ORINOCO GOLD ASX: OGX

ASX/Media Release – 23 October 2017

Maiden High-Grade JORC 2012 Mineral Resource and Exploration Target Completed for Cascavel Gold Project

Key Points:

- **Maiden JORC 2012 Mineral Resource Estimate completed for Cascavel Gold Mine.**
- **Initial Resource covers only the currently developed portion of the mine.**
- **Exploration Target completed which covers down-plunge portions of Cascavel lode and the Mestre lode, located to the south.**
- **Resource to be updated once sufficient development and sampling has been undertaken in the Mestre lode and other adjacent lode systems (e.g. Cuca lode).**

Orinoco Gold Limited (ASX: OGX) (**Orinoco** or the **Company**) is pleased to advise that it has completed a maiden Mineral Resource Estimate (**MRE**) and associated Exploration Target (**ET**) in accordance with the JORC Code (2012) for its 100%-owned Cascavel Gold Mine (**Cascavel**), located in the Goiás State in central Brazil.

Cascavel forms part of Orinoco's broader Faina Goldfields Project (**Faina Project**), and the Cascavel Mineral Resource is the second Mineral Resource to be estimated within the Faina Project this year following the maiden high-grade Mineral Resource reported in June for the Sertão Gold Project (see ASX Release, 13 June 2017).

The MRE, the Company's first-ever MRE for Cascavel, comprises **4,500 tonnes at an average grade of 15.4 g/t Au for 2,200 ounces of contained gold** at a cut-off grade of 3 g/t Au (see Table 1). The Cascavel MRE was prepared by Orinoco's Brazilian-based geological team and has been reported in accordance with the requirements of the JORC Code (2012). It has been peer reviewed by the Company's external consultant, Mining Plus Pty Ltd (**Mining Plus**).

The MRE covers only that portion of the Cascavel lode which has been opened up with underground mine development, and therefore covers an area limited to ~125m along strike and ~125m down-dip.

Given that the mineralisation remains open both down-dip and along strike, Mining Plus has calculated a maiden ET covering the area immediately down-plunge of the Cascavel lode and part of the adjacent Mestre lode – areas to be targeted for mining soon.

The ET* comprises **15,000 – 46,000 tonnes @ 16 – 49 g/t gold for 23,000 – 24,000 ounces.**

**An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.*

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ASX Code
OGX
(Ordinary Shares)
OGXOC & OGXOD
(Listed Options)

Issued Capital
778,568,506 Ordinary Shares
270,220,247 Options

Commenting on the maiden MRE and Exploration Target, Orinoco's Chief Executive Officer, Mr Craig Dawson, said:

> *"The announcement of a maiden MRE and Exploration Target for Cascavel marks another significant milestone for the Company as our understanding of the geometry, structure and grade distribution within the lode systems at Cascavel continues to grow.*
>
> *"Ultimately, the best way of modelling coarse gold systems is to open them up with mine development, which we have now done with a small part of the overall high-grade lode system at Cascavel. The maiden MRE covers the area defined by mine development to date and is therefore extremely limited in scope.*
>
> *"The mineralisation remains open down-dip and along strike both within the Cascavel lode itself and in the Mestre lode to the south. Mining Plus has estimated an additional Exploration Target which provides a slightly more expansive picture of the potential of these lode systems – although we should caution that the high grades identified in the MRE will not necessarily be indicative of mined grades.*
>
> *"There is also good near-mine potential associated with the Cuca lode system, which sits stratigraphically below the Cascavel lode. An assessment of the Cuca lode system is planned to be undertaken in H1 2018."*

Cascavel Mineral Resource Estimate (MRE)

The nature of the gold mineralisation at Cascavel (high nugget effect and clustered gold areas) has, to date, presented a major challenge to the Orinoco geological team in being able to develop a MRE for Cascavel in accordance with the JORC Code (2012), even with the regular occurrence of visible gold in the mine. The evolution of knowledge in the mineralisation geometry through extremely detailed structural analysis has led to the creation of a solid geological model for the deposit and resulted in this maiden MRE. The processes implemented to achieve this maiden MRE will be a fundamental aspect of the mapping and sampling methods for future MREs as development and mining at Cascavel continues.

The Cascavel MRE is limited to that portion of the Cascavel lode which has been "opened up" with development and is therefore limited to an area of approximately 125m along strike and 125m down-dip as shown by the area highlighted in green in Figure 1. Further, the MRE has been estimated based on a minimum ore zone width of 0.5m (which is the minimum width expected to be able to be mined by the planned "Drift and Slash" mining method), and as such is inclusive of some waste dilution within this 0.5m envelope.

The MRE is based on the Cascavel lode only and does not include the Cuca lode (situated stratigraphically below the Cascavel lode system) or the Mestre lode (which is situated immediately south of the Cascavel lode system). The Cascavel lode remains open down-dip (as evidenced by exploration holes – see ASX Announcement – 21 January 2013) with mine development continuing down-dip.

The MRE has been peer reviewed by the Company's external consultant, Mining Plus Pty Ltd (**Mining Plus**). The scope of work completed by Mining Plus involved a high level fatal flaw review of the geological model, grade estimation assumptions and overall validity and relative accuracy of the MRE to ensure that it can be reported in accordance with the JORC Code (2012). While identifying some areas where improvements could be made to future MREs, the review by Mining Plus did not identify any fatal flaws in the MRE and confirmed that it can be reported in accordance with the JORC Code (2012).

Access to the Mestre lode was established in mid-August and development continues on this lode. An update to the Cascavel MRE to incorporate the Mestre lode is planned to be undertaken once sufficient development and panel sampling has been completed.

Table 1: Cascavel MRE as at 30 August 2017 at varying cut-off grades

Domain	Category	Cut-off Grade (g/t Au)	Tonnage (tonnes)	Grade (g/t Au)	Contained Gold (ounces)
Cascavel Lode	Inferred	0	7,000	10.2	2,300
	Inferred	1	5,800	12.1	2,300
	Inferred	2	4,900	14.3	2,200
	Inferred	3	4,500	15.4	2,200
	Inferred	4	4,100	16.3	2,200
	Inferred	5	3,700	17.8	2,100

Note:

1) *The Mineral Resource Estimate has been compiled under the supervision of Mr. Thiago Vaz Andrade who is an employee of Orinoco Brasil Mineração Ltda (**OBM**), a wholly owned subsidiary of the Company, and a Registered Member of the Australian Institute of Mining and Metallurgy. Mr. Andrade has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he has undertaken to qualify as a Competent Person as defined in the JORC Code.*
2) *All Mineral Resource figures reported in the table above represent estimates as at 30 August 2017. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
3) *Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).*
4) *A conceptual mine plan for Cascavel has been completed. Additional mine design and more detailed and accurate cost estimate mining studies and test work are required to confirm viability of extraction.*
5) *The cut-off grade was calculated to report the Mineral Resource contained and to demonstrate reasonable prospects for economic extraction. A cut-off grade of 3.0 g/t Au was used in consideration of the intended underground mining scenario required to exploit the Cascavel deposit. The calculations do not constitute a detailed mining study which along with additional drilling and test work, is required to be completed to confirm economic viability. It is further noted that in the development of the Project, that capital expenditure is required and is not included in the mining costs assumed. Orinoco has utilised estimated operating costs and recoveries along with current commodity prices in determining the appropriate cut-off grade. Given the above analysis, Orinoco considers the Mineral Resource demonstrates reasonable prospects for eventual economic extraction.*

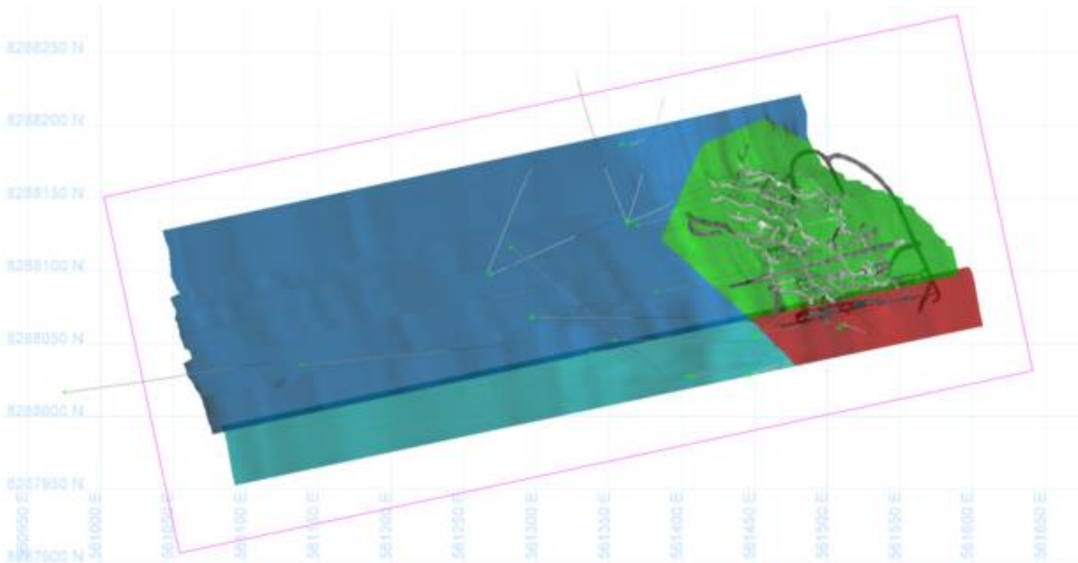

Figure 1: Plan view of Cascavel resource model (where the green portion is the area for this MRE).

Within the Cascavel MRE there are three sub-zones (as shown in Figure 2):

- Zone A is the area located north of the Cascavel Adit;
- Zone B is the area bounded by the Cascavel Adit and the Incline Shaft; and
- Zone C is the area located south of the Incline Shaft.

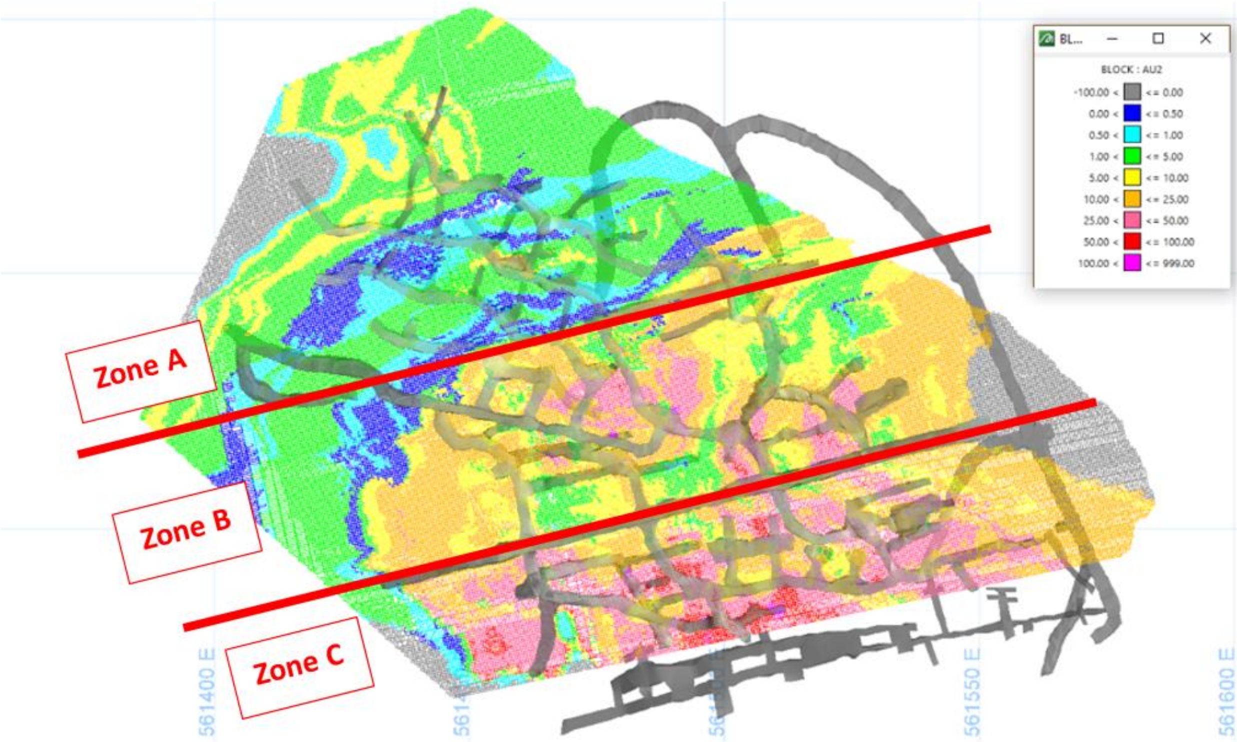

Figure 2: Cascavel MRE Zones

Table 2: MRE by Zone as at 30 August 2017 at 3 g/t Au cut-off grade

Domain	Zone	Category	Cut-off Grade (g/t Au)	Tonnage (tonnes)	Grade (g/t Au)	Contained Gold (ounces)
Cascavel Lode	A	Inferred	3	1,000	5.4	180
	B	Inferred	3	2,000	13.3	820
	C	Inferred	3	1,500	25.2	1,200
			Total	**4,500**	**15.4**	**2,200**

Cascavel Exploration Target

Orinoco engaged the services of Mining Plus to derive an ET for the remaining parts of the Cascavel lode and the nearby Mestre lode (Figure 3) which can be reported in accordance with the JORC Code (2012). Mining Plus has used the mineralisation wireframes and drill-hole databases provided by Orinoco to estimate the tonnage and grade range within the Cascavel and Mestre lodes.

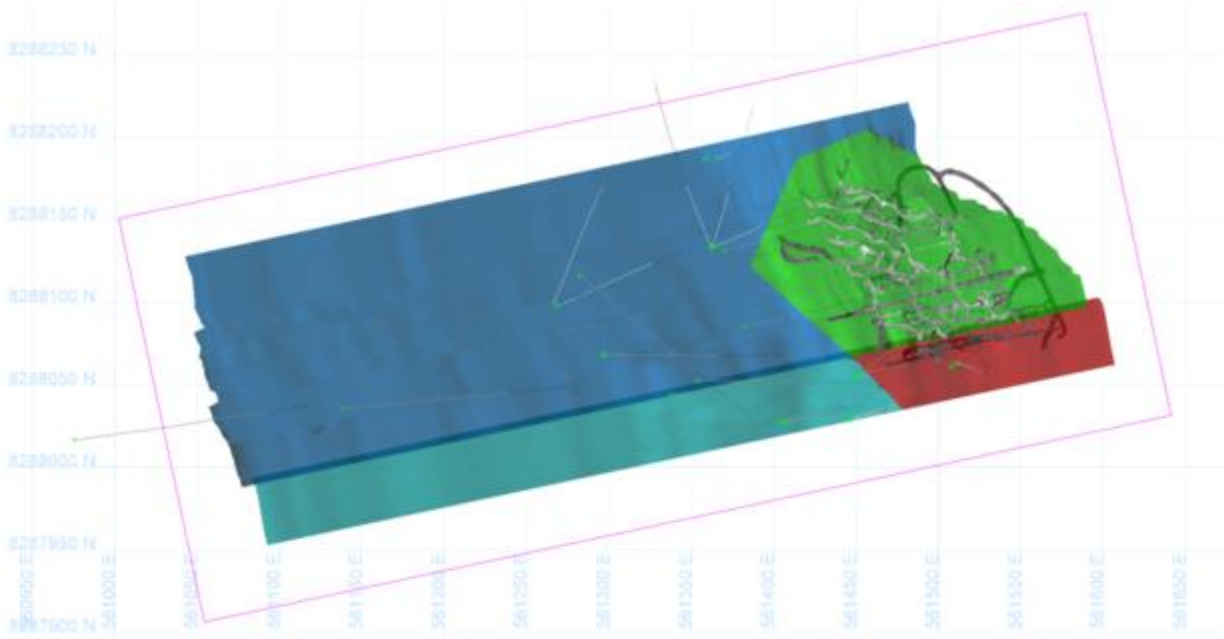

Figure 3: Plan view of the Cascavel resource model (where blue and red portions form the area for the ET)

To estimate the ET for the Cascavel and Mestre Lodes, Mining Plus used all the available drill hole, channel and panel sampling data to derive high and low grade areas, or sub-domains, within the two (2) mineralised lodes. Geostatistical analysis including continuity studies of these areas has then been completed with a block model constructed for the entire mineralised system. Grade has been estimated via Ordinary Kriging into this block model using the mineralised sub-domains as hard boundaries during the three estimation passes. These estimation passes have been set using the results of the continuity analysis with increasing search ranges and decreasing sample requirements required for populating a block with grade on each subsequent pass. The results of the estimation have been validated against the declustered input composite grades to ensure that they have not over or under stated the grade for the lodes

As ETs are required to be reported as a range of grades and range of tonnages, the most suitable method for identifying a suitable range for each of these for the Cascavel and Mestre lodes is to use the grade and tonnage data at varying cut-offs from the block model.

Table 3 summarises the tonnes and grade at varying cut-offs for that part of the deposit that has not been estimated and reported already as part of the MRE. This includes the down-plunge portion of the Cascavel lode and the entire Mestre lode.

Table 3: Tonnage and grades from the ET Block Model at varying cut-offs (excluding the reported MRE)

Cutoff Grade (g/t Au)	Tonnage (tonnes)	Grade (g/t Au)	Contained Gold (ounces)
0	46,000	16.0	24,300
1	35,000	21.0	24,200
2	30,000	25.0	24,000
3	15,000	49.0	22,700
4	11,000	61.0	22,400
5	9,000	80.0	21,900

Mining Plus recommended that the tonnes reported at no cut-off grade represent the lower part of the grade and highest part of the tonnage range, with the results at 3 g/t Au (same cut-off as for the MRE) be used for the other part of the range. Therefore, the *Exploration Target** for the Cascavel Gold Mine is:

The higher tonnes and lower grade part of the range is 46,000 tonnes @ 16 g/t gold for 24,000 ounces

The lower tonnes and higher grade part of the range is 15,000 tonnes @ 49 g/t gold for 23,000 ounces

Resulting in an Exploration Target of

15,000 – 46,000 tonnes @ 16 – 49 g/t gold for 23,000 – 24,000 ounces.

**An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.*

The information in this release that relates to the Exploration Target has been compiled by Mr. Richard Buerger (BSc.). Mr. Buerger is a full-time employee of Mining Plus Pty Ltd and has acted as independent consultant on the Exploration Target estimation. Mr. Buerger is a Member of the Australian Institute of Geologists and has sufficient experience with the style of mineralisation, and deposit type under consideration and to the activities undertaken to qualify as 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. Buerger consents to the inclusion in this report of the contained technical information relating the Exploration Target estimation in the form and context in which it appears.

Summary of Resource Estimate and Reporting Criteria

As per ASX listing Rule 5.8 and the JORC 2012 reporting guidelines, a summary of the material information used to estimate the Mineral Resource is detailed below (for more detail please refer to Appendix 1 and Sections 1 to 3 in Appendix 2).

Geology and geological interpretation

The Cascavel deposit is an orogenic-type, lode-gold deposit hosted in Archean to Proterozoic metasedimentary rocks of the Faina greenstone belt (**FGB**). The Au mineralisation occurs in narrow to very narrow quartz (carbonate) veins (10 cm to 20 cm thick on average), hosted in a layer of arkosic quartzites of variable composition and about 80 metres in width.

The deposit is characterised by a complex structural pattern resulting from the polyphase deformation history. At least three folding episodes of folding have been recognized in the mine to so far, two of them (Dn-1 and Dn) directly linked to the complex geometry of the deposit.

The Dn-1 phase is the earliest deformational event found in the FGB belt and is responsible for the most important and pervasive foliation system in the mine, which holds the mineralised veins. This phase is marked by a strong layering-parallel foliation and a well-defined stretching lineation, related to intrafolial folds (F1). The intrafolial folds are asymmetrical, commonly associated with vein repetition and thickening (folding on itself) and their axes are mostly parallel with the orientation of the stretching lineation. The Sn-1 foliation has an average orientation of 200/30 (dip direction), varying from 180/35 in the mine northern portion to 220/25 in the mine southern portion. The axis of F1 folds have on average a E-W orientation (N260°) and plunges gently westwards (10°)

The second deformational event Dn is characterized by the refolding of the structures associated with Dn-1 event and it is responsible by the generation of the second planar foliation found in the Cascavel Mine, Sn. Despite Dn being the most important deformation event regionally, it has had minor effect on the mine area, resulting in a less pervasive foliation than Sn-1. The Sn has a general orientation of 240/20, varying from 220/25 in the mine northern portion to 250/18 in the mine southern portion.

The interaction between Sn-1 and Sn foliations results in a very pervasive intersection lineation, L1, oriented on average 260/10 (roughly parallel to the F1 folding axis and to the main stretching orientation).

The gold occurs in its native form mostly in the mica layers present in the internal laminations and external boundaries of the quartz veins in the contact with the host rocks but it can be also found incapsulated by the quartz. Very little sulphide has been recognised in the deposit so far, mostly pyrite, with little association with the gold occurrence and content. Generally, the gold occurs in its native form, forming a paragenesis mostly with quartz, carbonate, sericite and rare sulphides.

The mineralised shoots are a few meters to dozens of meters in size, distributed along the vein strike and oriented parallel to the F1 axis, to stretching direction and to the intersection lineation. That makes it easier to track down the mineralisation to the levels below once it is found.

Drilling Techniques and hole spacing

Drilling was conducted by Servitec LTDA exclusively using diamond drilling up to the present date. Drill rigs were locally built (MACSonda 320) and were hydraulic assisted. Drilling commenced with HQ up to the limit of the equipment, or where the rock type permitted, and then downsized to NQ. Polymer filling was used when necessary. Drilling inclination is up to 60°.

In 2016, seven axially-oriented drill holes were completed to assist in determining the real-space orientation of any planar or linear fabric in drill cores.

The structural survey of lines and planes on the drill holes is done through the core-angle method. This method consists of identifying the α and β angles of the structural plane. The α angle is the angle between the axis of the drill hole and the structural plane that is being measured, the β angle is the angle between the inflection point of the structural plane and the line of the drill hole orientation. The α angle gives the merge and the β angle the dip of structural plane. To do line measurements it is necessary to measure the delta angle (δ), which is the angle between the line contained in the plane and the line of the orientation of the hole.

Sampling and sub-sampling techniques

Up to 2017, Orinoco Gold has completed in the Cascavel area 36 diamond drill (**DD**) holes (**DDH**), totalling 5,844.36 drilled meters. DDH cores were sampled based on the geological boundaries selected by a geologist. Samples from drill core were sawn in half with a diamond core saw and sampled every 0.5m in the mineralised zone. Half of the core was sent to a laboratory and the other half remained in the core tray. Sampling places were marked on the core tray with the sample number. The core trays were also marked with the “blanks” and “standards” samples and all core was photographed. All data is stored in the Orinoco Access database following QA/QC procedures.

For a good representation of the grade distribution in this kind of deposit it was recommended that panel sampling be used. Drill core samples alone were considered to be too small to generate reliable gold grades.

Until the end of 2016 the panel sampling was conducted taking samples in 0.5m squares, thus diluting the sample with surrounding host (waste) rock if the vein width was less than 0.5m. Since this protocol was changed, 460 new panel samples have been generated from within the Cascavel mine.

Underground samples were collected either as panels or channels:

- Panel samples are 2m long (to ensure representability in a coarse-grained gold environment), continuously taken along the vein. Chips are collected from inside the panel areas to comprise the sample, up to around 20 kg in weight; and

- Control channel samples were taken in the host rock every 3m to 5m to test the host rocks for marginal gold content. All channels were cut 20cm wide by 5cm deep;

The QAQC results confirmed the reliability of the sampling and assaying methodologies with sufficient confidence for the Mineral Resource Estimate.

Drill cores were sawn in half with a diamond core saw and half core was sent to a laboratory;

The drill core trays were marked metre by metre, according to the recovery of each interval. A geologist subsequently marked all lithological contacts and possible mineralised zones in the trays. Duplicates were inserted in each batch of 20 samples. Blanks and standards were inserted approximately each 30m;

The core sample duplicates were the half of the remaining cores halves (i.e. quarter core);

In the laboratory, core samples were dried, crushed until 90% < 2mm (10 mesh), split until a 1kg sample was obtained, after which it was crushed to 95% < 106µm (150 mesh);

For panels and channel samples, physical preparation included drying and crushing the total sample, riffle splitting and pulverization (95% < 150µm) of a 1kg subsample for cyanide leaching.

Sampling analysis method

Core samples were analysed using the screen fire assay (**SFA**) technique. This procedure involves screening a large pulverized sample (commonly 1kg) at 75µm. The entire oversize (including the disposable screen) is fire assayed as this contains the 'coarse' gold and a duplicate determination is made on the sub 75µm fraction. A calculation can then be made to determine the total weight of gold in the sample. This procedure is equivalent to assaying a large sample to extinction and averaging the results;

Panel and channel samples were analysed using the leach well technique. Aggressive leaching conditions promote the liberation and breaking of gold nuggets, being the best routine in the case of coarse-grained nugget gold present in the Cascavel deposit. The gold in the cyanide solution is then measured using atomic absorption spectroscopy (**AAS**). 5% of the solid residue was also analysed to check for gold extraction issues;

The QA/QC protocol was:

- *Standards*: insertion of one (1) known standard in each 30 samples approximately:
  - If less than 10% of samples are outside of the expected mean + 2 x standard deviation (**Std Dev**), the results are validated;
  - If less than 10% of the samples report results outside the Mean + 3 x Std Dev, but there are standards between the first and these two points - the results are validated, but the Laboratory was notified; and
  - If more than 10% is outside the Mean + 3 x Std Dev, the batch (40 samples) is rejected, an investigation is required and a re-analysis of the batch is made;
- *Blanks:* one (1) blank insertion in each 20 samples approximately:
  - If less than 5% are above 5 x the detection limit of the Laboratory, the results are validated; and
  - If more than 5% are above 5 x the detection limit, the Laboratory was notified and the batches with failure were re-analysed;
- *Duplicates:* insertion in each 20 samples – Bias control. Project Duplicates were quarter core and Laboratory duplicates were Pulp Duplicates.

Cut-off grades

The cut-off grades were calculated to report the Mineral Resource contained and to demonstrate reasonable prospects for eventual economic extraction. A cut-off grade of 3 g/t Au was used in consideration of the underground mining scenario required for Cascavel. The calculations do not constitute a detailed mining study which along with additional drilling and test work, is required to be completed to confirm economic viability. It is further noted that in the development of the Project, that capital expenditure is required and is not included in the mining cost assumed. Orinoco has utilised estimated operating costs and recoveries along with current commodity prices in determining the appropriate cut-off grade. Given the above analysis, Orinoco considers the Mineral Resource demonstrates reasonable prospects for eventual economic extraction.

Estimation methodology

All modelling, statistical analysis and interpolation was conducted with Maptek Vulcan 10.0.4 3D software.

Based on the drilling and panel data, surveyed vein data and geological concepts, the hanging and footwall surfaces of the mineralised vein were modelled, and then divided into two (2) lodes (Cascavel and Mestre).

A contact profile analysis was undertaken comparing the grades between the mineralised body and waste along equal distances from the contact. Between the vein and waste it is clear that there is a hard boundary, with the waste having average grades below 0.1 g/t Au and the vein having average grades over 10 g/t Au.

The drilling database was composited using the run length process. This compositing process was set to 0.5m to allow adjusting of the composite lengths.

Descriptive statistics of sample populations within a domain may be biased by clustering of sample data in particular areas of the domain. For the composited drilling samples and panel samples cell declustering was run where cell sizes of 10m were used for the drilling data and 65m for the panel data.

In the exploratory data analysis, different comparisons were made, considering the different kind of data (drill hole or panel) and their composited and declustered databases.

In the geostatistical analysis, it was noted the presence of important outliers in the sample distributions. The statistics justify a differentiated treatment of the samples with extreme values during the estimation. For the drilling data this value is 35 g/t Au and for the panel's this value is 175 g/t Au. Quartile data, histograms and cumulative plots were used to define these extreme values.

To generate variograms, capping the extreme values of the outliers was used. Search orientations were selected from the fan variogram, but were checked against the geological interpretation to ensure proper matching. Cascavel tends to behave isotropically and so, search orientations are determined primarily from geology. Fan variogram have shown search directions very similar to the known plunge direction determined by geology, between 255° and 265°. Accordingly, 255° was chosen as the search direction.

Search distances were determined from the directional correlograms using 70% of the total sill variance. The other 30% sill variance are nugget effect. Two structures were used to model the variograms. The major and semi directions show a small zonal anisotropy.

Before making the block definition file in Vulcan 3D Software, plots were made with many values of discretization, block sizes and gammabar using the variogram model. This was developed to choose the best discretization value and block size (Discretization x Gammabar; Block Size x Gammabar; Block Size x Block Variance). For this step it was necessary to use the gammabar program from GSLib package.

For discretization, the values 3m x 3m x 2m seems to be the point of stabilisation for the drilling data and 2m x 2m x 2m for the panel data. These were therefore the values chosen to be used for the estimation parameters. The test for block sizes using gammabar and the block variance shows that size 2m x 2m x 0.5m provides a better balance between block size (volume) and variance.

The block model has an origin at the coordinates 561,641.17m (X), 8,288,030.37m (Y) and 250.0m (Z). The block model has a bearing rotation of -12°. The offsets are 250m (X), 600m (Y) and 400m (Z). Parent block dimensions used to construct the block model are 2m (X) x 2m (Y) x 0.5m (Z), and the sub-blocks have a minimum size of 0.5m (X) x 0.5m (Y) x 0.1m (Z) varying until a maximum equal to the parent block sizes.

Blocks were generated for the entirety of the wireframes but it was divided in three (3) zones, depending on the kind of samples more common in the area (**panel** or **drill hole**) and the lode (**Cascavel** or **Mestre**).

Only the developed areas of the mine were estimated, with just the panel samples used. The other zones which had just drill hole samples are characterised by a nugget effect over 90% and a very skewed distribution. Due to this, it was decided to not use these samples for the estimation.

Two (2) estimation techniques were used for the deposit. The blocks were estimated using Inverse Distance Squared (**ID2**) and Ordinary Kriging (**OK**). ID2 was used for a validation comparison with OK.

A cross validation was performed using several scenarios with different minimum and maximum of samples, number of octants and different search ranges. This was done to choose the best parameters in each run pass, reflecting their confidence level.

Four (4) estimation steps were used to reflect changes in search distances and sample selection. Search directions were determined by using the average plunge and dip of the ore grade shell. Search distances were determined using the directional variograms.

A 175 g/t Au Top-cut was a special step used to treat the samples with grades higher than 175 g/t Au. For this step, a very restricted search area was used, with a small number of samples, to estimate blocks, and the variable run was flagged as 1.

Following the grade estimation, sectional and plan views of the block model were validated visually with the panel samples. Grades, density, oxidized zone, and survey zones were checked as were the blocks to confirm that they fit the triangulations. During the interpolation, some blocks were not estimated.

A global comparison of the input and model averages indicates a fair comparison of both. The grades over the quartiles are better distributed in the blocks than in the declustered dataset. This smoothing is intrinsic from the interpolation methodology. The average of the blocks has a value between the median and the third quartile, while the declustered dataset has a value higher than the third quartile. Nevertheless, the averages have similar values comparing the blocks and the declustered dataset.

To test the local estimation of the mean within each zone, moving window input-output mean grades were computed. Narrow slices were generated through each zone along northing, easting and elevation, and for each slice, the panels mean grades were compared to the tonnage weighted mean grade of the blocks. Locally, where the number of input samples were poor, there was some overestimations or sub-estimations, all in the third pass.

During the construction of the block model there was inserted the variable "mine" to flag what was already mined and what was remaining. Orinoco considers as mined the blocks within the mine solids (e.g. decline shaft, drives, slot raises and stopes), all delivered by the mine crew.

Classification criteria

The portion of the Cascavel deposit defined by underground development and panel sampling has been classified as an Inferred Mineral Resource in accordance with the JORC Code (2012) guidelines based on a combination of drill spacing, geological confidence, grade continuity, previous mining and the quality control standards achieved.

Mining and metallurgical methods and parameters

Based on their orientations, thickness and depths to which the ore body has been modelled, as well as the estimated grade, underground mining is the intended mining methodology.

Previous mining and processing of the Cascavel deposit by Orinoco in 2016 showed that the mineralisation is amenable to gravity processing with recoveries of 80 - 85% to produce a marketable gold doré.

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Appendix 1: Exploration Results – Panel Samples (to be read in conjunction with JORC Table 2)

Panel	X	Y	Z	Au_ppm	Type
CDP-P-1974	561502.82	8288082.85	523.07	38.800	panel 2m
CDP-P-1975	561504.17	8288083.82	523.81	157.000	panel 2m
CDP-P-1976	561505.70	8288084.72	524.62	35.900	panel 2m
CDP-P-1977	561507.76	8288084.70	525.27	76.400	panel 2m
CDP-P-1978	561509.67	8288084.62	525.78	216.000	panel 2m
CDP-P-1979	561511.34	8288084.89	526.25	173.000	panel 2m
CDP-P-1980	561505.75	8288081.44	523.42	42.700	panel 2m
CDP-P-1981	561507.36	8288082.14	524.26	95.500	panel 2m
CDP-P-1982	561509.10	8288082.80	525.03	62.100	panel 2m
CDP-P-1983	561510.78	8288083.42	525.68	244.000	panel 2m
CDP-P-1984	561533.66	8288088.63	533.11	5.690	panel 2m
CDP-P-1985	561531.88	8288088.00	532.61	2.030	panel 2m
CDP-P-1986	561530.04	8288087.46	532.02	2.580	panel 2m
CDP-P-1987	561519.50	8288087.58	529.31	86.000	panel 2m
CDP-P-1988	561517.56	8288087.72	528.91	41.400	panel 2m
CDP-P-1990	561515.63	8288087.82	528.50	9.370	panel 2m
CDP-P-1991	561513.68	8288087.95	528.06	61.900	panel 2m
CDP-P-1992	561511.74	8288087.93	527.57	92.200	panel 2m
CDP-P-1993	561509.88	8288087.70	527.04	4.600	panel 2m
CDP-P-1994	561508.05	8288087.25	526.37	10.000	panel 2m
CDP-P-1996	561506.24	8288086.76	525.73	7.020	panel 2m
CDP-P-1997	561504.37	8288086.45	525.08	28.600	panel 2m
CDP-P-1998	561502.44	8288086.32	524.45	52.500	panel 2m
CDP-P-1999	561500.65	8288086.15	523.87	5.090	panel 2m
CDP-P-2000	561499.95	8288085.20	523.16	56.400	panel 2m
CDP-P-2001	561500.73	8288083.66	522.71	10.200	panel 2m
CDP-P-2002	561530.52	8288090.42	532.80	94.500	panel 2m
CDP-P-2003	561528.71	8288090.07	532.16	48.300	panel 2m
CDP-P-2004	561527.28	8288090.71	532.19	84.700	panel 2m
CDP-P-2006	561527.06	8288092.19	532.68	0.650	panel 2m
CDP-P-2007	561524.08	8288093.31	532.28	0.190	panel 2m
CDP-P-2008	561524.12	8288091.78	531.91	15.400	panel 2m
CDP-P-2009	561522.79	8288090.78	531.38	0.300	panel 2m
CDP-P-2010	561520.95	8288090.36	530.79	5.820	panel 2m
CDP-P-2011	561519.50	8288091.04	530.56	0.530	panel 2m
CDP-P-2013	561519.64	8288092.56	530.95	0.230	panel 2m
CDP-P-2014	561520.71	8288094.06	531.53	0.130	panel 2m
CDP-P-2015	561520.56	8288095.58	531.88	16.300	panel 2m
CDP-P-2016	561519.02	8288096.64	531.70	5.670	panel 2m
CDP-P-2017	561517.11	8288096.71	531.24	3.250	panel 2m
CDP-P-2018	561515.99	8288095.46	530.80	3.900	panel 2m

CDP-P-2019	561516.29	8288093.65	530.50	60.100	panel 2m
CDP-P-2021	561516.20	8288092.08	530.20	6.970	panel 2m
CDP-P-2022	561514.76	8288091.15	529.67	32.000	panel 2m
CDP-P-2023	561512.96	8288090.98	529.03	13.500	panel 2m
CDP-P-2024	561511.59	8288091.57	528.83	21.900	panel 2m
CDP-P-2025	561511.19	8288093.17	528.97	0.080	panel 2m
CDP-P-2026	561512.09	8288094.60	529.28	0.150	panel 2m
CDP-P-2027	561513.18	8288096.00	530.05	6.480	panel 2m
CDP-P-2028	561513.12	8288097.92	530.66	45.000	panel 2m
CDP-P-2029	561511.98	8288099.38	530.59	22.500	panel 2m
CDP-P-2031	561510.87	8288100.90	530.64	42.600	panel 2m
CDP-P-2032	561507.75	8288100.48	529.90	98.700	panel 2m
CDP-P-2033	561506.62	8288099.00	529.19	62.500	panel 2m
CDP-P-2034	561507.56	8288093.93	528.44	38.100	panel 2m
CDP-P-2035	561508.69	8288092.29	528.37	3.840	panel 2m
CDP-P-2036	561508.78	8288090.87	527.98	1.960	panel 2m
CDP-P-2037	561507.38	8288089.98	527.34	5.460	panel 2m
CDP-P-2038	561505.58	8288089.55	526.70	8.030	panel 2m
CDP-P-2039	561503.87	8288089.60	526.20	3.570	panel 2m
CDP-P-2041	561502.83	8288090.76	526.29	0.750	panel 2m
CDP-P-2042	561502.88	8288092.64	526.82	10.850	panel 2m
CDP-P-2043	561504.15	8288093.96	527.49	11.800	panel 2m
CDP-P-2044	561506.09	8288094.57	528.17	14.550	panel 2m
CDP-P-2045	561505.36	8288097.96	528.55	3.640	panel 2m
CDP-P-2046	561503.84	8288097.87	528.17	24.600	panel 2m
CDP-P-2047	561499.53	8288101.12	527.49	0.130	panel 2m
CDP-P-2048	561499.20	8288099.36	527.05	1.240	panel 2m
CDP-P-2049	561498.12	8288098.06	526.55	0.100	panel 2m
CDP-P-2050	561497.18	8288096.63	525.94	0.140	panel 2m
CDP-P-2051	561497.41	8288094.71	525.60	62.700	panel 2m
CDP-P-2052	561498.87	8288093.53	525.87	57.900	panel 2m
CDP-P-2054	561500.18	8288092.45	525.97	35.700	panel 2m
CDP-P-2055	561500.36	8288090.67	525.38	6.860	panel 2m
CDP-P-2056	561499.44	8288089.72	524.87	1.560	panel 2m
CDP-P-2057	561497.74	8288090.12	524.57	0.430	panel 2m
CDP-P-2058	561495.95	8288090.54	524.10	83.700	panel 2m
CDP-P-2059	561494.05	8288090.81	523.47	86.300	panel 2m
CDP-P-2061	561492.20	8288091.51	522.98	56.900	panel 2m
CDP-P-2062	561524.17	8288118.71	537.92	10.650	panel 2m
CDP-P-2063	561522.50	8288119.35	537.66	0.480	panel 2m
CDP-P-2064	561520.75	8288119.01	537.07	16.550	panel 2m
CDP-P-2065	561519.01	8288118.52	536.45	143.000	panel 2m
CDP-P-2066	561517.23	8288118.11	535.87	15.300	panel 2m

CDP-P-2067	561515.33	8288117.66	535.29	10.850	panel 2m
CDP-P-2068	561513.15	8288117.52	534.31	23.700	panel 2m
CDP-P-2069	561509.40	8288115.58	532.58	0.010	panel 2m
CDP-P-2070	561509.65	828117.89	532.70	0.870	panel 2m
CDP-P-2071	561511.04	8288119.41	534.03	12.450	panel 2m
CDP-P-2072	561512.86	8288119.74	534.27	0.280	panel 2m
CDP-P-2073	561514.74	8288119.18	534.55	12.650	panel 2m
CDP-P-2074	561516.51	8288119.66	536.24	54.200	panel 2m
CDP-P-2076	561517.31	8288120.09	536.61	10.400	panel 2m
CDP-P-2077	561519.00	8288120.82	537.30	26.200	panel 2m
CDP-P-2078	561519.73	8288121.95	537.88	13.450	panel 2m
CDP-P-2079	561518.75	8288123.22	538.14	5.870	panel 2m
CDP-P-2080	561517.02	8288123.89	537.99	47.200	panel 2m
CDP-P-2081	561515.16	8288124.45	537.78	19.450	panel 2m
CDP-P-2082	561513.19	8288124.86	537.52	7.450	panel 2m
CDP-P-2083	561511.19	8288124.89	537.15	7.490	panel 2m
CDP-P-2084	561509.19	8288124.63	536.65	1.400	panel 2m
CDP-P-2086	561505.06	8288126.78	536.77	22.300	panel 2m
CDP-P-2087	561505.55	8288128.48	537.75	0.160	panel 2m
CDP-P-2088	561506.52	8288129.97	538.53	0.090	panel 2m
CDP-P-2089	561507.80	8288131.13	539.11	1.550	panel 2m
CDP-P-2090	561508.22	8288132.82	539.57	0.050	panel 2m
CDP-P-2091	561507.90	8288134.72	540.01	2.060	panel 2m
CDP-P-2092	561507.47	8288136.54	540.40	4.070	panel 2m
CDP-P-2093	561506.95	8288138.39	541.05	19.800	panel 2m
CDP-P-2094	561505.42	8288143.01	543.56	7.120	panel 2m
CDP-P-2096	561504.47	8288144.78	544.18	0.670	panel 2m
CDP-P-2097	561527.96	8288118.85	538.95	1.960	panel 2m
CDP-P-2098	561527.76	8288120.56	539.65	9.370	panel 2m
CDP-P-2099	561528.75	8288121.65	540.41	4.130	panel 2m
CDP-P-2100	561530.51	8288121.98	541.17	6.560	panel 2m
CDP-P-2101	561532.39	8288122.25	541.82	4.750	panel 2m
CDP-P-2102	561533.89	8288123.01	542.53	5.540	panel 2m
CDP-P-2103	561535.32	8288123.97	543.32	17.600	panel 2m
CDP-P-2104	561535.87	8288125.93	544.17	15.650	panel 2m
CDP-P-2106	561533.77	8288129.45	545.09	14.750	panel 2m
CDP-P-2107	561532.02	8288128.87	544.29	9.490	panel 2m
CDP-P-2108	561530.53	8288127.85	543.32	10.050	panel 2m
CDP-P-2109	561528.71	8288127.18	542.44	47.900	panel 2m
CDP-P-2110	561527.08	8288126.37	541.63	13.200	panel 2m
CDP-P-2111	561526.03	8288124.83	540.67	8.170	panel 2m
CDP-P-2112	561525.34	8288123.35	539.87	78.800	panel 2m
CDP-P-2113	561523.86	8288123.46	539.54	6.460	panel 2m

CDP-P-2114	561522.11	8288124.46	539.49	44.200	panel 2m
CDP-P-2115	561520.97	8288125.66	539.68	2.540	panel 2m
CDP-P-2116	561521.45	8288127.08	540.40	24.200	panel 2m
CDP-P-2117	561522.86	8288128.15	541.19	43.100	panel 2m
CDP-P-2118	561524.50	8288128.92	541.97	63.400	panel 2m
CDP-P-2119	561526.27	8288129.58	542.80	7.730	panel 2m
CDP-P-2121	561527.68	8288130.49	543.66	3.550	panel 2m
CDP-P-2122	561527.80	8288132.42	544.48	0.070	panel 2m
CDP-P-2123	561526.64	8288133.57	544.66	0.040	panel 2m
CDP-P-2124	561524.91	8288132.92	543.98	1.030	panel 2m
CDP-P-2126	561523.49	8288131.67	542.95	0.090	panel 2m
CDP-P-2127	561522.22	8288130.49	541.92	0.730	panel 2m
CDP-P-2128	561521.16	8288129.07	541.04	3.660	panel 2m
CDP-P-2129	561519.90	8288127.84	540.24	8.580	panel 2m
CDP-P-2130	561518.15	8288127.27	539.61	11.500	panel 2m
CDP-P-2131	561516.33	8288127.29	539.24	11.650	panel 2m
CDP-P-2132	561514.45	8288127.97	539.08	4.680	panel 2m
CDP-P-2133	561512.71	8288128.81	539.13	21.200	panel 2m
CDP-P-2134	561511.82	8288130.15	539.50	12.300	panel 2m
CDP-P-2135	561511.84	8288132.03	540.14	0.360	panel 2m
CDP-P-2136	561511.07	8288133.72	540.43	0.180	panel 2m
CDP-P-2137	561511.48	8288135.61	541.12	0.420	panel 2m
CDP-P-2138	561511.78	8288137.67	541.77	10.050	panel 2m
CDP-P-2139	561510.26	8288139.18	542.09	0.740	panel 2m
CDP-P-2141	561509.46	8288140.70	542.84	0.060	panel 2m
CDP-P-2142	561509.21	8288142.31	543.84	2.600	panel 2m
CDP-P-2143	561509.07	8288143.97	544.73	27.500	panel 2m
CDP-P-2144	561509.05	8288145.95	545.71	3.410	panel 2m
CDP-P-2145	561481.44	8288091.39	518.15	300.000	panel 2m
CDP-P-2146	561482.68	8288090.03	518.48	46.900	panel 2m
CDP-P-2147	561484.24	8288089.52	519.11	9.790	panel 2m
CDP-P-2148	561486.04	8288089.97	520.01	12.400	panel 2m
CDP-P-2149	561487.77	8288090.31	520.76	104.000	panel 2m
CDP-P-2150	561488.77	8288089.85	521.05	124.500	panel 2m
CDP-P-2151	561487.81	8288088.91	520.41	39.100	panel 2m
CDP-P-2153	561484.53	8288087.87	518.83	127.000	panel 2m
CDP-P-2154	561484.10	8288086.65	518.34	0.080	panel 2m
CDP-P-2155	561485.25	8288085.69	518.45	0.250	panel 2m
CDP-P-2156	561486.99	8288086.06	519.31	6.840	panel 2m
CDP-P-2157	561488.76	8288086.79	520.03	9.720	panel 2m
CDP-P-2158	561490.54	8288087.22	520.88	1.370	panel 2m
CDP-P-2159	561491.88	8288086.88	521.30	1.240	panel 2m
CDP-P-2162	561489.90	8288085.27	519.83	6.440	panel 2m

CDP-P-2163	561488.17	8288084.69	519.13	3.320	panel 2m
CDP-P-2164	561487.55	8288083.67	518.58	22.900	panel 2m
CDP-P-2165	561489.03	8288082.55	518.41	23.800	panel 2m
CDP-P-2166	561490.93	8288082.21	518.73	15.800	panel 2m
CDP-P-2167	561492.83	8288082.10	519.27	85.400	panel 2m
CDP-P-2168	561494.64	8288082.49	520.14	11.950	panel 2m
CDP-P-2169	561496.37	8288082.99	521.05	157.500	panel 2m
CDP-P-2171	561496.82	8288080.45	520.39	97.900	panel 2m
CDP-P-2172	561495.07	8288080.07	519.66	127.000	panel 2m
CDP-P-2173	561493.31	8288080.05	518.68	116.500	panel 2m
CDP-P-2174	561491.46	8288080.30	518.29	56.900	panel 2m
CDP-P-2175	561489.74	8288080.51	517.87	8.110	panel 2m
CDP-P-2176	561481.63	8288092.31	518.45	6.550	panel 2m
CDP-P-2178	561485.08	8288093.59	520.32	27.000	panel 2m
CDP-P-2179	561486.91	8288093.68	521.16	56.800	panel 2m
CDP-P-2180	561488.66	8288093.82	522.07	55.000	panel 2m
CDP-P-2181	561490.26	8288094.57	522.86	6.300	panel 2m
CDP-P-2182	561491.99	8288095.11	523.67	0.270	panel 2m
CDP-P-2183	561493.76	8288095.67	524.44	0.150	panel 2m
CDP-P-2184	561494.49	8288097.28	525.13	1.600	panel 2m
CDP-P-2186	561492.64	8288097.08	524.40	1.100	panel 2m
CDP-P-2187	561490.77	8288096.88	523.69	19.850	panel 2m
CDP-P-2188	561489.00	8288096.53	522.92	5.020	panel 2m
CDP-P-2189	561487.31	8288096.02	522.09	1.950	panel 2m
CDP-P-2190	561485.76	8288095.07	521.10	6.510	panel 2m
CDP-P-2191	561484.04	8288094.62	520.27	0.710	panel 2m
CDP-P-2192	561482.31	8288094.24	519.40	26.500	panel 2m
CDP-P-2193	561485.39	8288105.40	523.96	13.050	panel 2m
CDP-P-2195	561484.13	8288108.85	524.69	3.180	panel 2m
CDP-P-2196	561484.64	8288110.39	525.30	5.990	panel 2m
CDP-P-2197	561486.34	8288110.99	526.10	0.290	panel 2m
CDP-P-2198	561488.13	8288111.40	526.88	0.270	panel 2m
CDP-P-2199	561489.97	8288111.95	527.64	2.410	panel 2m
CDP-P-2201	561491.79	8288112.45	528.32	0.290	panel 2m
CDP-P-2202	561493.70	8288112.88	528.89	1.100	panel 2m
CDP-P-2203	561494.06	8288114.21	529.55	0.020	panel 2m
CDP-P-2204	561492.21	8288113.83	528.96	0.090	panel 2m
CDP-P-2205	561490.38	8288113.45	528.40	0.180	panel 2m
CDP-P-2206	561488.61	8288113.07	527.74	0.080	panel 2m
CDP-P-2207	561486.79	8288112.80	527.11	2.210	panel 2m
CDP-P-2208	561484.94	8288112.60	526.42	3.870	panel 2m
CDP-P-2209	561483.21	8288112.39	525.77	9.140	panel 2m
CDP-P-2210	561481.68	8288112.78	525.47	17.050	panel 2m

CDP-P-2211	561480.26	8288114.00	525.66	47.900	panel 2m
CDP-P-2212	561478.61	8288114.90	525.62	3.650	panel 2m
CDP-P-2213	561477.52	8288115.58	525.63	7.770	panel 2m
CDP-P-2214	561478.19	8288116.69	526.43	0.980	panel 2m
CDP-P-2215	561479.96	8288117.31	527.25	3.780	panel 2m
CDP-P-2216	561480.17	8288118.68	527.94	8.010	panel 2m
CDP-P-2217	561478.30	8288118.35	527.19	253.000	panel 2m
CDP-P-2218	561476.46	8288117.89	526.42	45.900	panel 2m
CDP-P-2219	561474.65	8288117.46	525.58	11.200	panel 2m
CDP-P-2221	561472.92	8288117.08	524.75	4.570	panel 2m
CDP-P-2222	561471.10	8288116.89	524.00	1.790	panel 2m
CDP-P-2223	561469.41	8288116.51	523.23	2.780	panel 2m
CDP-P-2224	561467.76	8288116.13	522.50	9.540	panel 2m
CDP-P-2225	561466.09	8288115.86	521.77	1.270	panel 2m
CDP-P-2226	561464.45	8288115.62	521.02	2.020	panel 2m
CDP-P-2227	561462.76	8288115.47	520.35	3.510	panel 2m
CDP-P-2228	561460.96	8288115.29	519.65	10.550	panel 2m
CDP-P-2229	561459.14	8288114.91	518.86	32.400	panel 2m
CDP-P-2230	561482.63	8288105.55	523.13	17.950	panel 2m
CDP-P-2231	561482.05	8288107.44	523.51	3.460	panel 2m
CDP-P-2233	561480.14	8288110.37	524.00	24.800	panel 2m
CDP-P-2234	561478.20	8288110.45	523.43	1.750	panel 2m
CDP-P-2235	561476.34	8288110.25	522.73	0.860	panel 2m
CDP-P-2236	561474.59	8288109.74	521.78	0.460	panel 2m
CDP-P-2237	561472.79	8288109.44	520.96	2.310	panel 2m
CDP-P-2238	561471.03	8288109.14	520.24	6.000	panel 2m
CDP-P-2239	561469.29	8288108.64	519.42	4.570	panel 2m
CDP-P-2241	561467.52	8288108.23	518.55	0.310	panel 2m
CDP-P-2242	561465.77	8288107.73	517.70	0.780	panel 2m
CDP-P-2243	561464.10	8288107.01	516.90	0.180	panel 2m
CDP-P-2244	561462.43	8288106.40	516.25	0.140	panel 2m
CDP-P-2245	561461.75	8288109.54	516.92	5.930	panel 2m
CDP-P-2246	561463.36	8288109.77	517.53	6.160	panel 2m
CDP-P-2247	561465.17	8288110.32	518.49	0.880	panel 2m
CDP-P-2248	561466.84	8288110.96	519.51	11.750	panel 2m
CDP-P-2249	561468.61	8288110.90	520.15	2.860	panel 2m
CDP-P-2250	561470.47	8288110.86	520.82	6.760	panel 2m
CDP-P-2251	561472.25	8288111.12	521.53	9.080	panel 2m
CDP-P-2252	561473.98	8288111.52	522.34	39.700	panel 2m
CDP-P-2253	561475.13	8288112.24	523.08	3.450	panel 2m
CDP-P-2254	561474.54	8288113.03	523.27	10.800	panel 2m
CDP-P-2255	561472.64	8288113.31	522.71	10.350	panel 2m
CDP-P-2256	561470.60	8288113.61	522.14	3.010	panel 2m

CDP-P-2257	561468.60	8288114.00	521.64	0.960	panel 2m
CDP-P-2258	561466.73	8288114.00	520.97	115.000	panel 2m
CDP-P-2259	561464.95	8288113.67	520.20	3.350	panel 2m
CDP-P-2260	561463.17	8288113.21	519.30	3.480	panel 2m
CDP-P-2261	561461.31	8288112.64	518.44	3.260	panel 2m
CDP-P-2262	561461.83	8288104.28	515.59	0.270	panel 2m
CDP-P-2263	561460.82	8288110.41	517.12	12.050	panel 2m
CDP-P-2264	561457.23	8288115.03	518.31	29.200	panel 2m
CDP-P-2266	561455.63	8288115.93	518.16	6.630	panel 2m
CDP-P-2267	561454.82	8288117.11	518.53	7.600	panel 2m
CDP-P-2268	561455.75	8288118.23	519.21	12.300	panel 2m
CDP-P-2269	561457.38	8288118.89	519.92	2.990	panel 2m
CDP-P-2271	561460.73	8288120.23	521.37	0.090	panel 2m
CDP-P-2272	561458.80	8288121.49	521.39	2.910	panel 2m
CDP-P-2273	561457.00	8288121.00	520.56	1.650	panel 2m
CDP-P-2274	561455.26	8288120.33	519.73	13.250	panel 2m
CDP-P-2275	561453.63	8288119.46	518.99	0.070	panel 2m
CDP-P-2276	561451.90	8288118.73	518.26	6.030	panel 2m
CDP-P-2277	561449.99	8288118.40	517.54	27.300	panel 2m
CDP-P-2278	561448.21	8288118.45	517.06	2.370	panel 2m
CDP-P-2279	561458.78	8288107.28	515.40	25.900	panel 2m
CDP-P-2280	561458.18	8288109.02	515.78	11.550	panel 2m
CDP-P-2281	561456.91	8288109.90	515.93	2.190	panel 2m
CDP-P-2282	561455.05	8288110.18	515.65	18.100	panel 2m
CDP-P-2283	561454.68	8288111.83	516.06	1.430	panel 2m
CDP-P-2284	561454.60	8288111.73	516.22	12.550	panel 2m
CDP-P-2285	561455.16	8288113.42	516.65	1.630	panel 2m
CDP-P-2286	561455.10	8288113.31	517.14	8.610	panel 2m
CDP-P-2287	561453.74	8288114.76	516.75	0.560	panel 2m
CDP-P-2288	561453.74	8288114.65	517.37	9.050	panel 2m
CDP-P-2289	561452.05	8288115.31	516.55	14.500	panel 2m
CDP-P-2291	561451.91	8288115.24	517.20	35.600	panel 2m
CDP-P-2292	561450.13	8288115.33	515.89	3.380	panel 2m
CDP-P-2293	561449.99	8288115.21	516.72	15.600	panel 2m
CDP-P-2294	561445.10	8288117.67	515.77	30.900	panel 2m
CDP-P-2295	561446.87	8288119.76	516.40	3.960	panel 2m
CDP-P-2296	561445.92	8288121.48	516.45	0.920	panel 2m
CDP-P-2297	561506.83	8288112.01	531.61	1.630	panel 2m
CDP-P-2298	561506.06	8288113.71	531.91	0.110	panel 2m
CDP-P-2299	561504.81	8288114.97	531.95	50.600	panel 2m
CDP-P-2300	561503.15	8288115.15	531.65	4.130	panel 2m
CDP-P-2301	561502.00	8288113.98	531.10	80.900	panel 2m
CDP-P-2302	561500.71	8288113.08	530.56	80.300	panel 2m

CDP-P-2303	561499.76	8288114.07	530.78	2.270	panel 2m
CDP-P-2304	561499.51	8288115.78	531.45	3.060	panel 2m
CDP-P-2305	561498.16	8288116.66	531.52	0.440	panel 2m
CDP-P-2306	561496.28	8288117.11	531.32	0.470	panel 2m
CDP-P-2307	561494.41	8288117.58	531.11	16.700	panel 2m
CDP-P-2308	561492.46	8288117.88	530.85	2.580	panel 2m
CDP-P-2309	561509.91	8288112.21	532.17	2.080	panel 2m
CDP-P-2310	561509.16	8288114.31	532.57	0.340	panel 2m
CDP-P-2311	561506.82	8288117.94	533.39	106.500	panel 2m
CDP-P-2312	561504.91	8288118.55	533.32	2.940	panel 2m
CDP-P-2313	561499.93	8288120.71	533.29	14.700	panel 2m
CDP-P-2314	561498.04	8288120.10	532.78	3.930	panel 2m
CDP-P-2316	561496.16	8288119.98	532.47	6.220	panel 2m
CDP-P-2317	561494.23	8288120.22	532.26	20.900	panel 2m
CDP-P-2318	561492.45	8288120.62	532.02	50.000	panel 2m
CDP-P-2319	561491.50	8288121.85	532.31	43.200	panel 2m
CDP-P-2320	561490.44	8288123.40	532.86	254.000	panel 2m
CDP-P-2321	561488.58	8288124.33	532.88	1.190	panel 2m
CDP-P-2322	561486.63	8288124.60	532.52	0.460	panel 2m
CDP-P-2323	561485.00	8288125.10	532.20	14.750	panel 2m
CDP-P-2324	561483.89	8288126.57	532.18	133.500	panel 2m
CDP-P-2325	561483.24	8288128.45	532.48	15.700	panel 2m
CDP-P-2326	561482.69	8288130.33	532.98	1.050	panel 2m
CDP-P-2327	561481.80	8288132.09	533.26	1.040	panel 2m
CDP-P-2328	561480.78	8288133.80	533.51	0.210	panel 2m
CDP-P-2329	561479.67	8288135.47	533.89	0.010	panel 2m
CDP-P-2331	561478.56	8288137.10	534.27	0.410	panel 2m
CDP-P-2332	561478.15	8288138.91	534.95	0.005	panel 2m
CDP-P-2333	561472.47	8288126.32	528.40	2.450	panel 2m
CDP-P-2334	561472.41	8288127.99	528.78	98.600	panel 2m
CDP-P-2335	561471.42	8288129.61	528.73	0.920	panel 2m
CDP-P-2336	561470.48	8288131.32	528.62	7.910	panel 2m
CDP-P-2337	561469.50	8288132.97	528.83	26.200	panel 2m
CDP-P-2338	561468.37	8288134.55	529.21	4.900	panel 2m
CDP-P-2339	561466.92	8288135.70	529.46	18.500	panel 2m
CDP-P-2341	561465.09	8288136.02	529.20	23.400	panel 2m
CDP-P-2342	561463.20	8288135.95	528.76	1.410	panel 2m
CDP-P-2343	561474.04	8288124.74	528.41	29.800	panel 2m
CDP-P-2344	561475.01	8288126.30	529.19	13.650	panel 2m
CDP-P-2345	561472.62	8288132.63	529.89	14.000	panel 2m
CDP-P-2346	561471.62	8288134.43	530.25	7.610	panel 2m
CDP-P-2347	561470.52	8288135.98	530.75	0.480	panel 2m
CDP-P-2348	561469.07	8288137.38	531.33	1.370	panel 2m

CDP-P-2349	561466.75	8288138.56	531.36	7.170	panel 2m
CDP-P-2350	561464.55	8288138.60	531.05	0.710	panel 2m
CDP-P-2351	561462.69	8288138.47	530.47	0.250	panel 2m
CDP-P-2352	561460.88	8288138.60	530.05	0.740	panel 2m
CDP-P-2353	561459.63	8288139.45	530.26	0.470	panel 2m
CDP-P-2354	561456.92	8288138.49	528.84	0.350	panel 2m
CDP-P-2356	561455.45	8288139.79	529.27	0.500	panel 2m
CDP-P-2357	561454.13	8288141.30	529.64	0.350	panel 2m
CDP-P-2358	561452.60	8288142.52	529.69	0.430	panel 2m
CDP-P-2359	561450.88	8288143.46	529.72	0.350	panel 2m
CDP-P-2360	561449.05	8288144.01	529.82	0.220	panel 2m
CDP-P-2361	561447.13	8288144.03	529.67	0.240	panel 2m
CDP-P-2362	561445.36	8288144.03	529.32	0.210	panel 2m
CDP-P-2363	561454.46	8288144.04	530.49	5.180	panel 2m
CDP-P-2364	561453.18	8288145.00	531.29	0.520	panel 2m
CDP-P-2365	561452.09	8288145.93	531.95	3.170	panel 2m
CDP-P-2366	561451.97	8288147.18	532.86	1.450	panel 2m
CDP-P-2367	561452.44	8288148.59	533.75	0.300	panel 2m
CDP-P-2368	561452.96	8288150.10	534.70	0.280	panel 2m
CDP-P-2369	561451.52	8288150.93	534.68	3.290	panel 2m
CDP-P-2370	561450.96	8288149.43	533.81	0.580	panel 2m
CDP-P-2371	561450.56	8288147.93	532.91	0.670	panel 2m
CDP-P-2372	561449.57	8288146.85	532.05	3.790	panel 2m
CDP-P-2373	561447.81	8288146.65	531.61	7.810	panel 2m
CDP-P-2374	561445.85	8288146.83	531.36	0.370	panel 2m
CDP-P-2375	561444.25	8288147.06	531.12	0.960	panel 2m
CDP-P-2376	561443.53	8288148.06	531.44	4.660	panel 2m
CDP-P-2377	561443.60	8288149.83	532.33	0.430	panel 2m
CDP-P-2378	561444.08	8288151.51	533.33	2.200	panel 2m
CDP-P-2379	561442.82	8288151.99	533.32	1.960	panel 2m
CDP-P-2381	561442.22	8288150.25	532.23	1.020	panel 2m
CDP-P-2382	561441.62	8288148.50	531.26	1.430	panel 2m
CDP-P-2383	561440.70	8288147.23	530.49	1.510	panel 2m
CDP-P-2384	561457.82	8288129.58	523.06	13.900	panel 2m
CDP-P-2385	561459.71	8288129.31	523.61	39.600	panel 2m
CDP-P-2386	561461.50	8288128.71	524.11	11.800	panel 2m
CDP-P-2387	561462.53	8288127.61	524.46	1.580	panel 2m
CDP-P-2388	561462.20	8288126.15	525.20	52.900	panel 2m
CDP-P-2389	561464.27	8288125.16	525.34	26.600	panel 2m
CDP-P-2390	561452.72	8288132.75	523.58	0.220	panel 2m
CDP-P-2391	561451.64	8288134.26	524.46	20.600	panel 2m
CDP-P-2392	561450.11	8288134.92	524.63	1.250	panel 2m
CDP-P-2393	561448.15	8288134.63	524.09	0.010	panel 2m

CDP-P-2394	561465.22	8288126.68	525.59	7.950	panel 2m
CDP-P-2396	561466.08	8288128.23	526.15	11.700	panel 2m
CDP-P-2397	561466.02	8288130.19	526.48	25.600	panel 2m
CDP-P-2398	561464.71	8288131.25	526.22	2.980	panel 2m
CDP-P-2399	561462.62	8288131.27	525.49	5.920	panel 2m
CDP-P-2400	561460.60	8288132.03	525.28	4.830	panel 2m
CDP-P-2401	561459.67	8288135.50	527.38	2.640	panel 2m
CDP-P-2402	561457.81	8288134.94	526.47	6.730	panel 2m
CDP-P-2403	561456.08	8288134.42	525.62	16.400	panel 2m
CDP-P-2404	561454.43	8288134.69	525.40	5.480	panel 2m
CDP-P-2405	561452.73	8288135.83	525.84	0.220	panel 2m
CDP-P-2406	561451.11	8288136.89	526.27	0.060	panel 2m
CDP-P-2407	561449.57	8288137.30	526.32	0.500	panel 2m
CDP-P-2408	561447.86	8288137.08	525.94	0.010	panel 2m
CDP-P-2409	561445.97	8288136.63	525.34	0.040	panel 2m
CDP-P-2410	561443.96	8288136.51	524.99	1.170	panel 2m
CDP-P-2411	561441.85	8288136.81	524.93	0.460	panel 2m
CDP-P-2412	561473.56	8288142.09	535.88	0.290	panel 2m
CDP-P-2413	561473.29	8288143.58	536.66	0.100	panel 2m
CDP-P-2414	561466.59	8288145.91	536.52	0.590	panel 2m
CDP-P-2415	561464.85	8288146.84	536.60	0.200	panel 2m
CDP-P-2416	561463.10	8288147.67	536.67	4.970	panel 2m
CDP-P-2417	561450.24	8288154.61	536.51	2.300	panel 2m
CDP-P-2418	561448.52	8288155.07	536.41	0.060	panel 2m
CDP-P-2419	561446.66	8288155.30	536.32	1.000	panel 2m
CDP-P-2420	561444.80	8288155.56	536.26	0.390	panel 2m
CDP-P-2421	561442.95	8288155.83	536.11	0.640	panel 2m
CDP-P-2422	561441.06	8288156.06	535.91	0.160	panel 2m
CDP-P-2423	561439.19	8288156.33	535.86	0.340	panel 2m
CDP-P-2424	561437.34	8288156.70	535.90	0.600	panel 2m
CDP-P-2426	561435.52	8288157.09	535.88	0.210	panel 2m
CDP-P-2427	561433.66	8288157.54	535.98	0.320	panel 2m
CDP-P-2428	561431.84	8288158.01	536.15	0.890	panel 2m
CDP-P-2429	561430.02	8288158.02	535.98	7.930	panel 2m
CDP-P-2430	561449.81	8288157.60	538.50	0.920	panel 2m
CDP-P-2431	561448.39	8288157.34	538.07	0.360	panel 2m
CDP-P-2432	561446.38	8288157.61	538.05	0.190	panel 2m
CDP-P-2433	561442.63	8288158.20	538.20	0.330	panel 2m
CDP-P-2434	561440.97	8288157.95	537.70	1.080	panel 2m
CDP-P-2435	561438.95	8288158.17	537.53	0.160	panel 2m
CDP-P-2436	561433.77	8288159.56	537.69	0.100	panel 2m
CDP-P-2437	561431.76	8288159.80	537.61	7.920	panel 2m
CDP-P-2438	561429.77	8288160.00	537.38	5.300	panel 2m

CDP-P-2439	561427.74	8288159.95	537.05	0.850	panel 2m
CDP-P-2440	561425.74	8288159.83	536.73	15.900	panel 2m
CDP-P-2441	561423.70	8288160.05	536.51	0.170	panel 2m
CDP-P-2442	561422.27	8288161.04	536.70	0.950	panel 2m
CDP-P-2443	561476.57	8288143.81	537.72	0.100	panel 2m
CDP-P-2444	561475.46	8288145.10	538.32	0.350	panel 2m
CDP-P-2446	561472.51	8288147.57	539.16	0.290	panel 2m
CDP-P-2447	561464.75	8288149.78	539.00	0.130	panel 2m
CDP-P-2448	561463.18	8288150.78	539.17	0.130	panel 2m
CDP-P-2449	561463.22	8288152.03	539.90	1.330	panel 2m
CDP-P-2450	561464.76	8288152.84	540.79	2.160	panel 2m
CDP-P-2451	561465.72	8288153.84	541.47	2.630	panel 2m
CDP-P-2452	561464.99	8288154.76	541.61	7.660	panel 2m
CDP-P-2453	561464.44	8288155.82	542.01	0.250	panel 2m
CDP-P-2454	561464.07	8288156.98	542.63	0.040	panel 2m
CDP-P-2455	561463.05	8288156.61	542.06	0.110	panel 2m
CDP-P-2456	561462.07	8288155.44	540.96	1.880	panel 2m
CDP-P-2457	561460.79	8288154.47	540.02	3.730	panel 2m
CDP-P-2458	561459.17	8288153.94	539.11	2.710	panel 2m
CDP-P-2459	561457.56	8288153.47	538.20	40.600	panel 2m
CDP-P-2460	561456.12	8288153.52	537.62	9.400	panel 2m
CDP-P-2461	561455.23	8288154.74	537.99	1.510	panel 2m
CDP-P-2463	561456.09	8288156.61	539.73	0.840	panel 2m
CDP-P-2464	561457.56	8288158.39	541.62	0.490	panel 2m
CDP-P-2466	561458.37	8288159.71	542.84	0.790	panel 2m
CDP-P-2467	561458.93	8288161.06	544.15	1.990	panel 2m
CDP-P-2468	561458.04	8288161.91	544.63	0.820	panel 2m
CDP-P-2469	561457.17	8288160.49	543.24	1.660	panel 2m
CDP-P-2470	561456.34	8288159.07	541.83	1.460	panel 2m
CDP-P-2471	561455.61	8288157.73	540.50	0.080	panel 2m
CDP-P-2472	561454.47	8288156.80	539.31	0.150	panel 2m
CDP-P-2473	561453.00	8288157.42	539.12	0.430	panel 2m

Appendix 2: Cascavel JORC 2012 Table 1

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.*
		• Until 30 August 2017, Orinoco Gold Limited (**Orinoco** or **Company**) has completed in the Cascavel Gold Mine (**Cascavel**) area 36 diamond drill holes (**DDH**), totalling 5,844.36 drilled metres;
		• DDH cores were sampled based on the geological boundaries selected by a geologist. Samples from drill core were sawn in half with a diamond core saw and sampled every 0.5m in the ore zone. Half of the core was sent to a laboratory and the other half remained in the core tray. Sampling places were marked on the core tray with the sample number. The core trays were also marked with the "blanks" and "standards" samples and all core was photographed. All data is stored in the Orinoco Access database following QA/QC procedures;
		• For a good representation of the grade distribution in this kind of deposit it was recommended that panel sampling be used. Drill core samples alone were considered to be too small to generate reliable gold grades;
		• Until the end of 2016 the panel sampling was made taking samples in 0.5m squares, thus diluting the sample with surrounding host (waste) rock if the vein width was less than 0.5m. Since this protocol was changed, 460 panel new samples have been generated from within the Cascavel mine following the procedure below:
		  • Underground samples are collected either as panels or channels:
		    ○ Panel samples are 2m long (to ensure representability in a coarse-grained gold environment), continuously taken along the vein. Chips are collected from inside the panels areas to comprise the sample, up to around 20 kg in weight; and
		    ○ Control channel samples were taken in the host rock every 3m to 5m to test the host rocks for marginal gold content. All channels were cut 20cm wide by 5cm deep;
		• The QA/QC results confirmed the reliability of the sampling and assaying methodologies with sufficient confidence for the Mineral Resource Estimate.

Criteria	JORC Code explanation	Commentary
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.).*	• Drilling undertaken to the date of this Mineral Resource Estimate was conducted by Servitec LTDA (**Servitec**) exclusively using diamond drilling (**DD**) techniques. Drill rigs used by Servitec were locally built (MACSonda 320) and were hydraulic assisted; • Drilling commenced with HQ sized drilling equipment up to the limit of the drill rig (or where the rock type permitted) and then downsized to NQ sized drilling equipment. Polymer filling was used when necessary. Drilling inclination was up to 60°; • In 2016, seven (7) axially-oriented drill holes were completed to assist in determining the real-space orientation of any planar or linear fabric in the drill cores; • The structural survey of lines and planes on the drill holes was done through the core-angle method. This method consists of identifying the α and β angles of structural plane. The α angle is the angle between the axis of drill hole and the structural plane that is being measured, the β angle is the angle between the inflection point of the structural plane and the line of the drill hole orientation. The α angle is give the merge and the β angle the dip of structural plane. To do line measurements it is necessary to measure the delta angle (δ), which is the angle between the line contained in the plane and the line of the orientation of the hole.
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 recovery was guaranteed by the contractor to be not less than 90% in the ore zones and was recorded every metre of advance with metal plate markings on the core trays with drilling reports delivered daily; • An Orinoco technician checked the numbers and measured the interval recorded on the drilling reports for data reconciliation as soon as the core trays were delivered to the core shed; • Assays for gold were completed using Screen Fire Assay (**SFA**) on the ore zone and ordinary Fire Assay (**FA**) for samples outside the ore zone, to minimise the analytical problems related to coarse gold.
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*	• The core samples were geologically logged to an appropriated level of detail concerning mineral resources, mining studies and metallurgical studies, where the main lithology and kind of alteration was described and the alteration minerals, veins, fractures, faults quantified; • All drill cores and channels were photographed; • All intersections were logged, with lengths varying between 0.5m and 1m or limited to the presence of geological boundaries in ore zones. • Main Hydrothermal Alteration minerals were logged quantitatively in the logging spreadsheet; • For the panel samples, just a brief description of the vein was done and written in the

Criteria	JORC Code explanation	Commentary
	intersections logged.	spreadsheet.
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.*	• Drill cores were sawn in half with a diamond core saw and half core was sent to a laboratory; • The drill core trays were marked metre by metre, according to the recovery of each interval. A geologist subsequently marked all lithological contacts and possible ore zones in the trays. Duplicates were inserted in each batch of 20 samples. Blanks and standards were inserted approximately each 30m; • The core sample duplicates were the half of the remaining cores halves (i.e. quarter core); • In the laboratory, core samples were dried, crushed until 90% < 2mm (10 mesh), split until a 1kg sample was obtained, after which it was crushed to 95% < 106µm (150 mesh); • For panels and channel samples, physical preparation included drying and crushing the total sample, riffle splitting and pulverization (95% < 150µm) of a 1kg subsample for cyanide leaching.

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.*
		• Core samples were analysed using the SFA technique. This procedure involves screening a large pulverized sample (commonly 1kg) at 75µm. The entire oversize (including the disposable screen) is fire assayed as this contains the 'coarse' gold and a duplicate determination is made on the sub 75µm fraction. A calculation can then be made to determine the total weight of gold in the sample. This procedure is equivalent to assaying a large sample to extinction and averaging the results;
		• Panel and channel samples were analysed using the leach well technique. Aggressive leaching conditions promote the liberation and breaking of gold nuggets, being the best routine in the case of coarse-grained nugget gold present in the Cascavel deposit. The gold in the cyanide solution is then measured using atomic absorption spectroscopy (**AAS**). 5% of the solid residue was also analysed to check for gold extraction issues;
		• The QA/QC protocol was:
		  • *Standards*: insertion of one (1) known standard in each 30 samples approximately:
		    • If less than 10% of samples are outside of the expected mean + 2 x standard deviation (**Std Dev**), the results are validated;
		    • If less than 10% of the samples report results outside the Mean + 3 x Std Dev, but

Criteria	JORC Code explanation	Commentary
		there are standards between the first and these two points - the results are validated, but the Laboratory was notified; and • If more than 10% is outside the Mean + 3 x Std Dev, the batch (40 samples) is rejected, an investigation is required and a re-analysis of the batch is made; • *Blanks:* one (1) blank insertion in each 20 samples approximately: • If less than 5% are above 5 x the detection limit of the Laboratory, the results are validated; and • If more than 5% are above 5 x the detection limit, the Laboratory was notified and the batches with failure were re-analysed; • *Duplicates:* insertion in each 20 samples – Bias control. Project Duplicates were quarter core and Laboratory duplicates were Pulp Duplicates.
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.*	• All sample (drilling, panels and channels) information is stored in an appropriately protected relational Microsoft Access database; • The assay data provided by the laboratory after the analysis was uploaded initially to a master table in Excel format where the information was checked and any discrepancies were verified in the samples ID, as well as the geological logs, and then both were transferred to the Microsoft Access database; • The electronic documentation (i.e. logs, assay certificates, drilling recovery, down-the-hole survey and protocols) is stored on the server at the OBM Exploration office; • The physical documentation (i.e. logs, assay certificates, drilling recovery and protocols) is stored at the OBM Exploration office; • The data entry to date has not been in the most appropriate way, however changes in the matrix of the Microsoft Access database and in the data entry protocol are programmed for the beginning of 2018.
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.*	• The drill hole collars and the panel vertices were surveyed using a Total Station surveyed by a qualified surveyor; • The surveyor used surveyed base stations to guarantee the quality of the surveying; • The grid system used is UTM South American 1969 - Zone 22 S.
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*	• The drilling spacing is not regular and was planned to fill zones with few or no information. It was considered the use of already opened drilling squares; • Most part of the analysed samples was taken with 1m spacing and in the mineralised zone

Criteria	JORC Code explanation	Commentary
	grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • *Whether sample compositing has been applied.*	with 0.5m spacing; • The drill hole information is not sufficient to classify resources as inferred; • See Figure 1 in the body of report. • .
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.*	• The drilling data orientation is not regular and depending on the drill hole orientation it is possible see different kinds of structures; • The drilling orientations provide unbiased sampling of the mineralisation; • The panels and channels data follow the drives and slot raises being clustered in some areas.
Sample security	• *The measures taken to ensure sample security.*	• Drill cores are stored in plastic core trays well identified and stacked in piles in the core shed of site; • The samples are stored in plastic sample bags, stored in a dedicated secure facility on site prior to transport to the laboratory. Mineralised samples were delivered directly to the assay laboratory by OBM staff; • All laboratory pulps are stored in the storage facility onsite in boxes supplied by the laboratory, stacked in dry places.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An internal review of the Mineral Resource Estimate has been undertaken by Dr. Marcelo Carvalho, a full time employee of OBM. • An external review of the Mineral Resource Estimate has been undertaken by Mr. Richard Buerger, a full-time employee of Mining Plus.

Section 2: Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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 Cascavel Gold Mine (**Cascavel**) is 100% owned by Mineração Curral de Pedra (**MCP**), which in turn is 100% owned by Orinoco Gold Limited (**Orinoco** or **Company**). • Orinoco has applied for a Mine Concession at the Mining Nacional Department (**DNPM**) for the tenement 840167/2007, where the majority of the work at Cascavel has been completed. As at the date of this report, the DNPM was still analysing the documentation of the application.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration for oxide gold deposits has been undertaken on the Faina Greenstone Belt for at least 20 years, in different cycles and by different companies. A reasonable amount of surface exploration was carried out. Soil, stream sediments and chip sampling (for gold) are widespread along and around the belt. Those surface surveys detected several gold and arsenic anomalies (about 64 anomalies have been identified). Some of those anomalies were tested with drilling, frequently with positive results. However, drilling was generally very shallow rotary air blast (**RAB**) drilling.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Gold mineralisation is widely distributed on the Faina Greenstone Belt, occurring in the ultramafic, felsic and mafic volcanics, on the clastic metasedimentary sequence and particularly at the chemical metasedimentary rocks; • Gold trends seem to be very continuous also along the strike, mostly associated with the main regional scale shear zones; • Mineralisation style is also varied on the belt. Most gold mineralisation can be classified as Orogenic, mainly hosted in chemical and volcanoclastic sedimentary units. At least the following models can already be considered, according to the available data: Shear Hosted (Orogenic) associated with carbonaceous/BIF hosts, mafic volcanic and volcanoclastic units. Paleo Placer/Conglomerate Hosted: associated with meta-conglomerates within the Proterozoic (Paleo?) transgressive clastic sequence. Au rich VHMS: hosted by younger Meso-Proterozoic intrusives in the volcanosedimentary rocks sequence in the Goiás Block, potentially in the Faina greenstone. The silver-tungsten-copper mineralisation at Cascavel has been interpreted as a carbonate replacement deposit due to the strong relationship to

Criteria	JORC Code explanation	Commentary
		the impure limestone unit and crosscutting faults. Tinteiro Target shows features so far interpreted as potentially related to a late IOCG system.
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.*	• No drill hole results are included in this announcement because they were used only to assist in the wireframe modelling of the quartz vein systems. • The data used for the grade estimations were the panels and their data is attached in the Appendix 1.
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 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.*	• The 2m panel samples centroids were used directly for this Mineral Resource Estimate.
Relationship between mineralization	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect*	• The Orogenic type gold mineralisation has a 210°-230°/25° direction and this value is interpreted as been constant over a strike length of 1.6km and a down dip length of 600m. Some of the drill holes show true width for the intercepts, but for some drill holes

Criteria	JORC Code explanation	Commentary
widths and intercept lengths	*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').*	intercepts represent an approximate true thickness due to the drill hole not being designed to intercept the mineralised zone at a perpendicular angle; • The panel samples were taken just on the mineralised vein, without any mixing with the surrounding host rock.
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.*	• Diagrams are attached to the current announcement.
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.*	• This announcement is a comprehensive report.
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 entire mineralised vein was surveyed, where it was taken points in each 20cm, separating hanging and footwall points; • A detailed geological/structural mapping with a 1:25 scale was done by the geology team; • The surface geological map was reviewed with no relevant changes; • Eleven geological sections were selected and they were interpreted by hand. For each section, two different drawings were made using the lithological and the hydrothermal halos respectively. The drawings are being digitalized in CAD format during the preparation of this report; • Aiming to find the water table, eleven resistivity sections were surveyed in two phases. In the first phase, it was made five sections with a dipole-dipole array, and in the second phase, it was made six sections with a pole-dipole array. Both phases showed a large low-resistivity anomaly at NW, 300m distance from the mine entrance and 100m depth (maximum of the method).
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).*	• A follow up drilling program is being planned, which will assist with future modelling of the mineralisation; • Panels and channels are continuously sampled.

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*.	

Section 3: Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
Database integrity	• *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.*	• Resource information is stored in an appropriately protected relational Microsoft Access database. • Drill cores were logged on paper using standardised codes and transferred into the database after validation in Vulcan. Finalised assay results were merged into Excel spreadsheets from laboratory source files, then loaded into the Microsoft Access database; • The database was reviewed monthly and validation checks were performed in Vulcan 3D software, including searches for overlaps or gaps in sample and geology intervals, inconsistent drill hole identifiers, and missing data. This procedure is done to validate the data as close to the source as possible to ensure reliability and accuracy. All inconsistencies identified in the validation procedures were checked by the resources geologist and corrected; • The database is centrally managed by a Database technician who is responsible for data entry, development, quality control, validation and queries.
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 works on site, or regularly visits the site, and has a vast knowledge on the regional and local geology, the mineralisation controls and resources data.

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 Orinoco Geological team has a good experience in the Faina Greenstone Belt, the geological setting and mineralisation controls are well understood and confidence in the geological interpretation is high;
		• In the area of Cascavel, there are three mineralised levels:
		  • The upper level is a quartz vein with gold (**Cascavel level**) inserted into the upper quartzite package, in a sericitic-biotitic alteration halo;
		  • The intermediate level contains mineralisation of silver and occurs inside limestones within an intensely leached zone; and
		  • The lower level (**Cuca level**) also is a quartz vein with gold, occurring in the second quartzite package.
		• E-W faults and NE-SW cut all levels;
		• The Cascavel level is divided in two lodes (**Cascavel** and **Mestre**) and both are characterised

Criteria	JORC Code explanation	Commentary
		by an extreme nugget effect with the presence of coarse gold (95% bigger than 200µm) in 10cm - 50cm quartz veins that are stacked in some areas. Strong sericite alteration with tens of centimetres on both sides of the quartz veins also carries grade. The quartzite host rock does not show gold mineralisation. It also displays a strong structural control on the distribution of grades showing a contrasting continuity; • These features are very similar to gold deposits at Bendigo (Australia) and Nalunaq (Greenland) which are known as challenging environments to work in terms of sampling and production of effective resource/reserve estimates.
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 mineralised vein has a behaviour of step and ramp, plunging to 255°/23°. The model extends 480m down-plunge and 180m along-strike; • A crossing fault NE-SW divide the vein into two lodes, with an offset about 3 meters between them. The Cascavel lode is on the NW portion and is three times bigger than Mestre lode, on SE portion; • See Figures 1 and 2 in body of report.
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*	• All modelling, statistical analysis and interpolation was made with Maptek Vulcan 10.0.4 3D software; • Based on the drilling and panels data, surveyed vein data and geological concepts, the hanging and footwall surfaces of the mineralised vein were modelled, and then divided into two (2) lodes (Cascavel and Mestre); • A contact profile analysis was made comparing the grades between the mineralised body and waste along equal distances from the contact. Between vein and waste it is clear that they have a hard boundary, where the waste has average grades below 0.1 g/t Au and the vein has average grades over 10 g/t Au; • The drilling database was composited using the run length process. This compositing process was set to 0.5m to allow adjusting of the composite lengths; • Descriptive statistics of sample populations within a domain may be biased by clustering of sample data in particular areas of the domain. For the composited drilling samples and panels samples cell declustering was run where it was used cell sizes of 10m to the drilling data and 65 to the panels data; • In the exploratory data analysis, different comparisons were made, considering the different kind of data (drill hole or panel) and their composited and declustered databases; • In the geostatistical analysis it was noted the presence of important outliers in the samples distributions. The statistics justifies a differentiated treatment of the samples with extreme

Criteria	JORC Code explanation	Commentary
	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.*	values during the estimation. For the drilling data this value is 35 g/t Au and for the panels this value is 175 g/t Au. It was used the quantiles data, histograms and cumulative plots to define these extreme values; • To generate variograms the extreme values as capping of the outliers was used. Search orientations were selected from the fan variogram, but were checked against the geological interpretation to ensure proper matching. Cascavel tends to behave isotropically and so, search orientations are determined primarily from geology. Fan variogram have shown search directions very similar to the known plunge direction determined by geology, between 255° and 265°. So, it was chosen 255° as the search direction; • Search distances were determined from the directional correlograms using 70% of the total sill variance. The other 30% sill variance are nugget effect. Two structures were used to model the variograms. The major and semi directions show a small zonal anisotropy; Variogram Model Paramters: Nugget: 0.3 Type / Sill / Azimuth / Plunge / Dip / Major / Semi / Minor Spherical / 0.210 / 255.0 / -23.5 / 14.0 / 6.0 / 9.7 / 0.2 Spherical / 0.490 / 255.0 / -23.5 / 14.0 / 38.0 / 36.0 / 1.0 • Before making the block definition file in Vulcan 3D Software, plots were made with many values of discretization, block sizes and gammabar using the variogram model. This was developed to choose the best discretization value and block size (Discretization x Gammabar; Block Size x Gammabar; Block Size x Block Variance). For this step it was necessary to use the gammabar program from GSLib package; • For discretization, the values 3m x 3m x 2m seems to be the point of stabilization for the drilling data and 2m x 2m x 2m for the panels data. These were the values chosen to be used for the estimation parameters. The test for block sizes using gammabar and the block variance shows that size 2m x 2m x 0.5m can make a better balance between block size (volume) and variance; • The block model has an origin at the coordinates 561,641.17m (X), 8,288,030.37m (Y) and 250.0m (Z). The block model has a bearing rotation of -12°. The offsets are 250m (X), 600m (Y) and 400m (Z). Parent block dimensions used to construct the block model are 2m (X) x 2m (Y) x 0.5m (Z), and the sub-blocks has a minimum size of 0.5m (X) x 0.5m (Y) x 0.1m (Z) varying until a maximum equal to the parent block sizes; • Blocks were generated for the entirety of the wireframes but it was divided in three (3) zones, depending on the kind of samples more common in the area (**panel** or **drill hole**) and

Criteria	JORC Code explanation	Commentary
		the lode (**Cascavel** or **Mestre**). This division can be seen in Figure 3 in body of report; • Just the developed areas of the mine were estimated, with just the panel samples used. The other zones had just drill hole samples which are characterised by a nugget effect over 90% and a very skewed distribution. Due to this, it was decided to not use these samples for the estimation; • Two (2) estimation techniques were used for the deposit. The blocks were estimated using Inverse Distance Squared (**ID2**) and Ordinary Kriging (**OK**). ID2 was used for a validation comparison with OK; • A cross validation was performed using several scenarios with different minimum and maximum of samples, number of octants and different search ranges. This was done to choose the best parameters in each run pass, reflecting their confidence level; • Four (4) estimation steps were used to reflect changes in search distances and sample selection. Search directions were determined by using the average plunge and dip of the mineralised grade shell. Search distances were determined using the directional variograms; • 175 g/t Au Top-cut was a special step used to treat the samples with grades higher than 175 g/t Au. For this step, a very restricted search area was used, with a small number of samples, to estimate blocks, and the variable run was flagged as 1; • Pass 1 to Pass 3 reflects the level of confidence decreasing from the best until the worst level of confidence in the estimation. For these steps, samples below 175 g/t Au were used; • Following the grade estimation, sectional and plan views of the block model were validated visually with the panels samples. Grades, density, oxidized zone, and survey zones were checked as were the blocks to confirm that they fit the triangulations. During the interpolation, some blocks were not estimated; • A global comparison of the input and model averages indicates a fair comparison of both. The grades over the quartiles are better distributed in the blocks than in the declustered dataset. This smoothing is intrinsic from the interpolation methodology. The average of the blocks has a value between the median and the third quartile, while the declustered dataset has a value higher than the third quartile. Nevertheless, the averages have similar values comparing the blocks and the declustered dataset; • To test the local estimation of the mean within each zone, moving window input-output mean grades were computed. Narrow slices were generated through each zone along northing, easting and elevation, and for each slice, the panels mean grades were compared to the tonnage weighted mean grade of the blocks. Locally, where the number of input samples were poor, there was some overestimations or sub-estimations, all in the third pass;

Criteria	JORC Code explanation	Commentary
		• During the construction of the block model there was inserted the variable "mine" to flag what was already mined and what was remaining. Orinoco considers as mined the blocks within the mine solids (e.g. decline shaft, drives, slot raises and stopes), all delivered by the mine crew.

Steps (run)	Samples Search Orientation (°)			Sample Search Range (m)			Samples						Type
	Azimuth	Plunge	Dip	Major Axis	Semi-Major Axis	Minor Axis	Discretiz.	Min.	Max.	Max. per octant	Min. DH	Max. DH	
175 g/t Top-cut	255	-23.5	14	1	1	0.5	2x2x2	1	4	x	x	x	OK and ID2
Pass 1	255	-23.5	14	19	18	0.5	2x2x2	4	8	2	x	x	OK and ID2
Pass 2	255	-23.5	14	38	36	1	2x2x2	3	12	x	x	x	OK and ID2
Pass 3	255	-23.5	14	76	72	2	2x2x2	2	16	x	x	x	OK and ID2

Criteria	JORC Code explanation	Commentary
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnages were estimated on a dry basis with bulk densities assigned by oxidation zone on basis of volume displacement measurements of representative core samples.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The cut-off grades were calculated to report the Mineral Resource contained and to demonstrate reasonable prospects for eventual economic extraction. A three (3) g/t Au cut-off has been used in consideration that grades are sufficient for a likely underground mining method.
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.*	• The "Slash and Drift" mine method has been chosen owing to the shallow dip (< 30 degrees) of the mineralised veins, operational ease and economics. By utilising this methodology, the mineralisation is planned to be extracted with minimal waste rock dilution, therefore; the waste rock stays in its natural position whilst the mineralisation is extracted. There are no fixed minimum or maximum vein sizes attributed to this system. The extraction of the lode requires minimal explosives, minimal waste rock haulage and creates a neat interface between the mineralised and waste rock surfaces; ➔ Relatively small development drives of 2.5m x 2.5m are essential to follow the high-grade mineralisation and to open access for stoping and ventilation. The weak nature

Criteria	JORC Code explanation	Commentary
	Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	of the lode and high-grade combine to eliminate a classic room and pillar mining method as too much gold would be left in pillars. The use of the pumpable cement packs (CemRite) will be used as a pillar replacement method, in combination with yield pillars; ➔ The development of an inclined shaft down dip in the mineralised vein, will also produce gold mineralisation. This shaft will be more centralized in the mine and drives will be established to both sides of the shaft. The drives will have shanty back profile, the lower section will be 2.5m high and the higher section a maximum of 3m. The slash will be 5m long (4.6m in plan) and will be undertaken from both sides of the drives; ➔ The method used in level drives followed by slot rises and stripping of the rises. This requires scrapers for cleaning. The sides of the rise are stripped only to the width of the ore to minimise dilution and improve the strength of pillars and packs. The pillars are yielding pillars and cross-cut drives are developed through the pillar to extract more ore and for ventilation; • The current (CemRite) cement packs are suited to the current mine conditions These packs can be used to ensure maximum ore extraction and will perform similarly to yield pillars (e.g. pillars with a 1:1 width to height ratio).
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.*	• The mineralised material from Cascavel is processed in a plant located at the mine site. Gekko Systems (**Gekko**) originally designed the plant. Orinoco purchased the crushing circuit in Brazil (**Simplex**) and gravity circuit in Australia (from Gekko) and shipped it to Cascavel; • The Cascavel mineralisation is processed by a gravity recovery method, with crushing in three stages, concentration in a gravity circuit and recovery on a shaking table, without the use of chemicals. Assays by size fraction and gold distribution of the lode indicates that 85% of the gold is contained between 250µm and 850µm; • The mineralisation from the mine is trucked and stored on the process plant ROM pad. A loader recovers the mineralisation and loads it onto the static grizzly screen to scalp out oversize (+300mm) rocks. The undersize is stored in the primary ROM bin. Material from the primary bin is drawn out of the bin using a belt feeder which transfers the material onto the jaw crusher feed conveyor. The jaw crusher feed conveyor delivers the material into the primary crusher. Primary crushed material is conveyed to the secondary crusher and the conic crusher product feed is delivered to a wet vibrating screen. The oversize material from the screen is directed to the tertiary Vertical Shaft Impactor (**VSI**), and the crushed material is recycled back to the vibrating screen via conveyor. The undersize from the screen reports to the JIG feed hopper, where the slurry is pumped to the gravity circuit; • The slurry from the screen undersize is pumped to the gravity circuit to an inline pressure

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		jig (**IPJ**). The IPJ separates material into two products: heavy (**concentrate**) and light (**tails**). The IPJ tails report to a Knelson scavenger concentrator and the IPJ concentrate reports to the cleaner In Line Spinners (**ISP**). Two (2) ISPs are arranged in series to provide sufficient residence time for gold recovery and to cover for alternate dumping cycles. The ISP tails report to the ISP tails hopper, where a pump pumps the slurry to the feed box of the vibrating screen in the crushing circuit. The concentrates from all three concentrators flow by gravity to the concentrate hopper. The concentrate pump runs continuously the concentrate material to the Gold Room. The final tails are directed in the Thickener and then to the dewatering stalls; • The concentrates from the gravity circuit are collected in the storage cone which sits above a Gemini gravity table, in the Gold Room. The rich concentrates recovered on the shaking table are filtered in a pressure filter and then dried. The dried concentrate is prepared with a flux mix (Borax, Silica, Soda Ash and KNO3) and added to a preheated furnace. A cascade mould table is used produce doré bars; • The Knelson tails (**final tails**) are directed from the gravity circuit to the Thickener, where the thickener underflow runs to the stalls to a dewatering, where the sand is drained of free water and then removed for dry storage, from the circuit into a truck for transport to a storage area. Thickener overflow water is pumped to a water process tank to reuse in processing plant. Raw water is delivered to the raw water tank area by two boreholes.
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 greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Orinoco is running an environmental impact study and during September will deliver it to the Environmental Agency.

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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.*	• Bulk density measurements have been conducted at Cascavel based on drill core samples using Volume Displacement methodology. Based on 411 measurements, 30 for oxidized zones and 381 for sulphide zones, it was determined density values of 1.90 g/cm^3 and 2.6 g/cm^3 respectively, using the averages of the distributions. In both distributions, the average is coincident with the median and mode.
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 confidence levels were assigned based on search pass, but the resources classification account all relevant factors including level of confidence in the estimates, reliability of the input data, confidence in continuity of geology, quality, quantity and distribution of the data; • All estimated blocks were classified as Inferred due to the high variability of the grades; • This appropriately reflects the Competent person view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates*	• The current resource model was prepared by Thiago Vaz Andrade from Orinoco and it was not externally audited; • These Tables form part of extensive internal documentation to provide for any independent consultant in a future audit. • An external review of the Mineral Resource Estimate has been undertaken by Mr Richard Buerger, a full-time employee of Mining Plus.
Discussion of relative	• *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*	• The relative level of confidence of the Mineral Resource estimate is reflected in the classification report, being all passes classified as Inferred due to the high nugget effect in the deposit; • Passes 1 and 2 of the estimation have sufficient level of confidence to form the basis of mine

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accuracy/ confidence	*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.*	designs and production scheduling.

Forward-Looking Statements:

This Announcement includes "forward-looking statements" as that term within the meaning of securities laws of applicable jurisdictions. Forward-looking statements involve known and unknown risks, uncertainties and other factors that are in some cases beyond Orinoco Gold Limited's control. These forward-looking statements include, but are not limited to, all statements other than statements of historical facts contained in this presentation, including, without limitation, those regarding Orinoco Gold Limited's future expectations. Readers can identify forward-looking statements by terminology such as "aim," "anticipate," "assume," "believe," "continue," "could," "estimate," "expect," "forecast," "intend," "may," "plan," "potential," "predict," "project," "risk," "should," "will" or "would" and other similar expressions. Risks, uncertainties and other factors may cause Orinoco Gold Limited's actual results, performance, production or achievements to differ materially from those expressed or implied by the forward-looking statements (and from past results, performance or achievements). These factors include, but are not limited to, the failure to complete and commission the mine facilities, processing plant and related infrastructure in the time frame and within estimated costs currently planned; variations in global demand and price for gold materials; fluctuations in exchange rates between the U.S. Dollar, the Brazilian Real and the Australian dollar; the failure of Orinoco Gold Limited's suppliers, service providers and partners to fulfil their obligations under construction, supply and other agreements; unforeseen geological, physical or meteorological conditions, natural disasters or cyclones; changes in the regulatory environment, industrial disputes, labour shortages, political and other factors; the inability to obtain additional financing, if required, on commercially suitable terms; and global and regional economic conditions. Readers are cautioned not to place undue reliance on forward-looking statements. The information concerning possible production in this announcement is not intended to be a forecast. They are internally generated goals set by the board of directors of Orinoco Gold Limited. The ability of the company to achieve any targets will be largely determined by the company's ability to secure adequate funding, implement mining plans and resolve logistical issues associated with mining. Although Orinoco Gold Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

Cascavel JORC Compliance

*The Information in this report that relates to exploration results or mineral resources for Cascavel is based on information compiled by Mr. Thiago Vaz Andrade, who is a member of the Australasian Institute of Mining and Metallurgy. Mr. Andrade is a full-time employee of Orinoco Brasil Mineração Ltda (**OBM**) (a subsidiary of the Company). Mr Andrade has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that 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. Andrade consents to the inclusion of this information in the form and context in which it appears in this report.*

The information in this release that relates to the Exploration Target has been compiled by Mr. Richard Buerger (BSc.). Mr. Buerger is a full-time employee of Mining Plus Pty Ltd and has acted as independent consultant on the Exploration Target estimation. Mr. Buerger is a Member of the Australian Institute of Geologists and has sufficient experience with the style of mineralisation, and deposit type under consideration and to the activities undertaken to qualify as 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. Buerger consents to the inclusion in this report of the contained technical information relating the Exploration Target estimation in the form and context in which it appears.