

# Quarterly Report

to 31 December 2016



## Highlights

### Operations

- **Gold Production** – Gold production for the December 2016 quarter was 42,373 ounces. Annual production for CY2016 was 145,870 ounces, representing an increase of 19% over CY2015 and in line with guidance.
- **Costs** – Cash costs for the December quarter were US\$640 per ounce. All-in Sustaining Costs (“AISC”)\* for the December quarter were US\$709 per ounce and US\$866 for the CY2016, in line with the CY2016 revised guidance (see September 2016 Quarterly Report dated 26 October 2016).
- **CY2017 Production Forecast** – The Tucano gold mine is expected to produce between 140,000 to 150,000 ounces of gold in CY2017, in line with CY2016 production. All-in sustaining costs are forecast to be in the range of US\$830 to US\$930 per ounce. Non-Sustaining Capital Expenditure is forecast to be in the range of US\$5.5 million to US\$6.5 million.

### Corporate

- **Gold Sales** – Gold sales for the December quarter totalled 46,407 ounces at an average cash price received of US\$1,213 per ounce. Annual gold sales for CY2016 were 146,316 ounces.
- **Cash and Bullion** – Cash and bullion as at 31 December 2016 was A\$36.3 million (as at September 2016 was A\$44.6 million) (bullion valued at AUD/USD = 0.75 and US\$1,151 per ounce).

### Exploration

- **Tap AB Mata Fome Fault** – A key new geological interpretation has resulted from detailed structural work. It is now thought that gold mineralisation postdates the initial lithological offset on the Mata Fome fault and therefore, the Tap AB1 Trough Lode is not the southern offset continuation of the Tap AB2 Trough Lode, but formed contemporaneously in separate structural positions, demonstrating along strike potential for both the AB1 and AB2 Trough lodes.
- **Tap AB1 Trough Lode** – Strong drill results from Tap AB1 Trough Lode continue to grow the resource, with multiple lodes emerging. Results include F02209, 5 m @ 5.49 g/t gold from 22m, 43 m @ 2.35 g/t gold from 103 m and 12 m @ 2.07 g/t gold from 196 m.
- **Tap AB2 Trough Lode** – Exceptional drill results continue to be received from the Tap AB2 Trough Lode step out drilling. Results of 50 m @ 6.66 g/t gold from 50 m including 6 m @ 44.14 g/t gold in F02214 and 27 m @ 1.72 g/t gold from 111 m and 18 m @ 7.03 g/t gold from 142 m including 4 m @ 24.57 g/t gold in F02024 have opened up a new potential south plunge of the high grade shoot, plunging towards the Mata Fome Fault.
- **Tap AB Sul** – A new high grade result of 16 m @ 4.86 g/t gold from 62 m in F02053 highlights the potential of this target to develop into an additional source of open pit oxide material near the mill. Further drilling will be completed targeting the down plunge extents of the mineralisation.
- **Tap AB Norte** – Drilling targeting a northern splay extension of the Tap AB3 Lode has intersected substantial gold mineralisation outside of the existing open pit reserve (Figure 1). Two RC holes were completed intersecting 18 m @ 2.16 g/t gold from 88 m in F02005 and 12 m @ 1.23 g/t gold from 101 m in F02002.

\*AISC has been calculated in accordance with the World Gold Council's Guidance Note on Non-GAAP metrics released 27 June 2013.

## Operations

### Tucano Gold Mine (100%)

Production Summary	Unit	Dec 2016 Quarter	Dec 2015 Quarter	%	CY2016	CY2015	%
Total Waste Moved*	tonnes	3,293,254	5,070,434	-35%	16,655,670	17,381,302	-4%
Gold Ore Mined	tonnes	930,128	1,485,564	-37%	2,935,037	3,363,255	-13%
Total Material Moved	tonnes	4,223,382	6,555,998	-36%	19,590,706	20,744,556	-6%
Gold Ore Milled	tonnes	874,398	1,052,801	-17%	3,597,163	3,714,942	-3%
Head Grade	g/t	1.82	1.32	37%	1.45	1.14	27%
Plant Recovery	%	82.8%	89.2%	-7%	86.9%	89.3%	-3%
<b>Total Gold Recovered</b>	<b>ounces</b>	<b>42,373</b>	<b>39,975</b>	<b>6%</b>	<b>145,870</b>	<b>122,292</b>	<b>19%</b>
<b>Total Gold Sold</b>	<b>ounces</b>	<b>46,407</b>	<b>38,100</b>	<b>22%</b>	<b>146,316</b>	<b>121,469</b>	<b>20%</b>

\* Waste mined plus iron ore mined.

Cash Costs and All-In Sustaining Costs	Unit	Dec 2016 Quarter	Dec 2015 Quarter	%	CY2016	CY2015	%
On-Site Production Costs	US\$/ounce	600	637		685	780	
On-Site G&A Costs	US\$/ounce	40	27		43	47	
<b>Cash Costs</b>	<b>US\$/ounce</b>	<b>640</b>	<b>664</b>	<b>-4%</b>	<b>728</b>	<b>827</b>	<b>-12%</b>
Royalties	US\$/ounce	27	23		24	25	
On-Site Corporate Costs	US\$/ounce	12	11		14	15	
Exploration Costs (Sustaining)	US\$/ounce	21	15		28	9	
Capitalised Stripping Costs (Sustaining)	US\$/ounce	0	173		63	125	
Capital Expenditure (Sustaining)	US\$/ounce	9	13		9	5	
<b>All-In Sustaining Costs*</b>	<b>US\$/ounce</b>	<b>709</b>	<b>899</b>	<b>-21%</b>	<b>866</b>	<b>1,006</b>	<b>-14%</b>

\* AISC has been calculated in accordance with the World Gold Council's Guidance Note on Non-GAAP metrics released 27 June 2013 and in accordance with this Guidance Note, gold ounces sold are used as the denominator in the cost per ounce calculations. Production costs are inclusive of the effects of ore stockpile and GIC inventory movements.

### Production

Gold recovered in the December 2016 quarter totalled 42,373 ounces, an increase of 6% over the December 2015 quarter. Gold production for the year was 145,870 ounces, an increase of 19% over the same period last year, which was in line with the CY2016 guidance.

### Costs

Completion of planned cutbacks during the quarter allowed continued access to higher grade ores, significantly increased gold sales and resulted in lowered AISC reported per ounce.

Despite falling AISC per ounce in the December quarter, USD reported costs continue to be negatively impacted by the stronger Brazilian Real against the USD which appreciated by approximately 20% in CY2016. For the year to 31 December 2016, this has resulted in an increase in reported AISC of approximately US\$100 per ounce.

Pleasingly, FY2016 AISC was US\$866 per ounce and at the lower end of the revised guidance range of US\$830 to US\$930 per ounce.

Higher exploration spend continued as the Company finalised programs associated with its 2016 exploration plan to replenish reserves, deliver near-mine resource extensions and advance early stage targets. Exploration costs were approximately US\$5 million for the year and less than the US\$7 million planned.

## **Mining**

In the December quarter, 930,128 tonnes of gold ore were mined. Total material movement was 4,223,382 tonnes, a decrease of 37% over the December 2015 quarter. This was due to mining at bottom of phases in Tap AB with a lot lower required strip ratio so the material required to be mined compared to the same period last year is lower. The total moved tonnes were also lower than planned due to availability of the mining fleet and lower performance of the mining fleet in Tap AB1 and AB2 due to the narrow access and increase in the hauling distance mainly to Tap AB2 as a result of the remodelling of the pit design of Tap AB2.

Mining during the quarter was predominantly from Tap AB1, Tap AB2, Urucum Central North and Urucum South. The good performance at those pits in producing ounces mined helped reduce the impact of the remodelling of the pit design of Tap AB2.

## **Processing**

During the December quarter, the CIL plant throughput was 874,398 tonnes, a 17% decrease over the December 2015 quarter, and the process plant recovery for the period was 82.8%, 7% lower than the December 2015 quarter. However, the mill feed grade was 1.82 g/t gold, recording a 37% improvement when compared to the same period last year.

The reported lower recovery in the quarter is the result of a number of factors including ongoing improvements and refinements to the metallurgical accounting procedures and balances. Remedial work on agitator blades in the quarter also contributed to a reduced recovery as retention time was impacted. A one off adjustment to gold-in-circuit balances resulted in this artificially low recovery percentage for the December 2016 quarter. The Tucano Gold Mine continues to transition from a substantially oxide feed mine to one where increasing percentages of fresh material will be processed. In order to allow the Tucano mill to process this different mix of sulphide and oxide, it is likely that the addition of a ball mill and some extra tankage will be required. A feasibility study has commenced with results expected in the next few months. The addition of the ball mill will allow the Tucano Gold Mine to be fully optimised for the first time with a targeted increase in head grade and recoveries.

Total high grade and low grade gold ore stockpile ounces at the end of December 2016 increased by 4% to 4.30 million tonnes @ 0.70 g/t for 96,000 ounces, whilst marginal stockpiles of 1.5 million tonnes @ 0.43 g/t for 21,000 ounces remained static. Both Oxide and Sulphide ore stockpiles increased at the end of the quarter and have offset the depletion of Spent Ore used to supplement mill feed.

## **CY2017 Production Forecast**

The Tucano gold mine is expected to produce between 140,000 and 150,000 ounces of gold in CY2017. All-in sustaining costs are forecast to be in the range of US\$830 to US\$930 per ounce. Non-Sustaining Capital Expenditure is forecast to be in the range of US\$5.5 million to US\$6.5 million.

It is expected that the December 2017 quarter will have the highest production and head grade for the year with the other three quarters to be more consistent.

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## **Corporate & Finance**

### **Gold Sales**

Gold sales for the December 2016 quarter totalled 46,407 ounces at an average cash price received of US\$1,213 per ounce. Annual gold sales for CY2016 were 146,316 ounces at an average cash price received of US\$1,245 per ounce.

### **Cash & Bullion**

Cash and bullion as at 31 December 2016 was A\$36.3 million (as at September 2016 was A\$44.6 million) (bullion valued at AUD/USD = 0.75 and US\$1,151 per ounce).

### **Debt**

During the quarter, the Company made its quarterly scheduled bank debt repayment of US\$5 million to Santander – Itaú.

## Capital and Exploration Expenditure

Non-sustaining capital expenditure for the December 2016 quarter was \$3.1 million, which was largely associated with deforestation and construction of the long term tailings storage facilities.

Non-sustaining exploration expenditure for the December quarter was \$1.7 million.

## Exploration

### Brazil

In the December 2016 quarter, a total of 24,629 m of drilling, comprising 12,121 m of grade control reverse circulation (RC) drilling and 10,974 m of exploration / resource delineation RC drilling, was completed. A total of 1,534 m of diamond drilling was also completed.

High grade oxide drill results continued to be received from the Tap AB1 and Tap AB2 Trough Lodes during the quarter (see ASX announcement of 6 December 2016), which remain the highest priority drill targets for oxide gold resource definition and extension at Tucano. The Tap AB Trough Lodes are within 2 km of the Tucano mill.

Recent detailed field work at Tucano by structural geologist Brett Davis of Orefind Pty Ltd indicates that gold mineralisation postdates the initial displacement on the Mata Fome fault. This key new geological interpretation suggests that the AB1 and AB2 Trough lodes developed contemporaneously in separate structural positions and are not the result of a later offset of the same orebody. The mineralisation is now interpreted to transgress across the Mata Fome fault. This new geological insight opens up the potential for extensions of both Tap AB1 and Tap AB2 Trough lodes north and south of the Mata Fome fault as indicated in Figures 1, 2 & 3.

Importantly, new results from Tap AB Sul and Tap AB Norte to the south and north of the Tap AB open pit complex, respectively, also suggest potential to grow open pit oxide resources along the highly prospective trough lode contact.

An accelerated step out drill program of the Tap AB Trough Lodes and surrounds is ongoing following dewatering of the Tap AB1 open pit.

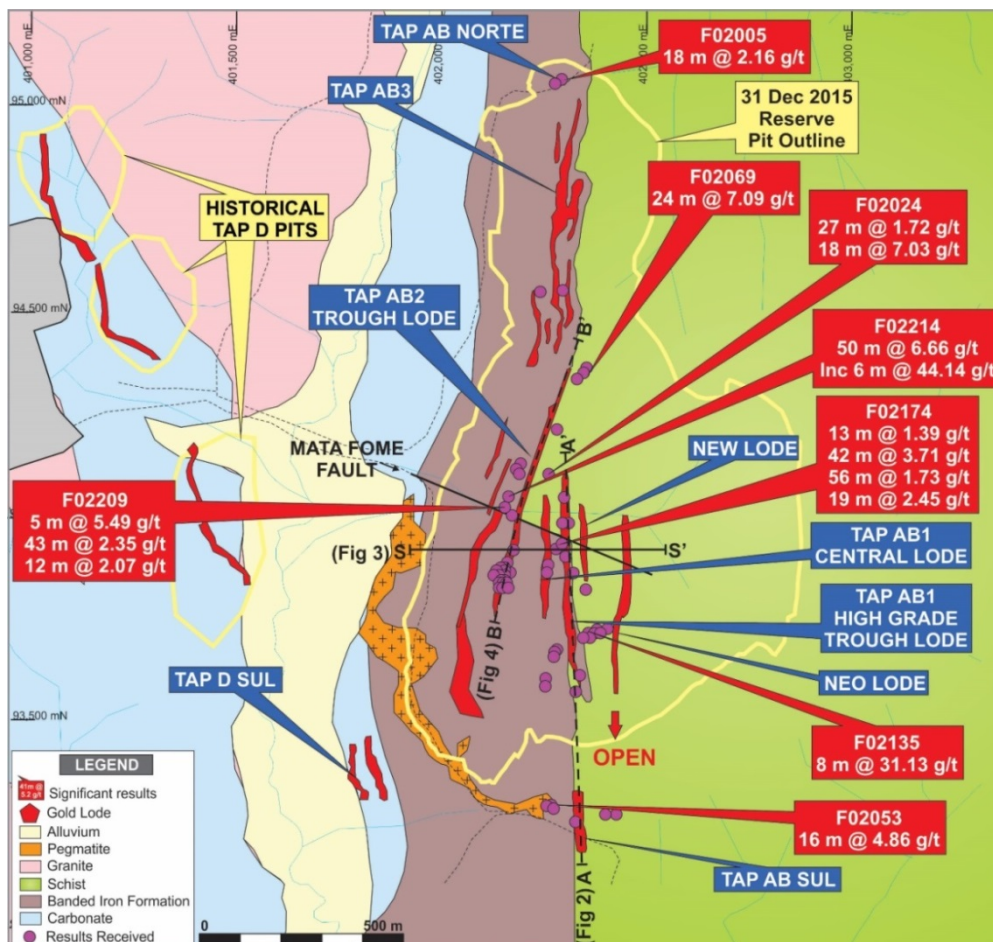


Figure 1. Tap AB plan showing location of recent drill results

### TAP AB1 Trough Lode

The Tap AB1 Trough Lode continues to grow with several key new drill results expanding the footprint of the mineralisation down plunge and identifying additional parallel lode positions. Drill access to the down plunge extension of the Tap AB1 Trough lode has been established with completion of dewatering of the open pit, and drilling is ongoing.

A significant new result was received in Hole F02209. This hole intersected the Tap AB2 Trough lode near the surface – 5 m @ 5.49 g/t gold from 22 m, then intersected the Tap AB1 Central Lode – 43 m @ 2.35 g/t gold from 103 m and then intersected the Tap AB1 Trough Lode – 12 m @ 2.07g/t gold from 196 m. These results show the moderate north plunge to the mineralisation remains strong north of the interpreted position of the Mata Fome Fault (Figure 2).

Hole F02174 also produced significant results and encountered wide zones of mineralisation throughout the hole including 13 m @ 1.39 g/t gold from surface, 42 m @ 3.71g/t from 29 m, 56 m @ 1.73 g/t gold from 96 m and 19 m @ 2.45 g/t gold from 161 m to bottom of hole. Several other important resource delineation results were also received including a result of 8 m @ 31.13 g/t gold from 71 m in F02135.

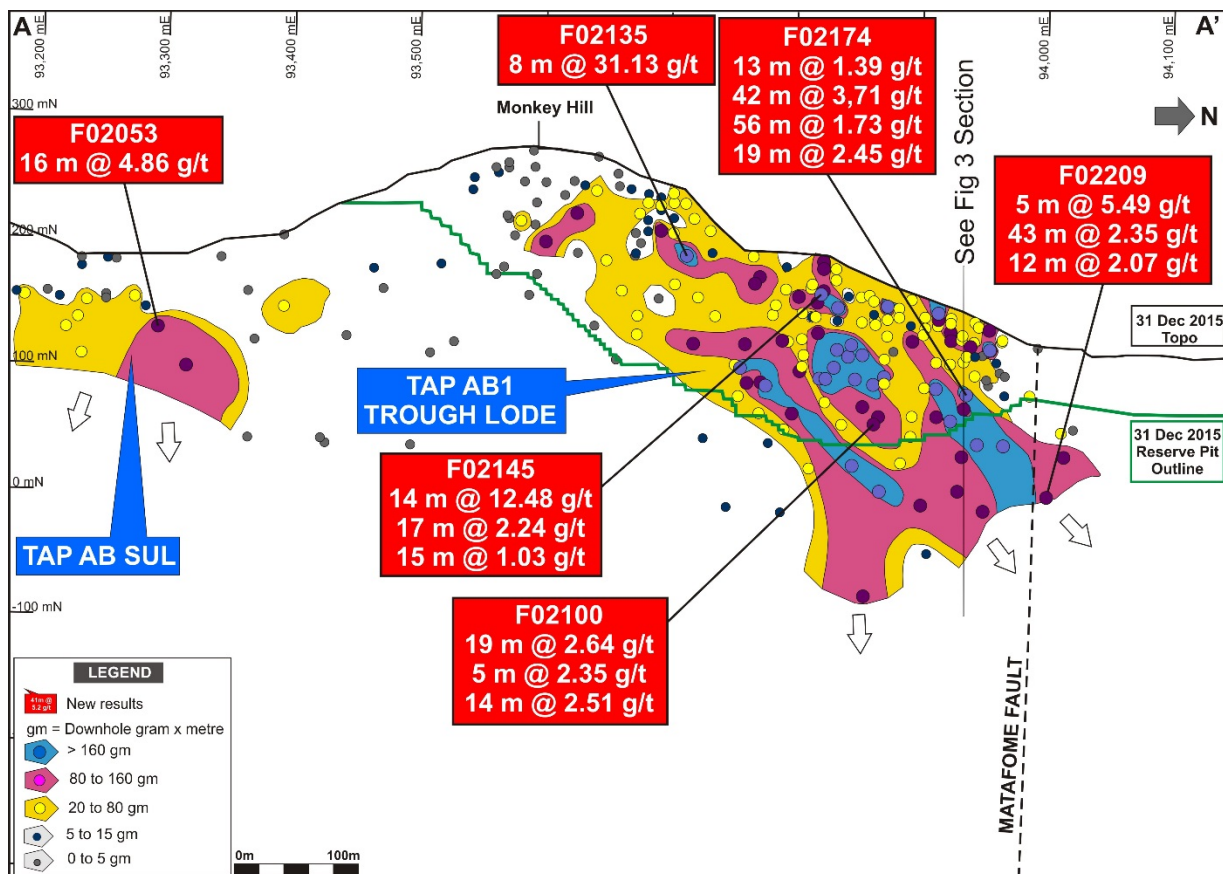


Figure 2. Tap AB1 composite long section showing location of recent drill results

### Tap AB2 Trough Lode

Exceptional drill results continued to be received from the Tap AB2 Trough Lode step out drilling. Two significant results of 50 m @ 6.66 g/t gold from 50 m including 6 m @ 44.14 g/t gold in F02214 and 27 m @ 1.72 g/t gold from 111 m and 18 m @ 7.03 g/t gold from 142 m including 4 m @ 24.57 g/t gold in F02024 have opened up a new potential south plunge of the high grade shoot, plunging towards the Mata Fome Fault (Figure 3). Follow up drilling is ongoing.

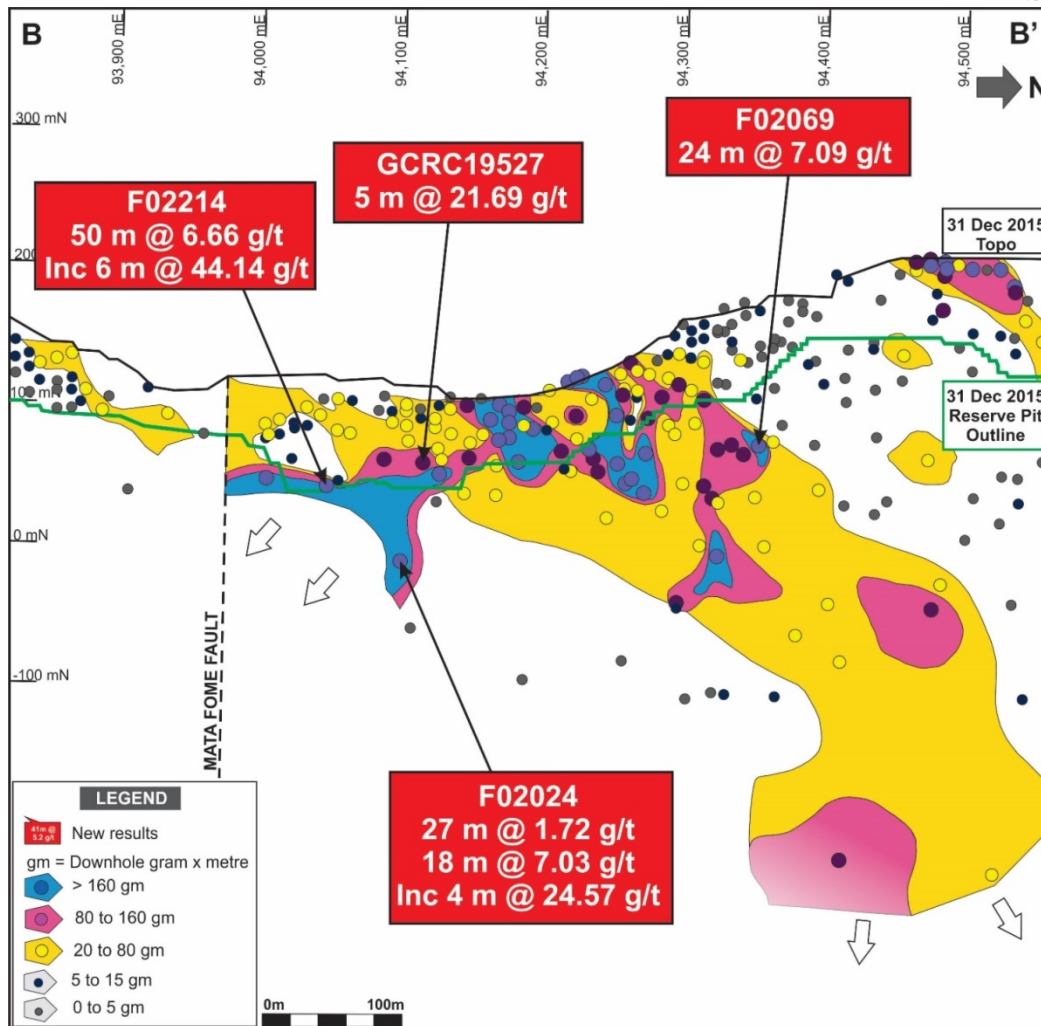


Figure 3. Tap AB2 long section showing location of recent drill results

### **Tap AB Sul**

Tap AB Sul is located approximately 300 m south and along strike from the Tap AB1 Trough Lode at the southern base of Monkey Hill (Figures 1 & 2). A new high grade result of 16 m @ 4.86 g/t gold from 62 m in F02053 highlights the potential of this target to develop into an additional source of open pit oxide material near the mill. Further drilling will be completed targeting the down plunge extents of the mineralisation.

### **Tap AB Norte**

Drilling targeting a northern splay extension of the Tap AB3 Lode has intersected substantial gold mineralisation outside of the existing open pit reserve (Figure 1). Two RC holes were completed intersecting 18 m @ 2.16 g/t gold from 88 m in F02005 and 12 m @ 1.23 g/t gold from 101 m in F02002. The gold mineralisation is hosted within a lesser drilled, narrower Banded Iron Formation (“BIF”) unit immediately east of the main BIF sequence. Follow up drilling is planned.

## **Brazil Greenfields Exploration**

### **Tucano Regional**

Regional exploration programs and permitting are advancing, with the assembly of a new greenfields exploration team and a renewed push to recommence early-stage exploration throughout the highly prospective greenstone belt.

Additional permitting and surveys required at the highly prospective Mutum target 20 km east of Tucano have delayed access to this area resulting in deferral of planned drill programs until appropriate regulatory approvals are received.

**ASX Code: BDR**
**Board of Directors**

Craig Readhead	Non-Exec. Chairman
Simon Jackson	CEO & Managing Director
Nicole Adshead-Bell	Non-Exec. Director
Brant E. Hinze	Non-Exec. Director
Timo Jauristo	Non-Exec. Director
Glen Masterman	Non-Exec. Director

**Senior Management:**

Simon Jackson	CEO & Managing Director
Greg Barrett	CFO / Company Secretary
Peter Holmes	Chief Operating Officer
Graham Donahue	Head of Corp. Develop.
Rob Watkins	Head of Geology
Luis Pablo Diaz	General Manager - Brazil
Mike Robinson	Operations Manager

**Corporate Details:**

**Issued capital:** 1,057,567,540 ordinary shares  
(as at 31 December 2016)

**ABN** 50 125 222 291

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**Competent Persons Statement**

The information in this report relating to Mineral Resource, Open Pit Ore Reserves and Exploration Results are based on information compiled by Mr Robert Watkins who is a member of the Australasian Institute of Mining and Metallurgy and who has sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activity which 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'. Mr Watkins is the Head of Geology of Beadell Resources and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information is extracted from the report entitled "New Geological Interpretation Expands Tap AB Potential" created on 6 December 2016 and is 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.