



## ASX Announcement

4<sup>th</sup> October 2021

## Updated Fortitude Optimisation Study Increases Surplus to A\$95M

### Highlights

- Strong results from updated optimisation study enhances Fortitude's value by effectively doubling mine life, production output and cash flow for the Fortitude Gold Mine:
  - Total operating cash surplus grows to **A\$95M over 4 years** (+72% increase)
  - Mine production of **~132,000 oz Au** at 1.6g/t (up from 58koz)
  - 95% of the ounces are in the Measured and Indicated resource category
  - **2.7Mt of ore** (up from 1.1Mt)
  - Strip ratio of 12:1 (down from 14:1)
  - Operating **cash costs of A\$1,570/oz** (previously A\$1,483/oz)
  - Potential for additional production via an underground operation currently being investigated
- Recovery rate of 93% in line with past trial production at AngloGold Ashanti's Sunrise Dam mine
- The optimisation study update was driven by the significant increase in Fortitude's Mineral Resource Estimate to **489koz @ 1.9 g/t Au** (1g/t cut-off) recently announced<sup>1</sup>
- This upgrade further enhances the value of Matsa's significant exploration program currently underway at Lake Carey and highlights a commercialisation opportunity for just a portion of the wider 874Koz resource

### CORPORATE SUMMARY

#### Executive Chairman

Paul Poli

#### Directors

Frank Sibbel

Pascal Blampain

#### Director & Company Secretary

Andrew Chapman

#### Shares on Issue

358.15 million

#### Listed Options

49.22 million @ \$0.17

#### Unlisted Options

65.38 million @ \$0.17 - \$0.35

#### Top 20 shareholders

Hold 53.29%

#### Share Price on 1<sup>st</sup> Oct 2021

6 cents

#### Market Capitalisation

\$21.49 million

<sup>1</sup> ASX Announcement 2 September 2021 - Lake Carey Gold Resource Nears 1 Million Oz Milestone

Matsa Resources Limited (“Matsa” or “the Company” **ASX: MAT**) is pleased to report positive and significant results from its recently updated scoping study for the Fortitude Pit, at the Company’s Lake Carey Gold Project in the Eastern Goldfields of Western Australia.

The study shows that the Fortitude Pit will now produce a potential cash surplus of **A\$95M** over an estimated mining period of **4 years** based on Matsa’s proposed 600ktpa processing plant. A sensitivity review indicates that the project is robust with potential for improvement from lower mining and processing costs by utilising a larger mining fleet and a bigger processing plant.

The revised optimisation has been driven by the recently announced revised MRE for Fortitude which 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.

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

*“This is a fantastic result, Lake Carey just keeps getting better and whilst more work will improve the economics of the Fortitude mine, on face value it alone now justifies the mill strategy. **The Devon and Fortitude open pits alone could now provide collective positive cash flows of A\$140-150M** and with ongoing exploration in this great project, I’m very confident we can continue to build on this result.*

*This study was completed using a gold price of A\$2,400/oz for the optimisation and the results have effectively doubled the mine life and gold production. What’s also really pleasing is that 95% of the ounces in this bigger pit are in the Measured and Indicated categories. I’m also very confident we can improve on this projection with the lower cost structures you would expect from a larger mill than the 600ktpa currently envisaged and I expect the larger pit should also provide an improved scheduling and cost structure scenario.*

*The exploration potential at Lake Carey is significant. Importantly, we’ve already commenced underground studies at Fortitude, if we can add an underground component to the Fortitude open pit this could be very interesting indeed.”*

#### **Fortitude Scoping Study Summary**

Matsa has completed an updated study into an open pit mining operation at Fortitude (Figure 1) following the recent upgrade of the MRE. The mining operation demonstrates a strong return from a 4 year operation:

- Operating cash surplus of **A\$95M**
- Operating cash cost per ounce **A\$1,570**
- Production of 2.7Mt @ 1.6g/t (~**124,000 oz @ 93% recovery**) over 4 years
  - 118koz in Measured & Indicated categories
  - 6koz in Inferred category
- Total movement of ~**30Mt**
- Waste to ore ratio **12:1**
- Assumed gold sale price of A\$2,400/oz

Importantly, the Fortitude mine has an approved Mining Proposal.

## Study Scope

The optimisation study on the Fortitude MRE was completed using a conventional open pit mining operation, with ore hauled and processed at a conceptual Matsa processing plant<sup>2</sup> at Fortitude.

Key Assumptions	
Gold price	A\$2,400/oz
Mining Recovery & Dilution	95% rec, 10% Dil
Pit slope	45°
Metallurgical Recovery	95% Ox, 95% Tr, 93% Fr
Processing costs (\$/t)	\$31 Ox, \$33 Tr, \$37 Fr
Bench height	5m
Mining costs	\$4.5/t
Selling costs	\$60/oz
General & Administration	\$3/t
Whittle shells (RF 1.0 = base case)	0.3-2.0

**Table 1: Key study assumptions**

Three shells were assessed and compared that reflect step changes in a potential mining operation. The summary outcome for each of these three shells is tabulated below:

Shell	Gold Price	Ore (kt)	Grade Au g/t	Produced Oz ('000)	Strip ratio	OPEX CF A\$/oz
36	2200	2,300	1.6	114	8	1,577
<b>35</b>	<b>2400</b>	<b>2,700</b>	<b>1.6</b>	<b>132</b>	<b>12</b>	<b>1,570</b>
36	2400	3,300	1.6	158	10	1,794

**Table 2: Pit shell summary outcomes**

The study does not account for setup costs and other capital requirements.

## Cut-Off grade

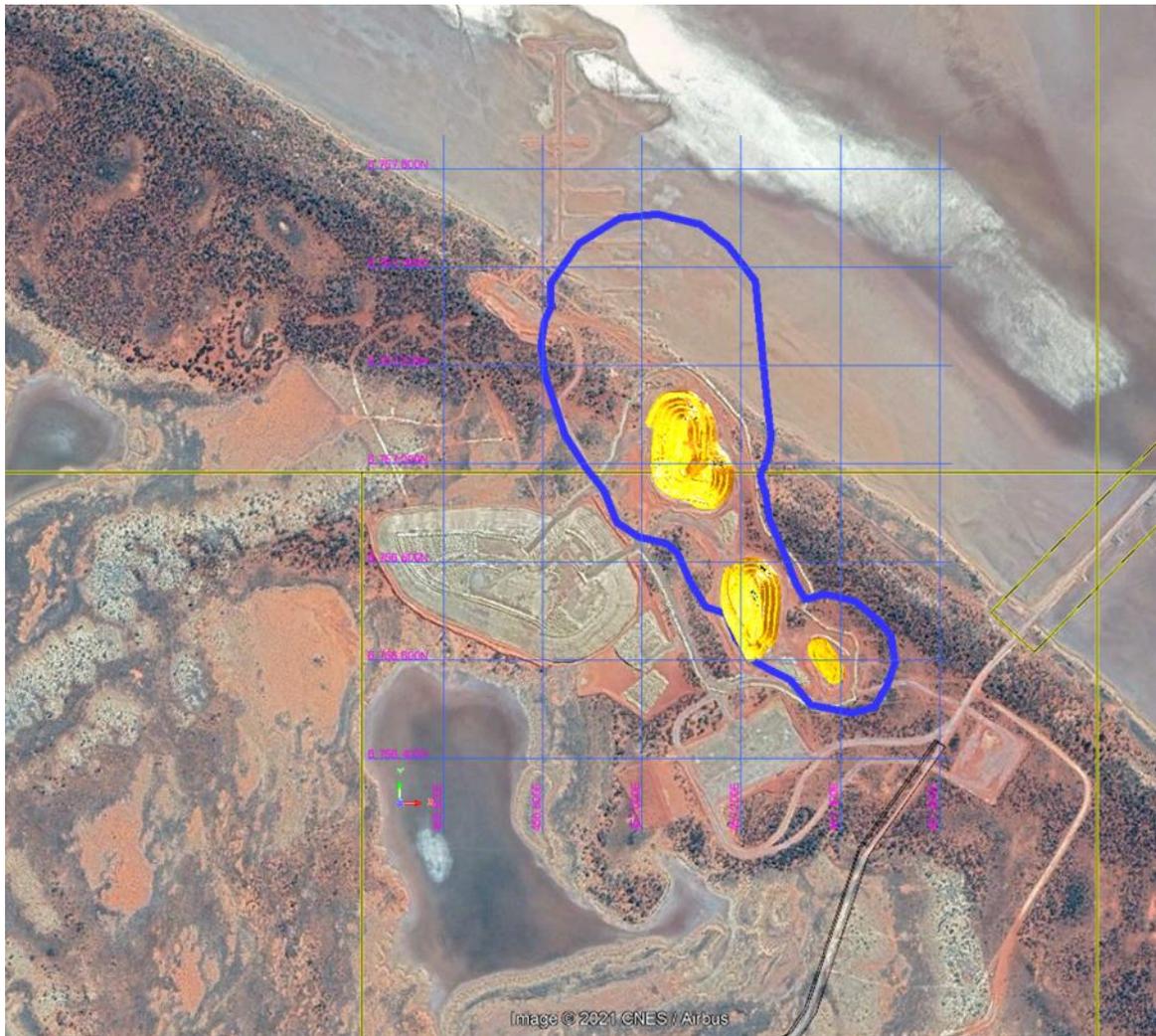
The Fortitude MRE<sup>3</sup> has been reported at a cut-off grade of 1 g/t. This is reasonable considering the style of the deposit, the proximity to process facilities and the selection of open cut mining equipment and methods used. It is quite possible that during operation a lower cut-off grade for mining will be economic. The scoping study has returned the following mining cut-off grades (at an optimised shell using A\$2,400/oz) for mining:

Ore Type	Cut-off Grade
Oxide	0.48g/t
Transitional	0.51g/t
Fresh	0.58g/t

**Table 3: Fortitude mining cut-off grades (at an optimised shell using A\$2,400/oz)**

<sup>2</sup> ASX Announcements 14 September 2021 - Fortitude Preferred Site for Proposed Gold Plant Lake Carey

<sup>3</sup> ASX Announcement 2 September 2021 - Lake Carey Gold Resource Nears 1 Million Oz Milestone



**Figure 1: Fortitude, existing trial mining pits and new optimised shell outline (in blue)**

## **Metallurgy and processing**

Trial mining at Fortitude was completed by Matsa in 2018 and ore processed at AngloGold Ashanti Australia's Sunrise Dam operation under an ore purchase agreement. Metallurgical testwork previously completed indicates recoveries of 93% in fresh ore can be achieved.

## **Infrastructure**

Fortitude has been subject to trial mining and some additional work will be required to cater for the enlarged pit footprint, including waste dump and tailings management. The Red October accommodation village is readily accessible being only 25km by dirt road. Matsa has an operating landing strip for small aircraft at Linden to transport Red October mine staff to site.

Power will need to be re-established via portable generators. Water availability is not expected to be an issue due to proximity to Lake Carey. It is likely that dewatering of the operation will be an ongoing requirement and generate surplus water being discharged onto Lake Carey.

## Environment and community

Fortitude was last mined in 2018 and as such a number of community and stakeholder relationships are already in place.

## Planning and approvals

Fortitude is located within a granted mining lease and associated infrastructure leases under care and maintenance. An approved Mining Proposal is in place but will need to be amended based on the new pit size as well as the inclusion of the proposed processing plant. Key work requirements include:

- Updated flora studies (completed 27 September)
- Waste dump landform design and engineering specifications to account for encapsulated tailings storage facilities (TSF)
- Revised geotechnical and dewatering studies
- Application for revised Clearing Permit for the larger pit

## Next steps for mill studies

- Scenario modelling for 600kt/800kt and 1,000ktpa processing rates
- Updated feasibility and cash flow models
- Formalise Mineral Reserves
- Conduct relevant study works associated with construction and management of a Fortitude processing plant
- Amend existing Mining Proposal (MP) and Project Management Plan (PMP) to capture a larger mining operation and inclusion of a new processing plant
- Evaluate underground mining options that can add mine life at the completion of the open pit mining schedule
- Lodge all relevant and formal applications for regulatory approvals

## Risks

The study is classified as a scoping study with a confidence level of +/-40%.

A key number of risks that are normal for this type of operation have been identified, such as:

- Reduction in the \$A gold price will negatively impact on revenue
- Confidence in the geological model
- Achieving the assumed unit cost mining rates as used in the study
- Geotechnical stability of the pit walls

- The processing plant is a conceptual study and therefore there is no guarantee that a Matsa owned and operated plant will be realised

## Exploration Potential

### Cautionary Statement

This announcement is expressed in good faith and believed to have a reasonable basis.

The Scoping Study referred to in this announcement is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the scoping study will be realised.

This announcement includes information and graphics relating to a conceptual mining study, completed Mineral Resource estimate and a scoping study and includes “forward looking statements” which include, without limitation, estimates of gold production based on mineral resources that are currently being evaluated.

While the Company has a reasonable basis on which to express these estimates, any forward looking statement is subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements.

Risks include, without limitation, gold metal prices, foreign exchange rate movements, project funding capacity and estimates of future capital and operating costs.

The Company does not undertake to release publicly any revisions to forward looking statements included in this report to reflect events or results after the date of this presentation, except as may be required under applicable securities regulations.

Any potential investor should refer to publicly available reports on the ASX website and seek independent advice before considering investing in the Company.

Significant exploration potential at the Fortitude Hub (Figure 2) remains and is centred on:

- UG mining potential at Fortitude
- Established resources that remain open along strike and at depth at Bindah and Gallant
- A number of identified satellite prospects including Fortitude North, Stealth and Mirage
- Large land position under lake cover that has had limited exploration
- Complex structural setting including interpreted splays

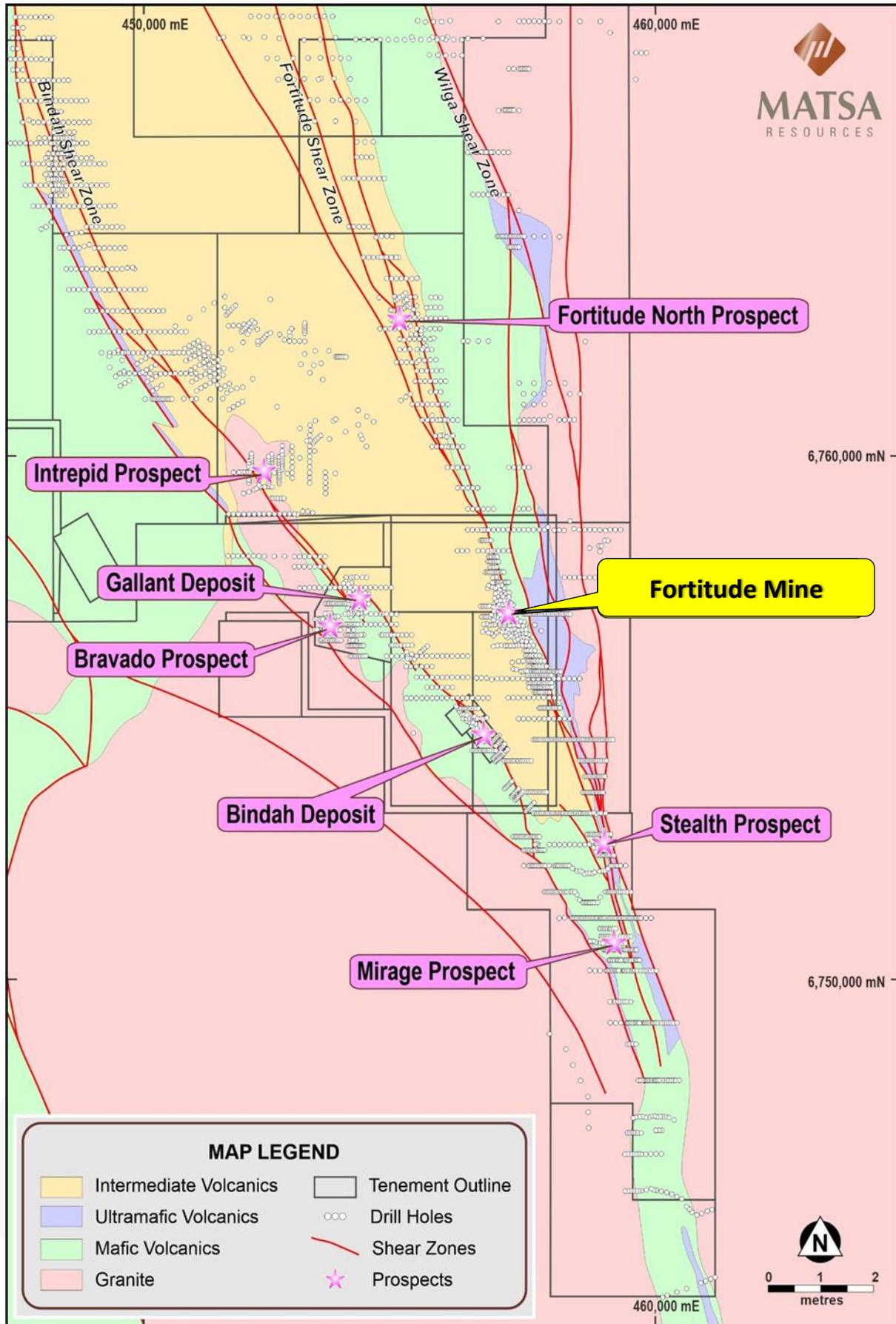


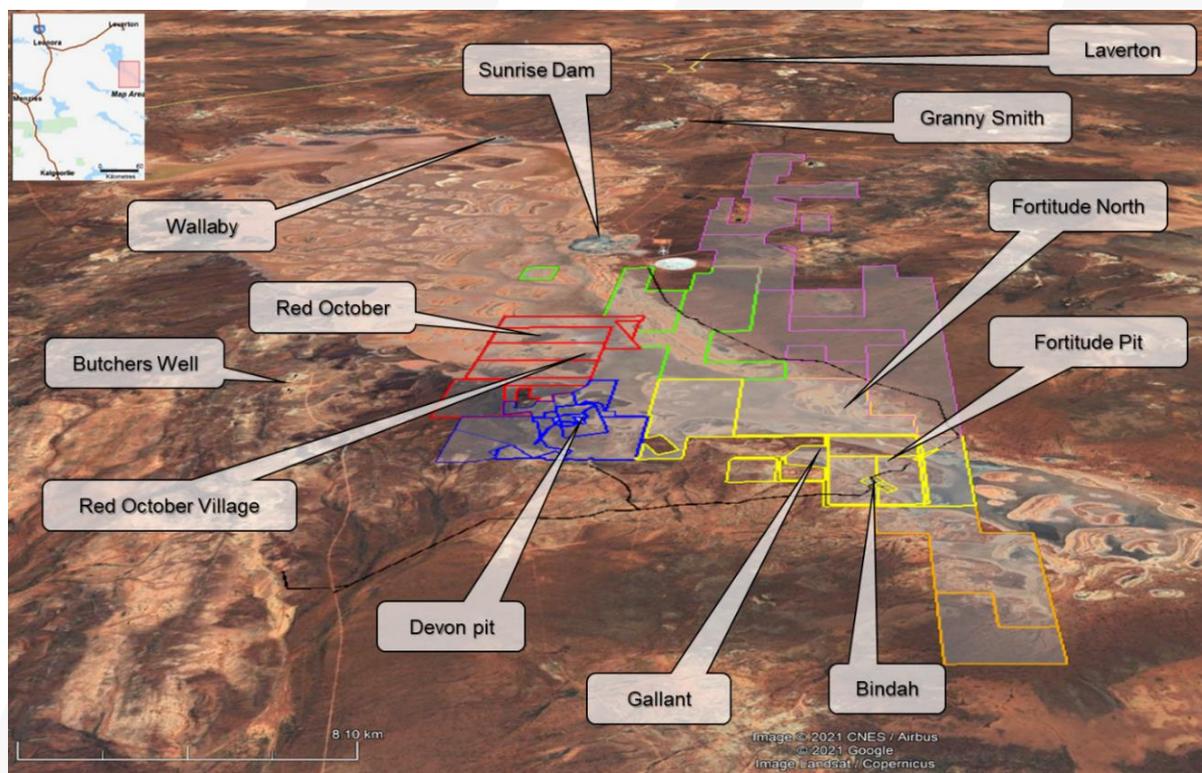
Figure 2: Matsa tenements, simplified geology, major structures, deposits and key prospects

## TOTAL MINERAL RESOURCES – SEPTEMBER 2021

As of 30 September 2021, Matsa’s global Mineral Resources\* are 867,000oz

Project	Cutoff g/t Au	Measured		Indicated		Inferred		Total Resource		
		('000t)	g/t Au	('000t)	g/t Au	('000t)	g/t Au	('000t)	g/t Au	('000 oz)
<b>LAKE CAREY</b>										
<b>Red October</b>										
Red October UG	2.0	105	8.4	483	5.7	411	6.3	999	6.2	199
<b>Red October Subtotal</b>		<b>105</b>	<b>8.4</b>	<b>483</b>	<b>5.7</b>	<b>411</b>	<b>6.3</b>	<b>999</b>	<b>6.2</b>	<b>199</b>
<b>Devon</b>										
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
<b>Devon Subtotal</b>		<b>-</b>	<b>-</b>	<b>341</b>	<b>4.8</b>	<b>906</b>	<b>2.1</b>	<b>1247</b>	<b>2.9</b>	<b>115</b>
<b>Fortitude</b>										
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
<b>Fortitude Subtotal</b>		<b>127</b>	<b>2.2</b>	<b>3021</b>	<b>2.0</b>	<b>5,767</b>	<b>1.9</b>	<b>8,915</b>	<b>1.9</b>	<b>553</b>
<b>Total</b>		<b>232</b>	<b>5.0</b>	<b>3,845</b>	<b>2.7</b>	<b>7,084</b>	<b>2.2</b>	<b>11,161</b>	<b>2.4</b>	<b>867</b>

\* Resource is net of 2020-2021 Red October mining depletions (7koz) and is the only change since the last release



**Lake Carey Gold Project and Tenement package colour coded by hubs**

### Hubs:

Red October (red)  
Devon (blue)

Fortitude (yellow)  
Lake Carey South (orange)

Lake Carey North (pink)  
Lake Carey Central (green)

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

For further information please contact:

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**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.*