



**ASX ANNOUNCEMENT**  
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**METALLURGICAL TEST WORK - TUCANO**

Beadell Resources Limited (**Beadell**) is pleased to release results of extensive grind and recovery test work that has been carried out under the supervision of feasibility study manager, Ausenco, over the preceding months as part of the Definitive Feasibility Study for the Company's Tucano Gold Project in Brazil. As indicated previously, both the oxide and sulphide components of the ore demonstrate excellent free milling characteristics with uncomplicated gold extraction achieved.

The comprehensive metallurgical testwork comprised an extensive selection of oxide and sulphide samples from 20 diamond drill holes specifically targeted for the test work across the main deposits. A total of 2.5 tonnes of samples were air freighted to Australia and analysed at Ammtec Laboratories in Perth with a summary of results presented in Appendix A.

After analysing these results, it has been resolved to proceed with a plant design optimised to grind the ore to P<sub>80</sub>S of 75 micron with a 24 hour leach duration. Preliminary work is indicating open pits will contain a split of 47% oxide ore and 52% sulphide ore. Taking into account the additional large inventory of Spent Ore and Low Grade Stockpiles (7.4 million tonnes), all of which are oxide, an estimated total treated ore inventory split of 62% oxide and 38% sulphide is likely.

Managing Director Peter Bowler commented "These exceptional test results validate our strategy to construct an uncomplicated Carbon in Leach (CIL) gold plant. We can now model indicative recovery numbers of 96.5% for the oxides and 93% for the sulphides into our feasibility study which continues apace".

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## APPENDIX A

### 1 INTRODUCTION

Samples of the four composite samples, Taperebá AB oxide, Taperebá AB sulphide, Urucum oxide and Urucum sulphide were subjected to a series of gold leaching tests to assess the influence of grind size and leach time on gold extraction.

The standard conditions for each leach test were:

- Initial cyanide concentration of 0.075% and maintained above 0.05%
- Oxygen sparge to maintain dissolved oxygen levels to > 20 ppm
- 72 h leach duration, with samples taken at 2 h, 4 h, 8 h, 12 h, 24 h, 36 h, 48 h and 72 h

The only variable tested was grind size, with tests completed at P<sub>80</sub>s of 53 µm, 75 µm, 106 µm and 150 µm

### 2 RESULTS

The results of the tests are summarised in Table 2-1 to Table 2-4. Note that the gold head assays were performed in triplicate, and each of the three assays for each sample is reported in the rows entitled 'Assay Head Grade'.

**Table 2-1 – Grind Optimisation Leach Test Results – Tap AB oxide**

Parameter	Unit	Test 1	Test 2	Test 3	Test 4
Calc. Head Grade	g/t Au	2.95	2.71	2.62	2.64
Assay Head Grade	g/t Au	2.60, 2.31, 2.97	2.60, 2.31, 2.97	2.60, 2.31, 2.97	2.60, 2.31, 2.97
Grind size, P <sub>80</sub>	µm	150	106	75	53
Gold extraction at 24 h	%	94.88	97.71	97.62	98.61
Gold extraction at 48 h	%	97.58	98.69	98.64	99.62
Gold extraction at 72 h	%	99.32	99.63	99.62	99.62

**Table 2-2 – Grind Optimisation Leach Test Results – Tap AB sulphide**

Parameter	Unit	Test 5	Test 6	Test 7	Test 8
Calc. Head Grade	g/t Au	1.52	1.61	1.59	1.60
Assay Head Grade	g/t Au	2.15, 1.98, 1.64	2.15, 1.98, 1.64	2.15, 1.98, 1.64	2.15, 1.98, 1.64
Grind size, P <sub>80</sub>	µm	150	106	75	53
Gold extraction at 24 h	%	84.10	89.28	94.76	96.25
Gold extraction at 48 h	%	85.85	90.94	95.61	96.25
Gold extraction at 72 h	%	87.53	92.53	95.61	96.25

**Table 2-3 – Grind Optimisation Leach Test Results – Urucum oxide**

Parameter	Unit	Test 9	Test 10	Test 11	Test 12
Calc. Head Grade	g/t Au	2.42	2.39	2.48	2.55
Assay Head Grade	g/t Au	1.83, 2.10, 2.62	1.83, 2.10, 2.62	1.83, 2.10, 2.62	1.83, 2.10, 2.62
Grind size, P <sub>80</sub>	µm	150	106	75	53
Gold extraction at 24 h	%	93.70	96.56	97.19	97.52
Gold extraction at 48 h	%	96.47	97.67	98.27	99.10
Gold extraction at 72 h	%	97.52	98.74	98.79	99.61

**Table 2-4 – Grind Optimisation Leach Test Results – Urucum sulphide**

Parameter	Unit	Test 13	Test 14	Test 15	Test 16
Calc. Head Grade	g/t Au	2.47	2.63	2.25	2.53
Assay Head Grade	g/t Au	2.37, 2.37, 2.02	2.37, 2.37, 2.02	2.37, 2.37, 2.02	2.37, 2.37, 2.02
Grind size, P <sub>80</sub>	µm	150	106	75	53
Gold extraction at 24 h	%	87.23	90.89	93.47	95.38
Gold extraction at 48 h	%	88.86	91.91	94.66	96.44
Gold extraction at 72 h	%	89.89	92.40	94.66	96.44