



## Gravity Gold Recoveries of 94% Achieved at Cascavel

*Results highlight potential for low-cost gold operation*

### Key Points

#### Cascavel Gold Exploration Program:

- Latest bench scale testing of a 200kg sample successfully optimises gravity recoveries:
  - Gravity gold recoveries of 94% achieved from a coarse grind of 1mm in a simple gravity circuit.
- 28-tonne bulk sample processed at nearby pilot plant:
  - Concentrate currently being refined to calculate total recovered gold.
- Visible gold encountered in drilling being completed in preparation for the exploration decline.

#### Tinteiro IOCG Exploration Program:

- Rock chip sampling and mapping of newly defined 4.5km target identifies further gossans, breccias and old workings.

Orinoco Gold Limited (**ASX: OGX**) is pleased to report further encouraging results from exploration and bulk sampling activities at its 70%-owned Faina Goldfields Project in central Brazil.

#### **Cascavel Gold**

##### Metallurgical Testing

Bench-scale metallurgical testing has been completed on a 200-kilogram sample which was collected selectively from the gold-bearing veins in the Cascavel winze during September 2013. **Gold recoveries of 94%** were achieved from this sample with the ore requiring only a very coarse grind (95% passing 1mm).

The average head grade of the 200-kilogram sample of vein material was **16g/t Au** and the reported gravity results were achieved using only shaking tables (refer Table 1 & 2 for full details) to recover the gold. The results indicate that a high proportion of the gold at Cascavel is amenable to recovery via gravity methods.

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#### Issued Capital

76,500,001 Ordinary Shares  
15,000,000 Performance Shares  
12,500,000 Listed Options  
17,900,000 Unlisted Options

#### ASX Code

OGX (Ordinary Shares)  
OGXO (Listed Options)



These excellent gravity recoveries at such a coarse grind size have positive implications for the potential development of a gold operation at Cascavel, with a gravity only operation requiring lower capital and operating expenditure, and having a smaller environmental footprint, than a circuit requiring cyanide to recover the gold.

### Drilling

Recent drilling has been undertaken at Cascavel ahead of a planned exploration decline to obtain important geotechnical and structural information. Six diamond drill holes are being completed between the Cascavel winze and the Mestre winze with all holes intersecting the mineralised package of stacked quartz veins and one hole containing visible gold. Assays will be received for these holes during December.

### Bulk Sample

The processing of the bulk sample has been completed and the gold concentrate is currently awaiting refinement, which should occur over the next 7-10 working days. After weighing all of the processed material, a total of 28.6 tonnes of material from Cascavel has been processed. This material represents a non-selective sample containing both the barren host rock (quartzite) and the mineralised quartz veins and is intended to represent an initial indication of a diluted mining grade of the area immediately surrounding the Cascavel winze.

As a result of additional time being available at the metallurgical facility, Orinoco is also now processing approximately 5 tonnes of a previously collected bulk sample from shafts from its **Eliseo Project** through the pilot plant.

### **Tinteiro: IOCG**

#### Exploration Update

Follow-up fieldwork at the recently announced Tinteiro target has resulted in the identification of previously unknown gossans, breccias and old artisanal workings. The Tinteiro trend is a +4km set of geophysical and geochemical anomalies associated with favourable structural sites, particularly at their edges. Current exploration at Tinteiro is focussed on delineating drill targets for an initial drilling campaign expected to take place in early 2014.

### **Management Comment**

Commenting on the latest metallurgical results from Cascavel, Orinoco's Managing Director Mark Papendieck said: "We are very pleased with these initial results which confirm that a very high percentage of the gold is amenable to gravity recovery. Bench-scale metallurgical testwork shows that we can recover 94% of the gold from a gravity circuit alone, which clearly has some very positive implications for the Cascavel Project.

"When combined with the fact that these excellent gravity recoveries were achieved with a very coarse grind, we remain confident that any potential operations at Cascavel will have significant advantages in terms of both capital and operating costs given the free nature of the gold," Mr Papendieck said.

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**Competent Person's Statement:** The information in this presentation 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. Dr Klaus Petersen is an employee of Orinoco Gold Limited and has 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 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Klaus Petersen consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

### **Metallurgical Testing**

A 200kg quartz vein sample was crushed using a jaw crusher and then classified using a 3.35mm screen.

The remaining +3.35mm fraction was returned to the Jaw crusher until 100% of the sample passed through the screen following which the entire <3.35mm product was homogenised in piles and fed into a rotating splitter. This procedure permitted the uniform distribution of the sample into splits of approximately 2kg.

Splits were then milled to <1mm (P95%), taking 7.35 minutes and then screened and assayed by fraction (fire assays conducted by ALS Global laboratories) as shown in Table 1:

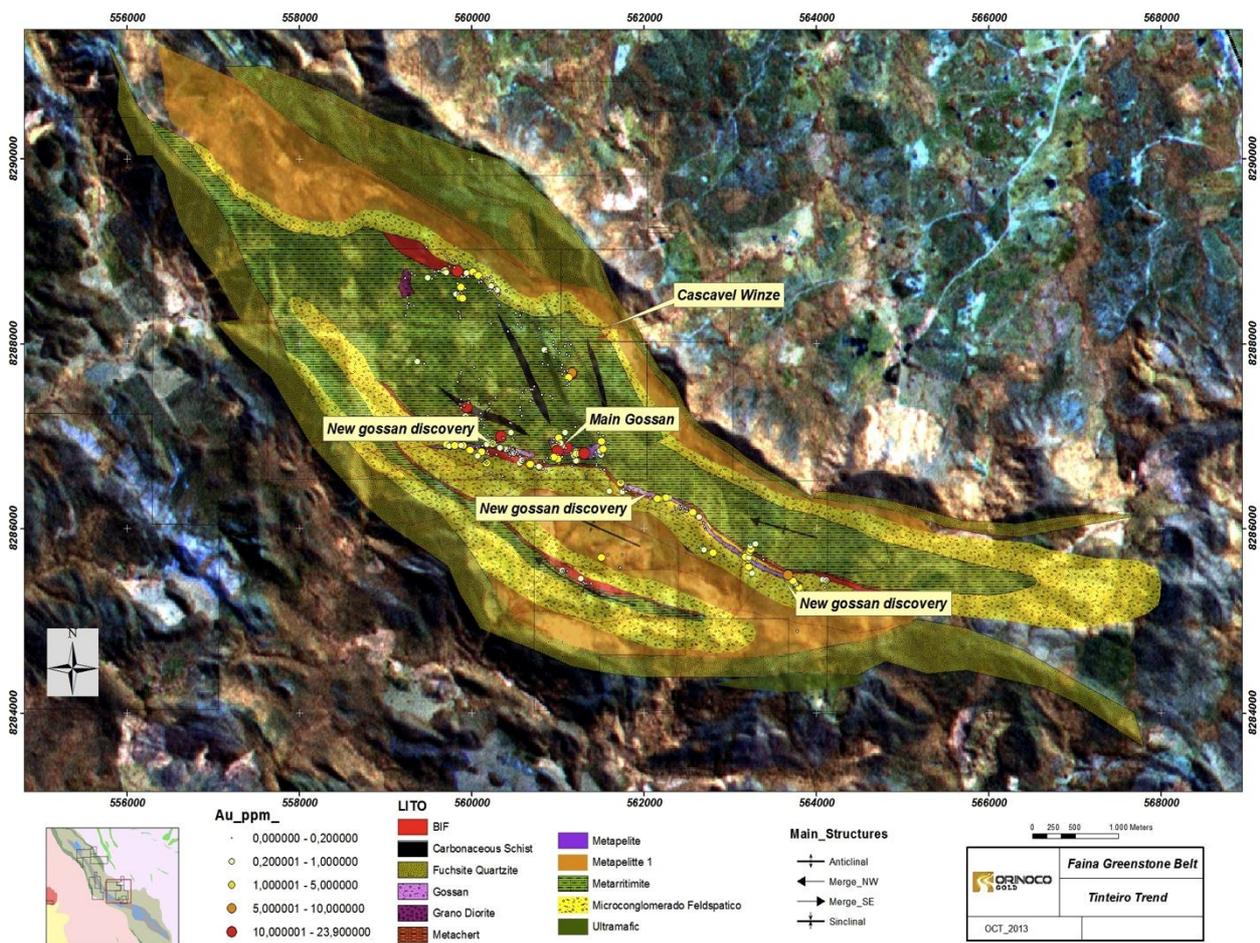
**Table 1:**

<b>Grain fraction assay (&lt; 1mm)</b>			
<b>Sreen (mm)</b>	<b>Acumulated retained (%)</b>	<b>Grade Au(ppm)</b>	<b>Distribution of Au per grain size (%)</b>
1	3.48	>100	16
0.85	7.61	5.1	1
0.5	26.13	41.8	35.5
0.3	40.93	26.2	17.7
0.212	49.79	31.8	12.9
0.15	58.11	16.5	6.3
0.106	68.37	10.5	4.9
0.075	77.09	7.7	3.1
0.053	82.46	3.1	0.8
0.045	85.36	5.8	0.8
0.038	87.05	3.8	0.3
<0,038	100	1.4	0.8

The <1mm product was then concentrated on a shaking table (model: MC, with 18" by 40" size). Results are shown in Table 2:

**Table 2**

Bench test for Cascavel ore <1.00mm (95%)						Table variables	
Product identification	Weight solids (g)	Mass		Grade	Metalic distribution	Frequency	AMPLITUDE (mm)
		%	ppm Au FINAL	Calculated	%		
Feed	15173.38	100.00	<b>14.87</b>	15.37	<b>100.00</b>	~ 120	16
Concentrate	6928.60	45.66	<b>31.84</b>		<b>94.56</b>	Angle	
Tailings	8244.78	54.34	<b>1.53</b>		<b>5.44</b>	8°	



**Figure 1.** Geological map of the Tinteiro and Cascavel targets, showing:

- The location of the Cascavel winze, from where the material for the 200kg metallurgical tests was collected.
- Rock chip anomalies (gold) at the Tinteiro target.
- Location of newly mapped gossans along the Tinteiro trend.