2.2 Million Ounce Resource Estimate Transforms Morila

- **Indicated and Inferred Mineral Resource at Morila pit jumps from 1.3 million ounces of contained gold to 2.2 million ounces of contained gold**
- **Grade of the Mineral Resource increases from 1.2 g/t gold to 1.6g/t gold**
- **Bulk of resource is open pittable with a portion of underground resource with intercepts including 14m at 21.7g/t gold and 6m at 9.0g/t gold at Morila NE; 5m at 31.5g/t gold, 17m at 4.9g/t gold and 35m at 3.0 g/t gold at Samacline**
- **Studies to commence to target production of 150,000 - 200,000 ounces of gold per annum from a Morila Superpit using existing infrastructure**
- **Global resource for the entire Morila project is now 2.35 million ounces of gold**

Firefinch Limited (ASX: FFX) (**Firefinch** or **the Company**) is pleased to announce the results of a Mineral Resource Estimate at the Morila Gold Mine in Mali. The Mineral Resource for the Morila deposit is:

42.6 million tonnes at 1.6g/t gold for 2.2 million contained ounces.

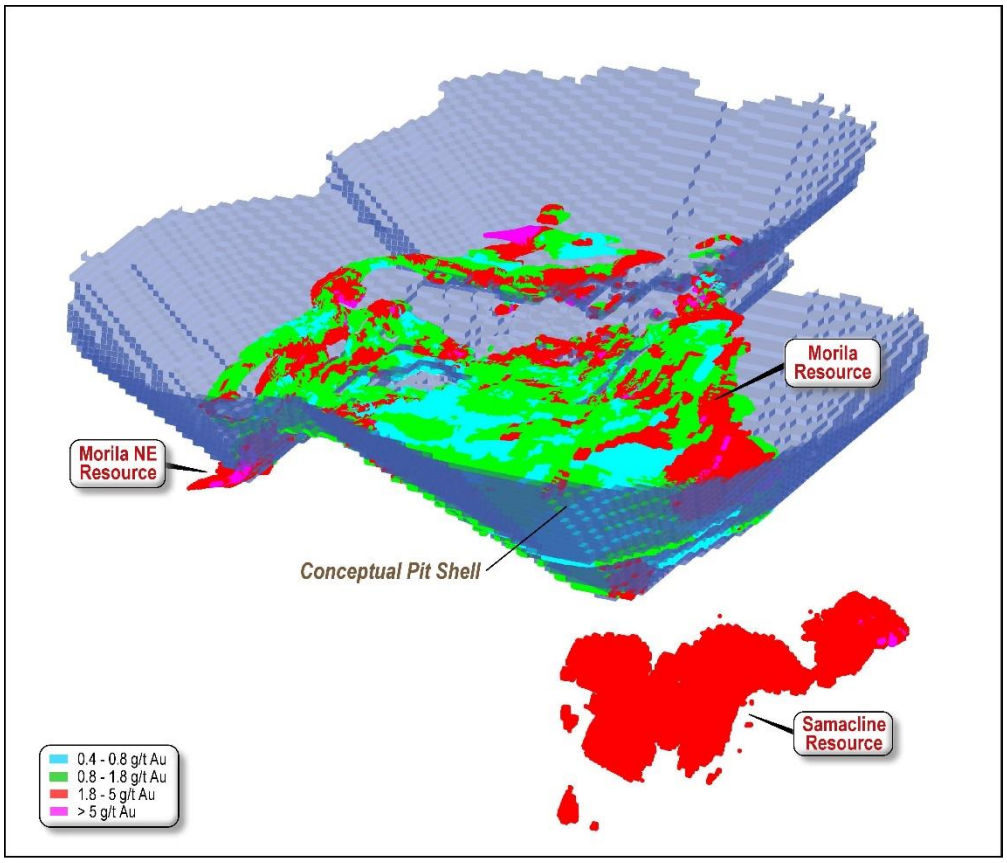

Figure 1. Oblique view of the Morila Mineral Resource and the $1800/oz gold pit shell used to constrain it. View is towards the SE, looking down from the NW.

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The Mineral Resource was estimated by independent consultants Optiro Pty Ltd (Optiro) using an entirely new geological model constructed by Optiro based on drilling data from the Morila deposit. Some 12,082 drillholes for over 483,000 metres of Reverse Circulation and diamond core drilling informed the estimate.

The Mineral Resource Estimate is reported in accordance with the 2012 edition of the JORC Code and is detailed in Table 1 below (see also Appendix 2). The Mineral Resource is reported at a 0.40g/t gold cut-off grade for the Morila Main Pit Resource and a 1.80g/t gold cut-off grade for the Morila NE and Samacline Resources.

The open pittable mineralisation lies around and beneath the existing Morila pit and has been constrained within a conceptual Whittle pit shell based on a gold price of US$1800 per ounce, that gold price also informs the economic cut-off grade. The cut-off grade for mineralisation which could be exploited by underground mining methods has been determined based on potential mining costs, comparison with other operations in West Africa and the current gold price.

Deposit	Indicated			Inferred			Total		
	Tonnes (millions)	Grade (g/t)	Ounces ('000)	Tonnes (millions)	Grade (g/t)	Ounces ('000)	Tonnes (millions)	Grade (g/t)	Ounces ('000)
Morila Pit	21.2	1.60	1,090	17.5	1.37	770	**38.63**	**1.50**	**1,860**
Morila NE				0.2	3.07	20	**0.2**	**3.07**	**20**
Samacline				3.7	2.56	310	**3.7**	**2.56**	**310**
Total Morila	**21.2**	**1.60**	**1,090**	**21.4**	**1.59**	**1,095**	**42.6**	**1.60**	**2,190**

Table 1. Morila Deposit Mineral Resources

The previously reported Inferred Mineral Resource of 32 million tonnes at 1.26 g/t gold for 1.30 million ounces of contained gold was based on resource modelling completed in 2008. This estimate used a 'numbers driven' approach and a 1 g/t gold cut-off grade (see ASX Release, 31 August 2020).

The almost 70%, increase in the ounces of contained gold is due to three factors:

- Application of a 0.4g/t gold open pit cut-off grade due to the gold price being more than double than that applicable when the prior estimate was made
- A geologically driven approach from Optiro where considerable effort was made to generate coherent and credible 'geological' shapes that reflect and honour the geometry of mineralisation mined in the Morila pit from 2000 to 2009; and
- Unification and validation of various databases by independent database consultants Geobase Australia that delivered confidence to improve resource classification and permitted the verification and inclusion of data in the estimate that was not included in the prior estimate

The Cross Section shown in Figure 2 below illustrates the drilling immediately adjacent to the Morila pit and the Resource geometry erected around that drilling. The figure also provides a 'whole of deposit' view of the resource model including the position of the Samacline Mineral Resource. Further Cross Sections are provided in Appendix 1. The geometry of multiple flat-lying stacked lodes is common to many gold deposits and the characteristic of ultra-high grade being contained within steep ramp structures is also known elsewhere.

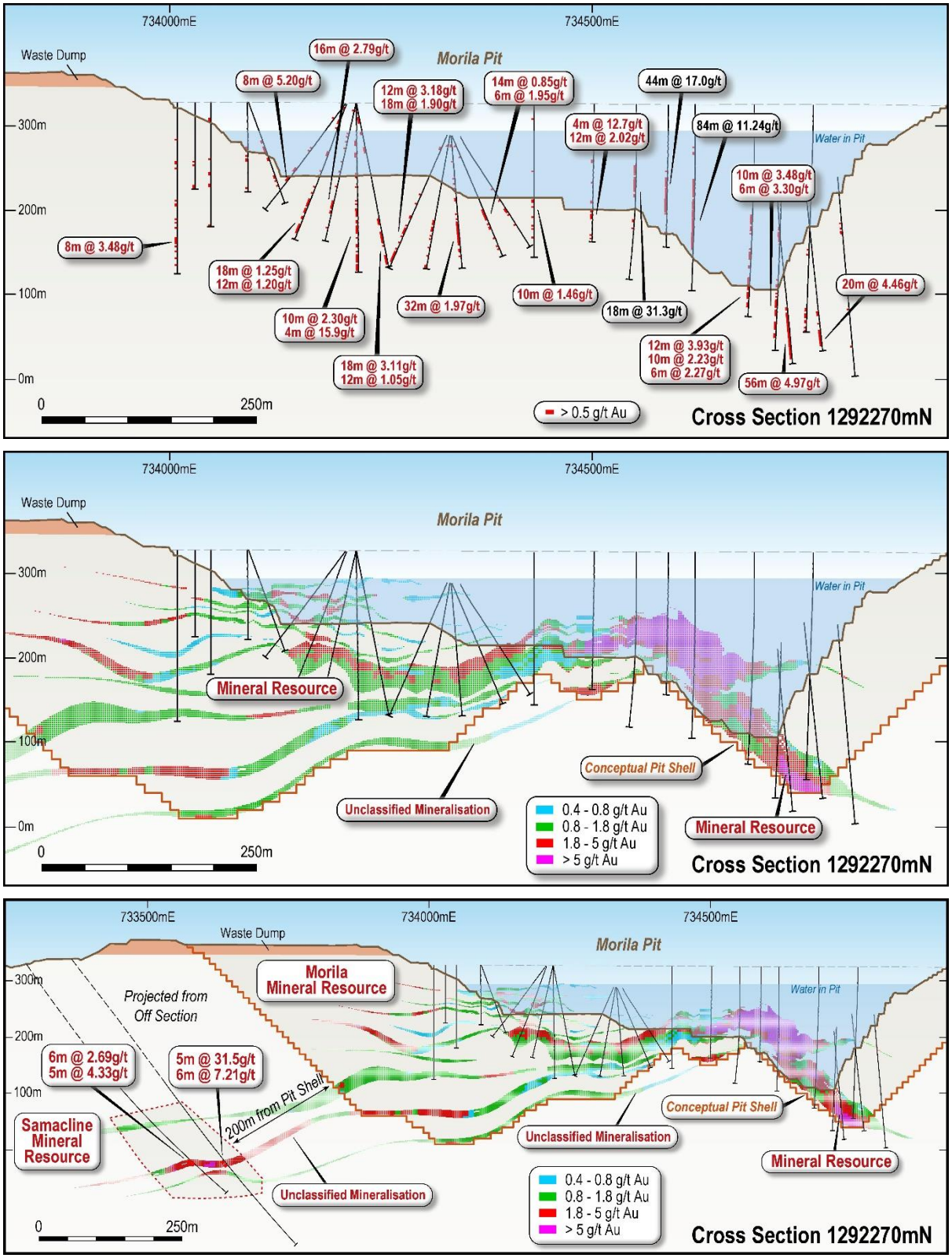

Figure 2. Cross section 192270mN showing drilling results (top), Mineral Resource (middle). and a 'zoomed out' view of the resource including Samacline (bottom). Refer to Appendix 1 for plan showing cross section location.

Executive Chairman, Dr Alistair Cowden, commented:

"Morila was one of the best mines in the world 15 to 20 years ago due to the large scale of production, its low costs and its very high grades. Randgold termed it "Morila the Gorilla" - a big and impressive mine! This resource estimate certainly surprised and shows that Morila the Gorilla is back! The mine has produced 7.5 million ounces of gold to date and, with resources of almost 2.4 million ounces, Morila is now a 10 million ounce goldfield. Morila is 80% owned by Firefinch and has been in production continuously since the processing plant was commissioned in October 2000."

"The size of the resource places Morila among the larger goldfields held by ASX listed gold companies and it is particularly pleasing that this has been achieved without drilling a hole at Morila."

"We are very excited with the drilling underway at Morila, three drill rigs are turning at satellite pits and after this we will turn to Morila itself to verify the Inferred Resources that have been identified and bring these to higher classifications to facilitate ore reserve estimation and then seek repeats of the ultra-high grades that the mine is famous for."

Key Takeaways from the Estimate

- Over 1 million ounces are in the Indicated category and are therefore available for Ore Reserve estimation. These studies are underway and will inform a life of mine plan.
- The Resource grade has increased, improving economics with potential for substantial production from delivering ore with an average head grade of 1.3 to 1.5 g/t gold to the Morila plant.
- The size of the open pit resource indicates that there is clear potential to develop a large Morila Superpit, much drilling of the footprint of that pit remains to be completed. The resource will also permit the full utilisation of existing infrastructure at Morila including a plant with a nameplate throughput of 4.5 million tonnes per annum. A study on the Superpit will commence shortly.
- There is also the opportunity for underground mining in the medium term at Morila NE and Samacline. Both areas are not fully defined and prior drilling has returned intersections (refer ASX Announcement 31 August 2020) such as;

  14 metres at 21.7g/t from 119 metres downhole (RCX2814) and

  6 metres at 9.0g/t gold from 146 metres downhole (RCX2995) both at Morila NE;

  5 metres at 31.5g/t gold from 487 metres depth (SAN364),

  17 metres at 4.9g/t gold from 337 metres depth (SAN271) and;

  35 metres at 3.0 g/t gold from 445 metres depth (SAN290) all at Samacline.

Global Resources for the Entire Morila Project

Mineral Resources have also been recently estimated for the satellite pits at N'Tiola, Viper and Domba where drilling is in progress and associated resource upgrades are pending (refer ASX Announcement 27 November 2020). In addition, drilling and resource estimates are in progress at the Koting discovery and the Pit 5 area, adjacent to the Morila pit. Together with the Tailings resource the satellite pits contribute to a global resource for the Morila project of:

2.35 million ounces in Measured, Indicated and Inferred Mineral Resources of 48.3 million tonnes at 1.52 g/t gold (see Table 2 below).

These resource estimates will be continually updated over coming months as new drilling results become available.

Deposit	Indicated			Inferred			Total		
	Tonnes (millions)	Grade (g/t)	Ounces ('000)	Tonnes (millions)	Grade (g/t)	Ounces ('000)	Tonnes (millions)	Grade (g/t)	Ounces ('000)
Morila Pit	21.2	1.60	1,090	17.5	1.37	770	**38.6**	**1.50**	**1,860**
Morila NE [1]				0.21	3.07	21	**0.21**	**3.07**	**21**
Samacline [1]				3.74	2.56	308	**3.74**	**2.56**	**308**
Tailings [2]							**3.15**	**0.50**	**51**
N'Tiola	0.75	1.35	33	0.38	1.06	13	**1.13**	**1.25**	**45**
Viper	0.67	1.31	28	0.29	1.59	15	**0.96**	**1.39**	**43**
Domba	0.20	1.75	11	0.25	1.61	13	**0.46**	**1.67**	**25**
Total	**22.80**	**1.59**	**1,163**	**22.32**	**1.58**	**1,136**	**48.27**	**1.52**	**2,350**

Table 2. Morila Gold Project Mineral Resources.
[1]The Samacline and Morila NE resources are quoted using a 1.8g/t gold cut-off grade.
[2]The Tailings resource is in the Measured classification and is quoted using a 0.3g/t gold cut-off grade.
[3]Further information regarding the Mineral Resources can be found in the announcements of 31August 2020 (Morila), 7 September 2020 (Morila Tailings) and 24 November 2020 (N'Tiola, Viper, Domba).
[4]Numbers in the above table may not appear to sum correctly due to rounding

Next Steps

The Company is tackling Morila in a logical and systematic manner, with a plan well underway to define near-term feed to the plant, refurbish the plant and tailings dam, build resources and reserves and then define an initial mine plan that details production and costs.

Drilling:

Further drilling is required at Morila's satellites - Koting, N'Tiola, Viper, Domba and Pit 5. This drilling will rotate continuously through the deposits; the order of drilling will be determined by production priorities. Drilling will continue until the limits of economic open pittable material have been reached.

Assay turnaround from the on-site, independently operated laboratory is quick (5 - 10 days) compared to the backlogs being faced by Australian companies.

Further drilling is also required at Morila to test extensions to mineralisation as well as infill to verify the resource. This drilling is now able to be planned as it can be informed by the new resource estimate. Of the two rigs currently at Morila, one is a multi-purpose rig, and when production priorities permit, that rig will commence infill and extension reverse circulation and diamond drilling around the Morila pit. Some infill drilling will await dewatering of the upper part of the Morila pit.

Resource and Reserve estimates:

Satellite Pits - As drill and assay results become available, new resource estimates will be generated for all the potential satellite ore sources. Based upon these estimates, Ore Reserve estimates will be generated. These reserve estimates will be informed by mining costs from tenders recently received for the mining of N'Tiola and Viper.

Morila - An Ore Reserve estimate will be generated for the main Morila pit utilising the new resource estimate.

Mine Planning:

As reserve estimates become available, mine designs and plans will be created. The initial focus is on satellite pits and obtaining a high degree of confidence to allow the restart of open pit mining and milling by mid-year 2021. De-watering is already underway at the satellite pits.

A life-of-mine plan will be developed once an initial Ore Reserve is available for the Morila pit. More conceptual mining studies, using Inferred as well as Indicated and Measured Resources at Morila, will investigate the potential for a Morila Superpit.

Summary of Resource Estimation Parameters

A summary of the parameters used to estimate the Mineral Resource, along with the classification methodology, is provided below for compliance with the requirements of ASX Listing Rule 5.8.1.

Geology and Geological Interpretation:

The Morila gold deposit has been previously classified as an intrusion related vein hosted gold deposit. It is hosted within a sequence of meta-greywacke and meta-volcaniclastic rocks that show a complexly folded sequence that includes a series of upright to overturned folds dissected by steep brittle faults.

Gold mineralisation is associated with variably deformed polymineralic veins, commonly with coarse arsenopyrite and occurs as free gold. Data analysis showed that there appeared to be a natural cut-off between background and anomalous mineralisation of 0.2 g/t gold. Using this natural cut-off discrete intervals were delineated to produce geologically coherent vein models of each mineralised domain, excluding non-mineralised lithologies such as greywacke. Using this approach, the average mineralisation thickness within each domain was reasonably consistent in the exploration and advanced grade control drilling areas.

Drilling Techniques:

The deposit was initially drilled out on a 70m x 35m spacing utilising diamond core drilling, with later infill to 30m x 30m in most areas. Subsequent Reverse Circulation (RC) drilling was completed at a 20m x 20m and 10m x 10m spacing. All available drillhole data was used to inform the resource model.

Sampling and Sub-sampling Techniques:

RC drilling samples were generated via a face sampling hammer, collected by a rig mounted cyclone and split using a riffle. Diamond drill core samples were half NQ core, with HQ sized core drilled and sampled in the weathered profile. All drillholes were geologically logged. All diamond drillholes were surveyed at 50m intervals to the base of the hole. Early RC drilling was vertical and not surveyed, whereas later RC drillholes were surveyed. All collar positions were surveyed using a differential GPS. Bulk density values have been derived from direct measurements of core.

Sample Analysis:

Samples were analysed at an accredited commercial laboratory. Standard sample preparation techniques were used, with a 50g sub sample fire assayed and the bead analysed by AAS. Where samples returned over 5g/t gold, a second sub sample was fire assayed with a gravimetric finish. 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 with interpolation of 2.5 metre composite data constrained within the mineralised lode interpretations. Search ellipses were based upon grade continuity models. The block model size was 10m X by 10m Y by 5m Z, based on the selective mining units in use during mining operations at Morila. Top cutting was required to reduce the influence of outlier values, guided by variograms generated for the mineralised composites.

Mining and Metallurgical Methods and Other Factors:

The Mineral Resource has been prepared assuming that open pit mining will be carried out, following similar methods used when the deposit was previously mined. To confirm reasonable prospects for eventual economic extraction (RPEEE) the Mineral Resource has been constrained within a conceptual pit shell using current and historical costs for the project and a US$1800/ounce gold price.

It is assumed that all mineralised material will be processed through the existing Morila processing plant, which is currently in operation, and accordingly recoveries and other metallurgical parameters are based on historical performance because the remaining mineralisation is similar to the ore previously mined and processed.

For the deeper Morila NE and Samacline Mineral Resources an order of magnitude estimate of likely operating costs was generated and compared with similar operations to arrive at the cut-off grade. More detailed studies will need to be carried out following further drilling to confirm the most appropriate underground mining method for these resources and consequently the parameters to used to determine RPEEE for them.

Classification and Cut-off Grade:

The Mineral Resource has been classified as Indicated and Inferred based on data quality, geological confidence and sample spacing. The cut-off grade used was 0.40g/t based on the costs used in the pit optimisations for the open-pittable Mineral Resource. For the Morila NE and Samacline Mineral Resources, order of magnitude cost analysis was completed at current gold prices to obtain a range of cut-off grades, which were then compared with other operations. Drilling will be required to confirm those Mineral Resources classified as Inferred and to enable them to be upgraded to classifications suitable for mine planning, with confirmatory drilling also recommended across all resource categories.

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

For Enquiries

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Competent Persons Declaration

The information in this announcement that relates to Mineral Resource estimation and classification for the Morila Deposit is based on information compiled by Paul Blackney. Paul Blackney is an employee of Optiro Pty Ltd, consultants to the Company, and a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Paul Blackney 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')". Paul Blackney 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 Exploration Results and data quality and information relating to the Mineral Resources for the N'Tiola, Viper, Domba and Tailings is based on information compiled by Mr Bill Oliver BSc (Hons), an employee of Firefinch Limited. Mr Oliver is a member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and 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.

Firefinch is a Mali focussed gold miner and lithium developer. It has an 80% interest in the Morila Gold Mine which has produced 7.5 million ounces of gold from continuous production since 2000. Firefinch is ramping up production at the 4.5mtpa mill and mine from a current annual production profile of 40,000 ounces of gold per annum from tailing treatment towards a target of 80 to 90,000 ounces of gold per annum from small open pits, stocks and tailings. In 2022, the company plans to further increase production by re-commencing mining from the main Morila pit to fully exploit the 2.4 million ounces of gold in the Global Resource at Morila.

Morila was one of the world's highest grade open pits 12 to 20 years ago but its limits are not well understood. Exploration will be a major focus at Morila, its satellite resources and multiple targets on the 685km^2 of surrounding tenure.

The Goulamina Lithium Project is one of the world's largest undeveloped deposits and has the potential to be one of the lowest cost producers. All permits are in place, a Definitive Feasibility Study is complete and a Global Resource of 109 million tonnes at 1.45% Li_2O with 1.57 million tonnes of contained Li_2O has been declared.

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 safeguard the environment and our people's health, safety and wellbeing.

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 July 2020 and 20 October 2020 (Goulamina), 31 August 2020 (Morila), 7 September 2020 (Morila Tailings) and 24 November 2020 (N'Tiola, Viper, Domba), 26 November 2020 (Morila), 8 January 2021 (Morila), 22 January 2021 (N'Tiola).

APPENDIX 1: IMAGES OF THE MORILA MINERAL RESOURCE

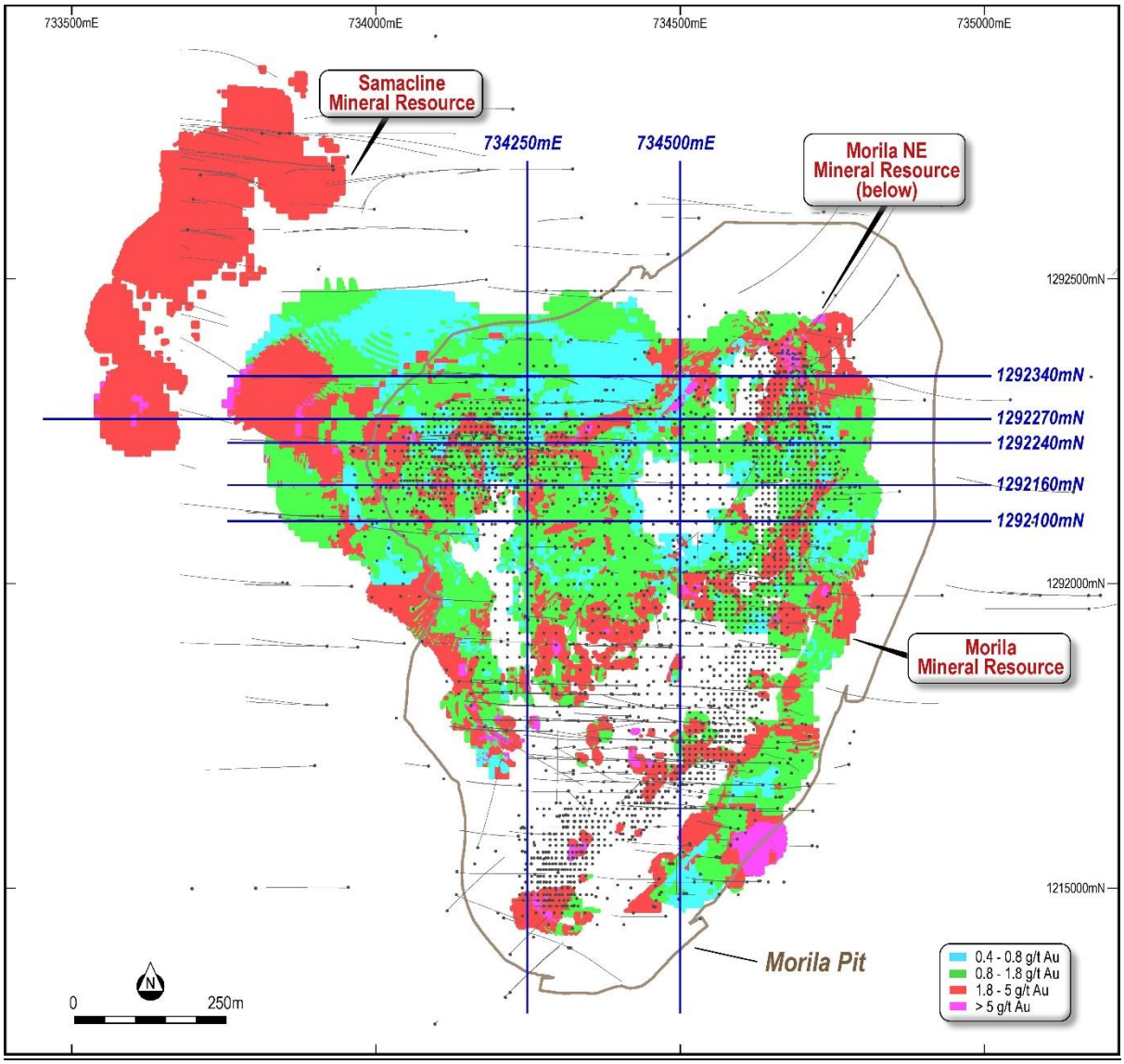

Figure A.1. Plan view of the Morila Mineral Resource showing all drillhole collars and location of cross section views. Mineralisation previously mined is not shown. The Morila NE Mineral Resource lies below the Morila Main Mineral Resource as shown in Figure 1.

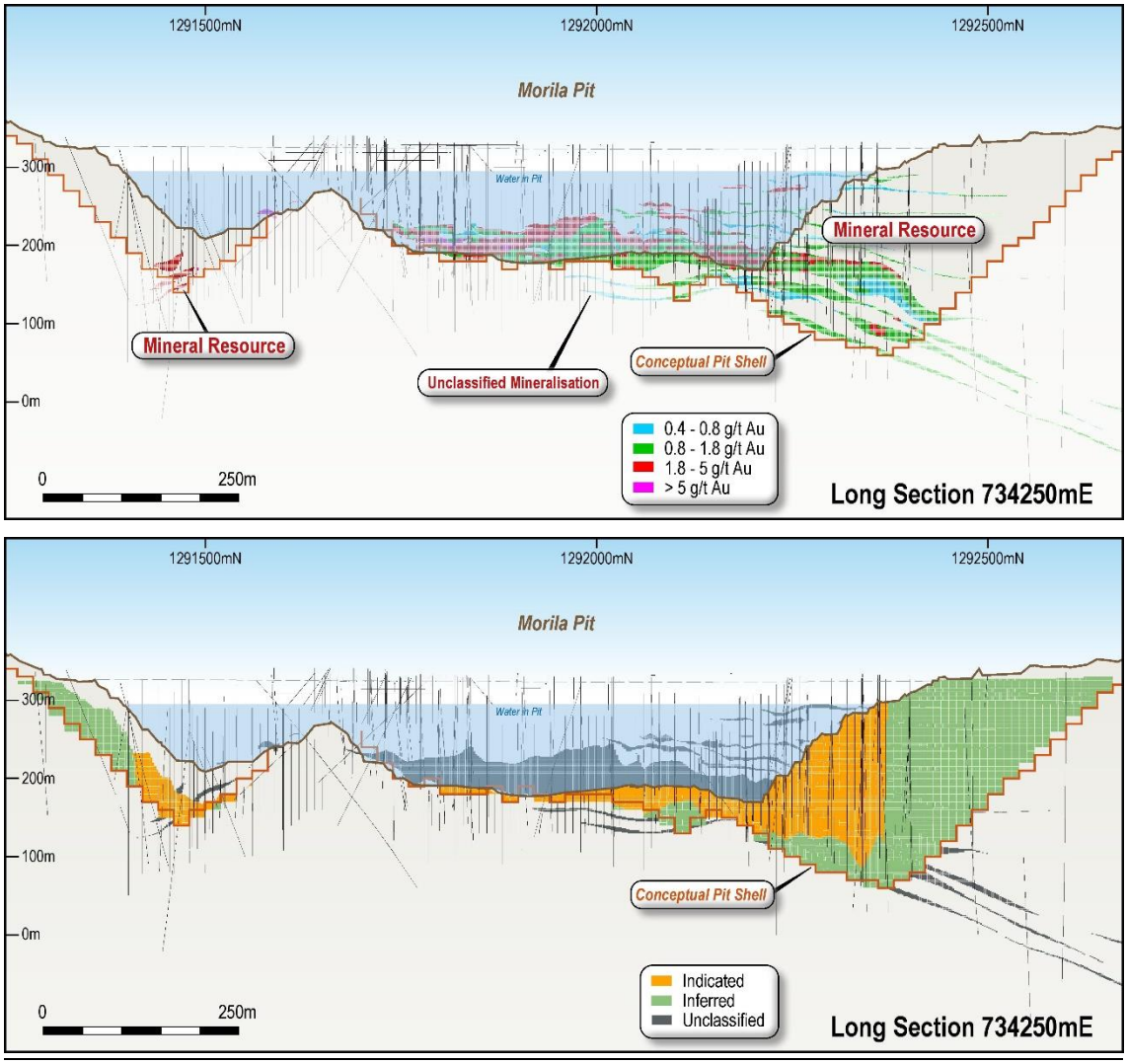

Figure A.2. Long Section 734250mE showing resource grade (top) and resource category (bottom).

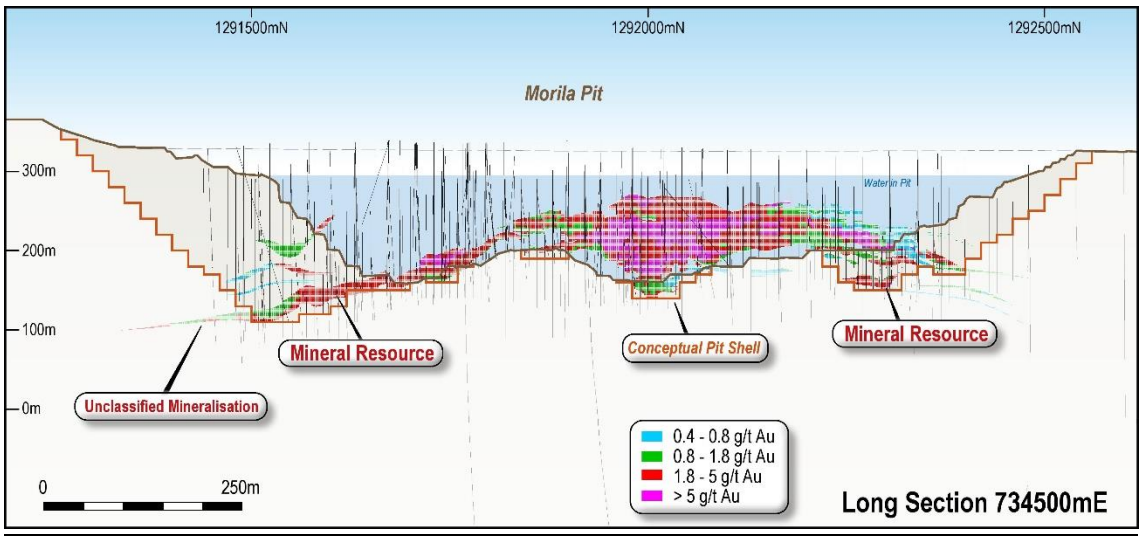

Figure A.3. Long Section 734500mE showing resource grade.

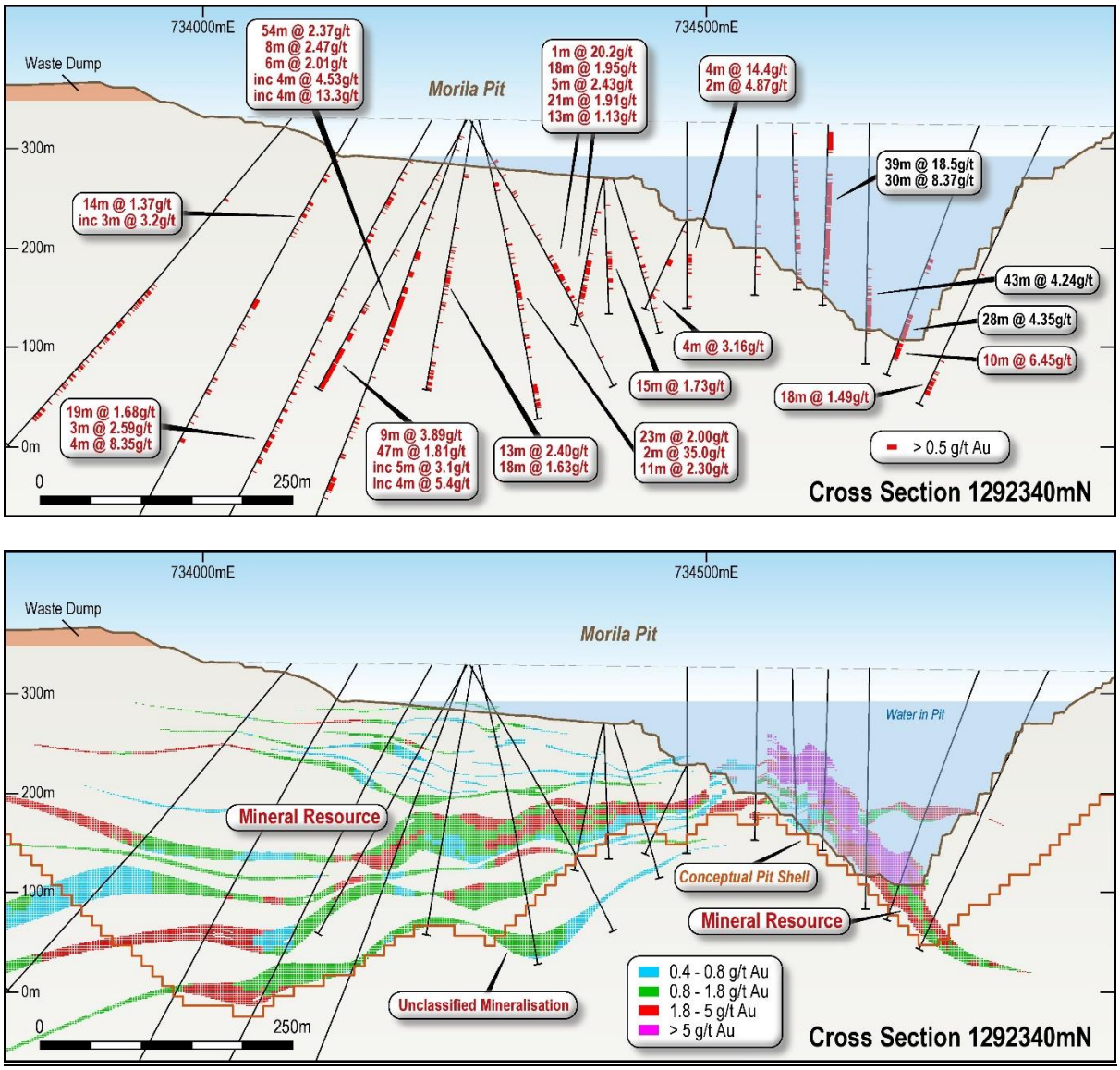

Figure A.3. Cross section 192340mN showing drilling results (top) and Mineral Resource (bottom). Refer Figure A.1 for plan showing cross section location.

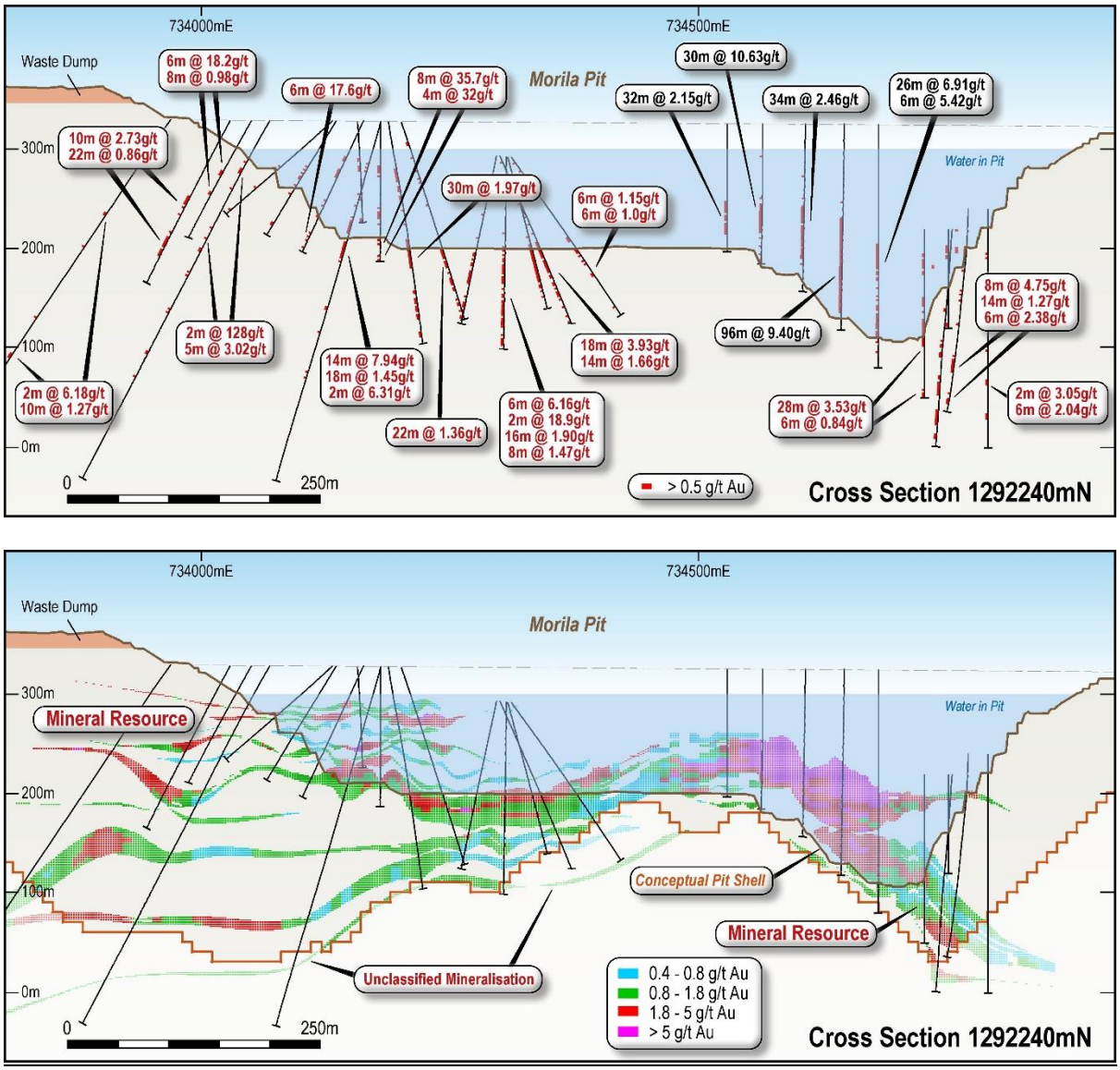

Figure A.4. Cross section 192240mN showing drilling results (top) and Mineral Resource (bottom). Refer Figure A.1 for plan showing cross section location.

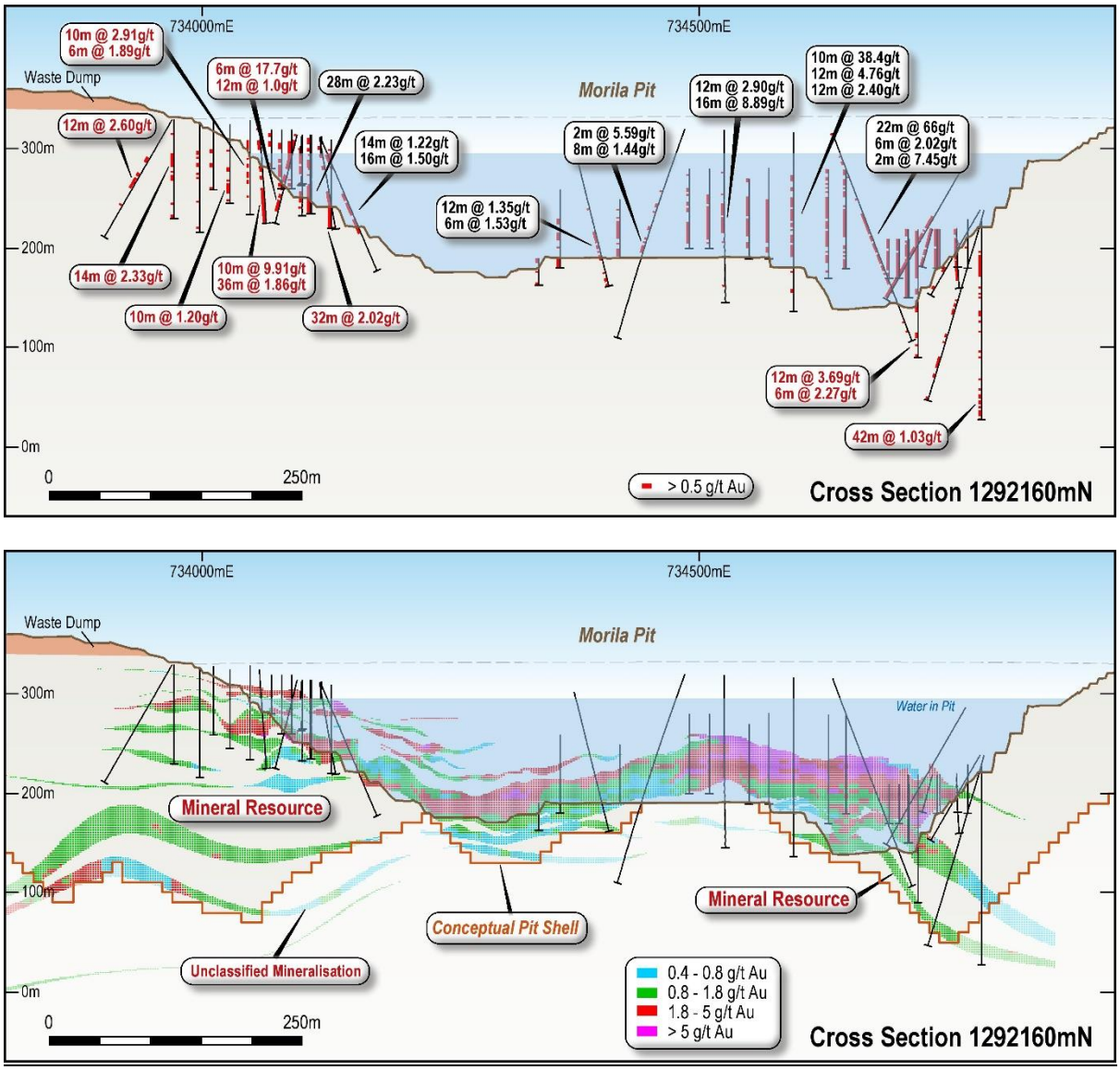

Figure A.5. Cross section 192160mN showing drilling results (top) and Mineral Resource (bottom). Refer Figure A.1 for plan showing cross section location.

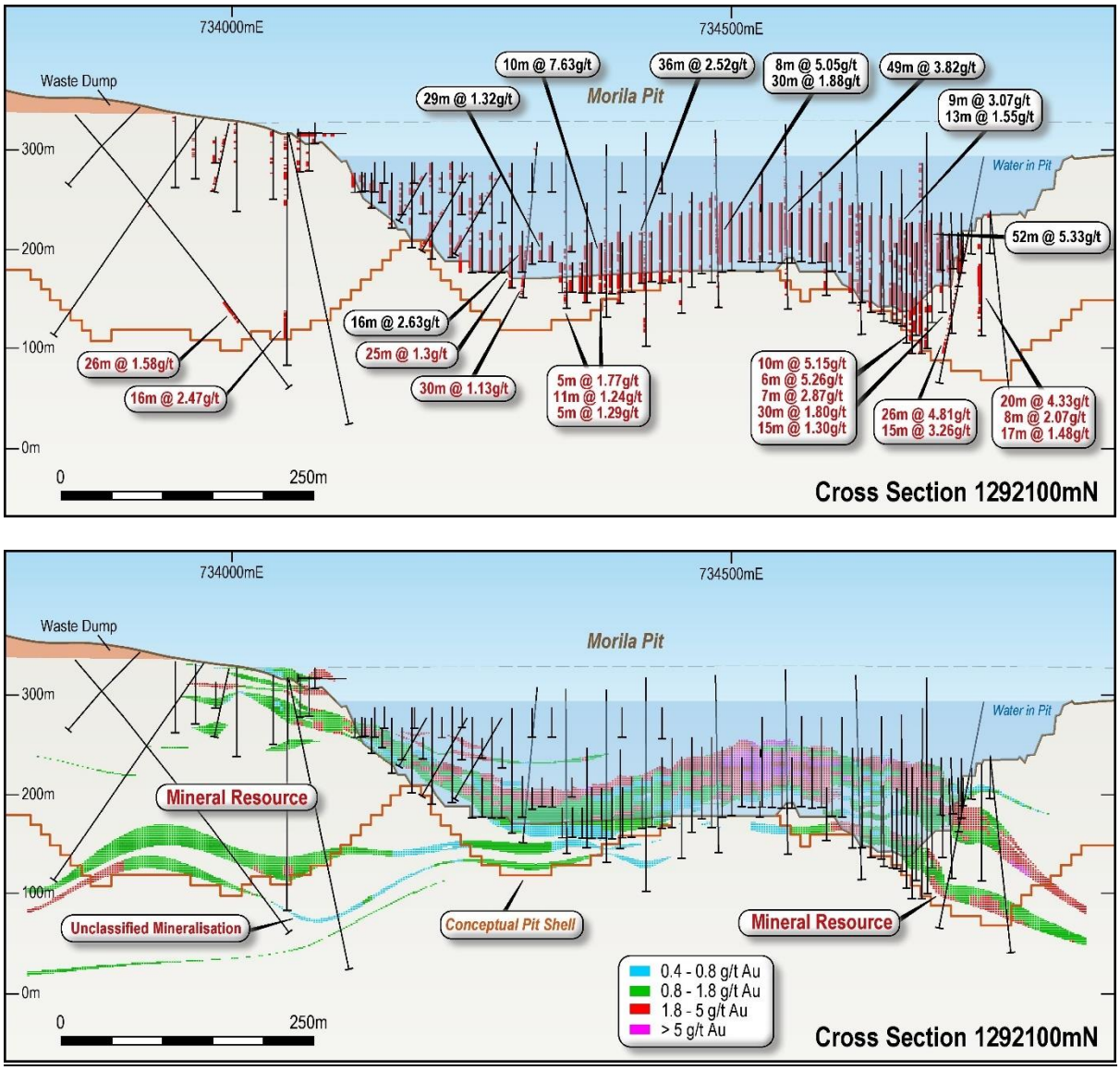

Figure A.6. Cross section 192100mN showing drilling results (top) and Mineral Resource (bottom). Refer Figure A.1 for plan showing cross section location.

APPENDIX 2: JORC CODE, 2012 EDITION – TABLE 1
EXPLORATION RESULTS AND MINERAL RESOURCES, MORILA GOLD DEPOSIT, MALI

Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Mineral Resources are based on diamond and reverse circulation (RC) drilling. • Diamond drilling has been completed in phases and includes drilling prior to the commencement of mining (pre-2000) by Randgold, Placer Dome and Anglo American as well as additional infill drilling carried out during mining activities (2001, 2002, 2003, 2004, 2005, 2006, 2007 and 2008). • For core drilling half core samples were collected for each metre with the entire sample crushed and pulverised at an external laboratory prior to sub sampling for assay. • RC drilling can be divided into three categories: campaign RC drilling, Advance Grade Control (AGC) and routine Grade Control (GC). • For all RC drilling the entire sample was collected then split at the rig using riffle splitters to produce a sample of approximately 1/8th of the original volume. • Campaign RC drilling was sampled at 1m intervals, AGC drilling was sampled at 1.25m intervals and GC drilling at 2.5m intervals. • The samples were submitted to an external laboratory where they were dried and pulverised before sub sampling for assay.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• All diamond drilling was completed using conventional wireline diamond drilling techniques. • HQ drilling (63.5mm diameter) was undertaken in the weathered profile using double tube core barrels. • Once competent rock was encountered NQ (47.6mm) diameter drilling was used to continue the holes. • RC drilling can be divided into three categories: campaign RC drilling, Advance Grade Control (AGC) and routine Grade Control (GC). • In all cases RC drilling was carried out using face sampling reverse circulation hammers.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Core recoveries were measured and reported to be excellent, rarely dropping below 100%. • RC recoveries were measured quantitatively. • Early RC drilling was affected by water inflow due to an elevated water table and less powerful drilling equipment. Recoveries are reported at 83% for dry samples and 51% for wet samples, with up to 46% of samples being wet. • Later RC drilling utilised booster packs to manage water ingress with the majority of samples being dry; consequently, very good recoveries were reported.

Criteria	JORC Code explanation	Commentary
		• The impact of recoveries on grade in the early RC programmes was investigated but no conclusion could be reached as to whether a bias resulted. The areas drilled by the early RC programmes have now been mined out.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Core and chips were geologically logged in their entirety. The logs are sufficiently detailed to support Mineral Resource estimation. Logged criteria included lithology, alteration, alteration intensity, weathering, grainsize and sulphides. • Geological logging is qualitative in nature although percentages of sulphides are estimated along with structural measurements.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• For core drilling, core was split into halves using a diamond saw, unless soft, in which case a chisel was used. The core was sampled at 1m intervals then placed in a cloth bag and submitted to an external laboratory. • For RC drilling, samples were riffle split at the rig after passing through a conventional cyclone. Most drilling used a 3-tier splitter except the first RC campaign (sample split 3 times through a 1 tier splitter) and the GC drilling (4 tier). However, all splitters reduced the original sample to a sample approximately 1/8 of the original volume. Wet samples were collected and dried in the sample shed before splitting. • All techniques were appropriate for collecting statistically unbiased samples. • For both diamond drilling and RC drilling standards and blanks were inserted into the sample stream every 20 samples as the samples are collected to test the laboratory accuracy. • 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.

Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*
	• *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.*
		• Samples are analysed for gold at the Analabs Laboratory onsite at Morila, an accredited commercial laboratory. The laboratory is located on site but operated by an independent third party. Separate protocols were used for Exploration and Grade Control samples.
		• Sample preparation comprised of the following:
		  • drying all samples and crushing (for core samples)
		  • Pulverise entire sample to 95% passing 75 microns (all samples)
		  • 50g pulp sub-sample extracted and fire assayed with the bead analysed by AAS
		  • Where samples returned >5g/t a second 50g

Criteria	JORC Code explanation	Commentary
		sub-sample was extracted, fire assayed and finished with a gravimetric finish. • QA/QC programme comprises Certified Reference Materials, replicates, duplicates and blanks. Weekly meetings were held between the laboratory and Morila team to discuss any QA/QC issues. • •CRMs were inserted every 20 samples. 6 different standards sourced from Gannet and Rocklabs were submitted with the campaign RC and AGC drilling. Four different standards sourced from Gannet and Rocklabs were submitted with diamond core samples. Blanks were created by milling a commercially sourced barren material and submitting as a CRM. • 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
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Drilling and exploration data is stored in a database hosted by an independent geological database consultant. Data was compiled from a number of databases located on the site server. All data has been validated on loading the database. • Logging and sampling data are collected using datasheets and validated on completion of logging then on import into the database. • Drilling and sampling procedures are well established and were regularly reviewed during the time that drilling was ongoing at Morila. • QAQC reports were generated regularly to allow ongoing reviews of sample quality.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drill hole collar positions were surveyed using a differential GPS with an accuracy of <1m. • Sperry-Sun down-the-hole cameras were used for all diamond drillholes with azimuth and dip readings taken at 50m intervals to the base of the hole. Early RC drilling was vertical and not surveyed, whereas later RC drilling was surveyed using a Reflex EZ-Shot downhole camera. The AGC and GC holes were not surveyed. • Coordinates are recorded in UTM zone 29N Clarke 1880 spheroid and Point 58 Datum. • Topographic control was maintained by the Morila mine survey department with a mixture of survey pickups and aerial data.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been*	• Diamond drilling was carried out at 70m x 35m spacing initially, with infill completed in areas of interest resulting in an approximate data spacing of 30m x 30m. • Campaign, Advance Grade Control (AGC) and GC RC drilling were completed at a 20m x 20m or 10m x 10m spacing. • The spacing is sufficient to establish grade and

Criteria	JORC Code explanation	Commentary
	applied.	geological continuity and is appropriate for Mineral Resource estimation.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Mineralisation is hosted in a sequence of relatively flat lying stacked veins located 70 - 130m below surface. Drilling is generally vertical, with some holes oriented at -70 degrees to the west. Due to the attitude of the orebody intersection angles on the mineralised zone are almost perpendicular. Mineralisation does steepen on the margins of the orebody due to shearing and faulting in these places. • The relationship between drilling orientation and structural orientation is not thought to have introduced a sampling bias.
Sample security	• *The measures taken to ensure sample security.*	• Samples were delivered from the drilling site directly to the Analabs laboratory on site at Morila.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Regular reviews of all aspects of the Morila operation were completed due to the ownership structure. In particular, QA/QC data was reviewed annually to enable the annual Resources and Reserves Statement to be published.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *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.*	• The Morila Project comprises the Morila Lease (Decree number 99 217/PM-RM) and is owned by Morila SA, a Malian registered company with 20% held by the Malian Government. • The Company is currently operating under the Decree and the license is valid and in good standing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Focused systematic regional exploration of the Morila area began in the mid 1980s. Soil anomalies were followed up in the early 1990s by BHP through limited diamond drilling which intersected ore grade mineralisation. • Subsequent acquisition of the permit by Randgold Resources Ltd. in the late 1990s resulted in renewed exploration activity. Trenching was carried out across the oxide outcrop of the orebody with the "Discovery Trench" intersecting 8.90 g/t over 209 metres. This was followed by the completion of 178 diamond holes to define a maiden Mineral Resource. • Based on a positive feasibility study, construction was initiated in mid 1999. Commissioning of the plant began on the 4th October 2000 and first gold was poured on 16th October 2000. • Anglogold Ashanti became a JV partner in the project at the construction phase and was the manager of the operation until February 2008, when Randgold resumed operational responsibility for the project. Randgold was acquired by Barrick Gold in a US$6.5 billion transaction which completed in January 2019.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• 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. • The Morila orebody is developed within upper greenschist to amphibolite facies of pelitic and psammitic rocks. Their mineralogy is dominated by biotite (30%), plagioclase (30%) and quartz (30%). • The package has been intruded to the southwest by a tonalite body similar in composition to the Morila sediments. The sediments have been locally metasomatised by the tonalite to produce a feldspar porphyroblastic texture.

Criteria	JORC Code explanation	Commentary
		• Arsenopyrite is generally associated with mineralisation and is by far the most dominant sulphide (80%) followed by lesser amounts of pyrrhotite (15%) and pyrite (5%) The pyrrhotite is ubiquitous throughout the metasediments and occurs as irregular grains which often contain inclusions of chalcopyrite. It is not uncommon for visible gold to be present. • Gold mineralisation is predominantly associated with coarse arsenopyrite, occurring as individual grains on arsenopyrite grain boundaries or as intergrowths or as free gold in a silicate mineral matrix in the proximity of arsenopyrite grains. A small percentage of the gold occurs as inclusions within the sulphides and occasionally the gold is locked within silicate minerals (<5%). • Mineralisation is hosted in a sequence of relatively flat lying stacked veins located 70 - 130m below surface. Mineralisation does steepen due to shearing and faulting in certain places. • Various theories have been derived for the genesis of mineralisation at Morila and several internal and academic studies have been completed and published. Most agree that the key factors influencing the location of mineralisation are competency contrasts in the host sediments (fine grained vs coarse grained), fluid and heat from proximal granitoids, and proximity to regional structures.

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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *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.*
		• All drill hole intersections have been reported in Appendix 2 of the ASX Announcement dated 31 August 2020.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should*	• All intersections have been weighted based on sample intervals, which are dominantly either 1m or 2.5m in length.

Criteria	JORC Code explanation	Commentary
	be stated and some typical examples of such aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
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').*	• Mineralisation is relatively flat lying with drilling being generally vertical, with some holes oriented -70 degrees to the west. Due to the attitude of the orebody intersection angles on the mineralised zone are almost perpendicular and therefore drill widths are a reasonable approximation of true width.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Appropriate maps and sections are provided in the text
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All drill hole intersections are reported in Appendix 2 of the ASX Announcement dated 31 August 2020.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• The Morila Mine has been in operation since 2000 with exploration activities being undertaken prior to that. As a consequence, 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 are being used in the further evaluation of the project.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• As detailed in the text

Section 3. Estimation and Reporting of Mineral Resources
(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• 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. • One of the Competent Persons (Bill Oliver) has reviewed the database via import into Micromine and visual checks against the model and other data provided.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person (Bill Oliver) visited Morila in February 2020 and reviewed available material including drill data, sections, assay records and core, as well as completing site and plant tours.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The Morila deposit is an extensively studied body of mineralisation which has been drilled to a relatively close spacing in and around the open pit limits; as a consequence, the geological interpretation of the mineralisation envelope has a relatively high degree of confidence. • The distribution of high grades within the mineralisation envelope is well mapped but is less well understood, despite various studies. This is unlikely to materially affect the Mineral Resource estimate and is more of interest in targeting extensions to or repetitions of mineralisation. • The open pit clearly shows the complex structural controls on the mineralisation mined to date. The global architecture appears to be grossly domal, with the pit at the antiformal crest of the system, and the peripheral veining dipping away from the pits. • Data analysis showed that there appears to be a natural cut-off between background and anomalous mineralisation of 0.2 g/t gold. Using this natural cut-off discrete intervals were delineated to produce geologically coherent vein models of each mineralised domain, with non mineralised lithologies such as greywacke and tonalite excluded. Using this method, the average interpreted mineralisation thickness was reasonably consistent in the exploration and AGC areas
Dimensions	• *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.*	• The lateral dimensions of the Morila Mineral Resource are 1,700m north, 1,800m east, with a distinct northwest extension from the current pit due to the interpreted Samacline lodes. The resource extends from near surface adjacent to the pit to 600m below surface in the Samacline region. The dimensions of the mined pit are approximately

Criteria	JORC Code explanation	Commentary
		1,300m x 800m and generally 170m deep.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *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 resource model was produced using Datamine software based on 2.5m sample composites constrained within the mineralised lode interpretation, which is based on a nominal 0.2 g/t gold grade threshold. Grades were estimated into 10 mE by 10 mN by 5 mRL blocks using top-cut block ordinary kriging, with the estimation parameters optimised for the closer spaced drilling around the margins of the pit. • Mineralisation zones were modelled as hard boundaries with search ranges and orientations determined for larger, well informed lodes with the aid of kriging neighbourhood optimisation. • For areas where grade control drilling had been completed, grades were estimated into 10m by 10m by 5m blocks per estimation zone using top-cut ordinary kriging inside wireframes generated using Leapfrog and indicator methods. Primary search volumes ranged from 40m to 100m in the mineralised plane, with ellipsoidal searches used. The same approach was applied to the remaining areas even though data spacing widens rapidly. Multiple and expanding search passes were applied to ensure all mineralised volumes were informed with a grade estimate. It is acknowledged that over-smoothing of grade will be an issue outside the immediate vicinity of the pit and this is reflected in the Inferred classification applied. • Top-cuts varied by lode and were also assigned based on whether the data was in or outside the pit. In-pit top-cuts varied between 5 and 300 g/t gold, while outside the pit limits, they varied between 5 and 50 g/t gold. Some lodes did not require top-cutting. • Deleterious elements such as organic carbon are not present at the Morila Deposit. • Small quantities of silver are recovered as by-products in the refining process; however, these are not significant enough to warrant inclusion in the resource nor is there sufficient assay data to inform such an estimate. • Previous resource estimates have been completed for the Morila deposit and interpretation and conclusions from these estimates have been incorporated for the current resource estimate. As these estimates were focussed on the immediate pit area global comparisons of the estimates are not valid due to the current model including mineralisation away from the pit as well as not incorporating all mineralisation which has been mined within the pit limits. • Previous resource estimates were reconciled with

Criteria	JORC Code explanation	Commentary
		grade control and production records on a regular basis. As further drilling is completed on the current model delineation of domains will become practical which will enable future models to be reconciled in more detail.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages have been estimated on a dry in situ basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The cut off grade for the potential open pittable resource is based on open pit optimisation of the Mineral Resource in accordance with RPEEE principles. Costs used in this were the current processing and G&A costs for the Morila operation, along with mining costs sourced from multiple sources including a database of costs from similar operations, recent tenders for projects in the region and historical mining costs at Morila. • For the potential underground resources an order of magnitude estimate of likely operating costs was generated and compared with similar operations globally to arrive at the cut off grade. More detailed studies will be required to refine the cut off grade for future resources.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The resource model assumes that open cut mining is the extraction technique, 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 Morila. • Parameters for the underground resources were evaluated on the basis of appropriate stope dimensions and associated dilution. The underground resources will require further mine design work to confirm the appropriate underground mining method and consequently refine the cut off grade and other parameters for these resources.
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.*	• It is assumed that metallurgical recoveries will match those historically achieved by processing other parts of the deposit through the processing plant at Morila.

Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential 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.*	• 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.
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.* • *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.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Relative density measurements were completed on 4,161 samples of core taken at 5m downhole intervals for oxides and 10m intervals for sulphides. The core was divided into oxide, transitional and sulphide core. Relative density determinations on core used the weight in air/weight in water method. • In-situ bulk density tests were carried out on each ore blast from 2002 onwards. The water displacement method was used.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *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).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The resource for the Morila Deposit was classed as Indicated and Inferred based on data quality, geological confidence and sample spacing. • Indicated Resources are assigned only around the limits of the existing pit, where closer spaced sampling related to production grade control drilling is available. All other reported resources are considered Inferred if they are located within the reasonable prospects of eventual economic extraction limits derived from conceptual open pit and underground analysis. • The key factor requiring additional information is further review and validation of the drillhole database which is likely to include confirmatory drilling and verification of the depletion of the resource which is currently based on as mined pit surveys. • 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.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audits or review of the Mineral Resource estimate has been conducted.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The 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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The Mineral Resource statement relates to global estimates of tonnes and grade. Local accuracy is dependent on local data spacing. Drill spacing is good around the pit limits but inadequate for local grade estimation elsewhere.