

## Substantial Resource Increases for Viper and N'Tiola Satellite Deposits at Morila

- The Viper Mineral Resource Estimate (MRE) increased by 128% to 3.27 million tonnes at 1.15g/t gold for 119,000 ounces of contained gold
- The N'Tiola MRE increased by 18% to 2.90 million tonnes at 1.03g/t gold for 96,000 ounces of contained gold
- Total Mineral Resources for the Morila Gold Project are now 2.5 million ounces of gold
- The Viper MRE has been depleted for mining of 8,000 ounces of gold as at 31<sup>st</sup> December 2021.
- Viper mineralisation now defined over 1.5km of strike; further drilling planned at both deposits in 2022 testing extensions to mineralisation
- Mining at Viper is underway and mining at N'Tiola will soon follow. Both contribute substantially to mill feed in 2022-2023 as Morila production ramps up

Firefinch Limited (ASX: FFX) (**Firefinch** or **the Company**) is pleased to publish an update to the Mineral Resource Estimates or the Viper and N'Tiola Deposits within the Morila Gold Project (**Morila**).

The substantial increase in resources at both Viper and N'Tiola are a result of systematic drilling efforts at these deposits since Firefinch acquired Morila. Historical drilling focussed on near surface mineralisation and consequently only a portion of these deposits was adequately drill tested. Results from drilling have led to a re-appraisal of the potential of these mineralised systems, with mineralisation now defined over 1.5km of strike at Viper and further drilling planned for 2022.

**Firefinch's Managing Director, Dr Michael Anderson, commented:**

*"We set out to develop the satellite pits into a solid and confident source of ore to bridge between the tailings treatment operation that we inherited to full production from the Morila Super Pit. This investment in drilling has delivered that with now over 200,000 ounces of resource in these two deposits alone and we expect a solid increase in Reserves at these pits to follow. We are already delivering ore from Viper as we start to ramp up to full production from Morila."*

### Comparison with Previous Mineral Resource Estimate

Tables 1 and 2 compare the new MREs for Viper and N'Tiola to those published in May 2021<sup>1</sup>. Over 51,000 metres of intensive drilling completed by Firefinch since the acquisition of Morila has been used to update the Mineral Resource Estimates (**MRE**) for the Viper and N'Tiola Deposits. Depletion of the Viper MRE due to mining to 31st December 2021 (8,000 ounces of gold) has been included below.

**Table 1:** Comparison of total Mineral Resources for the Viper and N'Tiola Deposits

Deposit	March 2022 Contained Ounces	May 2021 Contained Ounces	Difference Contained Ounces	Difference (%)
Viper	119,000	52,000	67,000	+ 128%
N'Tiola	96,000	81,000	15,000	+ 18%

<sup>1</sup> Refer to ASX announcement dated 3<sup>rd</sup> May 2021.

**Table 2: Comparison of Measured & Indicated Mineral Resources for the Viper and N'Tiola Deposits**

Deposit	March 2022 Contained Ounces	May 2021 Contained Ounces	Difference Contained Ounces	Difference (%)
Viper	92,000	51,000	<b>41,000</b>	<b>+ 80%</b>
N'Tiola	84,000	81,000	<b>3,000</b>	<b>+ 5%</b>

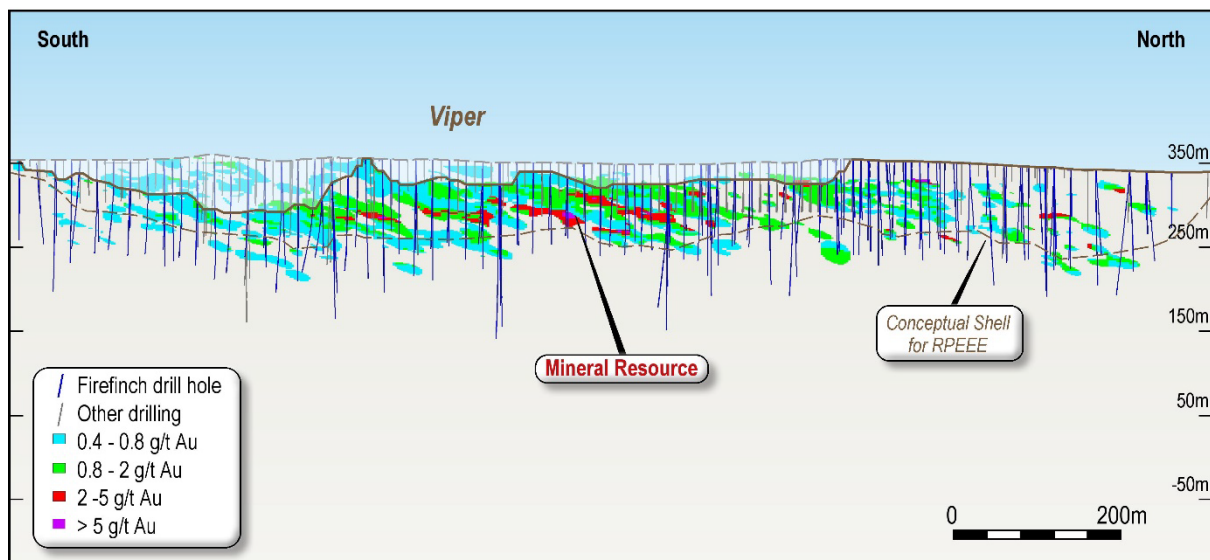
## Viper

The updated Mineral Resource Estimate at Viper is **3.23 million tonnes at 1.15g/t gold** for 119,000 ounces of gold, compared to the previous estimate of 1.55 million tonnes at 1.05g/t gold for 52,000 ounces of gold<sup>2</sup>. This includes 2.47 million tonnes at 1.16g/t gold for 93,000 ounces of gold in the Measured and Indicated categories.

The Viper Deposit is located some 26 kilometres from Morila and is accessed via a haul road from the plant (Figure 5). 0.81 million tonnes at a grade of 1.19g/t gold were previously mined from two small open pits at Viper and treated by Morila in 2018-2019 for 31,000 ounces of recovered gold. Mining recommenced at Viper in August 2021 and ore from the deposit is planned to make a substantial contribution to the mill feed in 2022 – 2023.

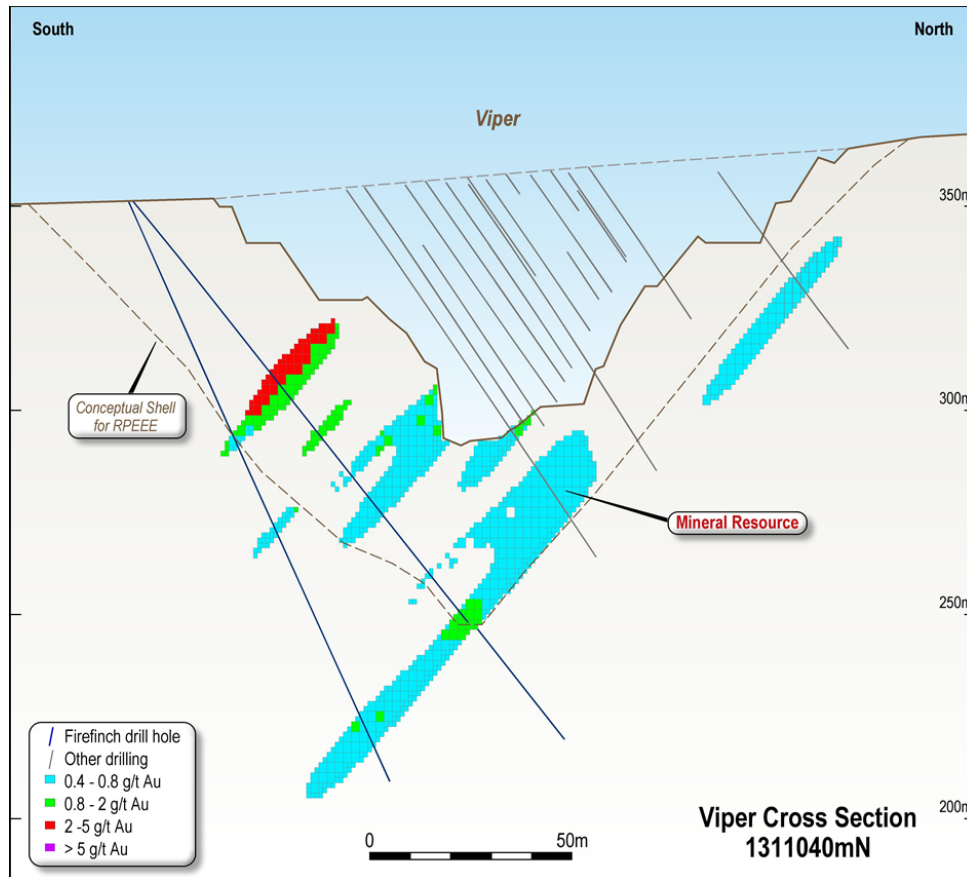
Mineral Resources for Viper were estimated based on 39,591 metres of drilling in 506 holes drilled by Firefinch which has been detailed in ASX announcements of 29<sup>th</sup> March 2021, 30<sup>th</sup> April 2021, 10<sup>th</sup> June 2021, 10<sup>th</sup> August 2021 and 22<sup>nd</sup> October 2021 as well as prior drilling of 20,530 metres in 516 drillholes detailed in the ASX announcement of 24<sup>th</sup> November 2020.

Mineralisation at Viper has now been defined over 1.5 kilometres of strike and to depths of 200 metres (Figure 1 and 2). Mineralisation remains open at depth and further drilling to test the extents of mineralisation is planned for 2022. There has been little systematic testing for repeats of Viper or parallel structures and systematic exploration is planned for coming years.



**Figure 1: Long Section of the Viper Deposit showing Mineral Resource.**

<sup>2</sup> Refer to ASX announcement dated 3<sup>rd</sup> May 2021.



**Figure 2: Cross Section of the Viper Deposit showing Mineral Resource**

## N'Tiola

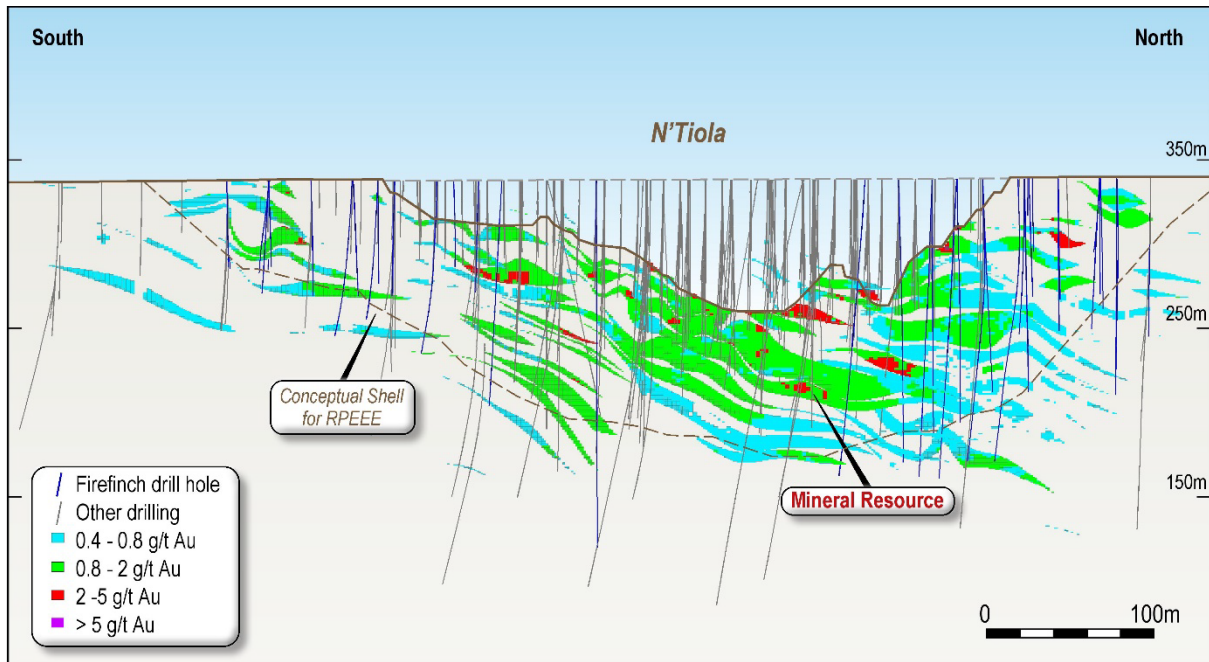
The updated **MRE** at N'Tiola is **2.90 million tonnes at 1.03g/t gold** for 96,000 ounces of gold. This compares to the previous estimate of 2.43 million tonnes at 1.04g/t gold for 81,000 ounces of gold<sup>3</sup>. (refer ASX Announcement 24<sup>th</sup> November 2020). The Mineral Resource includes 2.55 million tonnes at 1.03g/t gold for 84,000 ounces in the Measured and Indicated categories.

The N'Tiola Deposit is located some 25 kilometres from the Morila plant, some 5 kilometres northeast of the Viper Deposit and is accessed via a haul road (Figure 5). 0.85 million tonnes at a grade of 1.42g/t gold were previously mined from an open pit at N'Tiola and treated by Morila in 2018-2019 for 39,000 ounces of recovered gold. Mining at N'Tiola is planned to recommence in the second half of 2022 with ore from the deposit planned to make a substantial contribution to mill feed in 2022-2023.

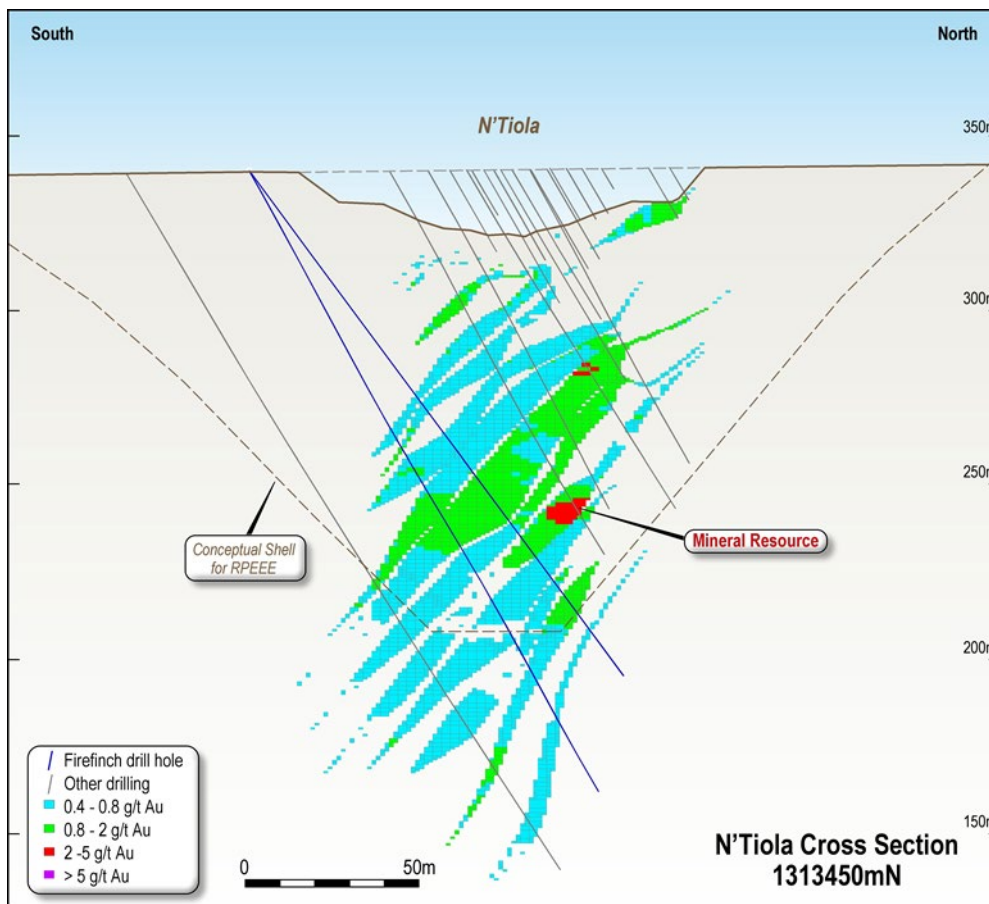
Mineral Resources for N'Tiola were estimated based on 12,025 metres in 179 holes drilled by Firefinch as detailed in ASX announcements of 22<sup>nd</sup> January 2021, 30<sup>th</sup> April 2021, and 22<sup>nd</sup> October 2021 as well as prior drilling of 38,652 metres in 621 drillholes detailed in the ASX announcement of 24<sup>th</sup> November 2020.

Drilling at N'Tiola in 2021 successfully defined near-surface mineralisation at the northern and southern extremes of the deposit. The near surface mineralisation, especially at the southern end of the deposit, is anticipated to enable bringing forward the planned start of ore mining. Drilling during 2022 will test for extensions to higher grade zones of mineralisation as well as test parallel zones inferred in geological interpretation.

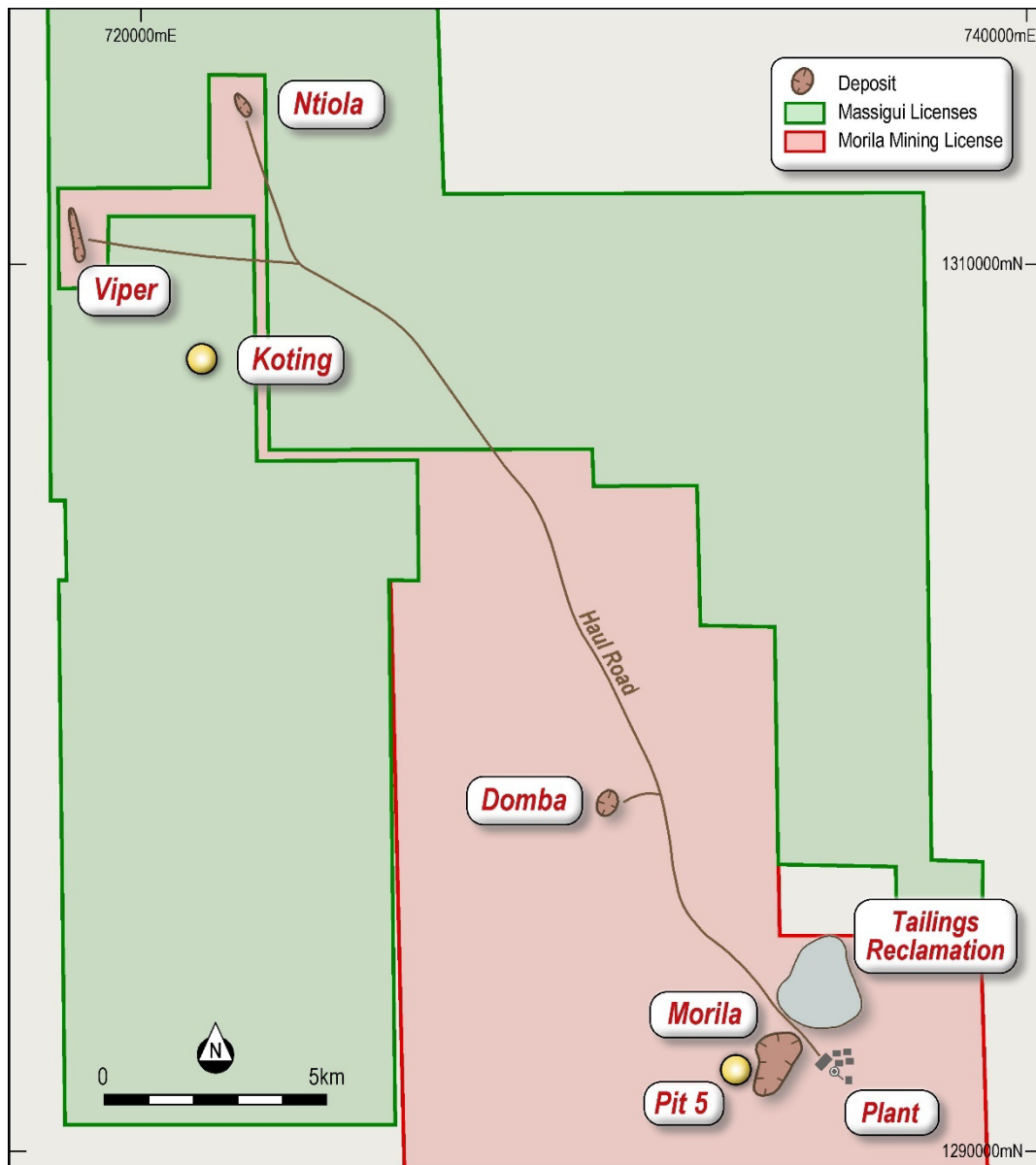
<sup>3</sup> Refer to ASX announcement dated 3<sup>rd</sup> May 2021.



**Figure 3:** Long Section of the N'Tiola Deposit showing Mineral Resource.



**Figure 4:** Cross Section of the N'Tiola Deposit showing Mineral Resource



**Figure 5:** Location of Viper, N'Tiola and the other satellite deposits.

### Summary of Resource Estimation Parameters

As per ASX Listing Rule 5.8 and the 2012 JORC Code, a summary of the material information used to estimate the Mineral Resource is detailed below. Further details can be found in Appendix 2.

**Geology & Geological Interpretation:** The N'Tiola and Viper deposits are hosted within broadly steeply dipping metasedimentary packages with alternating fine, medium and coarse-grained beds. Mineralisation is associated with shearing parallel to bedding, with flatter structures also present. Mineralisation has been interpreted from section to section based on both geological and assay criteria, using a lower cut-off grade of 0.3g/t gold.

**Drilling, Sampling and Sub-sampling Techniques:** Mineralisation at the N'Tiola and Viper deposits has been defined by both Reverse Circulation (**RC**) and diamond drilling. Initial exploration drilling at all prospects was detailed in the ASX Announcement of 24<sup>th</sup> November 2020, with Firefinch completing infill and extensional RC drilling from December 2020 to the present. All available drilling data is used in the resource estimates.

Sample Analysis: All samples used in the resource estimates were analysed at accredited commercial laboratories. Standard sample preparation techniques were used with a 50 grams sub-sample fire assayed and the bead analysed by AAS. Quality control protocols for all drilling included the use of certified reference materials, blanks and duplicates.

Estimation Methodology: Block grades were estimated using Ordinary Kriging. Search ellipses were based on variography. The block model size used for all deposits was 2.5 metres east by 5 metres north (10 metres at Viper) by 2.5 metres height corresponding to the expected selective mining unit.

Mining & Metallurgical Methods and Other Factors: The Mineral Resources are based on open pit mining with all mineralised material being processed through the Morila processing plant which has been in continuous operation since 2000. It is assumed that mining rates, processing rates, recoveries and other mining and metallurgical parameters will be similar to historical and current performance. To ensure reasonable prospects for eventual economic extraction all resources have been constrained using pit optimisation shells developed at a range of gold prices as forecast over the next 12 - 24 months along with best estimates for mining, processing and administration costs over the same period.

Classification & Cut-off Grade: The Mineral Resources have been classified as Indicated and Inferred. It is anticipated that the resources could achieve a higher level of classification with infill drilling and verification of the extent of historical mining. The Mineral Resources have been depleted using pit surveys as at 31<sup>st</sup> December 2021 provided by the Morila survey department. The lower cut-off grade used was based on current costs at Morila along with the current and forecast gold price and varies for each deposit due to their differing distance from the plant. The cut off grades are between 0.35 – 0.5g/t gold.

This announcement has been approved for release to the ASX by the Board.

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#### Forward Looking Statements

This announcement contains certain forward-looking statements with respect to Firefinch's financial condition, results of operations, production targets and other matters that are subject to various risks and uncertainties. Actual results, performance or achievements could be significantly different from those expressed or implied by those forward-looking statements. Such forward looking statement are no guarantees of future performance and involve known and unknown risks, uncertainties, and other factors beyond the control of Firefinch that may cause actual results to differ materially from those expressed in the forward-looking statements in this announcement.

### Competent Persons Declaration

The information in this announcement that relates to Exploration Results is based on information compiled under the supervision of Mr Bill Oliver. Mr Oliver is an employee of Firefinch Limited and a member of the Australian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy. Mr Oliver has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity 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 ('the JORC Code')". Mr Oliver consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resources is based on information compiled by Mr Kerry Griffin. Mr Griffin is an employee of Firefinch Limited and a member of the Australian Institute of Geoscientists. Mr Griffin has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity he is undertaking to qualify as a Competent Person as defined in the JORC Code. Mr Griffin consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Table 3: Mineral Resources for the Morila Gold Project**

Deposit	Measured			Indicated			Inferred			Total		
	Tonnes (millions)	Grade (g/t)	Ounces ('000)	Tonnes (millions)	Grade (g/t)	Ounces ('000)	Tonnes (millions)	Grade (g/t)	Ounces ('000)	Tonnes (millions)	Grade (g/t)	Ounces ('000)
<b>Morila Pit</b> <sup>1</sup>				21.2	1.60	1,090	17.5	1.37	770	<b>38.6</b>	<b>1.50</b>	<b>1,860</b>
<b>Morila NE</b> <sup>2</sup>							0.21	3.07	21	<b>0.21</b>	<b>3.07</b>	<b>21</b>
<b>Samacline</b> <sup>2</sup>							3.74	2.56	308	<b>3.74</b>	<b>2.56</b>	<b>308</b>
<b>Morila Tailings</b> <sup>3</sup>	1.73	0.50	28							<b>1.73</b>	<b>0.50</b>	<b>28</b>
<b>Morila Pit 5</b> <sup>4</sup>				0.72	1.04	24	0.12	1.38	6	<b>0.84</b>	<b>1.10</b>	<b>30</b>
<b>N'Tiola</b> <sup>4</sup>				2.55	1.03	84	0.35	1.04	12	<b>2.90</b>	<b>1.04</b>	<b>96</b>
<b>Viper</b> <sup>4</sup>				2.47	1.16	92	0.75	1.10	27	<b>3.23</b>	<b>1.15</b>	<b>119</b>
<b>Domba</b> <sup>5</sup>				0.20	1.75	11	0.25	1.61	13	<b>0.46</b>	<b>1.67</b>	<b>25</b>
<b>Koting</b> <sup>4</sup>				0.65	1.04	22	0.28	0.94	8	<b>0.93</b>	<b>1.01</b>	<b>30</b>
<b>Total</b>	<b>1.73</b>	<b>0.50</b>	<b>28</b>	<b>27.78</b>	<b>1.48</b>	<b>1,325</b>	<b>23.15</b>	<b>1.56</b>	<b>1,160</b>	<b>52.65</b>	<b>1.48</b>	<b>2,514</b>

<sup>1</sup> The Morila Pit resource is quoted using a 0.4g/t gold cut-off grade.

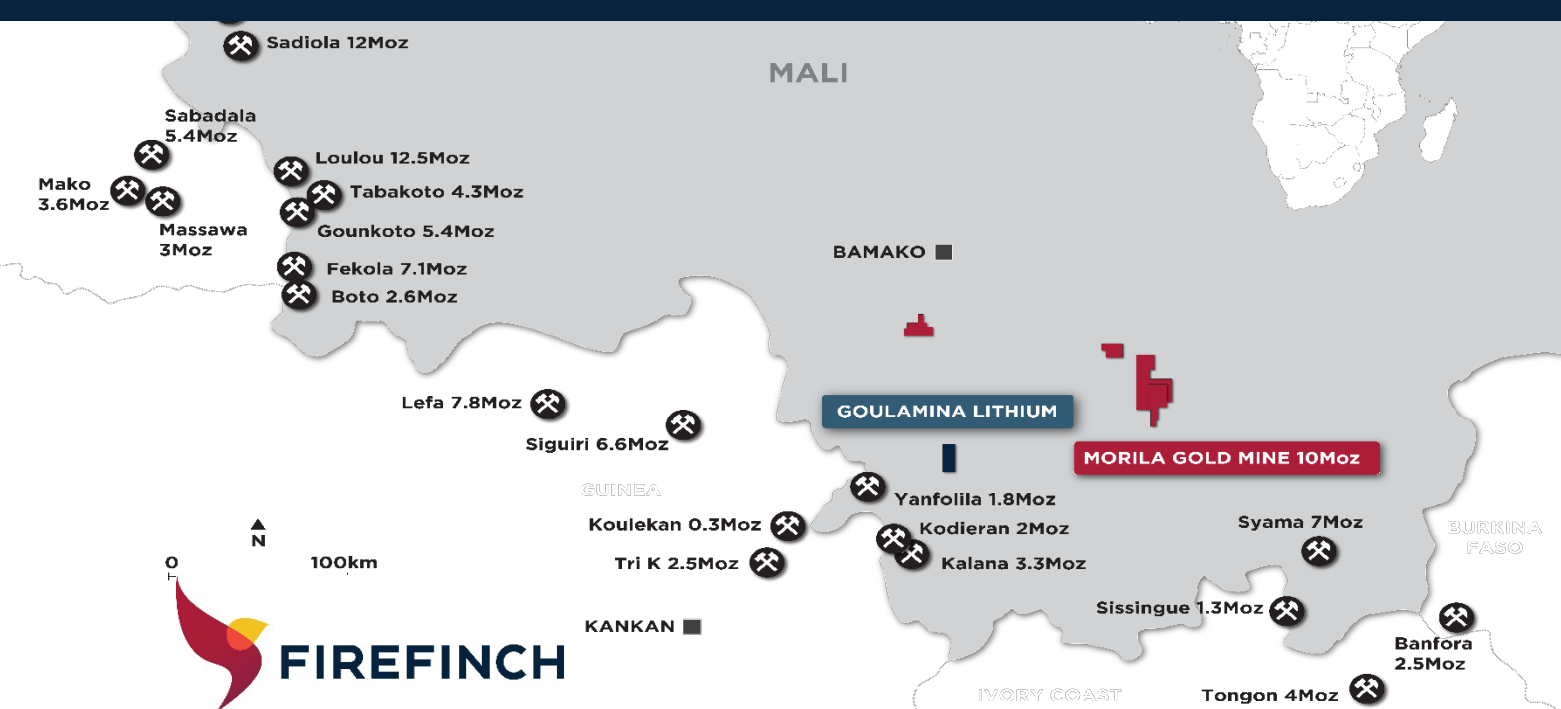
<sup>2</sup> The Samacline and Morila NE resources are quoted using a 1.8g/t gold cut-off grade.

<sup>3</sup> The Tailings resource is quoted using a 0.3g/t gold cut-off grade.

<sup>4</sup> The N'Tiola, Viper, Pit 5 and Koting resources are quoted above cut-off grades based on forecast costs (0.35 – 0.48g/t).

<sup>5</sup> The Domba resource is quoted using a 0.5g/t gold cut-off grade.

<sup>6</sup> Numbers in the above table may not appear to sum correctly due to rounding.



Firefinch (ASX: FFX) is a Mali focussed gold miner and lithium developer. Firefinch has an 80% interest in the Morila Gold Mine (**Morila**) and it currently owns 100% of the Goulamina Lithium Project (**Goulamina**).

The Morila Gold Mine is one of the world’s great open pit gold mines, having produced over 7.5Moz of gold since 2000 at grades that were among the highest in the world, earning it the moniker “Morila the Gorilla”. Firefinch acquired Morila for just US\$28.9 million in late 2020 with the strategic intent to rapidly increase production; initially targeting 70-90kozpa of gold from a combination of satellite pits, stocks and tailings, and thereafter growing production to 150-200kozpa of gold by mining the Morila Superpit. Morila’s current Global Resource is 2.51 million ounces of gold (Measured: 1.73Mt at 0.5g/t gold for 0.03Moz, Indicated: 27.8Mt at 1.48g/t gold for 1.33Moz and Inferred: 23.2Mt at 1.56g/t gold for 1.16Moz). However, Morila’s geological limits have not been tested. Exploration is therefore a major focus at the existing deposits and multiple targets on the 620km<sup>2</sup> of surrounding tenure.

Goulamina is one of the world’s largest undeveloped high quality spodumene deposits. In partnership with Ganfeng, Firefinch will bring the project into production. A 50/50 incorporated joint venture has been established, with Ganfeng contributing US\$194 million in development funding, comprising US\$130 million in equity funding and US\$40-64 million in debt funding. All permits are in place and the Definitive Feasibility Study Update confirmed Goulamina as a long life, large scale and low-cost open pit project expected to produce 726,000 tonnes of spodumene concentrate at an average cash cost of US\$312/t. Goulamina has high grade, low impurity Ore Reserve of 52Mt at 1.51% Li<sub>2</sub>O for 0.79Mt contained Li<sub>2</sub>O comprising 8.1 million tonnes of Proven Ore Reserves at 1.55% Li<sub>2</sub>O and 44.0 million tonnes of Probable Ore Reserves at 1.50% Li<sub>2</sub>O. Goulamina has a Mineral Resource of 109Mt at 1.45% Li<sub>2</sub>O for 1.57Mt contained Li<sub>2</sub>O comprising 8.4 million tonnes at 1.57% Li<sub>2</sub>O in the Measured category, 56.2 million tonnes at 1.48% Li<sub>2</sub>O in the Indicated category and 43.9 million tonnes at 1.45% Li<sub>2</sub>O in the Inferred category. The Company is in the process of demerging Goulamina into a new ASX listed entity, Leo Lithium.

Firefinch is a responsible miner. We support positive social and economic change through contributing to the communities in which we operate. We seek to buy local, employ local and back local socio-economic initiatives, whilst operating in a manner that safeguards the environment and places our team’s safety and wellbeing as our first priority.

The Company confirms that it is not aware of any new information or data that materially affects the Mineral Resources at Goulamina and Morila and the production estimates for Goulamina. The Company also confirms that all material assumptions and parameters underpinning the Mineral Resource estimates and production estimates continue to apply and have not materially changed. Please refer to ASX Announcements of 8<sup>th</sup> July 2020, 20<sup>th</sup> October 2020 and 6<sup>th</sup> December 2021 (Goulamina), 8<sup>th</sup> February 2021 (Morila Resource), 7<sup>th</sup> September 2020 and 28<sup>th</sup> April 2021 (Morila Tailings), 24<sup>th</sup> November 2020, 3<sup>rd</sup> May 2021, and 10<sup>th</sup> August 2021 (N’Tiola, Viper, Domba, Koting, Morila Pit 5), and 17<sup>th</sup> January 2022 and 28<sup>th</sup> January 2022 (Morila Gold Production, Ore Reserves and Production Targets).



**APPENDIX 1: JORC CODE, 2012 EDITION – TABLE 1**  
**EXPLORATION RESULTS & MINERAL RESOURCES SATELLITE DEPOSITS,**  
**MORILA GOLD PROJECT, MALI**

**Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>One metre samples were collected using Reverse Circulation (RC) drilling with a ~140mm bit.</li> <li>The entire sample is collected from the cyclone on the rig in plastic bags and then split by hand using a riffle splitter to collect a sample of between 2 and 3 kg in a prenumbered cotton sample bag.</li> <li>The entire sample is pulverized and a 30g charge is collected for fire assay/AAS analysis.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>All samples in the current campaign were collected using RC drilling RC drilling using face sampling bit with a nominal 5.5” hole diameter.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <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>	<ul style="list-style-type: none"> <li>RC recoveries for the primary sample were observed and estimated qualitatively, with the sub samples weighed as a quantitative measure.</li> <li>The entire sample was collected from the cyclone and subsequently split by hand in a riffle splitter to maximise representivity.</li> <li>Drill sample recovery is considered adequate for the drilling techniques employed.</li> <li>RC drilling utilised booster packs to manage water ingress with most samples being dry. Condition of the sample was recorded (ie</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>Dry, Moist, or Wet)</p> <ul style="list-style-type: none"> <li>Where samples were wet (due to ground water there is a possibility that the assay result could be biased through loss of fine material.</li> <li>No relationship is known to exist between sample recovery and grade.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <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> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Chips were geologically logged in their entirety by geologists and a representative fraction collected in a chip tray. The logs are sufficiently detailed to support Mineral Resource estimation. Logged criteria included lithology, alteration, alteration intensity, weathering, grainsize and sulphides.</li> <li>Geological logging is qualitative in nature although percentages of sulphides are estimated along with structural measurements.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <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> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples are either split using a cone or riffle splitter mounted on the rig or split by hand using a stand-alone riffle splitter. These techniques are appropriate for collecting statistically unbiased samples.</li> <li>Samples are weighed to ensure a sample weight of between 2 and 3 kg. Samples of between 2 and 3 kg are considered appropriate for determination of contained gold using the fire assay technique.</li> <li>Certified reference standards, Blanks, and duplicates are inserted into the sample stream as the samples are collected at a rate of 10%.</li> <li>Field duplicates are inserted every 20 samples</li> <li>Blanks (derived from unmineralized river sand) and Certified reference material standards (CRMs) are inserted alternately every 20 samples.</li> <li>Both duplicates (two aliquots of 50g from the same 200g sub sample) and replicates (two samples from the same raw sample) were used to test the laboratory precision (repeatability) and the homogeneity of the sample respectively.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and</li> </ul>	<ul style="list-style-type: none"> <li>Samples were analysed for gold at the laboratory onsite at Morila, an accredited commercial laboratory, as well as at commercial laboratories in Bamako. The Morila laboratory is located on site but operated by an independent third party (MSALABs).</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>model, reading times, calibrations factors applied and their derivation, etc.</i></p> <ul style="list-style-type: none"> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Sample preparation comprised of the following: <ul style="list-style-type: none"> <li>○ drying all samples and crushing (for core samples).</li> <li>○ Pulverise entire sample to 95% passing 75 microns (all samples).</li> <li>○ A 30g sub sample analysed by fire assay with AAS finish.</li> </ul> </li> <li>• QA/QC programme comprises Certified Reference Materials, replicates, duplicates, and blanks.</li> <li>• Laboratory checks include <ul style="list-style-type: none"> <li>○ Every 50th sample is screened to confirm % passing 2mm and 75 microns.</li> <li>○ 1 reagent blank every 84 samples</li> <li>○ 1 preparation blank every 84 samples</li> <li>○ 2 weighed replicates every 84 samples</li> <li>○ 1 preparation duplicate (re split) every 84 samples</li> <li>○ 3 SRMs every 84 samples</li> <li>○ Certified reference standards, Blanks, and duplicates are inserted into the sample stream as the samples are collected at a rate of 10%.</li> </ul> </li> <li>• Field duplicates are inserted every 20 samples.</li> <li>• Blanks (derived from unmineralized river sand) and Certified reference standards (CRMs) are inserted alternately every 20 samples.</li> <li>• Replication (two samples from the same raw sample) and duplication (two aliquots from the same sub-sample) tests were also carried out by the laboratory.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Firefinch drill hole data was compiled and digitally captured by Company geologists at the drill rig. Drilling and sampling procedures have been developed to ensure consistent sampling practices are used by site personnel.</li> <li>• All drilling and exploration data are stored in the company database which is hosted by an independent geological database consultant. The compiled digital data is verified and validated by the consultant before loading into the database.</li> <li>• QAQC reports are generated regularly to allow ongoing reviews of sample quality.</li> <li>• Twinned holes were not used to verify results, infill drilling has been used to increase confidence.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <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> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill hole collars are located using DGPS or RTK GPS.</li> <li>• Down hole dip and azimuth are collected using a Gyro measuring every 20 to 50m for RC drilling.</li> <li>• Coordinates are recorded in UTM WGS84 29N</li> <li>• Topographic control is maintained by the Morila mine survey department with a mixture of survey pickups and aerial data and is considered adequate for mine planning purposes.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <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> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• At N'Tiola and Viper historical shallow drilling has been completed to a 10 x 10m spacing. Drilling below the mined pit is at a more variable spacing but Firefinch drilling has ensured that drilling is at 40 x 40m spacing or closer.</li> <li>• No sample compositing has been applied.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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> <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>	<ul style="list-style-type: none"> <li>• N'Tiola – mineralisation is hosted between two steeply west-dipping shear zones, with high grade zones in more shallowly dipping vein sets linking the shears. Drilling has been oriented to the east to intersect the main mineralised structures.</li> <li>• Viper – mineralisation is hosted in mineralised zones which are interpreted to dip moderately (~65°) to the west. Drilling has been oriented to the east to intersect the main mineralised structures.</li> <li>• No sampling bias is known to exist though it is not precluded.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples are delivered from the drilling site in batches for each drill holes to the SGS laboratory at Morila with appropriate paperwork to ensure the chain of custody is recorded.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• QAQC checks of individual assay files are routinely made when the results are issued.</li> <li>• A QAQC report for the entire program is generated and reviewed to document any laboratory drift or assay bias.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <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> <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 style="list-style-type: none"> <li>The N'Tiola, Viper and Morila Pit 5 Deposits lies within the Morila license (PE 99/15) which is owned by Société des Mines de Morila SA, a Malian registered company with 20% held by the Malian Government.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Focused systematic regional exploration of the Morila area began in the mid 1980s. Most exploration was completed by Randgold, in JV with AngloGold Ashanti. Exploration in the Morila area has been extensively detailed in ASX Announcements of 31<sup>st</sup> August 2020 and 8<sup>th</sup> February 2021.</li> <li>Firefinch, under its former names Birimian Gold and Mali Lithium, completed substantial exploration at N'Tiola, Viper, Koting and the surrounding area (also as) including soil sampling, Auger Drilling, Air-core Drilling and RC Drilling as well as limited diamond drilling.</li> <li>The N'Tiola and Viper deposits which were then acquired and mined by Randgold under an option agreement (refer ASX Announcement 4<sup>th</sup> November 2016).</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Morila permit is situated in the northern portion of the West African craton between the NNE trending Birimian volcano-sedimentary belts of Kalana-Yanfolila and Syama. The region is underlain predominantly by Lower Proterozoic meta-volcanic and meta-sedimentary sequences (Birimian) and large areas of granitoids. The whole package of rocks has been deformed by the Eburnean Orogeny. The permit area locates along a contact between Birimian metasediments and the Eburnean granitoids.</li> <li>The N'Tiola and Viper deposits are shear vein hosted orogenic style gold deposits. This style of mineralisation typically forms as veins or disseminations in altered host rock. Deposits of this type often form in proximity to linear geological structures.</li> <li>Surficial geology within the project area typically consists of indurated gravels forming plateau, and broad depositional plains consisting of colluvium and alluvial to approximately 5m vertical depth. Lateritic weathering is common within the project</li> </ul>

Criteria	JORC Code explanation	Commentary
		area. The depth to fresh rock is typically 35m vertical.
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• 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: <ul style="list-style-type: none"> <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> </li> <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 style="list-style-type: none"> <li>• All drill hole intersections from the current phase of drilling are reported in Appendix 1.</li> <li>• Previous drilling completed at the N'Tiola and Viper Prospects were detailed in the ASX Announcements of 24<sup>th</sup> November 2020, 22<sup>nd</sup> January 2021, 29<sup>th</sup> March 2021, 30<sup>th</sup> April 2021, 10<sup>th</sup> June 2021, 10<sup>th</sup> August 2021 and 22<sup>nd</sup> October 2021.</li> <li>• The Company confirms that there are no material changes to any of the information previously released.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• 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.</li> <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> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• All sample lengths are 1m. a weighting of 1 has been applied to all samples.</li> <li>• Top cuts have not been used</li> <li>• Metal equivalent grades have not been stated.</li> </ul>
<b>Relationship between mineralisation on widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	<ul style="list-style-type: none"> <li>• At N'Tiola and Viper mineralised lodes are interpreted to dip moderately or steeply to the WNW. Drilling is generally oriented -60 degrees due east or -60 degrees due west. Intersection angles on the mineralised zones are between 25 and 35 degrees. True widths of mineralisation are above 50% of downhole widths.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections are provided in the text</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All intersections from previous drilling were reported using a consistent grade and length criteria, with any barren drillholes included to ensure balanced reporting.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>The Morila Project has been in operation since 2000 with exploration activities completed prior to that. Consequently, there is a large quantity of data including exploration data (geochemical and geophysical surveys, trenching, drilling), production data (grade control drilling, mining and processing), as well as associated data such as environmental and geotechnical, which is used in the exploration and development of the project. None of this information is meaningful or material for the current release.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <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>	<ul style="list-style-type: none"> <li>As detailed in the text</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

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

Bd Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <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> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>All drilling and exploration data are stored in an SQL database hosted by an independent geological database consultant. Logging and sampling data are collected using datasheets and validated on completion of logging then on import into the database. Data was subsequently validated upon import into the modelling software.</li> <li>The Competent Persons have reviewed the database via import into Micromine &amp; Suprac and visual checks against the model.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person for Exploration Results visited Morila in 2020 and reviewed data and other material on site as well as completing site visits to the prospects.</li> <li>The Competent Person for the Mineral Resources has not been able to visit Morila to date due to restrictions on travel related to COVID-19.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>The geological interpretation is based on a substantial amount of drilling as well as mining resulting in a high degree of confidence.</li> <li>Mineralisation at N'Tiola is hosted within medium to coarse grained sediments with pyrite and minor arsenopyrite. The sedimentary package comprises steeply dipping fine, medium and coarse-grained sediments with late intrusive rocks also present. Mineralisation is parallel to foliation and controlled by a NNW-striking ductile shear zone. Higher grade zones occur as flat SW-dipping structures (&amp; veins) linking two parallel shear zones which form the boundary of the mineralised package.</li> <li>Mineralisation at Viper is hosted by silica flooded, sheared greenstone facies metamorphosed psammities. Arsenopyrite and pyrite is disseminated or occurs as stringers parallel to foliation. Mineralisation discovered to date is dominantly within the oxide zone, particularly in the southern portion of the deposit. The northern part of the deposit is slightly higher grade and the depth to fresh rock is less indicating a structural dislocation between the south and north parts.</li> <li>The Mineral Resources are based on the geological interpretation above.</li> </ul>



Bd Criteria	JORC Code explanation	Commentary
<b>Dimensions</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The N'Tiola resource model has dimensions of 700m in the north-south direction, 300m in plan/east-west width and extends 220m vertically from surface</li> <li>The Viper resource model has dimensions of 1,500m in the north-south direction, 460m in the east-west direction and extends 210m vertically from surface.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <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> <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> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>The resource models were produced using GEOVIA Surpac software based on 1m sample composites constrained by the mineralised lode interpretation. Grades were estimated into 2.5m x 2.5m x 2.5m blocks (or 2.5m x 2.5m x 1.25m at Viper) using Ordinary Kriging techniques inside wireframes generated from geological interpretation. This block size is consistent with the selective mining unit previously used at these deposits and likely to be used again.</li> <li>Search ellipses used ranged from 30m to 195m with appropriate min/max limits on the number of samples used, with search ranges and orientations determined by geostatistics with reference to the mineralised lode interpretation.</li> <li>Capping was used to reduce the effect of high-grade samples (between 5.2 and 33.5g/t for N'Tiola and 40g/t for Viper).</li> <li>Visual and statistical validation was completed and shows reasonable correlation between estimated grades and drill sample grades.</li> <li>The Mineral Resources were compared to previous resource estimates (including some which are not published) and found to be consistent.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Tonnages have been estimated on a dry in situ basis.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>The cut-off grade for the Mineral Resource is based on open pit design in accordance with RPEEE principles. Costs used in this were the current mining, processing and G&amp;A costs for the Morila operation, along with mining costs sourced from multiple sources including a database of costs from similar operations,</li> </ul>

Bd Criteria	JORC Code explanation	Commentary
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <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>	<p>recent tenders for projects in the region and historical mining costs at Morila.</p> <ul style="list-style-type: none"> <li>The resource model assumes open cut mining is utilised with a similar level of mining selectivity achieved as in previous mining. It is assumed that grade control techniques and procedures will mirror those which were successful during previous mining operations at these deposits.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>It is assumed that metallurgical recoveries will match those historically achieved by ore from these deposits through the Morila processing plant. Metallurgical testwork has been completed on composite samples and results to date are consistent with this assumption.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <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 greenfield 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.</li> </ul>	<ul style="list-style-type: none"> <li>No assumptions have been made regarding environmental factors. The Company will work to mitigate environmental impact as a result of any future mining or mineral processing. The N'Tiola and Viper areas were previously mined and the planned open pits do not significantly increase the footprint of disturbance.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>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.</li> <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> <li>Discuss assumptions for bulk density</li> </ul>	<ul style="list-style-type: none"> <li>Relative density measurements were completed on core samples. The core was divided into oxide, transitional and sulphide core. Relative density determinations on core used the weight in air/weight in water method.</li> </ul>

Bd Criteria	JORC Code explanation	Commentary
<b>Classification</b>	<p><i>estimates used in the evaluation process of the different materials.</i></p> <ul style="list-style-type: none"> <li><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li><i>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).</i></li> <li><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>The resources have been classified as Indicated and Inferred based on data quality, geological confidence and sample spacing.</li> <li>The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in situ mineralisation. The definition of mineralised zones is based on a good geological understanding producing a robust model of mineralised domains. This model has been confirmed by grade control, infill and extensional drilling which supports the mineralisation model.</li> <li>The key factors requiring additional information would be increased sample spacing to achieve improved local estimates of grade and more precision relating to the historic mining.</li> <li>The resource estimate appropriately reflects the view of the Competent Persons, that the data quality and validation criteria, as well as the resource methodology and check procedures, are reliable and consistent with criteria as defined by the JORC Code.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>No audits or review of the Mineral Resource estimate has been conducted.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>The lode geometry and continuity has been interpreted in detail.</li> <li>The data quality is good with all drill holes being logged by qualified geologists and a recognized laboratory has been used for all analyses. Further infill drilling could be used to increase confidence in local grade estimation.</li> <li>The Mineral Resource statement relates to global estimates of tonnes and grade.</li> </ul>