

## KOLONDIEBA GRADIENT ARRAY IP SURVEY SHOWS MULTIPLE STRUCTURAL ZONES WITH COINCIDENT GOLD ANOMALISM

### HIGHLIGHTS

- A Gradient Array Induced Polarisation survey has been completed at the Kolondieba Gold Project.
- The survey covered an area of 12km<sup>2</sup>, which included targets where previous auger drilling returned peak values of 2.35 g/t Au, 2.0g/t Au and 1.9g/t Au<sup>1</sup>.
- The survey shows multiple north-south trending structures with coincident Au anomalism in Auger drilling.

**Marvel Gold Limited** (ASX: MVL) (**Marvel** or the **Company**) is pleased to announce the results of the high-resolution Gradient Array Induced Polarisation (**GAIP**) geophysical survey which was completed at the Kolondieba Gold Project (**Kolondieba**), located in south-east Mali in December 2022. Kolondieba is held under a joint venture with B2Gold Corporation in which Marvel holds an 80% interest.

**Marvel's Managing Director, Chris van Wijk, commented:** "We are pleased with the results of the Gradient Array IP survey at Kolondieba which have worked very well to map the underlying lithology and structure and give further context to our highly anomalous auger drilling results. The survey has highlighted a strong north-south oriented structural fabric which was not evident in the magnetics. A number of geophysical anomalies have been defined which correlate well with the auger results and require follow-up work. Kolondieba is a strategic project for Marvel being located approximately 60km north-east of Tabakorole, which hosts an existing mineral resource of one million ounces<sup>2</sup> and also proximal to the Morila mine."

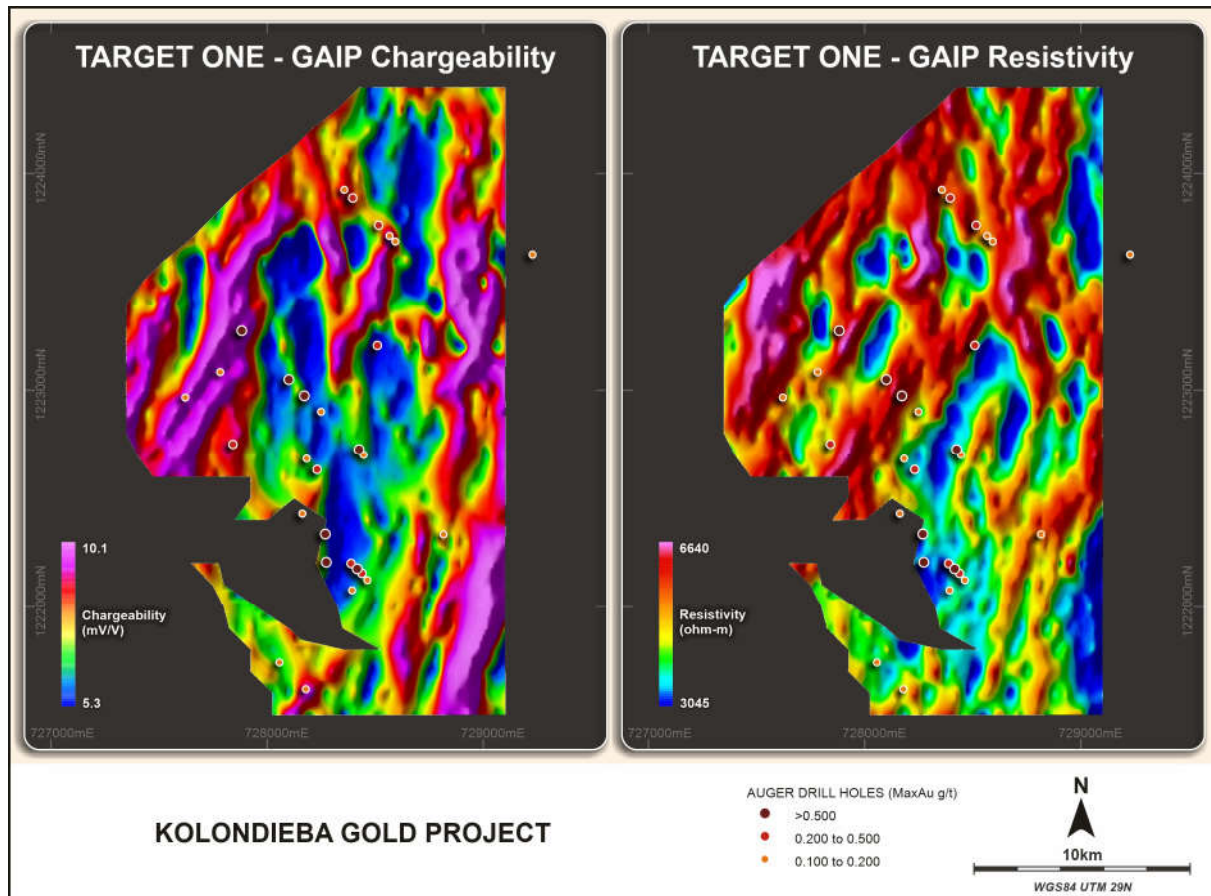
Three targets were selected for follow-up with GAIP based on the results of auger drilling carried out earlier in 2022.

**Target 1** – this is the southernmost target where six auger holes recorded results of 1g/t Au and 29 holes returned over 100ppb Au, with a best result of 2.35g/t<sup>1</sup>, which is extremely anomalous. The GAIP results show anomalous gold values oriented in a north-south direction, coincident with the underlying structural fabric evident in the GAIP. This is interpreted to be a north-south trending second order shear system emanating from the Bannifin shear zone which is located a short distance to the south-east. The main

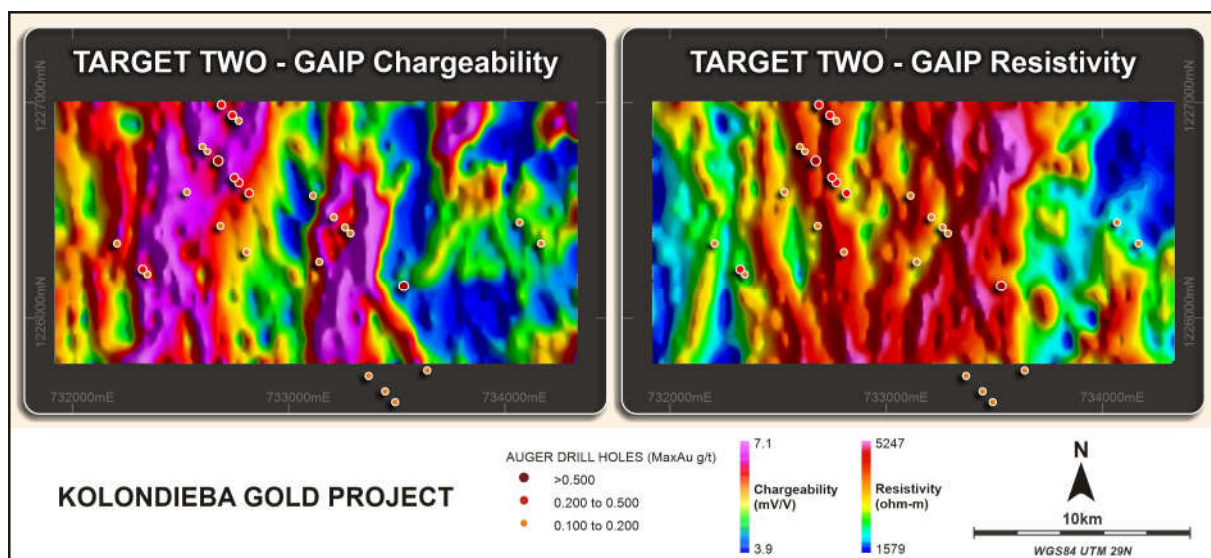
<sup>1</sup> ASX announcements dated 16 May 2022 and 22 June 2022

<sup>2</sup> See Table 1 for information on the Tabakorole Mineral Resource Estimate

gold anomalous zone has a strike length of approximately 1km with a width between auger holes of up to 200m.

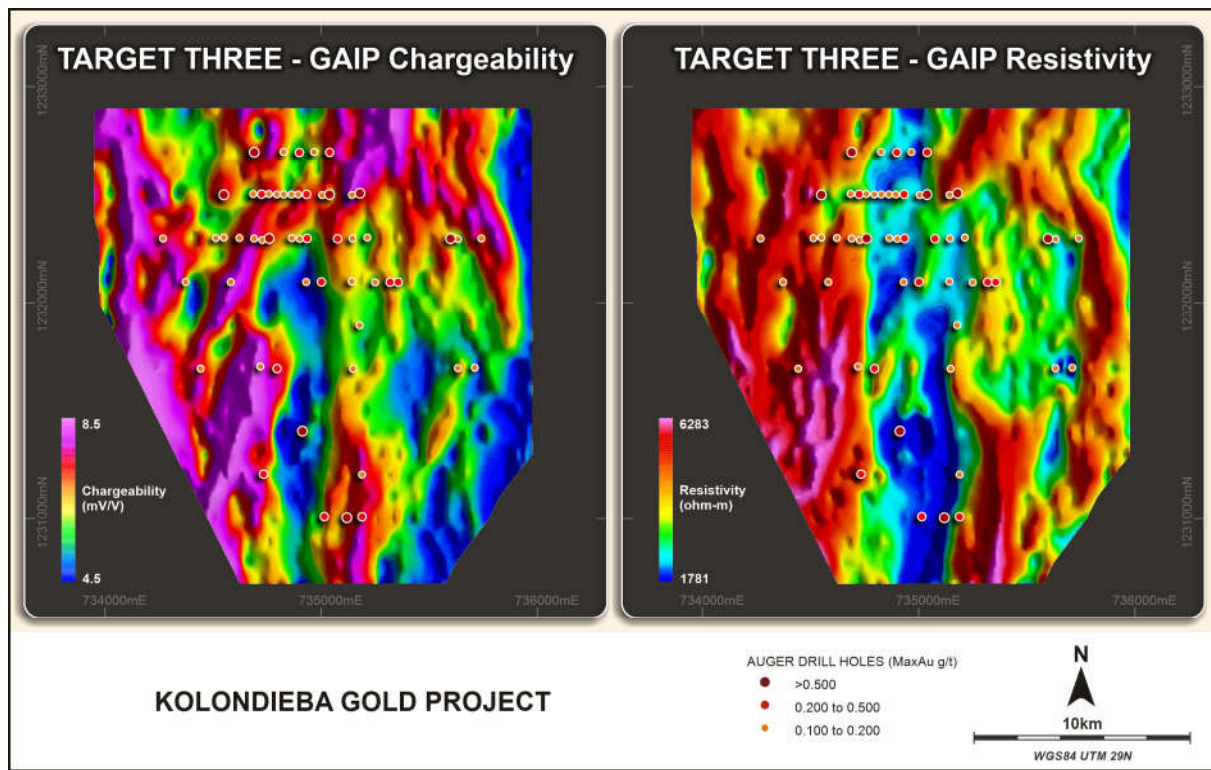


**Target 2** – this is the central most target and shows a similar north-south trending structural fabric in the underlying geology which is similarly interpreted to be a series of north-south trending splays emanating from the Bannifin Shear-Zone (**BSZ**). Strong mineralisation at this target was only encountered on the central line and this appears on a structure that is not well tested by the auger lines to the north and south and requires further work to understand the true extents of the target.



**Target 3** – shows a very strong north-south trending feature which is highly conductive and encapsulates most of the anomalous gold in auger values. In common with Targets 1 and 2, this is interpreted as a splay off the BSZ with the conductivity being explained

by conductive clays within the shear zone. This also suggests that the low chargeability represents a zone of deeper weathering over the shear zone that has oxidised any sulphides which were initially present. Eight auger lines were drilled over this target with each auger line encountering anomalous gold and with a peak value of 1.54g/t Au<sup>3</sup>.



### The significance of these results

The Gradient Array IP survey has shown the underlying fabric within the bedrock, in particular that the anomalies are sitting atop north-south trending structures which link to the BSZ. These north-south trending structures were not evident in the magnetics, which in this area shows the BSZ but is otherwise magnetically quiet.

The auger drilling results themselves are particularly significant as they confirm that the mineralisation evident in the soil geochemistry is in-situ and not transported. Furthermore, the level of anomalism is noteworthy; numerous holes show results at greater than 10 times the detection limit (>0.05ppm) and many holes display values that are over 20 times the detection limit (>0.1ppm). Peak values above 1g/t (200x detection) in Auger drilling are both exceptional and rare.

Auger drilling has been used to successfully demonstrate the presence of ore grade mineralisation in West Africa with Predictive Discovery Limited's (PDI) North-East Bankan deposit in Guinea being a notable example<sup>4</sup>.

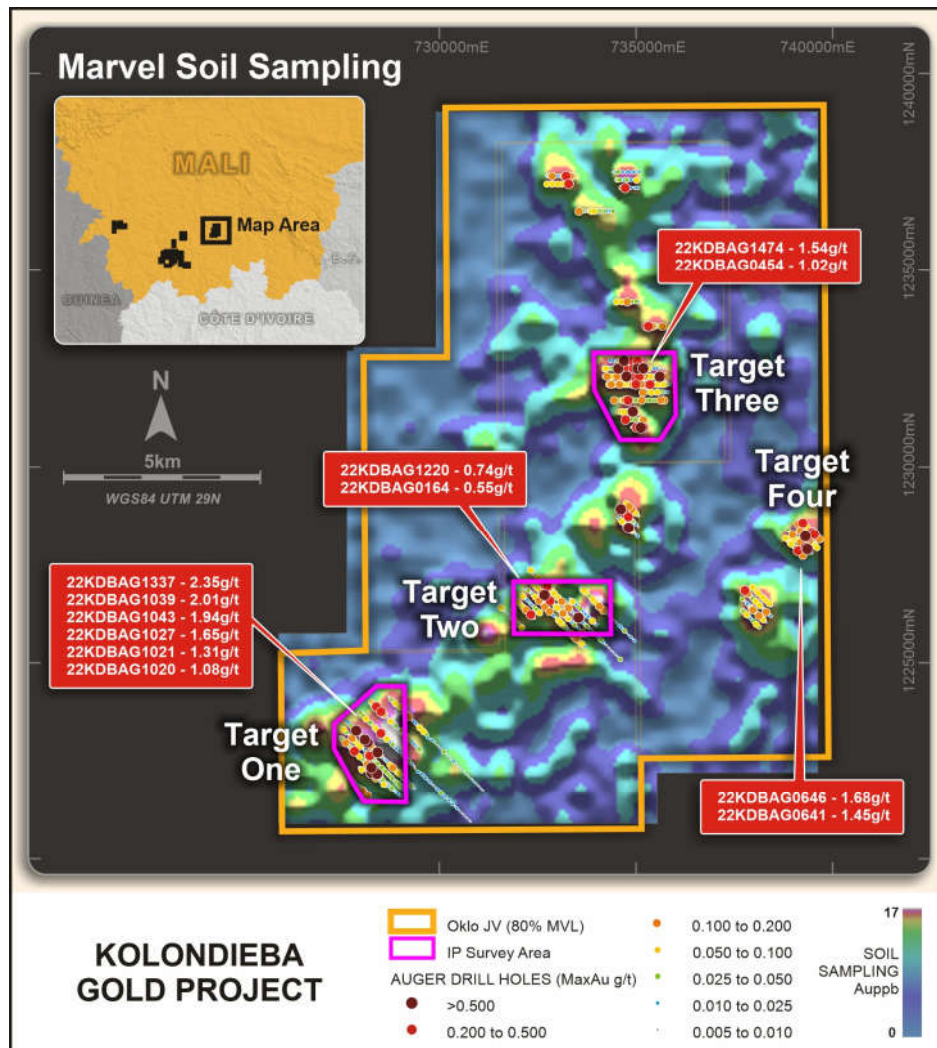
### Next Steps

The Company continues to interpret the geophysical results and notes that a number of the structures thought to host mineralisation are open along strike on the structures thought to host mineralisation in bedrock. Further reconnaissance drilling to extend and infill the currently defined anomalies is the most likely outcome of this process.

<sup>3</sup> See ASX announcement 22 June 2022

<sup>4</sup> For further information, see PDI's announcement of 26 February 2020



**Figure 1: Locations of Gradient Array IP Survey and significant Auger results<sup>5</sup>**

## Kolondieba Geology

Kolondieba straddles the BSZ, which is a major geological structure in the south of Mali. The BSZ is interpreted to be the major controlling (first order) structure responsible for gold mineralisation at the 7.5 million ounce Morila gold mine, and Marvel's one million ounce Tabakorole gold deposit, both of which are located on splays (second order structures) linked to the BSZ.

Mineralisation at Kolondieba appears to be associated with a lithological contact between felsic intrusives and metasediments, and a major adjacent structure parallel with the BSZ. Mafic and ultramafic lithologies also appear to have some control over gold mineralisation. This is a very similar geological setting to the nearby Morila deposit, where gold mineralisation is thought to be partly controlled by the emplacement of Birimian-aged granitic intrusives into the overlying sediments.

## Induced Polarisation (IP)

Gradient Array IP is a certain type of IP survey configuration which allows for relatively quick and cost-effective surveying of large areas. IP is an electrical geophysical method for the mapping of rock properties potentially indicative of gold mineralisation. In particular, it maps-out the resistivity-conductivity and chargeability characteristics of

<sup>5</sup> ASX announcement 16 November 2022

rock. Mineralisation is frequently found in rock formations that are both resistive and chargeable; the resistive nature caused by intense silicification during the hydrothermal deposition of gold and the chargeable nature due to the presence of disseminated sulphide minerals (such as pyrite) which carry the gold. Therefore, targets that are both resistive and chargeable are potentially very significant.

This announcement has been approved for release by Marvel's board of directors.

**CHRIS VAN WIJK**

**Managing Director**

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For more information, visit [www.marvelgold.com.au](http://www.marvelgold.com.au).

## Reference to previous ASX announcements

In relation to the announcement of the Tabakorole Mineral Resource estimate on 5 October 2021, the Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the Mineral Resource in that announcement continue to apply and have not materially changed.

In relation to Evolution's previously reported exploration results, the dates of which are referenced, the Company confirms that it is not aware of any new information or data that materially affects the information included in those announcements.

## About Marvel Gold

Marvel Gold Limited is an Australian resources company listed on the Australian Securities Exchange under stock code MVL. Marvel is a Mali-focused gold explorer with advanced gold exploration projects and extensive landholdings in South Mali.

The Tabakorole Gold Project has a JORC Mineral Resource of **1.025Moz grading 1.2 g/t gold** (see ASX announcement dated 5 October 2021), with strong growth prospects along strike and via near-deposit prospectivity over an extensive landholding in excess of 800km<sup>2</sup>. Tabakorole is held through 100%-owned licences as well as two separate joint ventures, with B2Gold Corporation (**B2Gold JV**), in which the Company holds an 80% interest) and with Altus Strategies plc (**Altus JV**), in which the Company currently holds a 70% interest which is moving towards 75% through committed expenditure.

Pursuant to the disposal of the Chilalo Graphite Project, Marvel also holds 50 million shares in ASX listed graphite company, Evolution Energy Minerals Limited (ASX Code: EVI).

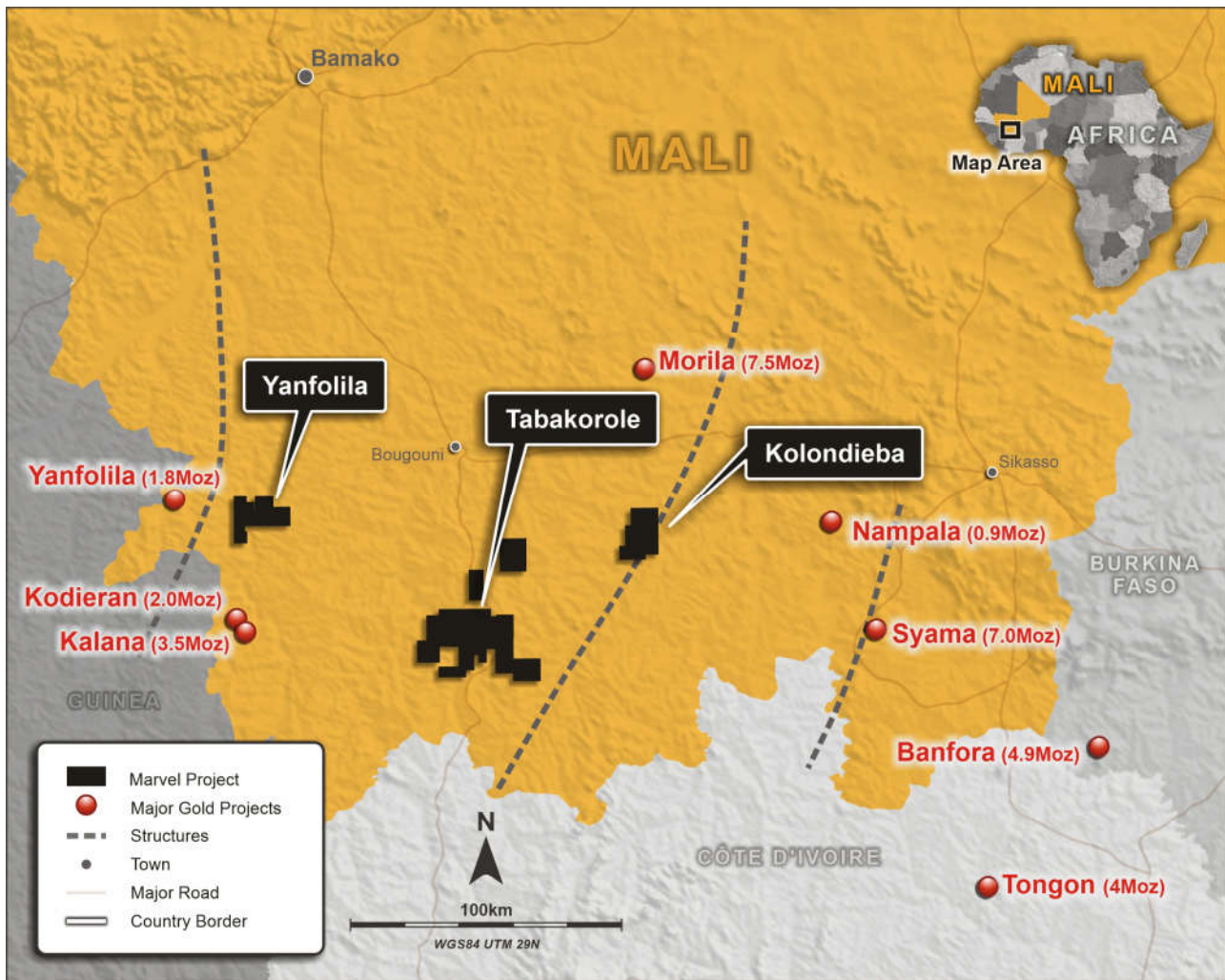
Marvel has an experienced board and management team with specific skills, and extensive experience, in African based exploration, project development and mining.

**Table 1. Tabakorole Mineral Resource Estimate as at 5 October 2021 (JORC 2012)**

	Indicated			Inferred			Total		
	Mt	Au (g/t)	koz (Au)	Mt	Au (g/t)	koz (Au)	Mt	Au (g/t)	koz (Au)
Oxide	1.4	1.2	50	1.3	1.3	55	2.7	1.3	110
Fresh	7.8	1.2	310	16.0	1.2	610	23.8	1.2	915
<b>Total</b>	<b>9.2</b>	<b>1.2</b>	<b>360</b>	<b>17.3</b>	<b>1.2</b>	<b>665</b>	<b>26.5</b>	<b>1.2</b>	<b>1,025</b>

Note: Reported at a cut-off grade of 0.6 g/t Au, differences may occur due to rounding.

## Location Map of Marvel projects



## Appendix 1. 2012 JORC Code Table 1 Reporting

### Section 1 - Sampling Techniques and Data

Criteria	Explanation	Commentary
<b>Sampling Techniques</b>	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	IP Geophysical surveys were undertaken using the following equipment:  2 x ELREC-Pro (Iris Instruments) receivers, 2 x Iris VIP10000 Transmitters, 2 x Honda 20 kW generators, 2 x Garmin 64S GPS, 4 kilometres of industry rated IP cable and collection mechanisms.
<b>Drilling techniques</b>	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Not applicable – no drilling reported.
<b>Drill Sample Recovery</b>	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.	Not applicable – no drilling reported.
<b>Logging</b>	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.	Not applicable – no drilling reported.
<b>Sub-Sampling techniques and sample preparation</b>	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.	Not applicable – no drilling reported.
<b>Quality of assay data and</b>	The nature, quality and appropriateness of the assaying and laboratory procedures used and	The following equipment was employed in the IP geophysical survey:  2 x ELREC-Pro (Iris Instruments) receivers,



Criteria	Explanation	Commentary
<b>laboratory tests</b>	<p>whether the technique is considered partial or total.</p> <p>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.</p> <p>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p>	<p>2 x Iris VIP10000 Transmitters, 2 x Honda 20 kW generators, 2 x Garmin 64S GPS, 4 kilometres of industry rated IP cable and collection mechanisms</p> <p>All lines oriented 090°-270°, For gradient array, a line spacing of 100m and a reading spacing of 25m.</p> <p>For the 3 lines of pole-dipole, 50 m A-spacing for receiver and transmitter. Period: Square W. 8 seconds, Time ON: ± 2 seconds, Duty Cycle: 50%</p>
<b>Verification of sampling and assaying</b>	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	Not applicable – no drilling reported.
<b>Location of data points</b>	<p>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.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control</p>	IP locations were obtained using a Garmin GPS in UTM WGS84 mode.
<b>Data spacing and distribution</b>	<p>Data spacing for reporting of Exploration Results.</p> <p>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.</p> <p>Whether sample compositing has been applied.</p>	Not applicable – no drilling reported.
<b>Orientation of data in relation to geological structure</b>	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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.</p>	IP lines were oriented east-west, which is oblique to the regional magnetic trend (northeast-southwest), but perpendicular to the (north-south) mineralised structures identified through previous auger drilling.
<b>Sample Security</b>	The measures taken to ensure sample security.	Not applicable – no drilling reported.
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	No audits have been conducted.

## Section 2 - Reporting of Exploration Results

Criteria	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.	<ul style="list-style-type: none"> <li>The Kolondieba and Kolondieba North licences are held under JV with B2Gold. MVL owns an 80% interest in this JV.</li> <li>The Kolondieba license was renewed under Arrêté N°2021-4448 on the 28<sup>th</sup> October 2021 and is valid for 3 years.</li> <li>The Kolondieba North license is currently under renewal.</li> </ul>
	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.	There are no known impediments to operating on any of the licences.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Historical termite mound sampling and limited auger drilling was undertaken by Randgold Resources.
Geology	Deposit type, geological setting and style of mineralisation	Kolondieba is thought to have potential to host an orogenic, hydrothermal gold deposit with much in common with other volcano-sedimentary hosted Birimian style orogenic gold deposits throughout the region.
Drill hole information	<p>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:</p> <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>	No new drilling information has been reported.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.	Not Applicable – No new drilling reported.
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	As above.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is</p>	Not applicable – no new drilling reported.

Criteria	Explanation	Commentary
	<p>known, its nature should be reported.</p> <p>If it is not known only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</p>	
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.	See body of announcement for diagrams.
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 results from the current program have been reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All applicable geological observations have been reported at this time.
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Further work is anticipated to consist of reconnaissance drilling and mapping.