



TROPICANA JV COMMITS TO LONG ISLAND AND INCREASED MILLING CAPACITY

Independence Group NL (IGO or the Company) (ASX:IGO) is pleased to announce that the Tropicana Joint Venture (TJV) has committed to both the Long Island mining strategy and a process plant improvement project to further increase processing plant capacity and improve metallurgical recovery. The TJV is an unincorporated partnership between AngloGold Ashanti Australia (AGAA)(ASX: AGG) (Manager and 70% interest) and IGO (30% interest).

Key Highlights

- Long Island mining strategy will proceed resulting in the extension of the operation life through to CY27.
- Process plant improvements will increase throughput to 8.1Mtpa and improve metallurgical recovery by up to 3%.
- Ore Reserves have increased to 4.08Moz (100% basis) as at 31 December 2017.
- Drilling underway at Boston Shaker confirms the deeper continuity of high-grade ore-shoots which will form the basis of underground mining studies.
- Regional exploration around Tropicana and within the broader Fraser Range region continues to be a key focus.

IGO's Managing Director, Peter Bradford, commented: *"We continue to optimise our operations and maximise the business by delivering both increased production rates and extending the mine life at Tropicana through the multiple work programs underway over the last few years.*

"The accelerated mining strategy deployed in the 2017 calendar year should deliver elevated gold production rates for the next two years, commencing this 2018 financial year and resulting in higher free cash flow to IGO.

"The Long Island mining strategy, which is now approved as part of the Joint Venture 2018 Business Plan, has delivered an Ore Reserve of 4.08Moz and extended the life-of-mine through to the 2027 calendar year.

"Capital costs associated with Long Island are estimated at A\$18M on a 100% basis, limited to the expansion of site infrastructure, including accommodation and workshops. Costs for the expansion of the mining fleet to increase annual mining capacity will be borne by the mining contractor, Macmahon. Mining capacity will increase from an estimated 90Mt this year to a peak of 107Mtpa in the 2019 calendar year, and continue at that rate for about four years and then gradually reduce.

"Coupled with Long Island, the Joint Venture has also approved the addition of a new ball mill which will deliver an increase in mill throughput capacity to 8.1Mtpa along with improved metallurgical recoveries. The total capital costs are estimated at A\$28M on a 100% basis and are expected to



have a pay-back of less than twelve months. The expansion work is scheduled to be completed in the upcoming 2018 calendar year.

“This is a great result for our business and for the Joint Venture, with Tropicana continuing to deliver strong results that bolster IGO’s portfolio of operations reflecting high-quality, long life assets. We congratulate AngloGold Ashanti and the entire team at Tropicana for their continued hard work and focus on value creation.”

Focus on Unlocking Value

At Tropicana, the Joint Venture partners have pursued multiple work programs that have demonstrated significant additional value to date, with the underground studies and regional exploration expected to unlock additional value going forward.

These work programs have included:

- Debottlenecking process plant capacity through to end-CY17 from 5.8Mtpa to 7.6Mtpa;
- Accelerated mining in CY17 to bring value forward and deliver a period of elevated gold production during FY18 to FY20;
- Long Island mining strategy to extend mine life by understanding the resource potential beneath the pits;
- Additional ball mill will further debottleneck the processing plant capacity by the end of CY18 to 8.1Mtpa and increase metallurgical recovery by up to 3%;
- Underground studies to better understand and unlock further potential beneath the pits within this major mineralised system; and
- Regional exploration to understand the potential for further discoveries.

Accelerated Mining and Grade Streaming

The Tropicana mining fleet was optimised in late-CY16 with the addition of a 600t face shovel, which resulted in a step change to the mining rate during CY17.

This increased mining rate in CY17 has delivered two outcomes:

- Accelerated access to ore, resulting in more ore being mined over the next two to three years than required for the process plant. This allows higher grade ore to be preferentially fed to the process plant while stockpiling lower grade ore. As a result, gold production during the period FY18 to FY20 is expected to be at an elevated level; and
- De-risked the mining volumes required for the Long Island strategy as set out under the “Long Island Mining Strategy” section below.

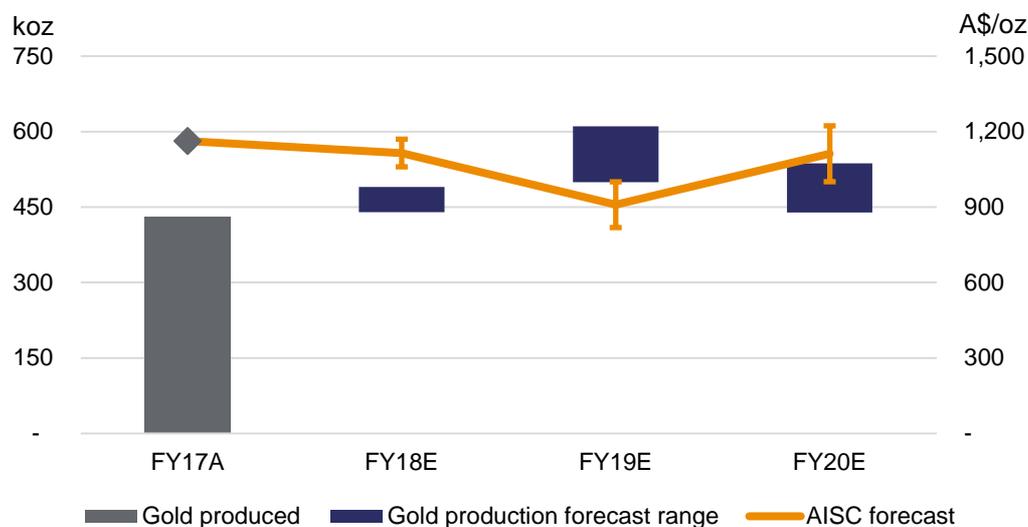


Figure 1: LoM Profile for the next three years

Long Island Mining Strategy

Background and Concept

The Long Island mining strategy was conceived in CY15 to unlock the open-pit potential of the extensive Tropicana Mineralised System consisting of multiple mineralised zones offset by post mineralisation faulting. The Tropicana Mineralised System has a strike extent over 5km.

The Long Island mining strategy utilises a strip mining approach designed to significantly reduce waste mining costs through the introduction of short, horizontal hauls to backfill a void in-pit. Initially, a starter pit at Havana was considered to act as a void for waste. However, as planning progressed it became apparent from drilling that there was limited potential beneath the Tropicana pit and that the completed pit under conventional mining practices would provide significant value as a backfill location to commence the Long Island development.

To progress the Long Island strategy, an extensive Mineral Resource definition drill program was completed through CY15 to CY17 to provide a framework for the understanding of the Tropicana Mineralised System. In total, 193,554m of drilling was completed on a 100 x 100m spacing with 50 x 50m, and later 50 x 25m, drilling on the known plunge of higher-grade ore-shoots.

In CY17, technical and financial studies, including risk assessments, were completed to demonstrate the technical feasibility and economic viability of the Long Island mining strategy.

For further background information, refer to the following IGO ASX Releases:

- 25 July 2017 titled Tropicana Gold Mine – Delineation of new high-grade shoot.
- 15 December 2016 titled Tropicana Gold Mine – Value Enhancement Update.
- 6 August 2017 titled Tropicana Gold Mine – Update.

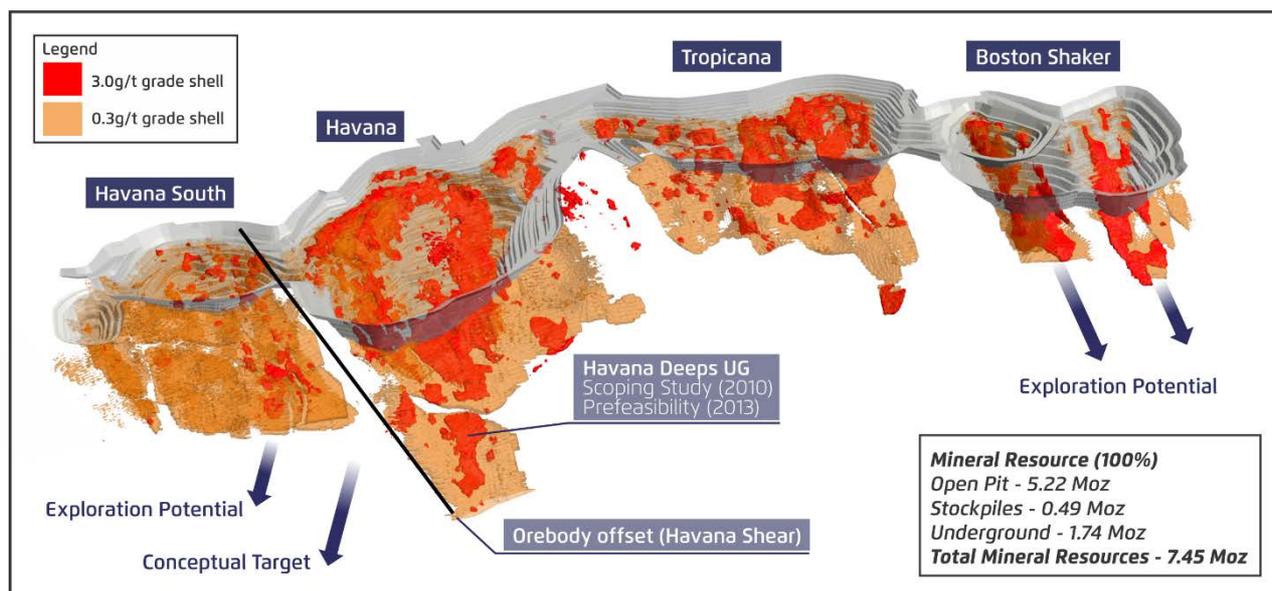


Figure 2: Tropicana Gold Mine showing mineralisation and pits over a 5km strike with current Mineral Resource and Ore Reserve open pits.

Long Island Mining Implementation

The Long Island concept provides optionality and flexibility, with eight mining stages and three decision points (see Figures 3 and 4) giving the opportunity to adjust to changing economic conditions.

Long Island Phase One, which has been approved as part of the CY18 Business Plan, requires mining of Havana South Pit and a cutback of the Boston Shaker Pit. The next decision points occur in CY20 with the commencement of mining of the Havana Main Pit strip and in CY22 with the final stages of Havana Main Pit.

Mining rates at Tropicana have risen over the past year to more than 90Mtpa with the addition in late CY16 of a 600-tonne face shovel. The higher mining rate in CY17 has de-risked the increase in mining rate of between 95 -107Mtpa required for the Long Island mining strategy.

Mining rates will peak at 107Mtpa in CY19 and will continue at that rate for four years until the bulk of the Havana Pit is mined.

To achieve the additional material movement increase, a second 600t face shovel with up to five additional Caterpillar 793 trucks and supporting ancillary equipment will be added to the mining fleet. This additional fleet will be provided by Macmahon Holdings as part of the existing mining contract at the site.

The capital expenditure to the owners related to the implementation of the Long Island strategy will be approximately A\$18M (on a 100% basis), primarily for expansions to the accommodation camp and heavy vehicle workshop infrastructure.

Productivity improvements through AGAA's Operational Excellence program have resulted in a reduction in mining costs at Tropicana over the past two years to A\$3.07/t mined using conventional mining methods. It is anticipated that ongoing mining efficiencies will further reduce mining costs by 5-10% during Phase One.

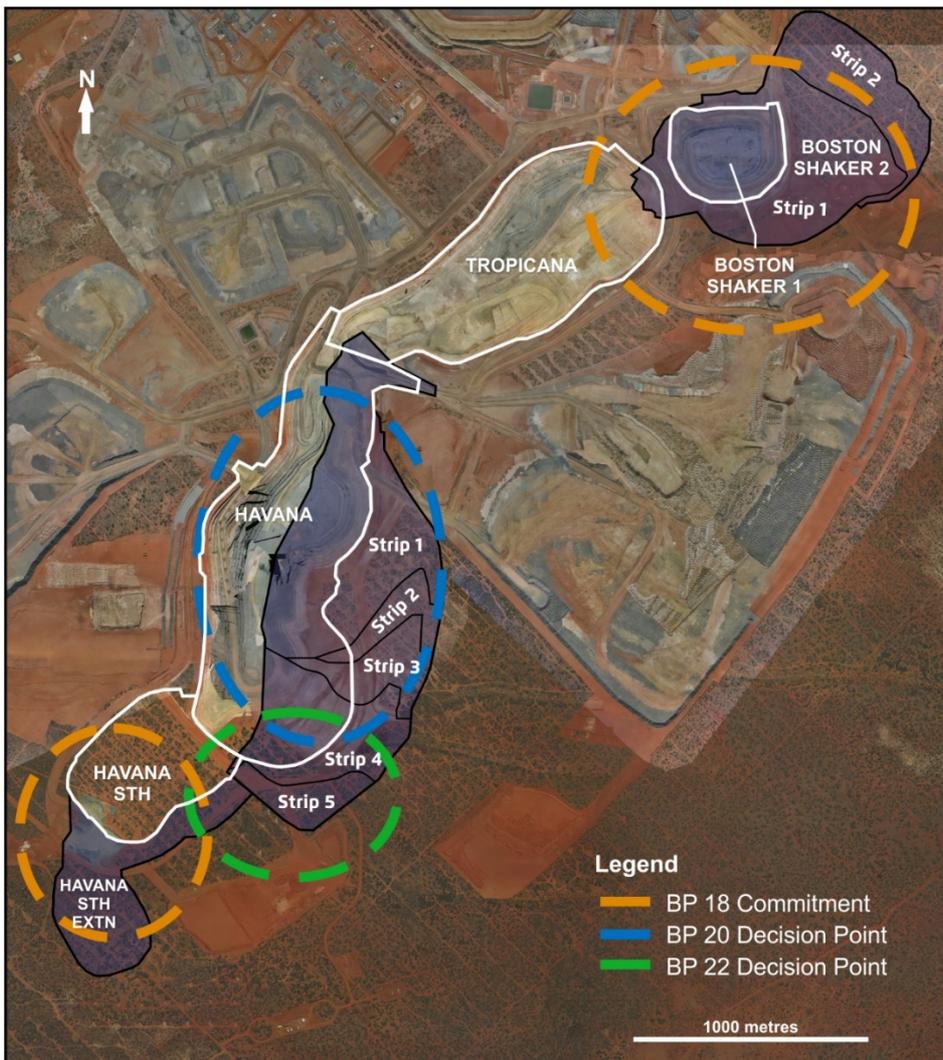


Figure 3: Image showing; A) current mining; B) the Long Island pit shapes, and C) the Long Island commitment decision points.

Risk Mitigation and Phasing of Decisions

Given the time horizon over which the Long Island pits will be mined, three decision points have been built into the mining plan so that final pit designs at each decision point stage can be optimised to reflect any change to revenue and cost assumptions. The three phases of the implementation of the Long Island mining strategy are depicted in Figure 4.

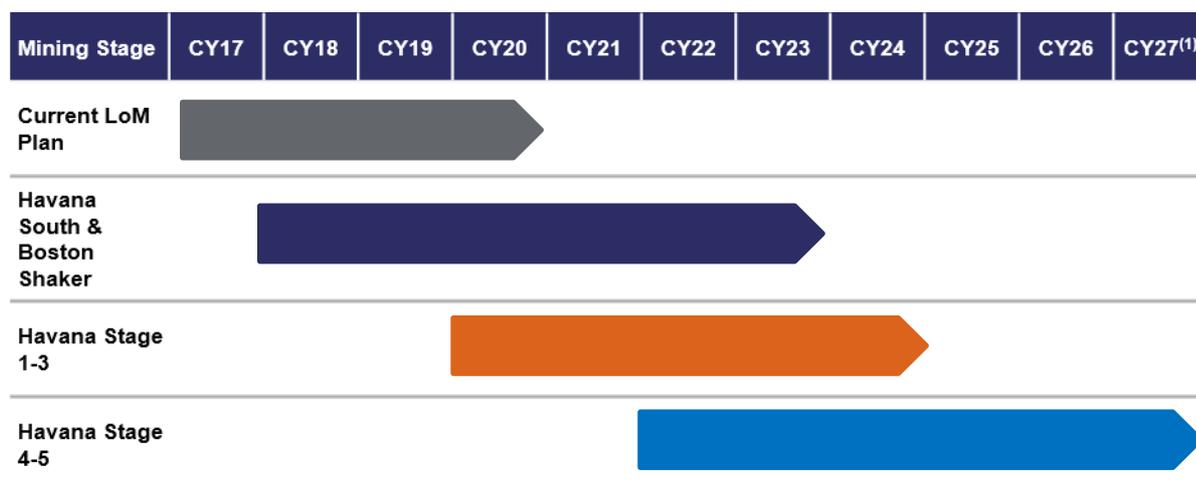


Figure 4: Forecast planning calendar reflecting the three implementation phases of the Long Island mining strategy.

Process Plant Optimisation

Background

The Tropicana process plant was designed with a nameplate capacity of 5.8Mtpa on a blend of soft and hard rock (5.5Mtpa on hard rock only). Since then, the process plant throughput rate has been increased by approximately 31% to 7.6Mtpa through a number of debottlenecking projects including:

- upgrading of conveyors;
- installation of additional carbon-in-leach tanks;
- installation of additional raw materials infrastructure and capacity;
- improved processing plant reliability; and
- commissioning of a fines pulping facility in November 2017 to deliver improved efficiency and throughput by minimising downtime during maintenance shutdowns.

Additional Ball Mill Installation

In CY18, a 6MW ball mill will be installed in the Tropicana processing plant grinding circuit to supplement the existing 14MW ball mill. The additional ball mill is designed to increase process plant throughput to 8.1Mtpa. In addition, the increased grinding capacity will enable an improvement in the baseline metallurgical recovery by up to 3% to approximately 92%.

Total capital expenditure is expected to be A\$28M (100% basis) including equipment, construction cost and spares and the new mill is scheduled to be commissioned in the December 2018 quarter. The site has adequate power generation capacity to cater for the additional mill and no further infrastructure is required.

The increased throughput will efficiently match processing capacity to the Long Island mining rate, and effectively bring forward gold production delivering the best production profile for the operation. The improved recovery rate will add approximately 160,000oz to recovered gold over the life-of-mine.

Based on mill throughput of 8.1Mtpa and a recovery improvement of 2.7% in the first year, the payback period will be less than twelve months.

Mineral Resource and Ore Reserve

Mineral Resource

The total Tropicana Mineral Resource (100% basis) as at 31 December 2017 is estimated to contain **143.2Mt grading 1.62g/t Au for 7.45Moz** of contained gold compared to 148.1Mt grading 1.68g/t for 8.02Moz as at 31 December 2016.

Table 1: Tropicana Mineral Resource (100% Project) as at 31 December 2017

Area	Resource Classification	Dec-16			Dec-17			Change		
		Mt	g/t	Moz	Mt	g/t	Moz	Mt	g/t	Moz
Open Pit	Measured	8.8	1.90	0.54	10.3	1.40	0.46	1.5	-0.50	-0.08
	Indicated	81.1	1.61	4.19	86.8	1.58	4.41	5.7	-0.03	0.22
	Inferred	22.3	1.32	0.94	9.2	1.17	0.35	-13.1	-0.14	-0.60
	Total	112.3	1.57	5.68	106.4	1.53	5.22	-5.9	-0.05	-0.45
Stockpiles	Measured	17.2	0.73	0.40	21.1	0.72	0.49	3.9	-0.01	0.09
Underground	Measured	-	-	-	-	-	-	-	-	-
	Indicated	6.8	3.38	0.73	10.1	3.57	1.16	3.3	0.20	0.42
	Inferred	11.9	3.15	1.20	5.7	3.20	0.58	-6.2	0.05	-0.62
	Total	18.6	3.23	1.94	15.7	3.44	1.74	-2.9	0.21	-0.20
Total	Measured	26.1	1.13	0.94	31.5	0.94	0.96	5.4	-0.18	0.01
	Indicated	87.9	1.74	4.93	96.9	1.79	5.57	9.0	0.04	0.64
	Inferred	34.2	1.95	2.15	14.9	1.95	0.93	-19.3	-0.01	-1.21
	Total	148.1	1.68	8.02	143.2	1.62	7.45	-4.9	-0.06	-0.56

Notes:

- The Open Pit Mineral Resource using a marginal (break-even) block cut-off grade of $\geq 0.3\text{g/t Au}$ cut-off for oxide material, and a $\geq 0.4\text{g/t Au}$ cut-off for transitional and fresh material. Cut-off grades for Mineral Resources have been based on an A\$1,817/oz (US\$1,400/oz) gold price.
- The Open Pit Mineral Resource is reported within a combination of pit designs and optimisation shells, reflecting the current Long Island mining strategy including; a) Havana South is reported within a A\$1,817/oz (US\$1,400/oz) gold price optimised shell, at Long Island study costs; b) Havana is reported within a pit design, based on Long Island Study costs at an A\$1,370/oz (US\$1,055/oz) gold price optimised shell; c) Tropicana is reported within the current life of mine design, and; d) Boston Shaker is reported within current life of mine design based on an A\$1,350 (US\$1,040/oz) gold price and Long Island Study costs.
- All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.
- Mineral Resources are inclusive of Ore Reserves.
- All Mineral Resources are reported in accordance with requirements and guidelines to the 2012 JORC Code.
- JORC Code (2012) Table 1 check-lists for Mineral Resource estimates are contained within Appendix B of this ASX release.

Ore Reserve

The total Tropicana Ore Reserve (100% basis) as at 31 December 2017 is estimated to contain **66.6Mt grading 1.91g/t Au for 4.08Moz** of contained gold compared to 60.1Mt at 1.97g/t for 3.80Moz as at 31 December 2016. This represents an increase in the Ore Reserve of 820,000oz net of depletion since 31 December 2016 as a result of the incorporation of the expanded Boston Shaker and Havana South pits.

Table 2: Tropicana Ore Reserves (100% Project) as at 31 December 2017*

Area	Reserves Category	Dec-16			Dec-17			Change		
		Mt	g/t	Moz	Mt	g/t	Moz	Mt	g/t	Moz
Open Pit	Proved	15.7	1.48	0.75	17.4	1.29	0.72	1.7	-0.18	-0.02
	Probable	44.4	2.14	3.05	49.2	2.12	3.36	4.8	-0.02	0.30
	Total	60.1	1.97	3.80	66.6	1.91	4.08	6.5	-0.06	0.28

*Including depletion of 7.15 Mt at 2.38 g/t for 0.55 Moz.

Notes:

1. The Proved and Probable Ore Reserve are reported above economic break-even gold cut-off grades for each material type at a gold price of A\$1,491/oz (US\$1,100/oz).
2. The Ore Reserve estimate is based on depletion through to the 31 December 2017, using the Resource model from June 2017.
3. The block cut-off grades used for reported are 0.6g/t Au for oxide material and 0.7g/t Au for transitional and fresh.
4. All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.
5. Mineral Resources are inclusive of Ore Reserves.
6. All Mineral Resources are compiled in accordance with the 2012 JORC Code.
7. JORC Code (2012) Table 1 check lists for Ore Reserve estimates, are contained within Appendix B of this ASX release

During CY16 the conversion of Mineral Resource to Ore Reserve for the Open Pit improved from 40% at 30 June 2016 to 62% at 31 December 2016. This improvement continued in CY17 with conversion of Mineral Resource to Ore Reserve improving from 62% at 31 December 2016 to 78% at 31 December 2017.

Underground Potential

Background

Down-plunge mineralisation at Havana was previously drilled and a feasibility study was completed in 2013. At the time the gold price and resource tonnage per vertical metre resulted in the project not meeting required investment hurdles.

As part of the framework drilling for the Long Island mining strategy, a greater understanding of the down-plunge potential through the whole of the Tropicana Mineralised System has emerged with additional higher-grade shoots identified at Boston Shaker and Havana South.

At Boston Shaker, the thickness, grade and plunge of the shoots have the potential to be amenable to conventional underground mining.

An initial 3,000m of diamond drilling was completed in the September 2017 quarter which returned significant intersections and resulted in the commitment to a 20,000m diamond drilling resource definition drill program. The Mineral Resource definition drill program based on 100 x 100m spaced drilling will be 60% complete at 31 December 2017.

Boston Shaker drilling and underground studies

Diamond drilling beneath the Boston Shaker pit in the second half of CY17 pit has returned significant intercepts including:

- 18m at 6.58 g/t Au from 587m depth (BSD087W1);
- 37m at 6.49 g/t Au from 509m (BSD088); and
- 20m at 5.82 g/t Au from 609m (BSD089AW2).

Refer to Figures 5,6 and detailed table of intercepts in appendix A.

A scoping study has commenced and will be followed by a Pre-Feasibility Study in CY18 to investigate the potential for underground mining at Boston Shaker with the aim of defining an underground Ore Reserve by the end of CY18.

Successful development of an underground mine at Boston Shaker has the potential to contribute high-grade ore to the processing plant from CY21 onwards.

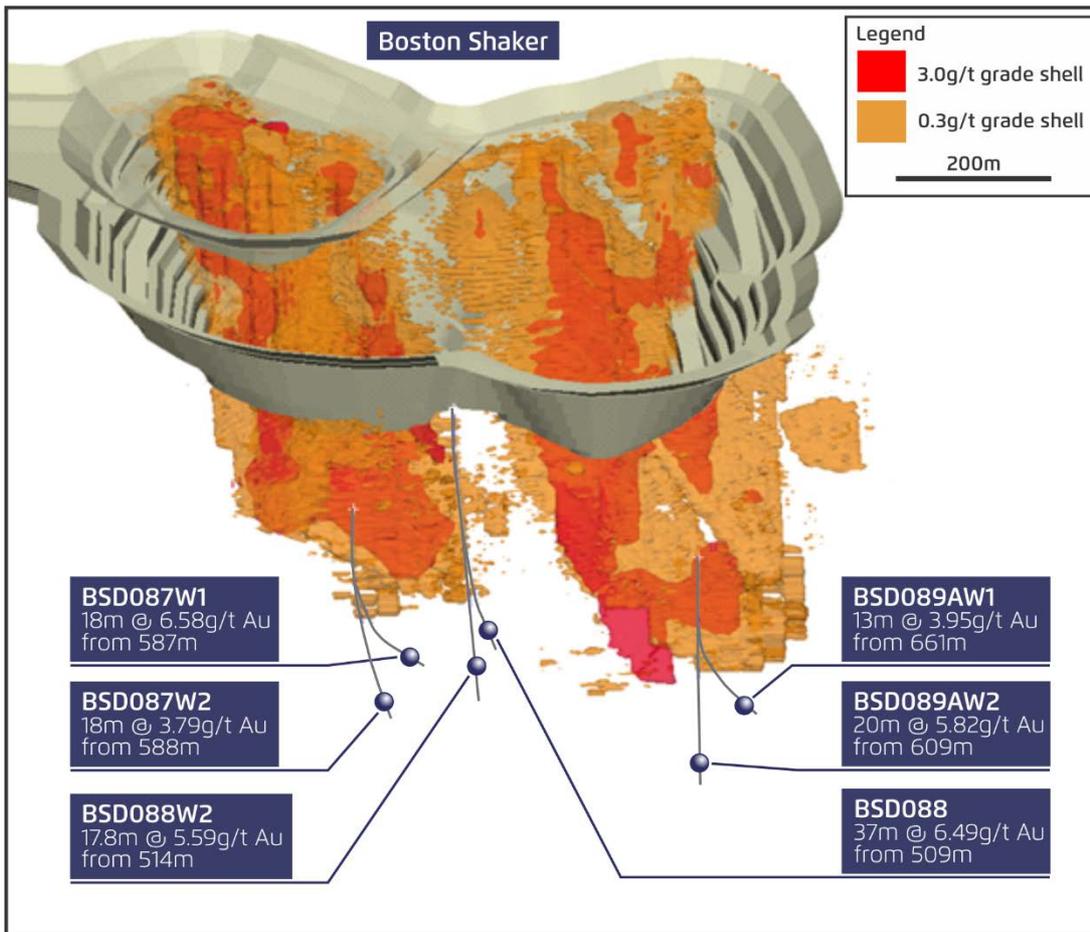


Figure 5: Image showing recent drilling beneath the Boston Shaker pit.

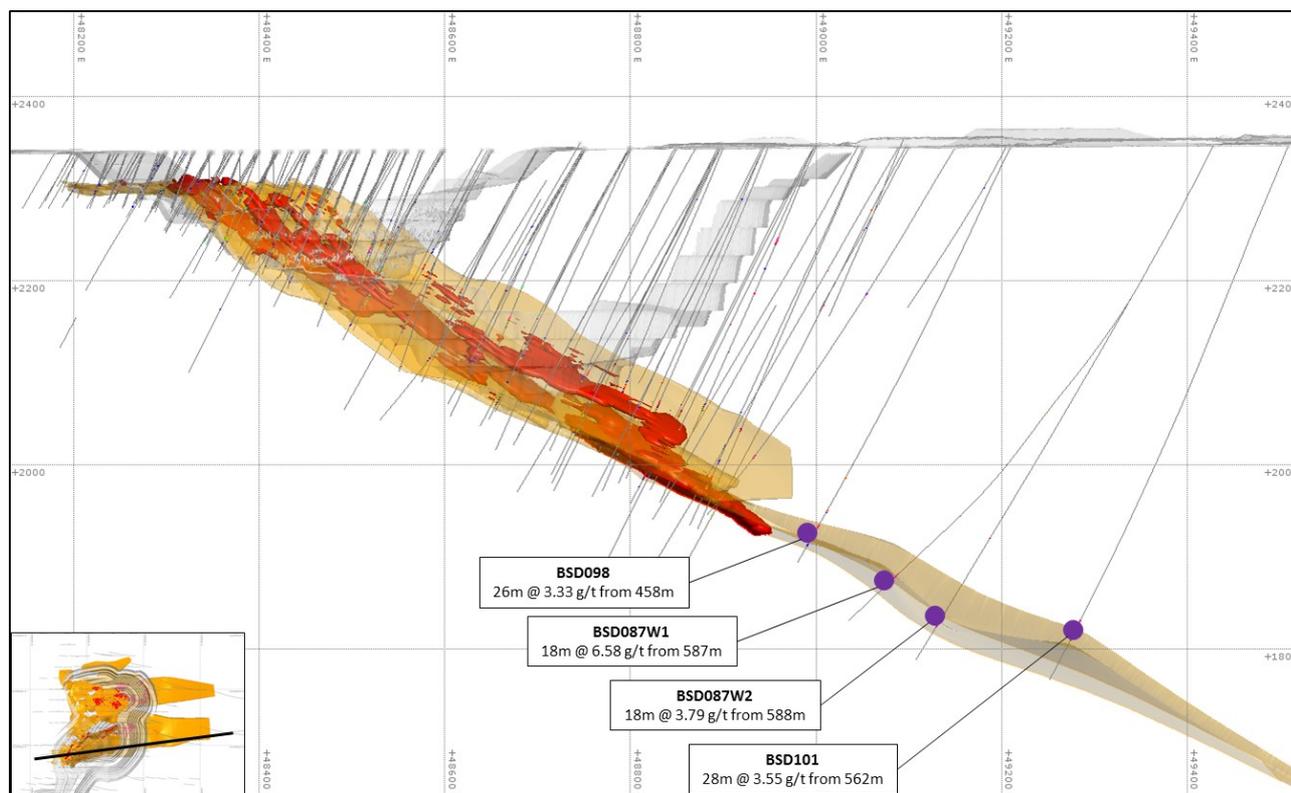


Figure 6: Boston Shaker cross-section showing recent drilling

Regional Exploration

Regional exploration at Tropicana in CY17 has been guided by new thinking and work completed through CY16.

Palinspastic reconstruction and a geological review have provided an updated understanding and revised interpretation of the regional geology and prospectivity in the belt. The evolution of this work continues, with inputs from current exploration drilling and further specialist and academic work.

Over the past year, a balanced strategy was adopted, comprising resource development at Tropicana, and early-to-advanced stage exploration regionally.

Advanced exploration continued to evaluate existing prospects (Madras, Voodoo Child, Angel Eyes, Springbok) and test the New Zebra anomaly identified through aircore drilling in late CY16. Early stage aircore drilling was carried out at Chocalatini, Iceburg, Caprioska and Watchtower.

Following exceptional results at Boston Shaker in CY17, priority was given to resource development drilling to evaluate the underground potential. This focus will continue in CY18 along with regional exploration to test new targets identified as a result of the palinspastic reconstruction.

FY18 Guidance

FY18 guidance for Tropicana (IGO 30% basis) is substantially unchanged with the exception of an increase to sustaining and improvement capex for IGO's share of the capital expenditure that will be incurred in FY18 for (i) the implementation of the Long Island mining strategy and (ii) the installation of the additional ball mill.



Table 3: Updated FY18 Guidance – substantially unchanged

Metric	UOM	Guidance	Changed Guidance
Gold produced (100% basis)	oz	440,000 – 490,000	No change
Gold Sold (30% basis)	oz	132,000 – 147,000	No change
Cash Cost	A\$/oz	680 – 750	No change
All-In-Sustaining-Cost	A\$/oz	1,060 – 1,170	No change
Sustaining and Capex	A\$M	3 – 5	4 – 6
Improvement capex ¹	A\$M	6 – 7	16 – 18
Capitalised Waste Stripping	A\$M	44 – 55	No change
Exploration Expenditure	A\$M	4 - 5	No change

Notes:

1. Improvement capex includes the Long Island camp expansion and heavy vehicle workshop infrastructure, and installation of additional ball mill. For the avoidance of doubt, the Improvement capex is not included in All-In-Sustaining-Costs.

JORC Code (2012) Competent Persons Statements

The information in this report that relates to Exploration Results is based on information compiled by Mr. Damon Elder who is a full-time employee of AGAA and is a member of The Australasian Institute of Mining and Metallurgy. Mr Elder has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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. Elder 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 that relates to the Tropicana Mineral Resources is based on, and fairly represents information and supporting documentation compiled by Mr Mark Kent, a full-time employee and security holder of AGAA, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Kent has sufficient experience relevant to the type and style of mineral deposits under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Mr Kent consented to the inclusion in this report of the Tropicana Mineral Resource estimate, based on the information in the form and context in which it appears.

The information that relates to the Tropicana Ore Reserves is based on, and fairly represents information and supporting documentation compiled by Mr Leonardo Vilela Couto, a full-time employee and security holder of AGAA, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Vilela Couto has sufficient experience relevant to the type and style of mineral deposit under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. Mr Vilela Couto consented to the inclusion in this report of the Tropicana Ore Reserve estimate, based on the information, in the form and context in which it appears.

FORWARD LOOKING STATEMENTS

This announcement contains forward-looking statements regarding future events, conditions and circumstances including but not limited to statements regarding plans, strategies and objectives of management, anticipated construction timelines and expected costs and levels of production. Often, but not



always, forward-looking statements can be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue" and "guidance", or other similar words.

These forward-looking statements are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are beyond IGO's control, which may cause actual results and developments to differ materially from those expressed or implied. These risks include but are not limited to economic conditions, stock market fluctuations, commodity demand and price movements, access to infrastructure, timing of approvals, regulatory risks, operational risks, reliance on key personnel, reserve and resource estimations, native title and title risks, foreign currency fluctuations, exploration risk and mining development, construction and commissioning risk.

The production guidance in this announcement is subject to the risks referred to above and should be read in conjunction with the further information regarding the Mineral Resources and Ore Reserves, as well as the Competent Persons' Statements, included in this announcement and with IGO's other announcements lodged with the ASX.

Forward-looking statements in this announcement apply only at the date of issue. Subject to any continuing obligations under applicable law or regulations, IGO does not undertake to publically update or revise any of the forward-looking statements in this announcement or to advise of any change in events, conditions or circumstances on which any such statement is based. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this announcement.

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APPENDIX A

Table of significant CY17 drill intersections

Tropicana Resource Drilling - Boston Shaker Intercepts													
Hole ID	Hole Type	East	North	RL	Dip	Azi	Drill Date	Total Depth	Depth From	Depth To	Intercept Width	Grade	Gram Metres
BSD087W1	DDH	652394.8	6763263.8	345.9	-63.3	319.4	6/08/2017	669.4	587	605	18	6.58	118.44
BSD087W2	DDH	652394.8	6763263.8	345.9	-63.3	319.4	6/08/2017	648.4	588	606	18	3.79	68.22
BSD088	DDH	652320.2	6763540.5	356.0	-83.2	319.0	16/08/2017	600.0	509	546	37	6.49	240.13
BSD088W2	DDH	652320.2	6763540.5	356.0	-83.2	319.0	18/08/2017	579.6	514	531.9	17.8	5.59	99.50
BSD089AW1	DDH	652804.4	6763482.6	350.2	-63.4	317.3	5/09/2017	716.5	661	674	13	3.95	51.35
BSD089AW2	DDH	652804.4	6763482.6	350.2	-63.4	317.3	5/09/2017	702.1	609	629	20	5.78	115.60
BSD098	DDH	652213.3	6763391.4	344.6	-63.9	317.7	16/10/2017	507.7	458	484	26	3.33	86.49
BSD101	DDH	652423.7	6763178.0	346.3	-67.3	318.5	14/10/2017	636.3	562	590	28	3.55	99.48

Intercept Note:
 Intercepts calculated based on minimum intercept 2m @ 0.5 g/t, lower cut-off grade 0.5 g/t, maximum consecutive waste 2m, minimum intercept grade 1 g/t, calculation based on downhole length, true thickness/width not stated or calculated.



APPENDIX B

Tropicana Gold Mine Mineral Resource and Ore Reserve as at 31 December 2017

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
<p>Sampling techniques</p>	<ul style="list-style-type: none"> - AngloGold Ashanti Australia (AGAA) has used drilling and sub-sampling of the cuttings or cores as the data basis for the Mineral Resource estimates of the Tropicana deposit. Details are given in the following subsection. - Drill hole spacing ranges from 25m×25m grids to 100m×100m grids, with most of the drilling of the Open Pit Mineral Resources on a 50m×50m spacing with 25m×25m testing the starter pits of the Tropicana and Havana initial pits, and the southern end of the Boston Shaker deposit. - A 100m×100m area of Havana was drilled out on a 10m×10m grid to validate the Mineral Resource estimate model and optimise the grade control sample spacing. - The Underground Mineral Resource down-plunge extensions of Havana Deeps is tested using a 100m×100m grid. Deep +800m deep step-out holes have been drilled on nominal ≈200m×100m to test the high-grade mineralisation of Havana Deeps. - All holes are drilled plunging towards the west to intersect the east dipping mineralised zones.
<p>Drilling techniques</p>	<ul style="list-style-type: none"> - Reverse circulation (RC) percussion drilling using face-sampling bits (5¼ inch or 133mm diameter) has been used to collect samples from the shallower (up-dip) part of the deposits with a nominal maximum RC depth of 150m. - Diamond core drilling has been used for deeper holes, with diamond tails drilled from RC pre-collars. To control the deviation of deep DD holes drilled since 2011, many of these holes were drilled from short ≈ 60m RC pre-collars or using 63.5mm (HQ) diameter core from surface. - Diamond core drilling for Mineral Resource definition is predominantly 47.6mm (NQ) diameter core, with a lesser number of holes drilled for collection of metallurgical and/or geotechnical data using 63.5mm (HQ2, HQ3) or 85mm (PQ) core diameters. - In fresh rock, cores are oriented wherever possible for collection of structural data. Prior to 2009, core orientations are made using the EzyMark tool with the Reflex Ace Tool replacing the system in later drilling programs.
<p>Drill sample recovery</p>	<ul style="list-style-type: none"> - RC recovery <ul style="list-style-type: none"> o Prior to 2008 semi-quantitative assessment was made regarding RC sample recovery with recovery visually estimated as 25%, 50%, 75% of 100% of the expected mass volume of a 1m drilling interval. o Since 2008, AGAA has implemented quantitative measure on every 25th interval where the masses of the sample splits are recorded and compared to the theoretical mass of the sampling interval for the rock type being drilled. o AGAA found that overall recovery in the regolith was >80% and total recovery in fresh rock. - DD Recovery <ul style="list-style-type: none"> o DD recovery has been measured as percentage of the total length of core recovered compared to the drill interval. o Core recovery is consistently high in fresh rock with minor losses occurring in heavily fractured ground or for DD drilling in the regolith. - The main methods to maximise recovery have been recovery monitoring as described above and diamond core drilling below ≈ 150m depth. - No relationships have been noted between sample recovery and grade and sample biases that may have occurred due to the preferential loss or gain of fine or coarse material are considered unlikely.



Criteria	Commentary
<p>Logging</p>	<ul style="list-style-type: none"> - RC cuttings and DD cores have been logged recording geological and geotechnical characteristics with reference to AGAA's logging standard library, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies. - Qualitative logging includes codes for lithology, regolith, and mineralisation for both RC and DD, with sample quality data recorded for RC such as moisture, recovery, and sub-sampling methods. - DD cores are photographed, qualitatively structurally logged with reference to orientation measurements where available. - Geotechnical quantitative logging includes QSI, RQD, and matrix and fracture characterisation. - The total lengths of all drill holes have been logged.
<p>Sub-sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> - RC – Primary splitting <ul style="list-style-type: none"> o Prior to 2007 RC samples were collected from the cyclone stream using a tiered riffle splitter. From 2007 a static cone splitter was introduced and replaced riffle splitters on all rigs. o The RC sampling interval is generally 1m but from CY16 2m intervals were introduced for RC pre-collars. o The splitters collected a \approx 12% split from the primary lot with two 12% splits collected – the first for laboratory submission and second as a reference or replicate. Most samples were collected dry with <2% of samples recorded as being split in moist or wet state. o The main protocol to ensure the RC samples were representative of the material being collected was monitoring of sample recovery and collection and assay of replicate samples. - DD – Primary sample <ul style="list-style-type: none"> o DD cores are collected of intervals determined by geological boundaries but generally targeting a 1m length o All NQ cores have been half-core sampled with the core cut longitudinally with a wet diamond blade. o A small amount of DD whole cores have been sampled from HQ3 cores drilled to twin RC holes in the regolith or for geotechnical or metallurgical testing. o In 2005, some 1,150m of cores drilled in the oxide zone were chisel split rather than wet cut but this poorer sub-sampling represents <0.01% of the core drilled. - Laboratory preparation <ul style="list-style-type: none"> o Sample preparation has taken place at three laboratories since commencement of Mineral Resource definition drilling including SGS Perth (pre- 2006), Genalysis Perth (CY06 to April 2016) and Tropicana site laboratory (2015 Boston Shaker samples and post-April 2016 samples) o RC samples were over dried then pulped in a mixer mill to a PSD of 90% passing 75 microns before sub-sampling for fire assay. o SGS prepared DD half-core samples by jaw-crushing then pulverisation of the whole crushed lot to a particle size distribution (PSD) of 90% passing 75 microns. A 50g subsample of the pulp was then collected for fire assay. o Genalysis prepared the samples in a Boyd crusher rotary splitter combo with nominally 2.5kg half-core lots crushed to <3 mm then rotary split to \approx 1 kg before pulverisation and sub-sampling for fire assay. o Samples less with mass <800g submitted to Tropicana laboratory are pulped in a LM2 mill to a PSD of 75 microns before sub-sampling for fire assay. Samples with larger masses are crushed in a Boyd crusher to a PSD of 90% passing 2mm then subsampled using a linear sample divider. o From May 2016, a jaw crusher has been used to crush half-core samples to a PSD of 100% passing 6 mm. - Quality controls for representative sampling: <ul style="list-style-type: none"> o SGS inserted blanks and standards at a 1:20 frequency in every batch with a duplicate pulp collected for assay every 20th sample. Further repeats were also completed at a



Criteria	Commentary
	<p>1:20 frequency in a random manner. Sieve checks were completed on 5% of samples to monitor PSD compliance.</p> <ul style="list-style-type: none"> o Genalysis inserted blanks and standards in every batch and a duplicate pulp was collected for assay on every 25th sample and 6% of each batch was randomly selected for replicate analysis. Sieve checks were completed on 5% of samples to monitor PSD compliance. o Tropicana laboratory used barren basalt and quartz to clean equipment between routine samples <p>- Sample size versus grain size</p> <ul style="list-style-type: none"> o No specific heterogeneity tests have been carried out but the sample sizes collected are consistent with industry standards for the style of mineralisation under consideration. o A 2008 sampling variability study found that 72% of the gold in the samples tested was in size fraction <300 microns, and that repeated sampling of the same lot have very low variance between replicates.
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> - No geophysical tools were used to determine any element concentrations material to the Mineral Resource estimate. - All Mineral Resource prepared pulps have undergone 50g fire assay which is considered a total assay for gold - As discussed above all laboratories have used industry standard quality control procedures with standards used to monitor accuracy, replicate assay to monitor precision, blanks to monitor potential cross contamination and sieve tests to monitor PSD compliance. - AGAA has also used other 'umpire' laboratories to monitor accuracy including Genalysis Perth (prior to November 2006), SGS (from November 2006 to August 2007) and ALS Perth (since August 2007), with these check assaying campaigns coinciding with each Mineral Resource update. - AGAA has reviewed the quality sample results on a batch by batch and monthly basis and has found that the overall performance of the laboratories used for Mineral Resource estimation samples is satisfactory.
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> - Significant intersections of mineralisation are routinely verified by AGAA senior geological staff and have also been inspected by several independent auditors as describe further below. - Twin holes have been drilled to compare results from RC and DD drilling with the DD results confirming that there is no material down-hole smearing of grades in the nearby RC drilling and sampling. - All logging and sample number data is captured digitally in the field using Field Marshall Software (upgrade to Micromine Geobank in 2016). Data is downloaded daily to the Tropicana exploration server and checked for accuracy, completeness and structure by the field personnel. - Assay data is merged electronically from the laboratories into a central Datashed database, with information verified spatially in Vulcan software. AGAA maintains standard work procedures for all data management steps. - An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the assay database - All electronic data is routine backed up to AGAA's server in Perth and provided to IGO via FTP transfer. - There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work.
<p>Location of data points</p>	<ul style="list-style-type: none"> - All early drill hole collar locations of surface holes have been surveyed using RTK GPS equipment, which was connected to the state survey mark (SSM) network. - The grid system is GDA94 Zone 51 using AHD elevation datum. - Prior to 2007, drill hole path surveys have been completed on all holes using Eastman single shot camera tools, with down-hole gyro tools used for all drilling post 2007



Criteria	Commentary
	<ul style="list-style-type: none"> - A digital terrain model was prepared Whelan's Surveyors from aerial photography flown in 2007, which has been supplemented with collar data surveyed using RTK GPS. This model is considered to have centimetre-scale accuracy.
<p>Data spacing and distribution</p>	<ul style="list-style-type: none"> - The drill hole spacing nominally ranges from 25mN×25mE to 100mN×100mE (local grid) over most of the Mineral Resource area with a small area of 10mN×10mE used for grade control calibration work. - Most of the Open Pit Mineral Resources has been tested on a 50mN×50mE grid with closer spaced 25mN×25mE patterns in the upper parts of the deposit within initial open pit designs. - The Havana Deeps area has been drilled on a 100mN×100mE pattern. - Down-hole sample intervals are typically 1m with 2m compositing applied for Mineral Resource estimation work. - The Competent Person considers that data spacing is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures applied, and the JORC Code classification applied.
<p>Orientation of data in relation to geological structure</p>	<ul style="list-style-type: none"> - Most drill hole are oriented to intersect the shallowly east dipping mineralisation at a high angle and as such, a grade bias introduced by the orientation of data in relation to geological structure is highly unlikely.
<p>Sample security</p>	<ul style="list-style-type: none"> - The chain-of-sample custody is managed by AGAA. - Samples were collected in pre-numbered calico bags, which are then accumulated into calico bags for transport from the collection site. The accumulated samples are then loaded into wooden crates and road hauled to the respective laboratories (Perth or Tropicana). - Sample dispatches are prepared by the field personnel using a database system linked to the drillhole data. - Sample dispatch sheet are verified against samples received at the laboratory and any missing issued such as missing samples and so on are resolved before sample preparation commences. - The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or contamination of samples is considered very low.
<p>Audits or reviews</p>	<ul style="list-style-type: none"> - Field quality control data and assurance procedures are reviewed on a daily, monthly and quarterly basis by AGAA field personnel and senior geological staff. - The field quality control and assurance of the sampling was audited by external consultants, Optiro, during CY17. Optiro rated the standard of the work as "good". The conclusion of the audit was that the data was suitable for Mineral Resource estimation work.

Section 2 Reporting of Exploration Results

Criteria	Explanation
Mineral tenement and land tenure status	<ul style="list-style-type: none"> - The Tropical Gold Mine Mineral Resources are located wholly within WA mining lease M39/1096, which commenced on 11 Mar 2015 and has a term of 21 years (expiry 10 Mar 2036). - Tropicana Gold Mine in a joint venture between AGAA (70%) and IGO (30%) with AGAA as manager. - Gold production is subject to WA State royalties of 2.5% of the value of gold value. - There are no material issues relating to native title or heritage, historical sites, wilderness or national parks, or environmental settings - The tenure is secure at the time of reporting and there are no known impediments to exploitation of the Mineral Resource and Ore Reserve and on-going exploration of the mining lease.
Exploration done by other parties	<ul style="list-style-type: none"> - AGAA entered in to a JV with IGO in early 2002 with the main target of interest being a WMC gold soil anomaly of 31ppb, which was reporting in a WA government open file report. Prior to the JV, the WMC soil sampling program was the only known exploration activity and the only dataset available were WA government regional magnetic and gravity data.
Geology	<ul style="list-style-type: none"> - The Tropicana Gold Mine is on the western margin of a 700km long magnetic feature that is interpreted to the collision suture zone between the Archean age Yilgarn Craton to the west and the Proterozoic age Albany-Fraser Orogen to the east of this feature. The gold deposits are hosted by a package of Archean age high metamorphic grade gneissic rocks. - Four distinct structural domains have been identified – Boston Shaker, Tropicana, Havana and Havana South, which represent the same mineral deposit offset by NE striking faults that post-date the mineralisation. - The gold mineralisation is hosted by a shallowly SW dipping sequence of quartz-feldspar gneiss, amphibolite, granulite and meta-sedimentary chert. - The gold mineralisation is concentrated in a ‘favourable horizon’ of quartz-feldspar gneisses, with a footwall of garnet gneiss, amphibolite or granulite. - Mineralisation is characterised by pyrite disseminations, bands and crackle veins within altered quartz-feldspar gneiss. Higher grades are associated with close-spaced veins and sericite alteration - Mineralisation presents as stacked higher grade lenses within a low-grade alteration envelope. Geological studies suggest the mineralisation is related to shear planes that post-date the development of the main gneissic fabric and metamorphic thermal maximum.
Drill hole Information	<ul style="list-style-type: none"> - A summary of the all drillholes used to prepare the Mineral Resource estimate is not practical for this public report. The Mineral Resource estimate gives the best-balanced view of all the drillhole information available as at June 2017.
Data aggregation methods	<ul style="list-style-type: none"> - No metal equivalent values are considered in the Mineral Resource estimate.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> - Exploration results included in this report are for extensional drilling at Boston Shaker (underground resource extension). - All Mineral Resource drilling interests the mineralisation at a high angle and as such approximate true thicknesses in most cases.
Diagrams	<ul style="list-style-type: none"> - A representative 3D oblique view for Boston Shaker results is included in the body of this report.
Balanced reporting	<ul style="list-style-type: none"> - The Mineral Resource is based on all available data and as such provides the best-balanced view of the Tropicana gold deposits as at June 2017. The Exploration results reported are not included in the Mineral Resource Estimate reported.



Criteria	Explanation
<p>Other substantive exploration data</p>	<ul style="list-style-type: none"> - Information relating to other exploration data, such as density, metallurgical assumptions are detailed in Section 3 further below
<p>Further work</p>	<ul style="list-style-type: none"> - Exploration drilling is continuing at Boston Shaker (Underground resource extension drilling) and will be included in the next Mineral Resource update, planned for the March 2018 quarter.



Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
<p>Database integrity</p>	<ul style="list-style-type: none"> - AGAA captures field data and drill hole logging directly in to handheld devices or laptop computers using Field Marshall and Geobank software. - The drillhole data is managed in DataShed software, which is an industry recognised system for management of geoscientific drillhole information. Logging, assays and survey information is loaded directly into Datashed using data import routines, with loading procedures incorporating quality control checking. - Data is validated following loading through visual inspection of results on-screen both spatially and using database queries and cross section plots. Typical checks carried out against original records to ensure data accuracy include items such as overlapping records, duplicate records, missing intervals, end of drillhole checks and so on.
<p>Site visits</p>	<ul style="list-style-type: none"> - The Competent Person makes regular site visits to Tropicana to review the data collection procedures and discuss the geology and mineralisation of the deposit prior to any Mineral Resource update.
<p>Geological interpretation</p>	<ul style="list-style-type: none"> - To control the Mineral Resource estimation process, three dimensional digital solids were prepared in LeapFrog software for the mineralised zones, dykes, shears and garnet (mostly hanging wall) gneiss. - Mineralised solids were prepared using a nominal 0.3g/t AU drill hole cut-off grade to encompass the gold mineralisation targeted for Mineral Resource estimation. The dykes, shears and garnet gneiss solids were prepared from geological logging codes. Regolith units were prepared as digital surfaces below topography based on the geological logging. - The resulting models encompass the mineralisation, the post-mineralisation barren dykes, and the shears controlling higher grade mineralisation and the main waste rock units that are the footwall and hanging wall to the mineralisation.
<p>Dimensions</p>	<ul style="list-style-type: none"> - The Open Pit Mineral Resource is reported within a combination of life-of-mine pit designs and an open pit Lerchs-Grossman-Analysis (LGA) pit optimisation 'shell' based on a gold price of A\$1,817/oz (US\$1,400/oz). - This reporting shell has dimensions of approximately 4.7km along strike, up to 1km wide and up to 450m deep, spanning all the major deposits. - The Underground Mineral Resource extends from the base of the Open Pit Resource below the Havana Open Pit with plan extents in long dimension down dip to the SE by up to 900m and up to ≈200m wide. Additional underground Mineral Resource is down dip from Boston Shaker open pit. A smaller lode extends from the Havana South pit with down dip extents of ≈ 200m and up to 200m wide. Other parts of the Underground Resource are below the other pits.



Criteria	Commentary
<p>Estimation and modelling techniques</p>	<ul style="list-style-type: none"> - The Open Pit Mineral Resource: <ul style="list-style-type: none"> o Has been estimated from the drillhole data available to 16 January 2017, which included 3,666 drill holes for a total of 702,961m of drilling of which, 1,011 holes were DD for 387,191m and 2,421 holes were RC for 278,683m. A further 144 holes of RC with DD holes totalled 37,087 of drilling. o The December 2017 update included 279 new holes (170 RC and 109 DD) for an additional 54,753m of drilling compared to the prior estimate. o The drillhole data was composited to 2m lengths within geological estimation domains using Vulcan software. o No grade top-cut or caps were applied to the composites, but high-grade estimation limits were applied to limit the spatial spread of high grades. o The composite data was declustered in each estimation domain using cell declustering commensurate with the drill spacing (25mE×25mN or 50mE×50mN and planned kriging panel height (10m for Havana and Tropicana, 7.5m for Boston Shaker) o Gold continuity was interpreted for each estimation domain and grades for large panels were estimated using ordinary block kriging in Isatis, with estimation panel dimension 15mE×45mN×10mElv used for Havana and Tropicana, and panels of 15mE×30mN×7.5mElv for Boston Shaker. o Sample searches were oriented down dip with a 160mX×160mY×30mZ search used for mineralised domains and 120mX×120mY×30mZ search in waste domains. A minimum of 8 (or 4 for Boston Shaker) and maximum of 32 samples were required for a panel grade to be estimated. A second pass search was then applied to address blocks with >1% negative kriging weights with the maximum number of samples reduced to 12. o Selective Mining Unit (SMU) grades were then estimated for each panel using the Local Uniform Conditioning method, where the SMU grade distribution within each panel is estimated through a change of support then the SMUs are localised using kriging so the distribution within the panel reflects the local grade trends in nearby data. The information effect of 12mE×12mN grade control information was accommodated in the change of support from panels to SMUs o The SMU dimensions were set to prepare 36 SMUs per panel with SMU dimensions of 10mE×15mN×3.33mElv for Havana and Tropicana and 5mE×7.5mN×2.5mElv for Boston Shaker. The elevation heights nominally match the mining flitch heights applied at each area. o The estimate model was validated by comparing (input) data declustered means for each domain to the respective (output) block estimated grades both globally within each domain and locally using moving window 'swath-plot'. On screen visual inspections were also completed in plan and section to ensure that the grade trends observed in the data were acceptably reproduced in the estimates without over extrapolation in areas of sparse drilling. o Comparison of the Open Pit estimate forecasts to mine production indicates acceptable forecasting performance for monthly, quarterly and annual recompilation periods. - The Underground Mineral Resource: <ul style="list-style-type: none"> o Is estimated in a separate model from the Open Pit with the model oriented to follow the 30° east dip of mineralisation. o The estimate has been prepared using Ordinary Block Kriging in Isatis software into block dimensions 10mX×10mY×2mZ in the rotated coordinates. o A higher-grade zone (>2 g/t) was defined by implicit modelling, with grades estimated into the higher and lower grade zones separately. Search ranges were consistent with the Open Pit estimate, with an additional longer-range search used. o Drill hole data were composited to 2m prior to estimation with no-top cuts applied o The model was validated in an equivalent manner to the Open Pit estimates. o There has been no mining of the Underground Resource to compare to the estimate - There are no assumptions relating to deleterious elements of non-grade variables of economic significance. Gold and density are the only relevant variables.



Criteria	Commentary
Moisture	<ul style="list-style-type: none"> - The tonnages are estimated on a dry basis.
Cut-off parameters	<ul style="list-style-type: none"> - Open Pit <ul style="list-style-type: none"> o The Open Pit estimate is reported within a combination of life-of-mine pit designs and a pit optimisation run with an assumed gold prices of US\$1,400/oz (A\$1,817/oz) and cost assuming back-filling of pits ('Long Island Study'). o On the basis described above, and assuming lower processing costs and higher metallurgical oxide ore, the cut-off are $\geq 0.3\text{g/t Au}$ for oxide Mineral Resources and $\geq 0.4\text{g/t Au}$ for transitional and fresh Mineral Resources. - Underground <ul style="list-style-type: none"> o The Underground estimate cut-off grade is based on assumptions of a pre-feasibility study completed in 2013 which used a gold price of US\$1,400 US\$/oz (A\$1,817/oz) and underground mining and process cost assumptions for fresh Mineral Resource. o The cut-off grade for reporting the Underground Mineral Resource on this basis is $\geq 2.0\text{g/t Au}$.
Mining factors or assumptions	<ul style="list-style-type: none"> - The mining factors and assumption for the Open Pit Mineral Resource is the current mining method of conventional truck and shovel mining with blasting of 10m benches in Tropicana and Havana and blasting of 7.5m benches in Boston Shaker. - Open Pit ore is mined in three 1/3 blast height flitches, with ore predefined by 12mEx12mN RC grade control drilling and 1m downhole sampling. - The assumed Open Pit mining selectivity are the SMU dimensions assumed for the LUC estimates. - The assumption for the Underground Mineral Resource is long-hole open stoping between 20m levels. - No Mineral Resource margin (external) dilution has been modelled in either estimate. - Eventual prospects of economic extraction for the Open Pit resource have been assessed through pit optimisation studies and reporting the Mineral Resource within pit designs and an optimisation shell. - Eventual prospects of economic extraction for the Underground Resource have been demonstrated in the 2013 study, albeit the project development is not currently economical attractive at current metal prices and costs.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> - The ore processing method at Tropicana is well-established with conventional, crushing, grinding then carbon-in-leach extraction of gold followed by electrowinning to produce gold bars. - An average metallurgical recovery of 90.3% has been assumed for both the Open Pit and Underground Mineral Resources based on metallurgical testing completed as part of the Feasibility Study for the Havana Open Pit.
Environmental factors or assumptions	<ul style="list-style-type: none"> - Tropicana Gold mine operates under an environmental management plan that meets or exceeds all statutory and legislative requirements. - Mined waste rock is disposed in waste dumps which are progressively rehabilitated as mining progresses with any potentially acid generating waste encapsulated in non-acid generating material. - A tailing storage facility is used to contain and capture process residues. - The mine produces rehabilitation plans for ongoing rehabilitation and mine closure plans, and the costs are included in the financial model.
Bulk density	<ul style="list-style-type: none"> - AGAA routinely collects <i>in situ</i> bulk density measurements on $\approx 10\text{cm}$ long core segments using the Archimedes principle method of dry weight versus weight in water. There are $\approx 138,000$ density measurements in the estimation database with 131,000 from fresh rock and the remainder in the regolith or cover.



Criteria	Commentary
	<ul style="list-style-type: none"> - Measurements are collected over 1m to 5m intervals targeting intervals that are deemed representative of key lithology in fresh rock. Density has been collected on core within the regolith from 'core-from-surface' drill holes, with the measurement method accounting for voids. - Depending on rock type density ranges of 1.89 t/m³ to 2.18 t/m³ in the saprolite and ranges from 2.56 t/m³ to 2.96 t/m³ in the transitional and fresh rock domains. - Density is estimated by ordinary block kriging in the Mineral Resource estimates apart from a few minor domains with sparse data (such as the regolith), where density is assigned as a mean of the data.
Classification	<ul style="list-style-type: none"> - The basis of classification of the Tropicana estimates into different JORC Code confidence categories is drill hole spacing as follows: <ul style="list-style-type: none"> o Measured Mineral Resources: average 25mE×25mN collar spacing. o Indicated Mineral Resources: average 50mE×50mN collar spacing. o Inferred Mineral Resources: average 100mE×100mN collar spacing (or less) when evidence of geological or grade continuity is sufficient to support grade estimation. - AGAA considers that the Measured Resource supports mine planning with a 90% confidence interval of ±15% on tonnage or grade on a quarterly production basis, with Indicated Resources have the same confidence but applicable on an annual production basis. - The Competent Person considers this classification takes in to account all relevant factors such as data reliability, confidence in the continuity of geology and grades, and the quality, quantity and distribution of the data. - The classification reflects the view of the Competent Person reporting the estimate with the same methodology applied to both the Open Pit and Underground estimates.
Audits or reviews	<ul style="list-style-type: none"> - The Open Pit estimate methodology was audited by consultant QG in 2007, 2009 and 2011. - Consultants Golder Associates audited the 2015 estimate in 2015 with recommendations that have been adopted in the current estimate. - Optiro consultants reviewed the current Mineral Resource and endorsed the estimate. - AGAA conducts internal peer review prior to the release of any Mineral Resource update.
Relative Accuracy/Confidence	<ul style="list-style-type: none"> - AGAA has carried out some non-conditional simulation studies to confirm the relationship between drill spacing and 90% confidence interval assumptions and found the study results in agreement with the drill spacing classification criteria described above. - The trial grade 10mE×10mN control pattern drilled within an 100m×100m area during the project Feasibility Study has also confirmed the precision assumptions and confidence the Mineral Resource estimate in that area - Mine reconciliation for the life-of-mine to date is satisfactory.



Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> - The estimate used for the Ore Reserve study is the Open Pit estimate described in the preceding sections of this JORC table 1. - The Tropicana Open Pit Mineral Resource is reported inclusive of the Ore Reserve. - No Ore Reserve has been estimated from the Underground Mineral Resource estimate.
Site visits	<ul style="list-style-type: none"> - The Competent Person for the Ore Reserve is the Senior LoM Planning Engineer and as such has intimate knowledge of the operation and is in daily contact when on site with personnel providing key inputs to the estimate.
Study status	<ul style="list-style-type: none"> - The level of study for the Ore Reserve estimate is commensurate with industry expectations of a Feasibility Study as described in the JORC Code, with all material Modifying Factors considered in the Ore Reserve estimate. - Current mining and processing operations confirming that the mine plans are technically feasible and economically viable
Cut-off parameters	<ul style="list-style-type: none"> - The Ore Reserve reporting cut-offs are determined based on the net return of gold produced at the processing plant for each ore type. - The specific cut-offs for reporting the Ore Reserve are; $\geq 0.6\text{g/t Au}$ for oxide and $\geq 0.7\text{ g/t Au}$ for transitional and fresh rock.
Mining factors or assumptions	<ul style="list-style-type: none"> - The mining method for the Ore Reserve is open pit mining with conventional excavators and trucks with blasting on 10m benches in Tropicana and Havana and 7.5m in Boston Shaker. Ore is mined in three 1/3 bench height flitches. - Inter-ramp pit slope angles are assumed to be 35° on the footwall and 67° on the hangingwall in both oxide and fresh rock, modified depending on lithology and alteration type. - The Ore Reserve is reported within operation designs that have been prepared using the Mineral Resource model described above, geotechnical inputs and financial assumptions discussed below. - Grade control RC drilling is completed on a 12mEx12mN pattern prior to ore mining. - No mining dilution has been applied as the LUC model incorporates internal dilution. - Mining recovery of ore is assumed to be 100% - Mine designs assume a minimum working face of 50m to 80m at the base of pits. - Inferred Mineral Resources are excluded from the Ore Reserve with the total in-pit Inferred Resource being <0.001% of the Ore reserve and as such, is no material to the mine viability. - No new infrastructure is required to support the operating mine methods.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> - The metallurgical process for Tropicana ores is already established and is a process flow of crushing (grinding rolls), grinding the recovery of gold through carbon-in-leach and electrowinning to produce gold bars. - Gold recovery factors are based on extensive metallurgical testing and range from 92.5% recovery in mineralised transported material down to 89.9% recovery in fresh rock. - No deleterious elements are present in the ore. - In the project Feasibility Study Pilot scale test work was carried out on large diameter (PQ) core collected in a spatially representative manner from the deposit. To date metallurgical recoveries have been consistent with the forecasts from these studies. - As a gold mine, the gold doré bars produced are not subject to any specification requirements.
Environmental	<ul style="list-style-type: none"> - Tropicana Gold mine operates under an environmental manage plant that meets or exceeds all statutory and legislative requirements. - Miner rock wastes are disposed in waste dumps which are progressively rehabilitated as mining progresses with any potentially acid generating waste encapsulated in non-acid generating material.



Criteria	Commentary
	<ul style="list-style-type: none"> - A tailing storage facility is used to contain and capture process residues. - The mine produces rehabilitation plans for ongoing rehabilitation and mine closure plans, and the costs are included in the financial model.
Infrastructure	<ul style="list-style-type: none"> - All major infrastructure required for the mining and processing is in place. - The owner and contractor staffing is fully complete, with personnel sourced on a fly-in-out basis from Perth or Kalgoorlie. - No other significant infrastructure is anticipated and sustaining capital cost for infrastructure are included in the financial model.
Costs	<ul style="list-style-type: none"> - The capital cost of removing waste overburden are included in the evaluation of the applicable pit designs. - Mining operating costs are provided by the mining contractor and other costs are sourced from in the mine operating budget. - As discussed there are no deleterious elements and as such related costs are not relevantThe source of AU\$:US\$ exchange rates is AGAA/IGO corporate guidance - Transpiration charges for gold doré bars is relatively minor and are charged on a contract basis with the refinery. - Treatment and refining charges are included in the refining contract and there are no specification ore penalties associated with treatment and refining. - WA State royalties are levied at 2.5% of the value of gold produced.
Revenue factors	<ul style="list-style-type: none"> - The assumption for gold prices for the Ore Reserve is US\$1,100/oz based on corporate guidance and assessment of historical prices - The A\$:US\$ exchange rate is 0.74, also based on corporate guidance and assessment of historical exchange rates.
Market assessment	<ul style="list-style-type: none"> - No specific market assessment has been completed for this Ore Reserve update.
Economic	<ul style="list-style-type: none"> - The inputs into the economic analysis for the Ore Reserve update have already been described above under previous subsections. - The economic evaluation has been carried out on a real basis (adjusted for inflation) with rates provided by AGAA corporate. - The confidence in majority of the economic inputs is high as Tropicana is an operating mine and as such, costs (opex and capex) are well understood. - The confidence in metal prices and exchange rates is consistent with routine industry practices with the data derived from reputable forecasters. - The discount rate used for NPV calculations is derived from the weighted average cost of capital in Australia. - Sensitivity studies have been completed on inputs such a mining and processing costs, gold price and discount rate. NPV has the greatest sensitivity to gold price with an estimated 30,000oz lost from the Ore Reserve for a 10% reduction in gold price.
Social	<ul style="list-style-type: none"> - Tropicana Gold Mine has all necessary agreements in place with key stakeholders and matters leading to social licence to operate.
Other	<ul style="list-style-type: none"> - There are no material naturally occurring risks associated with the Tropicana operation. - There are no material legal agreements or marketing arrangements not already discussed in prior sub sections. - All necessary government and statutory approvals are in place. - There are no unresolved third-party matters hindering the extraction of the Ore Reserve.
Classification	<ul style="list-style-type: none"> - The Ore Reserve has been classified into Proved and Probable Ore Reserve JORC Code classes based on the underlying MRE classification in the MRE model, with Measured Mineral Resources converted to Proven Ore Reserves, and Indicated Mineral Resources converted to Probable Ore Reserves. - The classifications applied to the estimate are consistent with the opinion of the Competent Person reporting the Ore Reserve.



Criteria	Commentary
	<ul style="list-style-type: none"> - There is no portion of Probable Ore Reserves derived from Measured Mineral Resources
<p>Audits or reviews</p>	<ul style="list-style-type: none"> - A Mineral Resource and Ore Reserve audit was completed in CY17 and no material recommendation came from the audit - The current Ore Reserve estimate has been reviewed internally by AGAA personnel
<p>Discussion of relative accuracy/ confidence</p>	<ul style="list-style-type: none"> - AGAA has carried out simulation to quantify the confidence in the Ore reserve – refer to the commentary at the end of Section 3 above. - The main driver of accuracy and confidence is the spacing of the pre-production drilling, which is captured in the Mineral Resource JORC Code classifications underpinning the Ore Reserve estimates. - Confidence in Ore Reserve inputs is generally high given the mine is operation and costs, prices, recoveries and so on are well understood. - The Ore Reserve estimates are considerate to have sufficient local accuracy to support mine planning and production schedules with Proved Ore Reserves considered a reliable basis for quarterly production targeting and Probable Ore Reserves reliable for annual production targets. - Confidence in the mine design and schedule are high as mining rates and modifying factors are based on actual site performance. Mine designs are consistent with what has been effective previously. - The mine to mill reconciliation data to date indicates the forecast precision of the estimates is good with the Ore Reserve estimate slightly conservative.