

## TUCANO PLANT UPGRADE UNDERWAY FOLLOWING POSITIVE FEASIBILITY STUDY

Beadell Resources Limited (Beadell or Company) is pleased to provide results of a Feasibility Study (FS) completed on a plant upgrade project, incorporating the addition of a 6MW ball mill, a high-rate thickener, another leach tank and an oxygen sparging system (Project) at its 100% owned Tucano gold mine (Tucano) in northern Brazil.

### KEY HIGHLIGHTS

- The FS demonstrates the viability of upgrading the Tucano process plant with an incremental estimated post-tax net present value (NPV) of US\$127 million at a 5% discount rate and an estimated internal rate of return (IRR) of 138%. The estimated pre-production capital cost is US\$27.6 million. Payback for the Project is 14 months.
- Given the robust results of the FS, the Board of Directors has approved the plant upgrade and the Project will commence immediately. It is expected that the Project will be commissioned in mid-2018 and will be fully financed from treasury.
- The completion of Project is expected to deliver a number of benefits to Beadell including:
  - An ability to process any mix of sulphide / oxide mill feed allowing the mine to be fully optimised;
  - An ability to process head grades in line with the reserve grade consistently;
  - An increase in forecast recoveries to 93% from the current budgeted recoveries of 88%; and
  - A more steady gold production profile and increased free cashflow.

Mr Simon Jackson, CEO and Managing Director of Beadell stated, "The Feasibility Study results show that the plant upgrades will add significant value to the Tucano project. Once complete we look forward to the mine being fully optimised for the first time with resultant consistency of production and cashflows. As we continue to add mine life through our successful exploration programs, the mill upgrades are the foundation of the future for Beadell."

The key results and parameters of the FS are tabulated below:

|  | Unit         | Value   |
|--|--------------|---------|
| Assumed gold price                     | USD/oz       | 1,250   |
| Assume USD/BRL exchange rate           | USD/BRL      | 3.40    |
| Tonnes open pit oxide ore              | Mt           | 6.781   |
| Tonnes open pit sulphide ore           | Mt           | 14.118  |
| Total open pit ore tonnes              | Mt           | 20.899  |
| Average gold grade                     | g/t          | 1.51    |
| Incremental recovered gold             | Oz           | 190,471 |
| Incremental gold revenue               | USD millions | 233.3   |
| Construction capital cost              | USD millions | 27.6    |
| Incremental processing cost LOM        | USD millions | 40.0    |
| Incremental Post Tax NPV <sub>5%</sub> | USD millions | 127.1   |
| IRR                                    | %            | 138     |
| Payback                                | Years        | 1.13    |

The FS was conducted by Harrier Project Management of Brisbane, Australia, with input from Ray Walton Consultants in Toronto, Canada, SRK in Vancouver, Canada and was based on the Ore Reserves as at 31 December 2015.

## OVERVIEW

The FS is for the upgrade of the existing Tucano processing plant by incorporating an additional 6MW ball mill, a high-rate thickener, another leach tank and an oxygen sparging system. The throughput will be maintained at 3.6 million tonnes per annum and recoveries are projected to increase to 93% from the current budgeted recovery of 88%.

The FS was based on the Ore Reserves as at 31 December 2015. On 11 April 2017, Beadell released an updated Ore Reserve statement as at 31 December 2016 that highlighted a 7% increase in ounces to 1.575 million ounces and a 9% increase in grade to 1.74 g/t gold. After depletion, the new Ore Reserves increased by 18%. The FS and life of mine plan will be updated to incorporate the new Ore Reserve and the results of this will be released to the market in due course.

As the mine deepens there will be an increasing amount of sulphide ore, which requires a finer grind to achieve economic gold recoveries. The new ball mill will allow for a grind size of 75 microns and will enable the mine to be fully optimised for any combination of sulphide and oxide ores. The finer grind requires longer residency in the leach circuit, which is facilitated by the additional CIL tank. Throughput remains at 450 tonnes per hour for a nominal annual throughput of 3.6 million tonnes per annum.

The timing of the FS was driven by the need to undertake Project civil works and concrete pours during the dry season in the second half 2017. It is expected that the Project will be completed in mid-2018.

The Project results in many benefits to the Tucano mine going forward including unlimited flexibility with the oxide/sulphide feed to the mill and improved gold recovery via:

- Addition of a ball mill and resultant finer grind;
- Increased leach residence time in the CIL with an extra leach tank;
- Addition of a pre-leach thickener allowing selection of the optimum density for cyclone classification efficiency as well as leaching in the CIL; and
- Incorporation of an oxygen plant reducing cyanide consumption and improving leach efficiency.

Overall, the aim is to operate Tucano on a fully optimised basis that should result in head grade being more in line with reserve grade quarter on quarter, resulting in more consistent gold production and cashflows.

## CAPITAL

The Detailed Capital cost estimate is tabulated below:

|   | USD (millions) |
|---|----------------|
| Grinding – Ball Mill  | 14.60          |
| Pre-leach - Thickener   | 2.00           |
| Leach and Adsorption - Tank                                   | 2.20           |
| Oxygen Plant  | 1.35           |
| <b>Total Processing Plant</b>                                 | <b>20.15</b>   |
| Spares, First Fills and Plant Mobile Equipment                | 2.70           |
| Temporary Construction Facilities, Start-up and Commissioning | 0.30           |
| Project execution team  | 1.80           |
| <b>Total Indirect</b>   | <b>4.80</b>    |
| <b>Contingency and Owner's Costs</b>                          | <b>2.65</b>    |
| <b>TOTAL CAPITAL COST</b>                                     | <b>27.60</b>   |

The Company has selected Outotec (Australia) Pty Ltd (Outotec) as the supplier for the ball mill and associated equipment. The order was committed to in March 2017 in order to maintain the Project timeline.

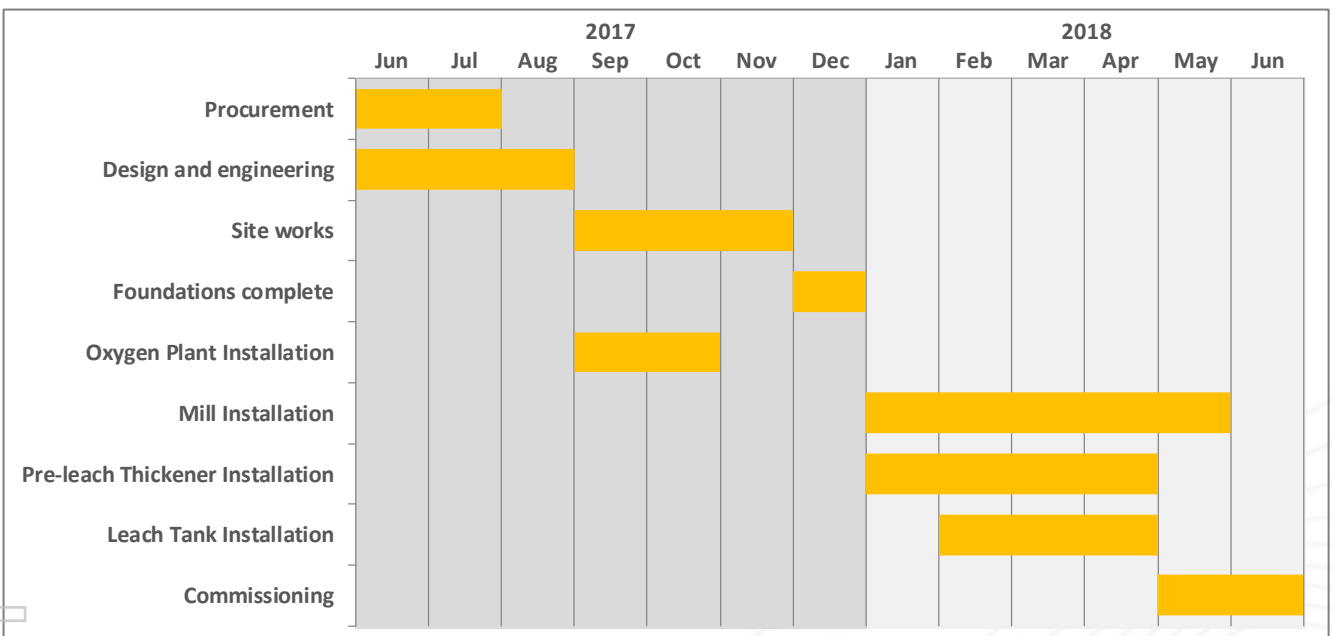
The benefits of the Outotec mill include the ability to same size a number of ancillary equipment such as gearboxes and lubrication systems to the in situ 6MW Outotec SAG mill at the Tucano plant. The savings in working capital from reduced spare part inventory requirements is approximately US\$1 million. The existing SAG mill is in excellent condition and the benefits of having one supplier supporting both mills at Tucano was considered of high importance.

**OPERATING COSTS**

Incremental operating costs considered by the FS relate to additional processing costs only. Mining and G&A costs are assumed incurred regardless of the completion of the Project. The major component of incremental processing costs is power. Total power draw is expected to increase from approximately 10MW to approximately 15MW.

Of this the FS assumes 12MW is drawn from the grid. On 14 September 2016, Beadell announced it had entered into an agreement with Amapá Electricity Company whereby Tucano can increase its grid supply to 12MW. Currently, the Company is in a one month test period drawing 2MW and subject to the success of the test, the grid supply will be increased to 5MW. The Company will then make additional upgrades to the power infrastructure that should facilitate grid supply of 12MW by mid-2018 concurrent with the estimated commissioning date of the Project.

**TIMELINE**



## ABOUT BEADELL

Beadell owns and operates the Tucano gold mine in Amapá State, in the north of Brazil. Tucano sits within an extensive land package of 2,500km<sup>2</sup> of highly prospective, under explored greenstone belt.

### FOR FURTHER INFORMATION PLEASE CONTACT:

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### COMPETENT PERSONS STATEMENT

The information is extracted from the reports entitled “Ore Reserve and Mineral Resource Update” created on 14 April 2016 and “Ore Reserve and Mineral Resource Update” created on 11 April 2017 and are available to view on [www.beadellresources.com.au](http://www.beadellresources.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement.

### FORWARD LOOKING STATEMENTS

These materials include forward looking statements. Forward looking statements inherently involve subjective judgement and analysis and are subject to significant uncertainties, risks and contingencies, many of which are outside the control of, and may be unknown to, the company.

Actual results and developments may vary materially from that expressed in these materials. The types of uncertainties which are relevant to the company may include, but are not limited to, commodity prices, political uncertainty, changes to the regulatory framework which applies to the business of the company and general economic conditions. Given these uncertainties, readers are cautioned not to place undue reliance on forward looking statements.

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