

#### **ASX Announcement**

#### 2<sup>nd</sup> September 2021

# Gold Resource Nears 1 Million Ounce Milestone Lake Carey Gold Project

#### **Highlights**

- The Lake Carey Mineral Resource grows to 874,000oz @ 2.4g/t Au following an upgrade of Fortitude Stage 2
- The upgrade in Fortitude Stage 2 Mineral Resource Estimate to 489koz
   @ 1.9 g/t Au (1g/t cut-off) represents a 43% increase against previous estimates of 343koz @ 2.0 g/t Au
- The Fortitude Hub Mineral Resource now stands at 553koz @ 1.9 g/t
   Au, which compares favourably against the previous estimate of 406koz @ 2.0 g/t Au
- The impact on existing Stage 2 mine plan is being evaluated and has the potential to make a substantial positive mining and economic impact

#### Matsa Executive Chairman Mr Paul Poli commented:

"This upgrade is a sensational result indeed. Our strategy is to increase our gold resource and we have successfully doubled it, adding 435,000 new ounces over the past 12 months. I'd say that's a huge achievement in anyone's language.

I will add, I am absolutely committed towards growing our resource beyond 1 Million ounces."

#### **CORPORATE SUMMARY**

#### **Executive Chairman**

Paul Poli

#### **Directors**

Frank Sibbel

Pascal Blampain

#### **Director & Company Secretary**

Andrew Chapman

#### Shares on Issue

358.15 million

#### **Listed Options**

28.12 million @ \$0.17

#### **Unlisted Options**

65.38 million @ \$0.17 - \$0.35

#### **Top 20 shareholders**

Hold 55.41%

#### **Share Price on 1st Sept 2021**

5.8 cents

#### **Market Capitalisation**

\$20.77 million

Matsa Resources Limited ("Matsa" or "the Company" ASX: MAT) is pleased to announce a Mineral Resource Estimate (MRE) update at Matsa's Fortitude Stage 2 mine following completion of remodelling with inclusion of grade control and pit geology data.

The Fortitude Stage 2 MRE now stands at **8,048,000t** @ **1.9** g/t Au for **489,000oz** and represents a 43% increase in resource ounces from this time last year.

#### Fortitude Stage 2 Resource Model

Matsa previously reported a global Fortitude resource of 5,449,000t @ 2.0 g/t Au for 342,600 oz and a Stage 2 pit mining reserve of 1,029,000t @ 1.8 g/t Au for 58,100 oz<sup>1</sup> producing a positive operating cash flow of A\$55M<sup>2</sup>.

Information from Fortitude has been used to update the model which includes grade control drilling, pit geology mapping and more density data from mined ore. Importantly, production reconciliation identified that the grade of fresh ore had been underestimated in the resource compared to the grade control drilling.

Matsa's trial mine at Fortitude produced 162kt @ 1.83g/t for 9,522oz³ over three small open pits during 2017-2018 and was processed at AngloGold Ashanti Australia's Sunrise Dam operation some 60km to the north.

The 2021 MRE involved a full re-interpretation of the mineralised lodes, incorporating the new grade control drilling and geological knowledge gained from mining. During the trial mining, it was noted that grade control drilling returned high grades in the fresh ore as compared to the mining reserve model. Geomorphology of the resource remains largely the same, albeit with slightly steeper dips of the main north striking lodes (refer Figure 1). The resource also comprises minor supergene ores.

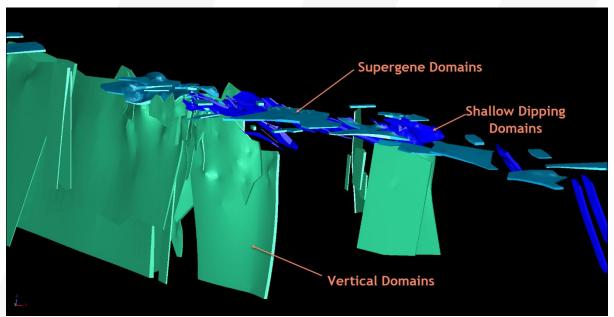


Figure 1: Oblique long section view of the Fortitude Stage 2 resource

The MRE was completed using Ordinary Kriging estimation methods and includes data from 942 grade control holes for 22,582m and pit mapping from the 3 small pits in the trial mining program. The bottom of the northern pit was not mined to the planned depth and remains grade control drilled.

<sup>1</sup> ASX Announcement 21 August 2019 - Mining Study Results Fortitude Gold Project Stage 2

<sup>2</sup> ASX Announcement 22 January 2021 - Concept Study 600,000tpa Treatment Plant Lake Carey Project

<sup>3</sup> ASX Announcement 19 June 2018 - Fortitude Trial Mine Final Results

Fortitude 2021 Mineral Resource Estimate (1g/t Au cut-off)									
		Resource Classification							
Domain	Mea	sured	Indic	ated	Infe	rred		Total	
Domain	kT	Au g/t	kT	Au g/t	kT	Au g/t	kT	Au g/t	k Oz
Transported	0	1.2	3	1.6	13	2.0	16	1.9	1
Oxide	114	2.3	292	1.7	249	2.4	655	2.1	43
Transition	13	2.0	160	1.9	151	2.0	324	1.9	20
Saprock	0	1.6	210	1.9	180	1.6	389	1.7	22
Fresh			2,314	2.0	4,349	1.8	6,663	1.9	104
Total	127	2.2	2,979	1.9	4,943	1.9	8,048	1.9	489

**Table 1**: Fortitude Mineral Resource Estimate

#### Resource Statement Notes:

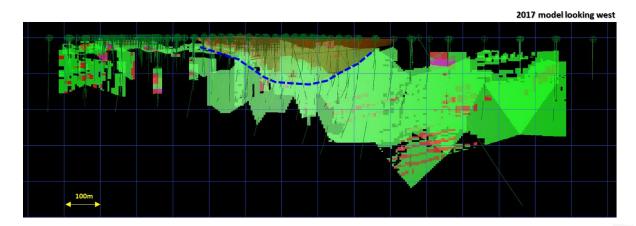
- The geographic region for the Mineral Resource Estimate is Western Australia
- Figures have been rounded in compliance with the JORC Code (2012)
- Rounding errors may cause a column to not add up precisely. Resources exclude recoveries
- Resource is depleted for past mining
- No reserves have been estimated
- There are Measured Resources associated with the base of existing pits where grade control drilling has been undertaken
- Cut-off grades used in this report are not mining cut-off grades
- No metallurgical or other modifying factors were used in this Resource statement

The key changes (refer Figure 2) since the last model (2017) were driven by:

- new drilling results from 942 holes for 22,582m which returned slightly lower grades in the oxide and higher grades in the fresh compared to the mining 2017 model
- pit mapping from 3 pits demonstrating better than expected continuity of the minor lodes
- inclusion of previously unmodelled minor lodes utilising better information derived from pit mapping and mining experience which demonstrated better than expected minor lode continuity
- Inclusion of 130 new specific gravity samples reflecting the higher densities experienced during mining of the trial pit(s)
- 29 supergene and 58 primary lodes were modelled, with the 6 largest domains hosting 75% of the contained oz in the model
- The 43% oz increase is wholly driven by an increase in model volumes as compared to the volume of material interpreted in the 2017 model version

The Fortitude Deposit is situated on the Fortitude Shear, which along with the Bindah Shear located just west, forms a narrow corridor of SSE trending Greenstones which are bounded to the east and the west by granitoid terrane. As the Fortitude-Bindah system extends north the greenstone pile thickens and lies host to numerous large mineralisation systems (Sunrise Dam, Wallaby, Granny Smith and Mt Morgan's). To the south the Fortitude-Bindah system appears to attenuate and eventually terminate against the granitoid of the Eastern Gneiss Terrane.

Gold mineralisation is associated with the Fortitude Shear Zone, a north-northwest striking D3 shear which extends the length of the Lake Carey gold project. To the north it horsetails into the Wilga fault system and in the south it continues into the Kirgella gneissic dome. Approximately 5km to the north along the Fortitude Shear, lies Matsa Fortitude North prospect (refer Figure 3).



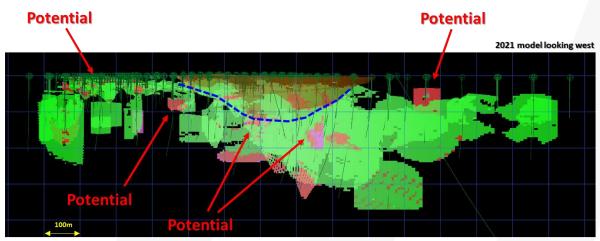


Figure 2: Comparison 2017 (top) and 2021 (bottom) models (long section) showing where new optimisation for further mining potential exists, current pit design is in blue

Fortitude Stage 2 gold mine is a fully permitted mining project on a granted mining lease with well established haul roads. Recently, Matsa announced maiden resource estimates for nearby Bindah and Gallant deposits (refer Figure 4). With Fortitude North and other local prospects such as Stealth and Mirage, the Fortitude Hub has the potential to develop into a substantive mining and exploration hub.

#### **Next Steps**

Re-optimisation of the upgraded model is underway. Should this work demonstrate a larger pit than currently planned and can produce a positive outcome then a new pit design, schedule and cash flow model will be prepared. It is possible this will lead to an update of the current and approved Mining Proposal for Fortitude Stage 2.

Importantly, the existing optimisation and mining study was completed using the higher cost structure of an ore purchase agreement with AngloGold Ashanti Australia Limited and greater haulage distance, as compared to a cost structure scenario using a Matsa processing plant. A reduced cost structure should draw an optimised pit deeper than currently modelled.

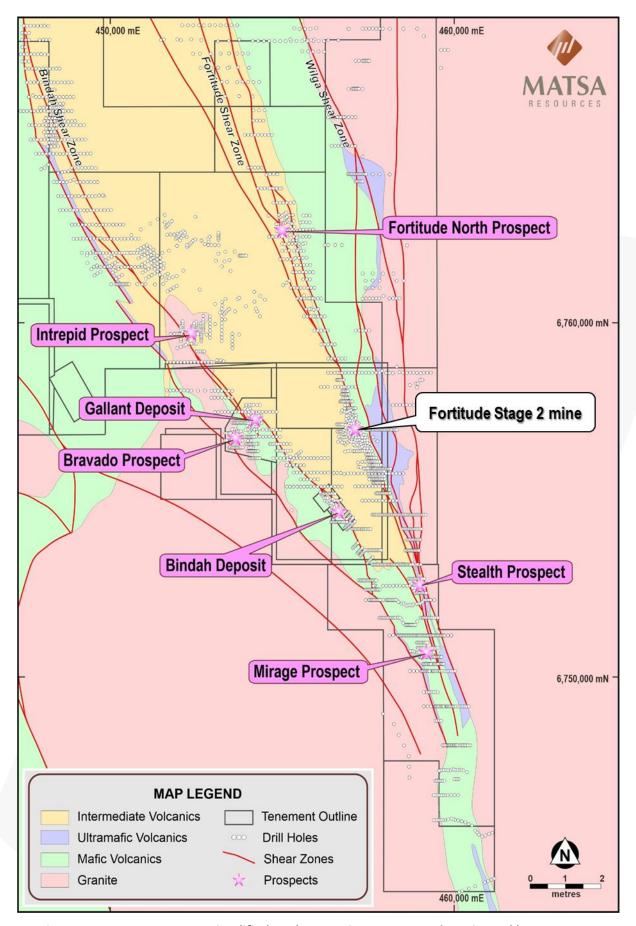


Figure 3: Matsa tenements, simplified geology, major structures, deposits and key prospects



Figure 4: Matsa tenements, Fortitude Hub resource outlines and outline of planned Stage 2 mine

#### **Exploration Potential**

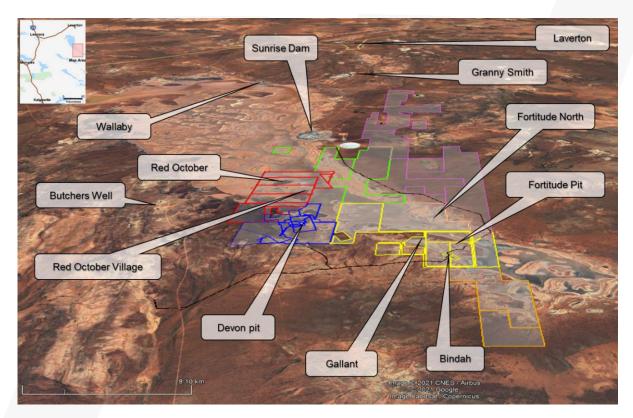
Significant exploration potential at Fortitude Hub remains and is centred on:

- Established resources that remain open along strike and at depth at Bindah and Gallant
- A number of identified prospects
- Large land position under lake cover that has had limited exploration
- Complex structural setting including interpreted splays
- Resource infill of inferred material leveraging off the grade increase in the updated model which has largely been attributed to new drilling data

#### **TOTAL MINERAL RESOURCES – SEPTEMBER 2021**

As of 1 September 2021, Matsa's global Mineral Resources are 874,000oz.

Project	Cutoff	Mea	sured	Indica	ted	Infe	rred	To	otal Reso	urce
	g/t Au	('000t)	g/t Au	('000 oz)						
LAKE CAREY										
Red October										
Red October UG	2.0	105	8.4	519	5.6	421	6.3	1045	6.1	206
Red October Subtotal		105	8.4	519	5.6	421	6.3	1045	6.1	206
Devon										
Devon Pit	1.0	-	-	341	4.8	102	3.6	443	4.6	65
Olympic	1.0	-	-	-	-	171	2.8	171	2.8	15
Hill East	1.0	-	-	-	-	633	1.7	633	1.7	35
Devon Subtotal		-	-	341	4.8	906	2.1	1247	2.9	115
Fortitude										
Fortitude Stage 2	1.0	127	2.2	2,979	1.9	4,943	1.9	8,048	1.9	489
Gallant	1.0	-	-	-	-	341	2.1	341	2.1	23
Bindah	1.0	-	-	43	3.3	483	2.3	526	2.4	40
Fortitude Subtotal		127	2.2	3021	2.0	5,767	1.9	8,915	1.9	553
Total		232	5.0	3,882	2.7	7,094	2.2	11,207	2.4	874



Lake Carey Gold Project and Tenement package colour coded by hubs

#### **Hubs:**

Red October (red) Fortitude (yellow) Lake Carey North (pink)
Devon (blue) Lake Carey South (orange) Lake Carey Central (green)

This ASX announcement is authorised for release by the Board of Matsa Resources Limited.

For further information please contact:

Paul Poli Executive Chairman T 08 9230 3555 E reception@matsa.com.au

#### **Competent Person**

The information in this report that relates to Exploration results, is based on information compiled by Pascal Blampain, who is a Member of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists. Pascal Blampain is a full-time employee, and serves on the Board, of Matsa Resources Limited and has sufficient experience which is relevant to the style of mineralisation and the type of ore deposit under consideration and the activity which he is undertaking 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 Blampain consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### Appendix 1

### Table 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul> <li>DD holes – After the core was oriented, marked up and logged the geologist marked up the sample intervals which honoured geological contacts or a 1m sample interval if no geological contact was observed. Where the core was unconsolidated it was split (halved) using a paint scraper along the orientation line with the left side of the core being sampled and the right side retained. In competent core the core was quartered using an Almonte core saw with the lower left side of the core (looking down hole) being sampled.</li> <li>RC holes - 1m samples were collected directly into pre-numbered calico sample bags from a cone splitter attached to the rig cyclone. The rejects were collected in a bucket and laid out on the ground in ordered rows for logging.</li> <li>RC sampling methodology below is known for Midas drilling only.</li> <li>RC sampling procedures adopted by Midas varied pre- and post- 2005. Prior to 2005 (FTRC001 – FTRC153) 1m bulk samples were collected from the cyclone using plastic bags. A 5m composite was then collected in a calico bag using a metal scoop. Upon receiving assays, the plastic bags containing the bulk samples within the mineralised zones were routinely re-split using a Jones riffle splitter to obtain a 2-3kg sample (1/8th split) for submission.</li> <li>Post 2005 drilling (FTRC154 – FTRC266) the bulk sample was collected for 1m sample intervals in plastic bags, while sub- samples were collected in calico bags at the time of drilling by splitting the bulk 1m sample through a Jones riffle splitter to get a 1/8th split.</li> <li>Sampling of AC cores – Drill cuttings were collected every metre in a plastic bag. 4m composite samples were collected by using a trowel or ridged plastic spear, and the approximate 2kg sample was and sent for analysis. Upon receipt of assays the bulk sample within each plastic bag in the mineralised zone was then re-sampled using on 1m intervals by scooping the sample from the bag.</li> <li>DD holes - Once the core was correctly</li></ul>

Criteria	JORC Code explanation	Commentary
		cut lengthways in a manner to preserve the orientation line. Sampling of $\mbox{\em 1}\mbox{\em 2}$ core was then completed.
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul> <li>For DD Drilling core was orientated marked up and logged prior to being marked up for sampling by the geologist. Any core loss was logged for entering into the database. Core was either halved or quartered the entire sample portion being collected in a calico bag for submission to the laboratory.</li> <li>RC holes - 1m samples were collected directly into pre-numbered calico sample bags from a cone splitter attached to the rig cyclone. The rig cyclone was kept dry and free flowing.</li> <li>For RC drilling completed by Midas 1 meter bulk samples were split using a jones riffle splitter or a rig mounted splitter beneath the cyclone. The resulting 2-3kg sample was collected in a calico bag for submission to the laboratory.</li> </ul>
	<ul> <li>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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information</li> </ul>	and pulverised to produce a 30-50g charge for fire assay Au determination.
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul><li>the resource estimation.</li><li>RC holes were completed using a standard face sampling hammer.</li></ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul> <li>Core recoveries were recorded on a per run basis and entered into the geotechnical database. Zones of "nil recovery" were logged by the geologist and assigned a grade of &lt;0.01ppm Au for resource calculation.</li> <li>Recoveries from RC and diamond drilling completed by Midas and Aurora were not provided.</li> </ul>
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	<ul> <li>Diamond drilling completed by Matsa Gold was carried out by HQ3 triple tube to maximise recovery.</li> <li>For RC drilling the cyclone was cleaned at the end of each rod and kept dry and free-flowing.</li> <li>The calico bagged sample was filled directly from the cone splitter</li> </ul>
	<ul> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	No relationship between recovery and grade has been observed.
Logging	<ul> <li>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.</li> </ul>	<ul> <li>All core, RC and AC chips were logged by either Matsa, Aurora or Midas geologists.</li> <li>Diamond drilling completed by Matsa was logged for RQD's and 6 holes were logged in detail by a geotechnical consultant.</li> <li>Geological and geotechnical logging was completed to an appropriate level of detail required for Mineral Resource estimation, geotechnical studies, metallurgical studies and mining studies</li> </ul>
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul> <li>DD core has been wet and dry photographed after metre marking and orientation was completed.</li> <li>Qualitative geological logging was completed using a standard set of codes. These codes are considered suitable for use in defining and modelling of the deposit geology.</li> </ul>
	<ul> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	All drill holes utilised for the Mineral Resource Estimate have been logged
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul> <li>The subsampling technique below is for Matsa Gold only.</li> <li>Where the core was unconsolidated it was split (halved) using a paint scraper along the orientation line with the left side of the core being sampled and the right side retained. In competent core the core was quartered using an Almonte core saw with the lower left side of the core (looking down hole) being sampled.</li> <li>For Midas, ½ core was sampled. No information exists for the core sub-sampling for Aurora.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul> <li>For RC drilling, mineralised sample splits from the 1m samples are obtained by Jones riffle splitter or rig mounted cone splitter to obtain a 2 – 3kg sample for submission.</li> <li>For AC drilling mineralised sample splits are obtained by metal scoop from the 1m sample bags. The size of the sample is not recorded but is assumed to be similar to the RC sampling.</li> <li>Moisture information has not been captured in the database.</li> </ul>
	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique</li> </ul>	<ul> <li>Samples taken by Matsa Gold were submitted to ALS laboratories in Kalgoorlie. Samples were dried and crushed to a nominal 6-10mm through a jaw crusher. Samples over 3kg were riffle split to below 3kg and pulverized. Pulverising reduced the particle size to 90% passing 75µm. 300-400g were sub-sampled from the pulveriser bowl as an analytical pulp.</li> <li>The majority of sampling completed by Midas was submitted to either Ultra Trace or Genalysis Laboratories in Perth. Both laboratories abide by a generic sample preparation process where drill samples are initially dried in an oven at temperatures of approximately 1050C, before crushing using a jaw crusher to achieve a product of a maximum 3mm size. Samples exceeding 3kg were split to obtain a volume that would fit in the LM5 pulveriser bowl with single pass. The crushed sample is then pulverised for a specified time in order to achieve a nominal 80% to 95% passing 75 micron size.</li> <li>A 250g sub-sample was then collected and placed in a pulp envelope for analysis.</li> <li>The sample preparation techniques are accepted routine procedure for the style and nature of gold mineralisation at Fortitude.</li> </ul>
	<ul> <li>Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.</li> </ul>	<ul> <li>QAQC procedures adopted by Matsa Gold included the insertion of appropriate certified standards and course blanks into the sample sequence preferentially in the ore zones as well as the use of laboratory repeats. 5% of samples were also submitted to an umpire laboratory, 2.5% of these were randomly selected and 2.5% selected by the geologist.</li> <li>Midas QAQC protocols involves submission of standards, blanks, and field duplicate samples. Laboratory repeat analyses have also been supplied to Runge and a large number of pulp samples were also submitted to a secondary laboratory for independent checks.</li> <li>In general all certified standards and blanks returned the expected results within an acceptable error. Laboratory repeats and umpire laboratory results had reasonable repeatability with no obvious bias as would be expected from a gold deposit with a moderate – low nugget affect.</li> </ul>
	<ul> <li>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.</li> </ul>	<ul> <li>A total of 1,072 field duplicates were taken from the RC drilling programs, there was no obvious bias in the sample results.</li> <li>Matsa Gold did not undertake any second half sampling of drill core as the samples were required for metallurgical testwork.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>802 duplicate samples were taken by Midas. A scatter plot showed reasonable repeatability with some outliers as expected in lode gold deposits. There was no inherent bias observed.</li> </ul>
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled</li> </ul>	<ul> <li>The split/cut sample size of 2-3kg to be pulverised with 200-300g sub samples are appropriate for the grain size of the material being sampled.</li> </ul>
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 of total.	d charge.
	<ul> <li>For geophysical tools, spectrometers, handheld XRI instruments, etc, the parameters used in determining the analysis including instrumen make and model, reading times, calibrations factors applied and their derivation, etc</li> </ul>	n t
	<ul> <li>Nature of quality control procedures adopted (egstandards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	standards, field duplicates and course blanks into the sample sequence preferentially in the ore zones as well as the use of laboratory repeats. 5% of samples were also submitted
		<ul> <li>In general all certified standards and blanks returned the expected results within an acceptable error. Laboratory repeats and umpire laboratory results had reasonable</li> </ul>

Criteria	JORC Code explanation	Commentary
		repeatability with no obvious bias as would be expected from a gold deposit with a moderate – low nugget affect.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No specific twinned holes have been drilled at Red October but underground diamond drilling has confirmed the width and grade of previous exploration drilling.</li> <li>Primary data is collated in a set of excel templates. This data is forwarded to the Database</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> </ul>	<ul> <li>For diamond drilling all drill holes were surveyed using a Sokkia GSR2650 LB differential GPS which has an accuracy of +/-10cm both vertically and horizontally. Down hole surveys were carried out by Gyro Australia Pty Ltd using an SDI high speed true north seeker keeping gyro.</li> <li>For RC grade control drilling drill collars were both set out and picked up using a Trimble DGPS with a local base station.</li> <li>Midas</li> </ul>
		<ul> <li>All drill holes used in the resource estimate have been accurately surveyed by contract surveyors using an RTK GPS instrument. Downhole surveys have been conducted by the drilling company at regular intervals using either a single shot or a gyro tool for RC and DD holes. Downhole survey of AC holes was not done</li> </ul>
	Specification of the grid system used.	Matsa used the MGA94_51 grid system.
	Quality and adequacy of topographic control	A high accuracy (method unknown) topographic DTM supplied by Midas has been used.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	Data spacing for reporting of Exploration Results	<ul> <li>Drill spacing of approximately 25m (along strike) by 25m (on section) was considered adequate to establish both geological and grade continuity. Towards the edges of the deposit the drill spacing widens to either 50m (along strike) by 25m (on section) or 50m (along strike) by 50m (on section). Grade control RC drilling was carried out on a 7.5m x 5m grid.</li> </ul>
	<ul> <li>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.</li> </ul>	Data spacing and distribution has been sufficient to permit delineation and to confirm grade continuity of the narrow lodes and supergene domains
	Whether sample compositing has been applied	Samples were composited to 1m downhole lengths
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul> <li>The orientation of bulk of the drilling is approximately perpendicular to the strike of the steeply dipping mineralisation and is unlikely to have introduced any significant sampling bias.</li> </ul>
	<ul> <li>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</li> </ul>	Not applicable.
Sample security	The measures taken to ensure sample security.	Samples were delivered directly to ALS laboratories in Kalgoorlie by Matsa Gold personnel.  The chain of custody was not broken by any 3rd parties.
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits or reviews of sampling techniques were undertaken.

### **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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</li> </ul>	<ul> <li>The Mineral Resource covers 2 granted mining leases M39/710 and M39/1065. Both tenements expire in 2029. Matsa Gold Pty Ltd is the 100% owner of the tenement which are located on the Mt Weld pastoral lease.</li> <li>Harmony Australia hold a 1.5% net smelter royalty for production over 250,000oz.</li> <li>There is no native title claim over the area.</li> <li>One mapped heritage site in the area will not impact on mine planning or production.</li> </ul>
	<ul> <li>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</li> </ul>	<ul> <li>The mine is currently in care and maintenance. Matsa Gold holds all the required licences to operate, including:</li> <li>Discharge ground water to Lake Carey L9031/2017/1</li> <li>Works Approval W6030/2017/1</li> <li>NVCP 7366/1</li> <li>License to take water 5C GWL183220(1)</li> <li>License to construct or alter a well 26D CAW183219(1)</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Exploration drilling was conducted by Aurora Gold Limited (Aurora) between October 1998 and February 2002.</li> <li>Midas Resources Limited (Midas) acquired the project from Aurora in October 2002. Midas has drilled in excess of 380 drill holes both in and around Fortitude to test for extensions to the Fortitude system</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Lake Carey Project of which the Fortitude deposit forms a part is situated on the Fortitude Shear, which along with the Bindah Shear located just west, forms a narrow corridor of ESE trending greenstones which are bounded to the east and west by granitoid terrane. As the Fortitude-Bindah system extends north the greenstone pile thickens and lies host to numerous large gold mineralisation systems. To the south the Fortitude-Bindah system appears to attenuate and eventually terminate against granitoids of the Eastern Gneiss Terrane.</li> <li>The greenstone sequence located within the Fortitude tenement is comprised of highly foliated felsic to intermediate volcanic rocks with relatively undeformed mafic volcanic units to the east and west in contact with granite. The whole greenstone package varies in width from &lt;2km at the southern end of the tenement to approximately 8km at the northern end. Major north to north- northwest trending shear zones occur within the</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:	greenstones and the granite to the east, in particular along geological contacts. The main structural features are the Fortitude Shear along the eastern intermediate-mafic contact and the more north- westerly trending Bindah Shear, along the western intermediate-mafic contact  • Gold mineralisation is typically associated with the Fortitude Shear Zone, a north-northeast striking dextral shear which extends the length of the Lake Carey tenement. To the north, it horsetails into the Wilga fault system and in the south it continues into the Kirgella Gneissic Dome. Gold mineralization is also associated with the Bindah Shear, particularly at the old Bindah Mine to the southwest  • The Fortitude deposit is hosted within sheared felsic to intermediate volcanic rocks and minor ultra mafics, and is covered by up to 10m of lacustrine clays and aeolian sands surrounding Lake Carey. Gold mineralisation occurs within a steeply dipping shear system, and is associated with pervasive carbonate-sericite-silica alteration along with pyrite-arsenopyrite mineralisation. Remobilisation of gold has also resulted in the formation of flat lying zones of supergene mineralisation within the regolith. Weathering extends to a depth of 60-80m.  • Not applicable, the company is not reporting exploration results
_	<ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	
	<ul> <li>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.</li> </ul>	<ul> <li>Not applicable, the company is reporting a Mineral Resource. A summary of the drilling information has been provided in Section1</li> </ul>

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> </ul>	Not applicable, the company is not reporting exploration results.
	<ul> <li>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.</li> </ul>	Not applicable, no intercepts have been reported
	The assumptions used for any reporting of metal equivalent values should be clearly stated	Not applicable, no metal equivalent results have been used.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	<ul> <li>Mineralisation styles tend to change from narrow vertical lodes in the north, to shallow dipping supergene-hypogene mineralisation in the south. The shear hosted lode mineralisation strikes at roughly between 330° and 350° and is vertical to very steeply dipping to the east north-east. The supergene mineralisation is somewhat more variable with strike roughly between 330° and north - south and the lenses are generally flat lying or shallow dipping to the east north-east.</li> <li>The orientation of the drilling is approximately perpendicular to the strike and dip of the shear hosted mineralisation and is unlikely to have introduced any significant sampling bias.</li> </ul>
Diagrams	<ul> <li>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 drill hole collar locations and appropriate sectional views</li> </ul>	Not applicable.
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should</li> </ul>	Not applicable

Criteria	JORC Code explanation	Commentary
	be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	<ul> <li>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.</li> </ul>	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> </ul>	
	<ul> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</li> </ul>	

### **Section 3 Estimation and Reporting of Mineral Resources**

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>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</li> </ul>	<ul> <li>The database used to generate the Mineral Resource estimate was a validated Surpac database. Use in Surpac requires the passing of a set of routine validation steps checking for sample overlaps, sample duplications, missing downhole and missing collar survey data.</li> </ul>
	Data validation procedures used.	<ul> <li>Historic data was validated during importation into the Matsa database and found to be clean.</li> <li>Sections were plotted and validated against historic hard copy sections.</li> <li>Planned drill holes were ground trothed against historic collars in the field.</li> <li>Matsa Gold is satisfied that the drill hole database has been thoroughly validated</li> </ul>
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits	<ul> <li>Matsa staff have made numerous visits to site throughout the conduct of exploration campaigns during 2016 and managed the mining and grade control operation during 2016- 2017.</li> </ul>
	• 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	<ul> <li>The geological interpretation of the Fortitude deposit was completed by Matsa Resources.</li> <li>The model is well constrained by a long history of discovery and mining. Structural and geological data collected from diamond drill core adequately characterizes the mineralization style to permit a high degree of confidence in the interpretation of the Fortitude deposit.</li> <li>The Competent Persons are satisfied that the geological model is robust and correlates well to field observations and drillhole data.</li> </ul>
	Nature of the data used and of any assumptions made.	<ul> <li>Detailed geological logging, including alteration and oxidation state data, along with logged intensity of shearing and quartz vein content were used, in conjunction with chemical assays, in order to develop the geological interpretation</li> </ul>

Criteria	JORC Code explanation	Commentary
	The effect, if any, of alternative interpretations on Mineral Resource estimation	<ul> <li>Narrow Archaean Lode Gold deposits with a supergene expression and a low grade halo are a common style of mineralization encountered in the Eastern Goldfields of Western Australia. Their morphology and petrogenesis are well characterized, and do not readily offer materially different interpretations. The Competent Person does not consider that an alternative interpretation of the Fortitude deposit is likely to yield material differences to the Mineral Resource estimate</li> </ul>
	The use of geology in guiding and controlling Mineral Resource estimation	<ul> <li>The Fortitude deposit is hosted by the Fortitude Shear, which represents the sheared contact between undifferentiated intermediate rocks and greenschist facies mafic / ultramafic rocks.</li> <li>The modelling of geology, along with the presence and intensity of quartz veining is a strong guide to the interpretation of the extents of mineralization</li> </ul>
	The factors affecting continuity both of grade and geology	<ul> <li>Continuity of grade along strike and at depth is controlled by the presence / absence of the host shear fabric, intensity of quartz veining, and the degree of chemical alteration the host rocks have undergone. Each of these characteristics may be traced between drillholes using visual characteristics</li> </ul>
Dimensions	<ul> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	<ul> <li>The Fortitude Mineral Resource is contained within an area defined by a strike length of 1,490 m and 200 m across strike, along an azimuth of 350. The deposit is bounded by the extents 456,807 mE to 457,570 mE and 6,756,451 mN to 6,757,880 mN. The deposit lies within 375 m of the surface, and is open at depth, and potentially to the north along strike.</li> </ul>
Estimation and modelling techniques	<ul> <li>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.</li> </ul>	<ul> <li>The Mineral Resource has been completed using 3 individual statistical domains built using a nominal 0.2 g/t Au cutoff grade for supergene and 0.5 g/t Au for primary mineralisation. Samples were composited to 1 m intervals base on assessment of the raw input sample intervals. High grade cuts ranging from 13 to 39 g/t Au were applied to the mineralization domains following statistical analysis. Analysis was completed using Surpac 2021 software.</li> <li>A two pass search strategy was used where the minimum number of samples required for estimation was reduced in the second pass.</li> <li>Ordinary Kriging (OK) was the chosen method of interpolation for the grades of mineralized zones.</li> <li>All grade estimation was undertaken in Surpac 2021 software.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> </ul>	<ul> <li>A previously published Mineral resource estimate was completed in 2017. Statement of this resource is publicly available and, after consideration for updated drilling data and re- interpretation of mineralized lodes, grade and tonnage values for this previous estimate compare reasonably to the current estimate</li> </ul>
	<ul> <li>The assumptions made regarding recovery of by- products.</li> </ul>	No by or co-products have been considered
	<ul> <li>Estimation of deleterious elements or other non- grade variables of economic significance (eg sulphur for acid mine drainage characterisation)</li> </ul>	No deleterious elements were recorded within the available assay data, and none have been considered in this Mineral Resource Estimate
	<ul> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed</li> </ul>	<ul> <li>Blocks of dimensions 5 x 10 x 5 m were used to, subcelled to a minimum size of 1.25 x 2.5 x 1.25 m. Dimensions represent approximately half the drillhole spacing in the X and Y dimensions for well informed regions of the model.</li> </ul>
	<ul> <li>Any assumptions behind modelling of selective mining units</li> </ul>	<ul> <li>No assumption of selective mining unit has been made as part of the Mineral resource estimate</li> </ul>
	<ul> <li>Any assumptions about correlation between variables</li> </ul>	The model considers only one variable; Au and so no correlations have been considered.
	• Description of how the geological interpretation was used to control the resource estimates	<ul> <li>Mineralisation domain boundaries were treated as hard boundaries for the purposes of selection of input samples data. These boundaries were created on the basis of logged geology, alteration and assay values</li> </ul>
	Discussion of basis for using or not using grade cutting or capping	<ul> <li>Mineralisation domain boundaries were treated as hard boundaries for the purposes of selection of input samples data. These boundaries were created on the basis of logged geology, alteration and assay values</li> </ul>
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available	The Mineral Resource estimate was validated visually via qualitative comparison on screen between estimated block grades in drillhole assays in section, and also via swath plots generated in the X, Y and Z directions
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	Tonnages have been determined on a dry in-situ basis. No moisture values were reviewed

Criteria	JORC Code explanation	Commentary
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>The Mineral resource has been reported at a cutoff grade of 1 g/t Au. The Competent Persons consider this reasonable when considering the style of deposit, its proximity to processing infrastructure and the assumption of open pit mining methods being employed</li> </ul>
Mining factors or assumptions	<ul> <li>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.</li> </ul>	<ul> <li>Mining optimisation studies conducted on historic Mineral resource estimates for the Fortitude deposit show that it is amenable to open pit mining at grade similar to those reported within this MRE.</li> <li>Open pit mining is considered the most appropriate method of extraction to consider in any future studies.</li> <li>Competent Persons believe that there is a likely prospect of economic extraction.</li> <li>A minimum downhole intercept width of 2m has been applied. No other considerations were made. Detailed assumptions regarding dilution and minimum mining widths should be included in any future optimisation and Mine Planning work conducted by Matsa during any Ore reserve estimation</li> </ul>
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.	<ul> <li>Excellent gold recoveries have been demonstrated by recent testwork with recovery kinetics between 92% and 97% at 12 hours with a grind sized of 140μm</li> </ul>
Environmental factors or assumptions	<ul> <li>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 environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a</li> </ul>	<ul> <li>No considerations regarding waste and process residue disposal have been made as part of this MRE. Given the proximity of the deposit to existing processing infrastructure, it is likely that such infrastructure will be used for processing and will include residue disposal options</li> </ul>

Criteria	JORC Code explanation	Commentary
	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.	<ul> <li>Matsa Gold used fixed density values, assigned on the basis of regolith classification of the material within the model. Fresh material was given a value of 2.8, Slightly weathered material; 2.7, transitional oxide material 2.4, fully oxide material &lt;370mRl 2.3, fully oxidized material and transported (colluvial) material; 2.0.</li> <li>128 bulk density measurements were undertaken representing all ore types.</li> <li>Bulk density determination was carried out by ALS laboratories using the wax immersion method on dried core for oxidised rocks to account for voids, vugs and porosity.</li> <li>In transitional and fresh rocks bulk densities were analysed by both the water immersion method and the wax immersion method (ALS). The wax immersion method was given priority when assigning the bulk density to the various rock types.</li> </ul>
	<ul> <li>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.</li> </ul>	The wax immersion method on dried core carried out by ALS laboratories adequately accounts for voids, vugs and porosity
	<ul> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>The average bulk density rounded to 1 decimal place was used for all material types except for oxide where a lower value was chosen. This is to account for any possible bias in sample selection</li> </ul>
Classification	The basis for the classification of the Mineral Resources into varying confidence categories	<ul> <li>The Mineral Resource was classified as Measured, Indicated and Inferred, taking into account the geological understanding of the deposit, the density and quality of input data (including drillhole spacing).</li> </ul>
	<ul> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the</li> </ul>	The Competent Person consider that the classification is appropriate when consideration is given to all of the above factors

Criteria	JORC Code explanation	Commentary
	data)	The about the common sixther and the common to the Common
	<ul> <li>Whether the result appropriately reflects the Competent Person's view of the deposit</li> </ul>	The classification appropriately reflects the view of the Competent Persons
Audits or reviews	<ul> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul> <li>An independent review of compositing approach, top cuts, variogram and search parameters used in the generation of the Mineral Resource Estimate was undertaken by Entech Pty Ltd. Recommendations were implemented by Matsa and no material risks to the MRE global outcomes were identified in Entech's scope.</li> </ul>
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	<ul> <li>The Mineral Resource accuracy is communicated through the classification assigned to the deposit. The Mineral Resource estimate 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.</li> </ul>
	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 estimate of in-situ tonnes and grade
	<ul> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available</li> </ul>	The MRE has been reconciled with recent mining at Fortitude