



Bonanza Grades in Initial Mining Areas at Cascavel

*New underground sampling returns gold grades up to 15 Oz a tonne in Cascavel
Level Drives within the first high-grade shoots in the mine plan*

Highlights

- Initial results from underground sampling of the mine development at Cascavel confirm the high-grade nature of the initial stopes.
- Level 0 Central has entered a high-grade shoot with 0.5m high panel sample results from along the (sub horizontal) strike of the initially planned stopes returning:
 - **2.9m @ 77.5g/t Au** (left drive wall) interval ends in high grade material;;
 - **2.2m @ 233g/t Au** (right drive wall) interval ends in high grade material, including:
 - **1.08m at 469g/t Au** from the last received assay.
- Sampling after this point has continued to yield significant visible gold – *assays pending*.
- Level 0 North is entering an ore shoot with the second last panel sample in this batch of assays returning **0.5m @ 70g/t**.

Orinoco Gold Limited (ASX: OGX) is pleased to report outstanding results from the initial batch of assays received from underground mine sampling at its flagship **Cascavel Gold Mine** in central Brazil as it advances towards initial production early next year.

The bonanza results, which include a **1.08 metre long panel sample grading almost 15 ounces to the tonne (469g/t Au)**, highlight the exceptionally high-grade nature of the gold-bearing system at Cascavel and support the Company's mine plan.

The results are from the first two Level Drives that have been opened up at Cascavel and, together with the bulk sample from the main incline shaft, provide further confirmation of the Cascavel geological model where the mineralised body consists of both high and lower grade shoots.

In particular, the results demonstrate the high grades being encountered in the areas from which initial stoping will occur (including the previously reported exploration decline results of 15m @ 88g/t).

Please refer to the section below entitled "Panel Sampling & Application of Results to Head Grade" for an explanation of how to consider the impact of mining dilution on these 0.5m high panel sample results.

The results from Level 0 Central are interpreted to represent the transition from a lower grade shoot (4.6m @ 8.9g/t on the right wall and 1.1m @ 2.5g/t on the left wall) into a high-grade shoot (2.9m @ 77.5g/t Au on the right wall and 2.2m @ 233g/t Au on the left wall of the Drive), from which Cascavel's first stopes will commence.

The last assay received from this zone was **1.08m @ 469g/t Au** with further significant high-grade gold continuing to be evident from panning of the face samples collected from each advance in the Level Drive (see *Figure 1 – assays pending*).

A 200kg bulk sample collected from the main incline shaft – interpreted to be within a lower-grade shoot in an area of thickening mineralisation at the border of the Central and Southern portions of the mine – returned an average grade of 8.4 g/t Au. This sample was comprised of vein and alteration over a width of approximately 1m.

Orinoco's current mine plan encompasses the mining of the high-grade shoots through small-scale room-and-pillar mining while the lower grade shoots are currently scheduled to be left as rib pillars. However, the lower grade areas will be further assessed for mining as both mine and plant costs are better understood once full production is underway.



Figure 1. Panning of a 1kg sample consisting of vein and alteration from the face of Level 0 Central approximately 2m beyond the assays reported in this announcement. Assays from the corresponding panel samples taken from the walls are pending.

Panel Sampling & Application of Results to Head Grade

Samples are collected from the mineralised zone continuously along each wall of the Level Drives. Samples are collected from contiguous 'Panels' of 0.5m height (although the dimensions of each panel will vary, and are reported fully in Table 1). Each advance in the Level Drives is followed by sampling and panning of the face of the Drive to give immediate

information regarding the qualitative gold grade of mineralisation, and is followed by sampling of the walls of the Drive in 'panels' to submit for assay.

Panel samples, as opposed to channel samples provide the following benefits:

- Channel samples are not contiguous with one another, and are collected from a narrow vertically cut channel from the floor to the ceiling of the drive;
- Panel samples provide for a larger volume of material to be collected and assayed to obtain a more representative sample of the gold bearing material than either a drill-hole or a channel sample can provide;
- Cascavel is a sub-horizontal mineralised structure (dipping at 30-35° to the south-west). Contiguous panel samples allow for the horizontal sampling of the ore zone in the Drives and subsequent estimation of the range of possible head grades from those parts of the mine.

Despite the advantages of taking a panel sample as opposed to a channel sample, panel samples still represent an insufficient quantity of material to account for the coarse gold effect. Several tonnes would need to be sampled in order to obtain a representative grade from any particular area within the mine. Compare the results of the last two reported panels from Level 0 Central : Right wall 56.6g/t Au while the left wall returned 469g/t Au. These two samples are located approximately 2.2m along plunge from each other and each weighed ~10kg.

Consequently, Orinoco considers panel samples, with the application of an appropriate mining dilution factor, to be the best *guide* to the expected head grade of material mined from the stopes, however they do not present a definitive grade estimate of any area.

The mineralisation in the Central part of Cascavel is generally around 0.5m to 0.7m thick. Orinoco's planned minimum stope height in a room-and-pillar stope is 1.6m, meaning that reported results in the Central portion of Cascavel would need to be diluted by a factor of approximately three to indicate a potential head grade for material delivered to the mill from a stope in this area.

The mining dilution effect has to be taken into account when assessing the results of the mineralised zone samples discussed in this release.

Orinoco's Managing Director, Mr Mark Papendieck, said the impressive panel sampling results from the initial mining areas at Cascavel gave the Company confidence both in its geological model for Cascavel and its mine plan and strategy.

"The results clearly demonstrate the high-grade nature of the mineralisation at Cascavel and, while we have clearly outlined the caveats that need to be placed on the grades in terms of the inherent limitations of the sampling method and the impact of dilution, the results clearly show that we have an exceptionally rich gold-bearing system on our hands.

"Development work is proceeding well and our overall schedule remains on track for first gold production early next year," he added. "It's great to see results like this as we move towards first production with Cascavel continuing to surprise us on the upside."

-ENDS-

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Competent Person's Statement:

The information in this announcement that relates to Exploration Results is based on information compiled by Dr Klaus Petersen who is a member of the Australasian Institute of Mining and Metallurgy and CREA and Dr. Marcelo Juliano de Carvalho who is member of the Australasian Institute of Mining and Metallurgy. Dr Klaus Petersen and Dr. Marcelo Juliano de Carvalho are employees of Orinoco Gold Limited and have sufficient experience, which is relevant to the style of mineralisation under consideration and to the activity that they are 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. Dr Klaus Petersen and Dr. Marcelo Juliano de Carvalho consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.

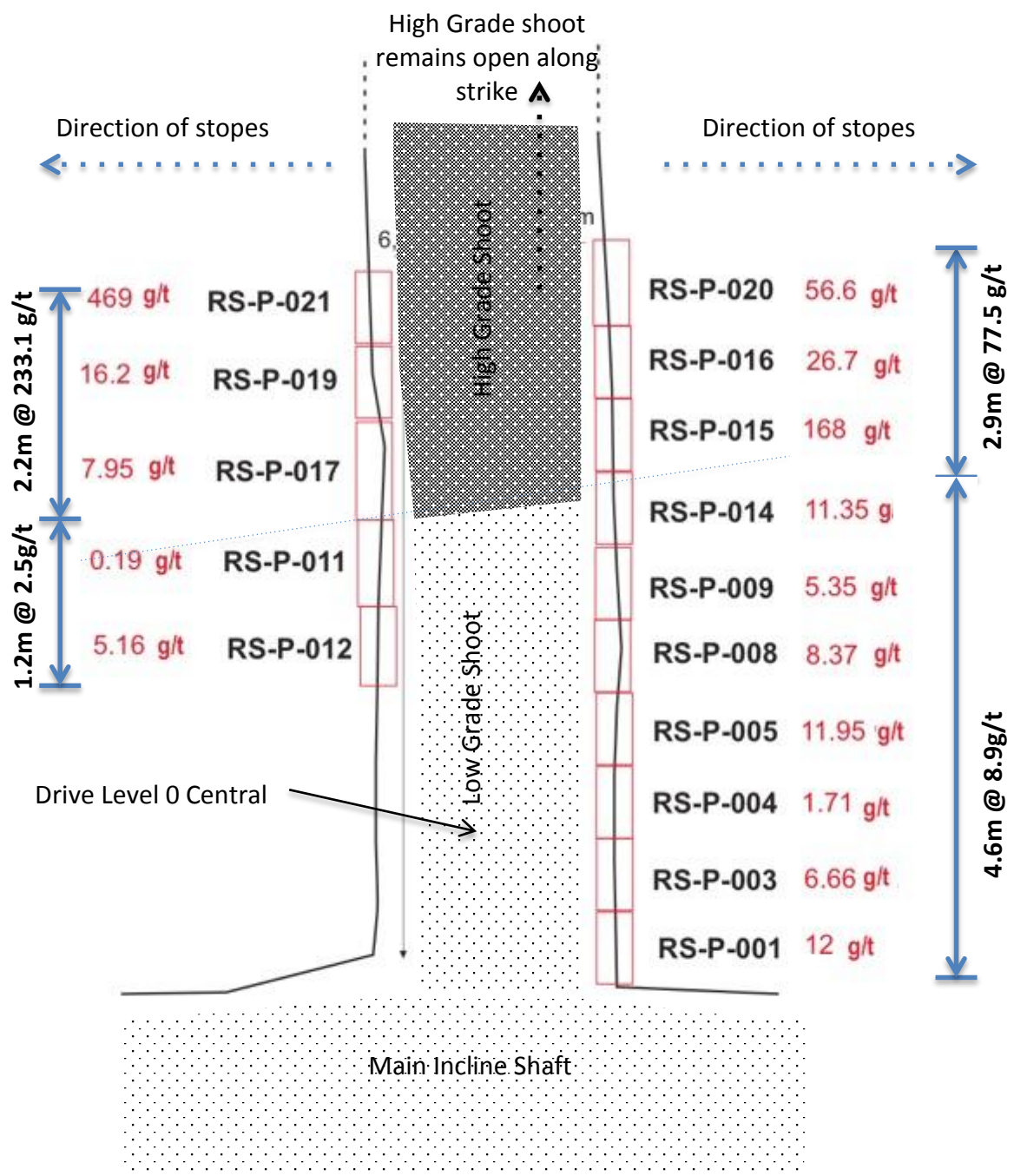


Figure 2 – Map of Level 0 Central showing the location of the panel samples.

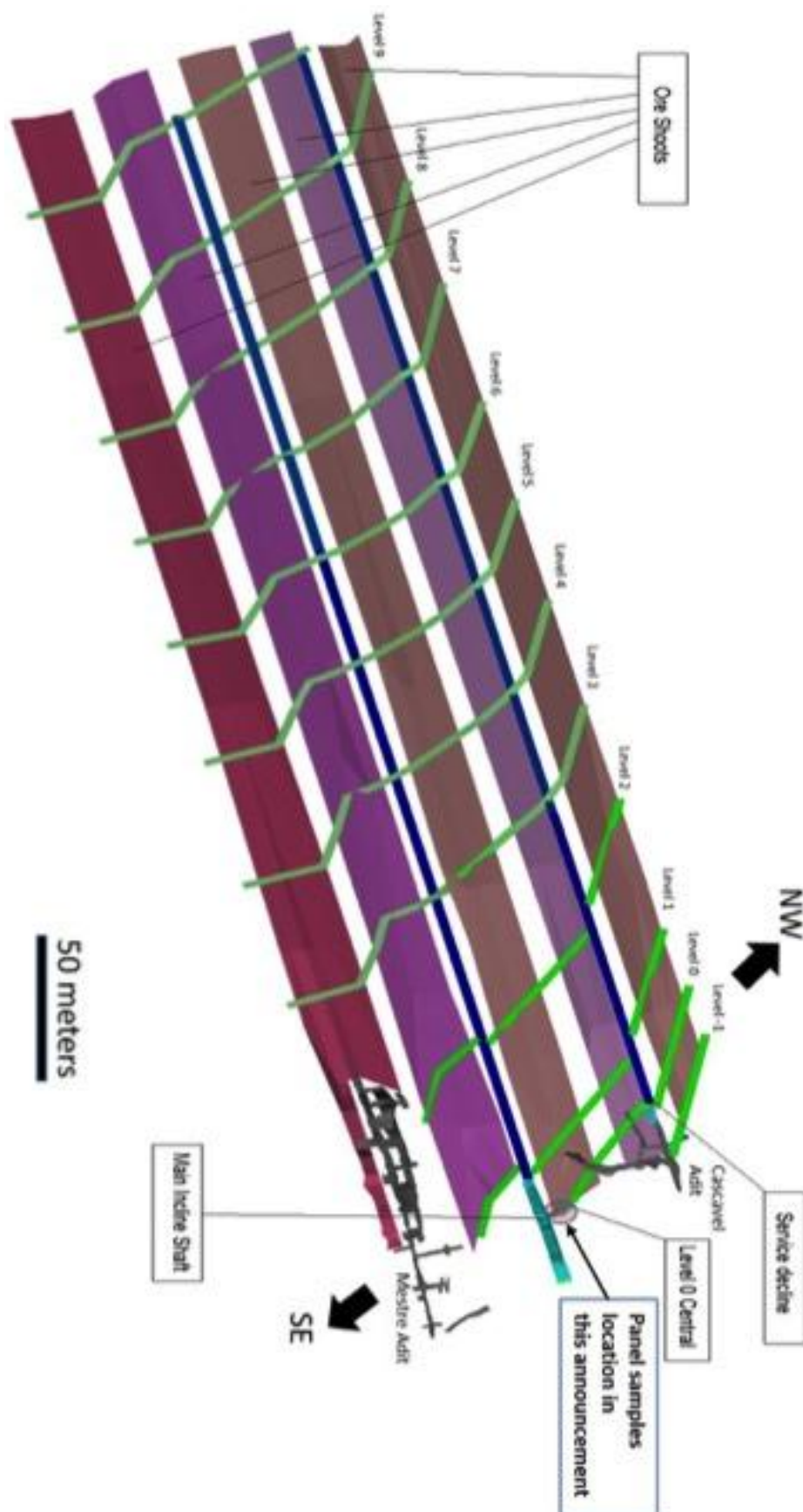


Figure 3 – Initial Mine Plan showing location of Level 0 Central.

Section 1 Sampling Techniques and Data

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> Continuous “panel sampling” has been undertaken across the mineralised zone at Cascavel. Panels measuring approximately 0.5m x 0.5m are marked up on the walls of the drives and are contiguous (each panel abutting another panel) along both walls of the decline (or drives) with the sample from each panel being composed of chips collected from the entire area of each panel. The panel samples in the current release Dive 0 North is a section sub-parallel to the strike and almost perpendicular to the dip (the Level 0 cross-cuts sections of the high-grade shoots that dip to the SW). Where a vertical height of more than 0.5m is assessed as requiring sampling, contiguous panels will be cut below or above a panel. Each panel sample (approximately 4-11kg in weight) is crushed/milled/homogenised and split to obtain a 1kg sample in the laboratory and that 1kg sample is submitted for a screen fire assay. Panel sampling has been undertaken along the mineralised vein/s and alteration and screen fire assay has been used to obtain correct grades of each panel. This assay procedure is not only more expensive but needs more time for the lab to screen larger amounts of the samples instead of splitting fractions in an ordinary fire assay procedure. All data is stored in the database following appropriate QA/QC procedures.
<i>Drilling techniques</i>	<ul style="list-style-type: none"> No drilling is reported in this announcement.
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> No drilling is reported in this announcement.
<i>Logging</i>	<ul style="list-style-type: none"> No logging is reported in this announcement
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> Chip samples went sent to the laboratory without drying or splitting. Blanks and standards are inserted into panel samples batches;
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> In the lab, all samples are dried at 100°C and crushed to 9 mesh in a jaw crusher. The samples go to a Jones or Rotary splitter and 500g of material is separated and powdered to 150 mesh. The 150# pulp is quartered and an aliquot of 50g is obtained. This aliquot is analysed by Fire Assay in non-mineralised samples. Metallic Screen Fire Assay is applied if the sample is considered mineralised. Selective samples are analysed in ICP-MS (Inductively Coupled Plasma Atomic Emission Spectrophotometry), with a multi-acid digestion for 32 elements.
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> Standards: (insertion of 1 known standards in each 20 samples approximately): If less than 10% of samples are outside of the expected mean + 2x Std. Dev, the results are validated. If less than 10% of the samples report results outside the Mean + 3x Std. Dev, but there are standards between the first and these two points - the results are validated, but the Lab is notified. If more than 10% is

Criteria	Commentary
	<p>outside the Mean + 3x Std. Dev, the batch (40 samples) is rejected, an investigation is required and a re-analysis of the batch is made;</p> <ul style="list-style-type: none"> • <i>Blanks</i> (1 blank insertion in each 20 samples approximately): If less than 5% are above 5x the detection limit of the Lab, the results are validated. If more than 5% is above 5x the detection limit, the Lab is notified and the batches with failure are re-analysed; • Duplicates (insertion in each 20 samples – Bias control): Project Duplicates are core quarter and Lab duplicates are Pulp Duplicates.
<i>Location of data points</i>	<ul style="list-style-type: none"> • The topographic survey on the underground workings has been done by a qualified surveyor using a Total Station (RUIDE), model RTS 822R³. The survey uses laser for the location of channels, panels and underground workings. • The grid system used is UTM South American 1969 - Zone 22 S; • The topography crew uses surveyed base stations to guarantee the quality of their surveying.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • Panel samples are approximately 0.5 x 0.5 metres and continuous along the mineralised zone.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • The data orientation is intended to cover the mineralised zone approximately along strike and down dip. Data is collected from all underground openings
<i>Sample security</i>	<ul style="list-style-type: none"> • Samples are stored in plastic sample bags, stored in a dedicated secure facility on site prior to transport to the lab. • All laboratory pulps are stored in the storage facility onsite in boxes supplied by the labs, stacked in dry places.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> • No audit or review has been undertaken regarding the results reported in this announcement.

Section 2 Reporting of Exploration Results

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

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> The Faina Goldfield project is 70% owned by Orinoco do Brasil Mineração Ltda, which in turn is 100% owned by Orinoco Gold Ltd. The 30% partners are free carried during the exploration stage until a decision to mine. The Sertão and Antena mining leases are owned 100% by Orinoco. Some locations within the Cascavel project have archaeological sites that are required to be mapped and photographed prior to removal of the sites. The key Cascavel tenement has a granted trial mining licence for 50.000 tonnes ROM for underground operation, an installation licence for a up to 50.000 tonnes per year gravity crushing and concentration plant and granted Environmental/Archaeological licences.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> This release reports results from underground working at Orinoco's Cascavel Gold mine. No earlier exploration is reported in this release
<i>Geology</i>	<ul style="list-style-type: none"> CASCAVEL: Cascavel is best characterised as an Archean shear hosted Orogenic gold system. The structurally controlled mineralised quartz vein/s, veinlets and related sericite alteration evident in the decline and from drilling are continuous both along strike and down-plunge with some minor off-sets caused by later E-W and N-W striking faults (associated with the Tinteiro mineralisation). Visible offsets are no greater than 1m in the walls of the decline. These late faults also cause a slight rotation between the blocks, slightly changing the dip of the veins. Repetition of high grade shoots along the strike has been confirmed by bulk and panel sampling and with visible gold up to 10mm in size evident in the walls of the decline.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> No drill holes are reported in this announcement.
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> To composite the panel samples the results were treated as a drill core section. The coordinates of the middle point at the left edge of each panel and vector data of azimuth and dip angles of a middle line in the panels was precisely surveyed. Those lines were used for the from/to data on the assay table. To give the correct weight for the grades in the panels due to minor differences in the length, 0.5 metres was considered 100% and all grades went normalised to this length. The normalised intervals were used to obtain the composite grade for the section.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> Reported rock chips are single point, selective samples of outcropping lithologies.
<i>Diagrams</i>	<ul style="list-style-type: none"> Diagrams are attached to the current announcement.

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<i>Balanced reporting</i>	<ul style="list-style-type: none"> This announcement is a comprehensive report of the results covered by this announcement.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> Only assays for panel samples are reported in this announcement.
<i>Further work</i>	<ul style="list-style-type: none"> Drilling and ongoing underground development is required to test the identified targets as the mine is developed.