine in the People's Republic of China. The new Global Mineral Resources from the 4 main deposit "Zones", reported in accordance with the JORC Code (2012) , total:

- **101.5 million tonne Global Mineral Resource (from 67.7 million tonnes[2])**
- **4.0 million tonnes of Zinc Metal (from 2.7 million tonnes[2])**
- **1.6 million ounces of Gold (from 1.0 million ounces[2])**
- **88.8 million ounces of Silver (from 48.5 million ounces[2])**
- **0.6 million tonnes of Lead (from 0.2 million tonnes[2])**

The global Measured, Indicated and Inferred Mineral Resource estimate totals 101.5 Mt at 3.9% Zn, 0.6% Pb, 27.0 g/t Ag and 0.5 g/t Au, resulting in total contained metal of approximately 4.0 million tonnes of zinc metal, 0.6 million tonnes of lead metal, 88.8 million ounces of silver metal and 1.59 million ounces of gold metal.

This is an increase of 33.9 Mt (50%) from the previous mineral resource, which incorporated Zone II and III only, of 67.6Mt @ 3.9% Zn, 0.4% Pb, 22.3g/t Ag and 0.5 g/t Au, as reported on 16th June 2020 in Griffin's 2019 annual report and accounts.

The contained metal has increased from approximately 2.653 to 3.968 million tonnes of zinc metal, 0.242 to 0.606 million tonnes of lead, 48.5 to 88.8 million ounces of silver and 1.025 to 1.593 million ounces of gold.

The Mineral Resources at Caijiaying are distributed among four "Zones" with the main line of lodes stretching 3km in strike. Zones II, III and VIII are all accessible from the existing mine infrastructure while Zone V is located just 0.8km west of Zone II. As previously announced by the Company on the 4th January 2021, the Zone II and III Mineral Resources are located within a single newly expanded Mining Licence where the current underground mining activity is focused on the Zone III resources. This recent resource increase has now triggered a development programme to be commenced to enable increased production to 1.5 Mt per annum, delivering an 80% production increase in the next two years.

In the future, an additional mine expansion may be delivered with the inclusion of the Zone V and VIII Mineral Resources that are located within the Company's Retention Licence adjacent to the west of Zone II and north of Zone III, respectively. The Retention Licence is valid for two years and is the first step in the process of converting the area to a Mining Licence.

The strategy of focusing on near-mine exploration and resource definition drilling has delivered substantial growth to the Caijiaying Mineral Resources. At Zone VIII, surface drilling has defined the northern extension to Zone III a further 500m along strike where it remains open at depth. The Zone V Mineral Resource is the result of detailed research into the historical data set. This significant body of work has enabled the Inferred Mineral Resource estimate to JORC 2012 compliance. Further work is planned to unlock the full potential of these maiden resources.

Further information in relation to the Mineral Resource estimate is set out in the appendix to this announcement, and is also available on the Company's website, www.griffinmining.com

Chairman Mladen Ninkov said "Finally, the vast potential of Caijiaying has been uncovered and confirms the absolute world class nature of the deposit. I am so delighted for the shareholders, directors and staff of Griffin, and in particular, our great friend and recently departed director Rupert Crowe, who believed in, and toiled so passionately for, Caijiaying. Yet we are still only in the earliest of stages of our journey of understanding what still could lie around us and below us. Remarkable!"

COMPETENT PERSON STATEMENT

The information in this announcement that relates to Mineral Resources is based on, and fairly reflects, information compiled by Mr Serikjan Urbisinov a Competent Person, who is a Member of the Australian Institute of Geoscientists. Mr Serikjan Urbisinov is a full-time employee of CSA Global Pty Ltd. Mr Serikjan Urbisinov 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 Person as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Serikjan Urbisinov consents to the disclosure of the information in this announcement of the matters based on his information in the form and context in which it appears.

[1]The insitu metal value is the result of the Company's assessment based on LME spot metal prices at 16/02/2021 and does not consider modifying factors such as the cost of metal extraction and recovery.

[2] The relative increase in resources compares the current Global Mineral Resource to the total Zone II and Zone III Mineral Resource as at 31st December 2019.

Further information

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Appendix A

Caijiaying Global Mineral Resource Statement and Parameters

CSA Global Pty Ltd ("CSA Global") was engaged by Griffin Mining Ltd ("Griffin") to prepare a Global Mineral Resource estimate for the Caijiaying zinc, gold, silver and lead deposit ("Caijiaying"), located in Hebei Province, People's Republic of China.

The Global Mineral Resource estimate has been reported in accordance with The JORC Code[1] and is shown in Table 1.

The Mineral Resource for Zone II and Zone III have been depleted using a three-dimensional survey "as built" wireframe which represents the mined-out-voids as at 31st December 2020. The resources at Zone V and VIII are maiden Mineral Resource estimates and therefore have not been reported previously.

The Mineral Resource estimate includes 2.8 Mt of oxidised resource that may require modifications to the processing circuit to enable satisfactory recoveries.

Table 1: Mineral Resource estimate for Caijiaying deposit February 2021 – reported by Zones.

Category	Tonnage Mt	Zn %	Zn Metal (kt)	Pb %	Pb Metal (kt)	Au ppm	Au Metal (koz)	Ag ppm	Ag Metal (koz)
Zone II Oxide: Zn Resources > 1% Zn									
Indicated	1.2	2.9	35.0	0.5	5.9	0.30	10.5	19	751
Inferred	1.6	2.5	38.8	0.5	8.0	0.10	6.7	17	830
Total	**2.8**	**2.7**	**73.8**	**0.5**	**13.9**	**0.20**	**17.2**	**18**	**1,581**
Zone II Fresh: Zn Resources > 1% Zn									
Indicated	11.5	3.8	435.9	0.9	109.2	0.30	96.1	27	10,085
Inferred	26.4	3.7	976.7	1.0	253.2	0.40	349.6	30	25,108
Total	**37.9**	**3.7**	**1,412.6**	**1.0**	**362.4**	**0.40**	**445.7**	**29**	**35,193**
Zone II Total									
Indicated	12.7	3.7	470.9	0.9	115.0	0.30	106.6	27	10,836
Inferred	27.9	3.6	1,012.5	1.0	261.2	0.40	356.2	29	25,938
Total	**40.7**	**3.7**	**1,486.4**	**0.9**	**376.3**	**0.40**	**462.9**	**28**	**36,774**
Zone III Domain 1: Zn Resources > 1% Zn									
Measured	19.0	4.5	861.6	0.2	42.5	0.64	388.8	23	13,932
Indicated	10.0	4.0	396.8	0.2	17.0	0.57	182.8	18	5,781
Inferred	17.9	4.0	718.4	0.2	35.8	0.36	209.6	22	12,364
Total	**46.8**	**4.2**	**1,976.7**	**0.2**	**95.2**	**0.52**	**781.2**	**21**	**32,077**
Zone III Domain 2: Au Resources > 0.5 g/t Au									
Inferred	0.7	0.8	5.9	0.1	0.7	3.00	67.5	20	446
Total	**0.7**	**0.8**	**5.9**	**0.1**	**0.7**	**3.00**	**67.5**	**20**	**446**

Category	Tonnage Mt	Zn %	Zn Metal (kt)	Pb %	Pb Metal (kt)	Au ppm	Au Metal (koz)	Ag ppm	Ag Metal (koz)
Zone III Total									
Measured	19.0	4.5	861.6	0.2	42.5	0.64	388.8	23	13,932
Indicated	10.0	4.0	396.8	0.2	17.0	0.57	182.8	18	5,781
Inferred	18.6	3.9	724.3	0.2	36.5	0.46	277.1	21	12,810
Total	**47.5**	4.2	**1,982.6**	0.20	**95.9**	0.56	**848.7**	21	**32,523**
Zone V Zn Resources > 1% Zn									
Inferred	6.0	3.2	190.7	1.4	84.3	0.60	115.8	56	10,819
Total	**6.0**	**3.2**	**190.7**	**1.4**	**84.3**	**0.60**	**115.83**	**56**	**10,819**
Zone VIII Domain 1: Zn Resources > 1% Zn									
Inferred	6.6	4.6	303.8	0.7	45.0	0.50	112.0	36	7,675
Total	**6.6**	**4.6**	**303.8**	**0.7**	**45.0**	**0.50**	**112.00**	**36**	**7,675**
Zone VIII Domain 2: Au Resources > 0.5 g/t Au									
Inferred	0.7	0.7	4.7	0.7	4.7	2.40	54.0	45	1,015
Total	**0.7**	**0.7**	**4.7**	**0.7**	**4.7**	**2.40**	**54.00**	**45**	**1,015**
Zone VIII Total									
Inferred	7.3	4.2	308.5	0.7	49.7	0.70	166.0	37	8,690
Total	**7.3**	**4.2**	**308.5**	**0.7**	**49.7**	**0.70**	**166.00**	**37**	**8,690**
Total									
Measured	19.0	4.5	861.6	0.2	42.5	0.64	388.8	23	13,932
Indicated	22.7	3.8	867.7	0.6	132.0	0.42	289.4	23	16,617
Inferred	59.8	3.7	2,239.0	0.8	431.7	0.48	915.2	30	58,258
Total	**101.5**	**3.9**	**3,968.3**	**0.6**	**606.2**	**0.51**	**1,593.4**	**27**	**88,806**

[1] 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).

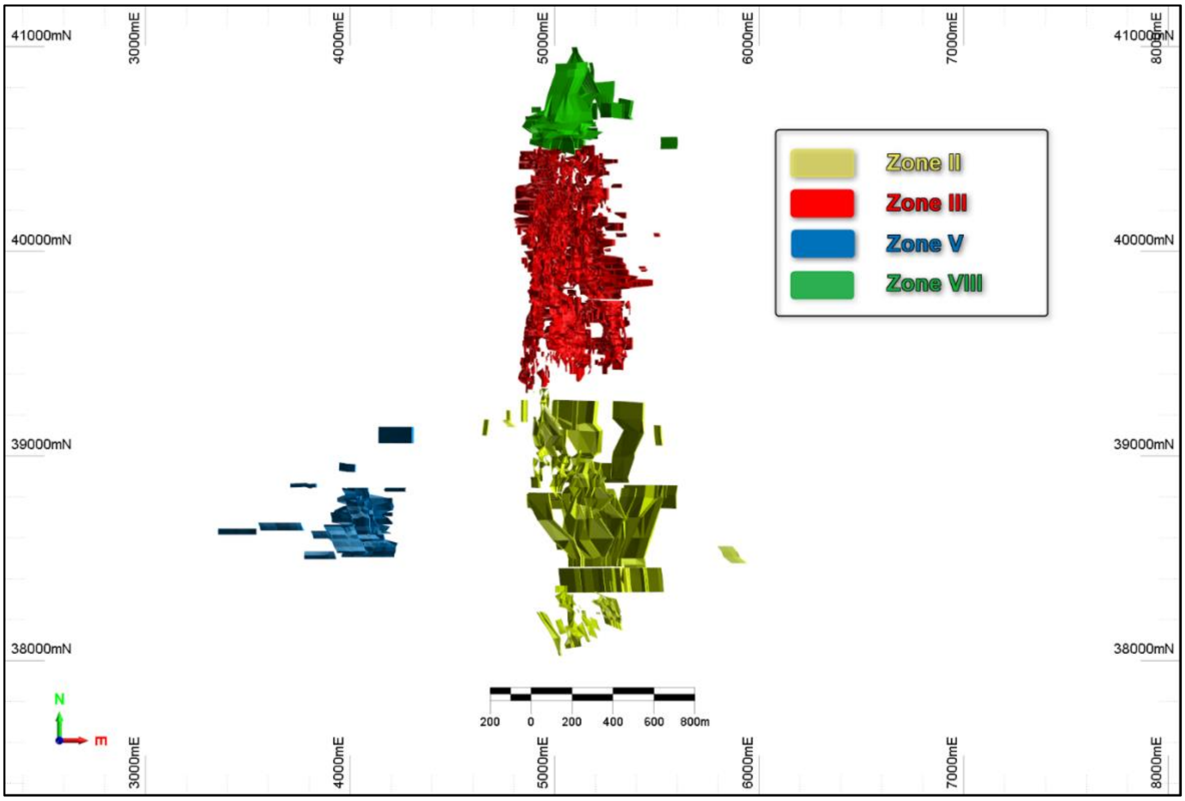

Figure 1: Plan showing mineralisation wireframes by zones.

Zone II

The previous Mineral Resource estimate first reported in 2013 is shown in

Table 2. As previously announced (See Company Announcement "Zone II Resource January 2021" dated 26th January 2021) the tonnage for the new updated Zone II Mineral Resource has increased by over 100% and the contained zinc metal has increased by over 130%. A total of 109 surface diamond drillholes, 91 reverse circulation surface drillholes and 163 underground diamond drillholes, define the Zone II deposit for a combined total of 91,383 m of drilling. The Zone II deposit was sampled predominantly by diamond drillholes at irregular spacing, but average spacings are approximately 40 m x 40 m. There is already some underground access from the existing Zone III Decline via the 1453 development drive and there has been no stoping of the material defined in the Zone II Mineral Resource estimate.

Zone III

The previous Zone III Mineral Resource estimate shown in **Error! Reference source not found.** is based on a block model completed in 2018, which has then been depleted for mining production as at December 31st, 2019.

A total of 192 surface diamond drillholes, 34 reverse circulation surface drillholes and 3,683 underground diamond drillholes, define the Zone III deposit for a combined total of 499,029 m of drilling. The Zone III deposit which is currently in production was sampled predominantly by diamond drillholes at irregular spacing, with a clustering in the main part of the mine, but average spacings are approximately 40 m x 40 m. Holes were generally aligned either to the east or west with dip angles set to optimally intersect the mineralised horizon.

Zone V

A total of 34 surface diamond drillholes, 3 reverse circulation surface drillholes define the Zone V deposit for a combined total of 15,242 m of drilling. The Zone V deposit was sampled by diamond drillholes at irregular spacing, but average spacings are approximately 25 m x 100 m.

Zone VIII

A total of 44 diamond drillholes define the Zone VIII deposit for a combined total of 32,193 m of drilling. Drilling was carried out as close as possible to right angles to the mineralisation. Drill spacing was 50 m to 100 m, to cover the limits of mineralisation in a systematic pattern.

Table 2: Caijiaying Zone II Mineral Resource estimates as at June 2013

Caijiaying Zone II Remaining Mineral Resources June 2013 (grade tonnage reported above a cut-off grade of 1.0% Zn)										
Zone	**JORC Classification**	**Tonnes (Mt)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Zn** Metal (kt)	**Pb** Metal (kt)	**Ag** Metal (koz)	**Au** Metal (koz)
	Indicated	4.06	3	0.7	25	0.30	123.0	27.0	3,243	39.3
	Inferred	15.57	3.3	0.8	25	0.30	516.0	117.0	12,277	124.2
	Subtotal	**19.63**	**3.3**	**0.7**	**25**	**0.30**	**638.0**	**144.0**	**15,520**	**163.5**

Table 3: Mineral Resource estimate for Zone III at December 31st 2019 at 1% Zn cut-off grade

Depth	**Classification**	**Tonnage (Mt)**	**Zn %**	**Zn metal (kt)**	**Pb %**	**Pb metal (kt)**	**Au ppm**	**Au metal (koz)**	**Ag ppm**	**Ag metal (koz)**
Domain 1: Zn Resources >1% Zn										
Total	Measured	19.4	4.6	887	0.2	43	0.7	397	23	14,291
	Indicated	10.0	4.0	400	0.2	17	0.6	186	18	5,843
	Inferred	17.9	4.0	722	0.2	36	0.4	211	22	12,423
	Total	**47.4**	**4.2**	**2,009**	**0.22**	**97**	**0.5**	**794**	**21**	**32,556**
Domain 2: Au Resources >0.5 g/t Au										
Total	Inferred	0.7	0.7	6	0.10	1	3.0	67	20	446
	Total	**0.7**	**0.7**	**6**	**0.10**	**1**	**3.0**	**67**	**20**	**446**
TOTAL										
TOTAL	**Measured**	19.4	4.5	887	0.22	43	0.64	397	23	14,291
	Indicated	10.0	4.0	400	0.17	17	0.57	186	18	5,843
	Inferred	18.6	3.9	728	0.20	37	0.46	278	21	12,423
	TOTAL	**48.0**	**4.2**	**2,015**	**0.20**	**97**	**0.56**	**861**	**21**	**32,557**

Glossary of key terms

CSA Global	CSA Global Pty Ltd. A private consulting firm providing technical and management services to the global mining industry.
cut-off	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.
deposit	Natural accumulations of minerals in the earth crust, in form of one or several mineral bodies which can be extracted at the present time or in an immediate future.
diamond drill hole	Method of obtaining cylindrical core of rock by drilling with a diamond-set or diamond-impregnated bit.
g/t	Grams per tonne - a unit of measurement used to express the concentration of an element within a mass of another (same as parts per million).
Indicated Mineral Resources	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.

Inferred Mineral Resources	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.
JORC	An acronym for Joint Ore Reserves Committee. by The Australasian Institute of Mining and Metallurgy (The AusIMM) and the Australian Institute of Geoscientists (AIG) and is binding on members of those organisations. The Code is endorsed by the Minerals Council of Australia and the Financial Services Institute of Australasia as a contribution to good practice. The Code has also been adopted by and included in the listing rules of the Australian Securities Exchange (ASX) and the New Zealand Stock Exchange (NZX)., the purpose of which is to set the regulatory enforceable standards or a Code of Practice for the public reporting of Exploration Results, Mineral Resources and Ore Reserves.
Measured Mineral Resources	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. Mineral Resources A concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories

JORC Code, 2012 Edition – Table 1

Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	The sample database is made up of surface diamond drilling, underground diamond drilling and surface reverse circulation (RC) drilling.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Diamond core was cut in half using a diamond saw, with the cut line determined by the mineralisation angles. RC samples were split through a riffle splitter.
	Aspects of the determination of mineralisation that are Material to the Public Report. *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	Diamond holes were sampled after standard logging and photography. Sampling intervals were 0.5–1.5 m with 1.0 m being the most common interval. RC drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 50 g charge for fire assay and a 20 g charge for base metal assay.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	Drilling was completed using a face sampling hammer or NQ2/BQ size diamond core. All holes were surveyed upon completion of drilling using single/multi-shot electronic or mechanical survey cameras.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Core recovery is measured for diamond core by measuring the length of core for each core run. This is recorded in a table called GEOTECH. There is no recovery recorded for RC holes, but these constitute only 50 holes within the Mineral Resource and have been mainly used to provide information about the depth of overburden.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Diamond coring is carried out using equipment in good working order to ensure no loss of core. Core loss during drilling is noted on a core block placed into the core tray, and then discussed with the geologist. Core loss is generally rare and related to fault zones away from the mineralisation. RC sample recovery was maximised by using a modern rig with sufficient air to keep the hole dry.
	Relationship between sample recovery and grade/sample bias.	This analysis was not carried out because core recovery has generally been high through the mineralised zones.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	All RC samples were geologically logged to record weathering, regolith, rock type, colour, alteration, mineralisation, structure and texture and any other notable features that are present. All diamond core was logged for structure, and geologically logged using the same system as that for RC. The logging information was recorded into Microsoft (MS) Excel format on paper and then transferred into

Criteria	JORC Code explanation	Commentary
		the company's drilling database once the log was complete. Since 2017 core logging has been directly into MS Excel sheets on laptop computers.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging was qualitative; however, the geologists also record visual quantitative mineral percentage ranges for the sulphide minerals present. Diamond core was photographed wet one core tray at a time using a standardised photography jig. Samples from RC holes were archived in standard 20 m plastic chip trays.
	The total length and percentage of the relevant intersections logged.	All holes and intersections have been logged.
Subsampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Core samples were taken from half core, cut using a diamond core saw. The remainder of the core was retained in core trays tagged with a hole number and metre mark. Since 2016 small diameter (BQ) underground holes have been whole core sampled, to remove the need for core cutting and to increase the sample weight.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples were cone split to a nominal 2.5 kg to 3 kg sample weight. The drilling method was designed to maximise sample recovery and delivery of a clean, representative sample into the calico bag. Where possible all RC samples were drilled dry to maximise recovery. The use of a booster and auxiliary compressor provide dry sample for depths below the water table. Sample condition was recorded (wet, dry or damp) at the time of sampling and recorded in the database. Samples were collected in a pre-numbered calico bag bearing a unique sample ID. Samples were crushed to 75 µm at the laboratory and riffle split (if required) to a maximum 3 kg sample weight. Gold analysis was determined by a 50 g fire assay with an inductively coupled plasma-optical emission spectrometry (ICP-OES) or atomic absorption spectroscopy (AAS) finish.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique	The assay laboratories' sample preparation procedures follow industry best practice, with techniques and practices that are appropriate for this style of mineralisation. Pulp duplicates were taken at the pulverising stage and selective repeats conducted at the laboratories' discretion.
	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	Cut lines are marked on diamond drill core to ensure that the core to minimise bias when cutting. The RC drilling was carried out several years ago, and no documentation remains on QAQC of subsampling. RC samples are not material to this Mineral Resource estimate (MRE).
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	Hua Ao inserts approximately three standards and three blanks for every 100 samples. Field duplicates were collected from the cone splitter on the rig for RC samples at a frequency of one duplicate every 20 samples, excluding the 100th sample as this was a standard. Diamond core duplicates were not taken during this drilling program. Regular reviews of the sampling were carried out by the supervising geologist and senior field staff, to ensure all procedures were followed and best industry practice carried out.

Criteria	JORC Code explanation	Commentary
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes were appropriate for the type, style and consistency of mineralisation encountered during this phase of exploration.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	The assay method and laboratory procedures were appropriate for this style of mineralisation. The fire assay technique was designed to measure total gold in the sample.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools, spectrometers were used. Handheld x-ray fluorescence (XRF) instruments are used; however, the values were only used to support geological modelling of the lithology. The values were not used for grade estimation.
	Nature of quality control procedures adopted and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	The QAQC process described above was sufficient to establish acceptable levels of accuracy and precision. All results from assay standards and duplicates were scrutinised to ensure they fell within acceptable tolerances.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Primary data is sent in digital format to the company's Database Administrator (DBA) as often as was practicable. The DBA imports the data into a GeoBank (MS SQL) database, with assay results merged into the database upon receipt from the laboratory. Once loaded, data was extracted for verification by the geologist in charge of the project.
	The use of twinned holes.	Twinned holes have not been drilled at Caijiaying because the MRE is predominantly based on diamond drillholes with demonstrated good recovery through the ore zones. Several years of production give confidence to the geometry and persistence of mineralisation.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All primary data is collected on paper logs, which are filed and stored. Procedures are documented for data recording and entry. Data from paper logs is transferred to MS Excel files and then imported into GeoBank drillhole database. A back up of the database is maintained in CSA Global's Perth office. Since 2017, logging has been directly into MS Excel tables on a laptop. These files are transferred to a server. The server has a backup system.
	Discuss any adjustment to assay data.	No adjustments were made to any current or historical data. If data could not be validated to a reasonable level of certainty it was not used in any resource estimations.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Surface RC drill collars were surveyed after completion, using a differential global positioning system (GPS) instrument. Downhole RC surveys were completed using a mechanical single-shot survey camera. Underground holes were surveyed by mine surveyors using a total station theodolite. Downhole surveys were completed using single/multi-shot electronic survey instruments or single-shot survey camera. Downhole surveys are recorded relative to magnetic north. Corrections are made, depending on the year of survey, for magnetic declination, to give azimuths in terms of the Hua Ao mine grid system.

Criteria	JORC Code explanation	Commentary
	Specification of the grid system used.	All coordinates and bearings use the Hua Ao mine grid system.
	Quality and adequacy of topographic control.	The quality of the topographic control is considered to be sufficient. The mine is in operation and has a site-based survey department. Their work is of good quality, supported by development breakthroughs occurring as expected; being able to connect two drives being developed towards each other and so on.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The data spacing is irregular, with a clustering in the main part of the mine, but average spacings are approximately 40 m x 40 m.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The Competent Persons believe the mineralised domains have sufficient geological and grade continuity to support the classification applied to the Mineral Resource given the current drill pattern. Mineral Resource estimation procedures are also considered appropriate give the quantity of data available and style of mineralisation under consideration.
	Sample compositing	Sample composites have not been used.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Drilling was designed based on known geological models, field mapping, verified historical data and cross-sectional interpretation. Drillholes oriented at right angles to strike of deposit, with dip optimised for drill capabilities and the dip of the orebody.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	This is not considered to be a material factor because of the style of mineralisation and the use of underground drill fans to intersect the mineralisation at various angles.
Sample Security	*The measures taken to ensure sample security.*	All samples were reconciled against the sample submission with any omissions or variations reported to back to the logging geologists. All samples were bagged in a tied numbered calico bag, grouped into green plastic bags. The bags were placed into cages with a sample submission sheet and delivered directly from site to the SGS and Intertek laboratories in Beijing and Tianjin by HHA personnel.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	An audit of the underground mining geology systems, including sampling, was carried out in 2018 by Aaron Meakin of CSA Global. This included work on ideal sample spacing. In general, this audit supported current practice.

Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	All exploration was conducted on tenements 100% owned by HHA Ao or its related companies. The leases are the Hua Ao Mining Licence, the Hua Ao Exploration Licence and the Sino-Anglo Exploration Licence. The Zone II Mining Licence has been granted See Company Announcement “Issue of New Mining Licence” dated 4th January 2021.

Criteria	JORC Code explanation	Commentary
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	All tenements are in good standing.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	All exploration has been undertaken by Hua Ao or the Third Geological Brigade of Hebei who now form part of the Hua Ao Joint Venture.
Geology	*Deposit type, geological setting and style of mineralisation.*	Mineralisation at Caijiaying is believed to be related to a Jurassic igneous event that affected the 2.3 billion-year-old metamorphic basement rocks. Base metal and gold mineralisation associated with Jurassic intrusives have replaced favourable horizons in the metamorphic rocks, most notably calcsilicates and marble. Porphyry sills and dykes intruding along faults have then cut across the sequence.
Drillhole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* • *dip and azimuth of the hole* • *downhole length and interception depth* • *hole length.*	Exploration results are not being reported.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Exploration results are not being reported.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Exploration results are not being reported.
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Exploration results are not being reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Exploration results are not being reported.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	Exploration results are not being reported.
	If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.	Holes were drilled orthogonal to mineralisation as much as possible; however, the exact relationship between intercept width and true width cannot be estimated exactly in all cases.
	If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	Exploration results are not being reported.

Criteria	JORC Code explanation	Commentary
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	Exploration results are not being reported.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Exploration results are not being reported.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No substantive exploration data not already mentioned in this table has been used in the preparation of this MRE.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Further work will be focused on infilling mineralisation to upgrade to a higher Mineral Resource classification and testing for dip extensions and strike extensions.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Exploration results are not being reported.

Section 3: Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging information was originally recorded on paper, then entered into excel format and then sent to the company's DBA once the log was complete. Since 2017, logging has been on laptops directly into MS Excel tables. Collar surveys were received electronically from surveyors. Downhole surveys (underground holes only) were received electronically from the drilling company with surface drilling surveys being entered first on paper then into MS Excel format before loading into the database. Laboratory analysis results were received electronically and loaded straight into the database.
	Data validation procedures used.	The company's DBA imports all electronic data received into a GeoBank database with database configuration support from CSA Global consultants. The Geobank database is a MS SQL Server database, which is relational and normalised. As a result of normalisation, the following data integrity categories exist: • Entity integrity: No duplicate rows in a table, eliminated redundancy and chance of error. • Domain integrity: Enforces valid entries for a given column by restricting the type, the format or a range of values. • Referential integrity: Rows cannot be deleted which are used by other records.

Criteria	JORC Code explanation	Commentary
		• User-defined integrity: Logging rules and validation codes set up by the company. Data extracted from the database was validated visually in Micromine software and when using the data any errors regarding incorrect locations, missing collar information, logging, sampling and downhole survey data and overlapping intervals are highlighted.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	Aaron Meakin, a current CSA Global consultant, spent approximately two weeks on site in 2018. In this time, discussions were held regarding the geological controls to the mineralisation, and data collection protocols were reviewed.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	There is a reasonable level of confidence in the geological interpretation of the mineralisation that is traceable over numerous drillholes and drill sections both for underground and surface drilling.
	Nature of the data used and of any assumptions made.	Surface mapping of mineralised outcrop, underground workings, drillhole intercept logging, assay results and detailed geological logging have formed basis for the geological interpretation.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Geological continuity is implied between drillholes and conforms well to the anticipated geological model based on the interpretation of regional and local geology, and its association with mineralisation. The data does not readily offer alternative interpretations. In places, the precise limits and geometry cannot be absolutely defined due to the limitations of the current drill coverage and the structural complexity. Further work is required to better define the geometry and limits of the mineralised zones, but no significant downside changes to the interpreted mineralised volume are anticipated.
	The use of geology in guiding and controlling Mineral Resource estimation.	The grade and lithological interpretation form the basis for the modelling. Lithological envelopes defining the prospective mineralisation within which the grade estimation have been completed.
	The factors affecting continuity both of grade and geology.	The mineralisation is hosted within the Proterozoic basement rock. Chang *et al.* (2009) described the mineralisation, which is dominated by zinc, in detail and categorised three distinct styles: breccias, skarns, and banded mineralisation. Brecciated zones are composed of angular clasts of sericite, chlorite, siderite and pyrite altered basement rock, and yields the most common style of mineralisation. Skarns are typically massive, associated with retrograde alteration, and characterised by replacement skarn mineralogies such as quartz, siderite, calcite, other carbonates, chlorite and sometimes sphalerite. Banded ore is present only in minor amounts and considered the result of uninhibited mineral growth inside previously leached and dissolved carbonate zones.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface*	**Zone II** The Mineral Resource has a strike length of 1,300 m, a width of 800 m and extends from 10 m below surface to 700 m below surface.

Criteria	JORC Code explanation	Commentary
	to the upper and lower limits of the Mineral Resource.	**Zone III** The Mineral Resource has a strike length of 1,200 m, a width of 650 m and extends from 30 m below surface to 700 m below surface. **Zone V** The Mineral Resource has a strike length of 630 m, a width of 800 m and extends to 700 m below surface. **Zone VIII** The Mineral Resource has a strike length of 530 m, a width of 450 m and extends from 220 m below surface to 780 m below surface.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	Grade estimation was carried out using the geostatistical method of ordinary kriging. The methods use estimation parameters defined by variography. The 1 m composite top-cut dataset was used for the grade interpolation. Estimation of the resource was competed using Micromine. The mineralisation domains, resource category and porphyry dykes were coded to the block model. Density data was also imported into Micromine software and was also applied using a regression formula relating to the zinc grade.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	CSA Global carried out an MRE for Griffin Mining in 2013. There is a good comparison between the 2013 estimate and the 2018 estimate, as expected with the same methodology applied being used with addition of new drillholes.
	The assumptions made regarding recovery of by-products.	The processing plant currently produces a zinc and a lead concentrate. Credits are paid for gold and silver in the lead concentrate. The MRE includes gold, silver and lead.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No potentially deleterious elements have been considered. The processing plant is currently operating, and no deleterious elements are reported as causing concern.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	A 3D block model was generated to enable grade estimation. The selected block size was based on the geometry of the domain interpretation and the data configuration. **Zone II** A block model was created using 5.0 mE x 10.0 mN x 5.0 mRL parent blocks. Sub-cells were generated down to 1 mE x 2 mN x 1 mRL **Zone III** A block model was created using 5.0 mE x 5.0 mN x 5.0 mRL parent blocks. Sub-cells were generated down to 1 mE x 1 mN x 1 mRL **Zone V** A block model was created using 5.0 mE x 5.0 mN x 5.0 mRL parent blocks. Sub-cells were generated down to 1 mE x 1 mN x 1 mRL **Zone VIII** A block model was created using 5.0 m(E) x 25.0 m(N) x 25.0 m(RL) parent blocks. Sub-cells were generated down to 1 m(E) x 5 m(N) x 5 m(RL)

Criteria	JORC Code explanation	Commentary
	Any assumptions behind modelling of selective mining units.	No selective mining units were assumed in this estimate.
	Any assumptions about correlation between variables.	No strong correlations were found between the grade variables.
	Description of how the geological interpretation was used to control the resource estimates.	The lower cut-off grades of 1.0% Zn for Zn domains and 0.5 g/t Au for Au domains defined the mineralised envelopes. Hard boundaries between the grade envelopes were used to select sample populations for grade estimation.
	Discussion of basis for using or not using grade cutting or capping.	Top cuts were used to treat the high-grade outliers of the domains. Top cuts were based on review of the domain histogram and log probability plot.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Validation of the block model consisted of comparison of the block model volume to the wireframe volume. Grade estimates were validated by statistical comparison with the drill data, visual comparison of grade trends in the model with the drill data trends. Additionally, swath plots were generated to verify block model grades vs drillhole grades along easting, northing and elevation slices.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages are estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	The Mineral Resource has been reported above a 1% Zn cut-off grade and 0.5 g/t Au cut-off grade for the gold domain.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Caijiaying is being mined by underground methods.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Caijiaying is being mined by underground methods and processed in a conventional flotation processing plant. It currently produces zinc and lead concentrates that are sold to smelters. This demonstrates that the ore can be treated.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential*	Zone III of the mine is in production and has all environmental permits in place. The Zone III mining licence extends down to 1000 mRL. There are processes in place in Chinese mining law to allow this to be extended deeper.

Criteria	JORC Code explanation	Commentary
	environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Density measurements were conducted via the standard water immersion technique. Data was only available for early stage operations (drillholes UGCJY-001 to UGCJY-827) and late stage operations (drillholes UGCJY-1318 to UGCJY-2013). No density data was collected between drillholes UGCJY-827 and UGCJY-1318, which correlates with the period from March 2007 to January 2010. A regression formula was developed to relate density to zinc grade, and this has been applied for Zone III.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	Some porosity can be expected; however, the bulk density assigned is considered to be reasonable.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Bulk densities were based on 31,312 density measurements taken on drill core using standard water immersion methods. These included samples of mineralised and un-mineralised material and were primarily collected from Zones II and III. Density data was used to develop a regression between density and % Zn for the samples that are within the mineralised envelopes.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	The Mineral Resource was classified as Inferred, Indicated and Measured, taking into account the level of geological understanding of the deposit, quality of samples, density data, drillhole spacing and sampling and assaying processes.
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The following initial classification approach was adopted: **Zone II** • The resource was classed as Inferred if the average weighted sample distance was greater than 50 m • The resource was classed as Indicated if the average weighted sample distance was between 25 m and 50 m. If the numbers of drillholes -<2 then Indicated resources were downgraded to Inferred. The initial classification was reviewed visually. Based on the initial classification, a solid wireframe was created to define Indicated Mineral Resources. This defined resource categories based on a combination of data density and geological confidence. **Zone III** • The resource was classed as Inferred if the average weighted sample distance was greater than 50 m.

Criteria	JORC Code explanation	Commentary
		• The resource was classed as Indicated if the average weighted sample distance was between 25 m and 50 m. If the numbers of drillholes -<2 then Indicated resources were downgraded to Inferred. • The resource was classed as Measured if the average weighted sample distance was less than 25 m. If the numbers of drillholes -<2, then Measured Resources were downgraded to Indicated. The initial classification was reviewed visually. Based on the initial classification, three solids rescat_meas, rescat_ind and rescat_inf were created to define Measured, Indicated and Inferred Mineral Resources. This defined resource categories based on a combination of data density and geological confidence. **Zone V** All resource was classed as Inferred. **Zone VIII** It was considered that part of the Mineral Resource could have been classified as Indicated, based on drill spacing and similarity to the Zone III mineralisation that is currently being mined. However, the downhole survey data causes material concerns about the location of the drillhole traces, and this has played a significant part in deciding to classify the whole of the Zone VIII Mineral Resource as Inferred.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The MRE appropriately reflects the view of the Competent Person.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	Internal audits were completed by CSA Global which verified the technical inputs, methodology, parameters and results of the estimate.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Mineral Resource accuracy is communicated through the classification assigned to this Mineral Resource. The MRE has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this table.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The Mineral Resource statement relates to a global tonnage and grade estimate. Grade estimates have been made for each block in the block model.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	The mine is in production. Each month mine production is reconciled with mill production and the resource model. This work supports confidence in this MRE.