ASX RELEASE

20 December 2018

PRE-FEASIBILITY STUDY CONFIRMS POTENTIAL FOR UNDERGROUND MINE AT TROPICANA

Independence Group NL (IGO or the Company) (ASX:IGO) is pleased to announce that a pre-feasibility study into the development of an underground mine beneath the Boston Shaker pits at Tropicana (the Pre-Feasibility Study or PFS) has confirmed that underground mining is technically and financially viable. The PFS is based on the scheduling of underground Mineral Resources with robust economics, fully integrated with the open pit mining plan.

The Tropicana joint venture partners, AngloGold Ashanti Australia Ltd (AGAA) and IGO (AGAA 70% and manager, IGO 30%) are now progressing a Feasibility Study (FS). The completion of this FS and a financial commitment to the Boston Shaker underground development is expected in the second half of FY19.

Boston Shaker PFS Highlights

- The PFS has confirmed that the development of an underground mine at Boston Shaker is technically and financially viable within a nominal PFS level of accuracy (+/- 25%).
- The study confirmed the technical feasibility and potential viability of an underground mine delivering ~1Mtpa of resources to produce in the order of 100,000 ounces per annum over a life-of-mine of approximately 7 years based on mine scheduling of the Boston Shaker underground Indicated and Inferred Mineral Resource only.
- The project would require an estimated capital investment of A$95 million.
- The joint venture partners, IGO and AGAA, are now progressing a FS, which is expected to be completed in the second half of FY19.
- The underground operation will be aligned with the open pit design and schedule, capitalising on process plant improvements delivered in late November 2018 through the successful commissioning of the second ball mill.
- The positive PFS results has led to the commitment to additional drilling, as part of the FS, to define Ore Reserves.

IGO's Managing Director, Peter Bradford, commented: "The Pre-Feasibility Study demonstrates the potential viability of underground mining beneath the Boston Shaker open pits that integrates with the existing open pit life-of-mine. Delivery of Boston Shaker underground will result in an improved grade and gold production profile from Tropicana from FY21.

"The Pre-Feasibility Study is one of a number of work programs implemented at Tropicana to add value. The results are extremely encouraging, and we look forward to completing the feasibility study and potentially starting another exciting chapter at Tropicana."

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Mineral Resource

The Boston Shaker Underground Mineral Resource is reported within a limiting wireframe defined by a profit algorithm to remove isolated and lower grade material, focused on material above a 1.8g/t cut-off grade, and based on a gold price of A$1,778/oz (US$1,400/oz). The Boston Shaker underground Mineral Resource (at 100%) is shown in the table below:

Table 1: Boston Shaker Underground Mineral Resource

Classification	Mt	Au g/t	Au Moz
Measured	0.0	0.0	0.00
Indicated	3.1	4.0	0.40
Inferred	7.5	4.3	1.05
Total	**10.6**	**4.2**	**1.45**

The current Boston Shaker Underground Mineral Resource has been classified as Indicated and Inferred. Infill drilling to convert Inferred Resources to Indicated Resources is ongoing, with an update to the Mineral Resource estimate and the public reporting of an underground Ore Reserve expected in late 3Q19 as part of the FS. The total drill metres informing the PFS Mineral Resource model is 1,436 holes for 175,000m. The drilling has been completed on both a 100m x 100m and 50m x 25m centres. Further infill drilling was completed during October and November 2018, for a total of 16,098 metres drilled. Recent highlights from this program are illustrated on Figure 1 and include:

- BSD166 16m at 5.37g/t from 470m
- BSD170 19m at 4.37g/t from 489m
- BSD171: 22m @ 4.68g/t from 453m
- BSD172: 9m @ 7.66g/t from 464m, and 12m at 3.76g/t from 477m
- BSD173: 15m @ 4.12g/t from 456m
- BSD174: 12m @ 4.14g/t from 454m
- BSD178: 19m @ 5.87g/t from 452m

Full details of the drill-hole intercepts are included in Appendix A.

Boston Shaker Underground Mining Strategy

The ground conditions at Boston Shaker are good and conventional ground support systems and practices have been incorporated into the PFS. The Boston Shaker underground mine design is based on conventional Long Hole Open Stoping, using longitudinal retreat and transverse stoping sequences. The underground mine design is schematically represented in Figure 2.

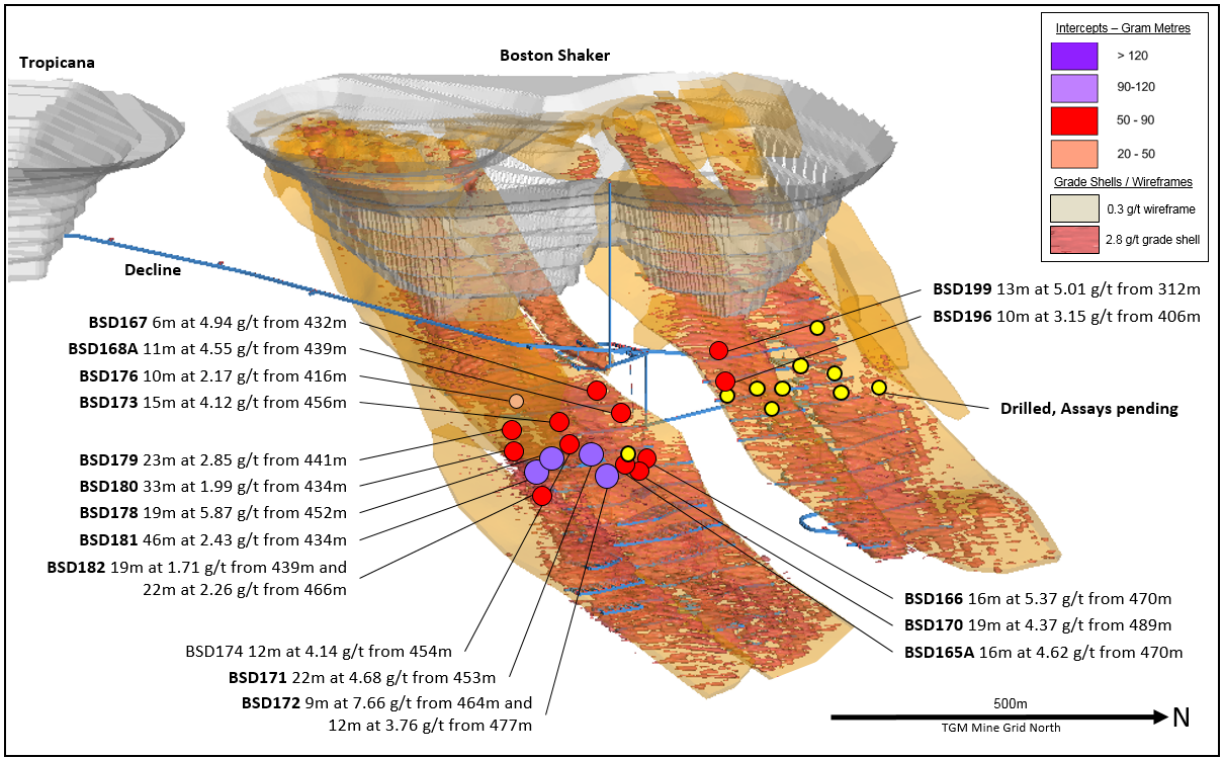

Figure 1: Boston Shaker Drilling Results for drilling completed in October and November 2018 (Looking north-west)

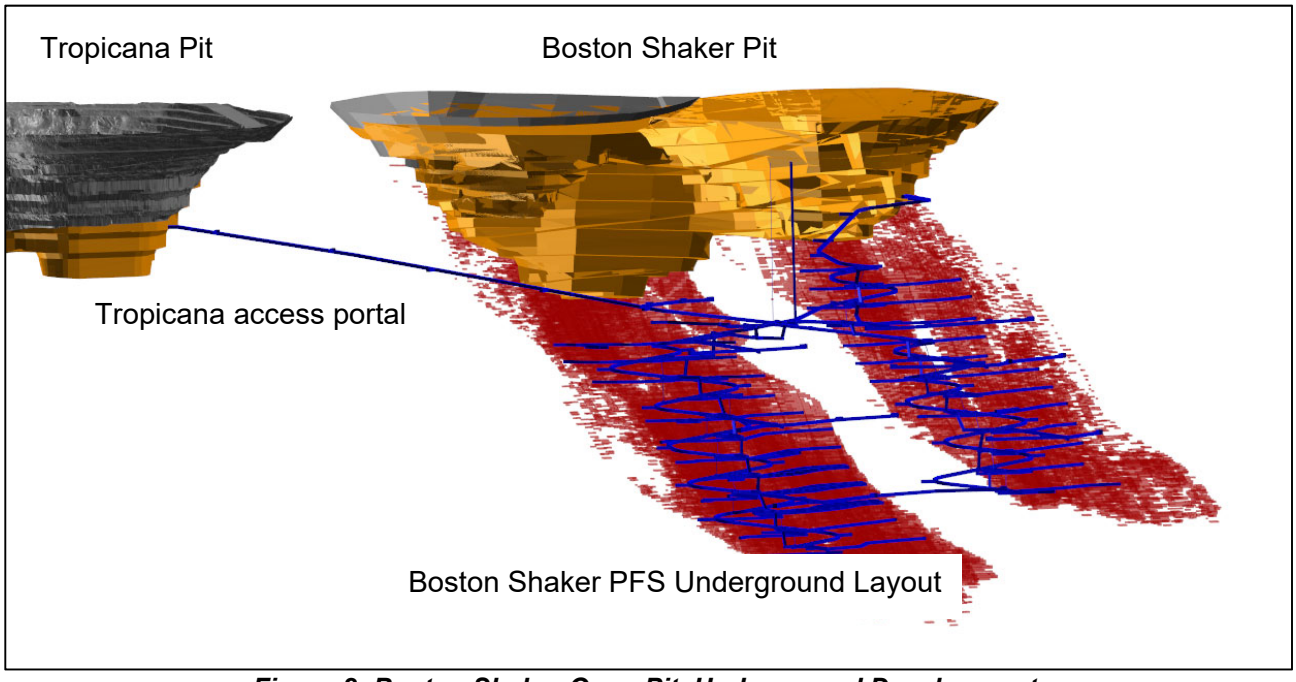

Figure 2: Boston Shaker Open Pit, Underground Development and access link to Tropicana

The underground mine design targets a production rate of 1Mtpa of material grading 3.7g/t to produce in the order of 100,000oz per annum over a life-of-mine of up to seven years. This mine life is subject to the conversion of the underground Inferred Resources into Indicated Resources which is currently being executed as part of the FS. The initial portal development is anticipated to start from within the completed Tropicana pit in mid-2019. Full production levels should be reached in 2021, with the last stopes currently scheduled to be mined in 2026. Underground material will be blended with open pit ore and processed in the existing mill. Interfaces between the Boston Shaker underground mine and the open pit mining activities have been incorporated into the 2019 business plan.

It should be noted that the resource remains open at depth and will be further explored during the life-of-mine.

Ore Processing

The metallurgical testwork completed as part of the PFS indicates that the current processing circuit is suitable to treat the underground material. The current throughput rate of 8.1Mtpa will be maintained. Metallurgical recovery remains in the 88-90% range with no adverse effect expected on reagent consumption and/or the processing cost.

Infrastructure

All infrastructure requirements to establish an underground mine have been scoped as part of the PFS. This includes an expansion to the mine village, additional Emergency Response facilities, workshops, power transmission lines and additional power generation capacity, as well as ventilation requirements.

Capital Cost

The capital cost is estimated at A$95 million (incl. mining development) in real terms on a 100% basis and at a Pre-Feasibility level of accuracy (+/- 25%).

Table 2: Boston Shaker Underground Project – Capital Cost

Major Area	2019 A$M	2020 A$M	Total A$M
Feasibility	4	-	4
Mining development	22	29	51
Infrastructure - Surface	17	6	23
Infrastructure - Mining	2	6	8
Indirects	5	2	6
Contingency	3	1	4
Total Capex	**52**	**43**	**95**

Operating Costs

The Boston Shaker operating costs estimated for the PFS (+/- 25%) are shown in the table below:

Table 3: Boston Shaker Underground Project – Operating Cost

Major Area	Costs A$/t
Mining	80
Processing	19
G&A	3
Total Operating Costs	**102**

Second Ball Mill

The second 6MW ball mill was successfully commissioned in late November 2018. The second ball mill will increase the total throughput rate by about 5% and gold recovery will be improved by up to 3% to approximately 92% at a grind of 65 microns. The operation now has the flexibility to vary the grind size to manage the trade-off between throughput and recovery. The project has been executed on time for a total expected cost of A$36 million (100% basis).

Continued Value Enhancement

The Boston Shaker underground mine is an exciting opportunity for Tropicana and is aligned to the continuous improvement culture of the mine. The FS is in progress and the outcome is expected towards the end of 3Q19.

COMPETENT PERSON STATEMENT

The information that relates to Exploration Results and Mineral Resources was based on information compiled by Mr. Damon Elder, a full-time employee and security holder of AngloGold Ashanti Australia Limited, who is a member of The Australasian Institute of Mining and Metallurgy. Mr. Elder 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 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr. Elder consented to the release of the Mineral Resource 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 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.

A portion of the production target referred to in this announcement is based on Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

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 publicly 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 – DRILL-HOLE INTERCEPT DETAILS

Table 4: Boston Shaker Underground Project – Drill Hole Intercept Details

Hole ID	Hole Type	East	North	RL	Dip	Azi	Drill Date	Total Depth	Depth From	Depth To	Intercept Width	Grade	Gram * Metres
BSD176	DDH	652144.71	6763515.36	345.32	-69.7	316.9	3/10/2018	449	416	426	10	2.17	21.7
BSD173	DDH	652251.39	6763479.16	345.74	-60.3	313.6	4/10/2018	489	456	471	15	4.12	61.8
BSD178	DDH	652216.17	6763443.45	345.12	-72.3	316.4	4/10/2018	489.4	452	471	19	5.87	111.5
BSD179	DDH	652186.81	6763415.84	344.54	-60.9	310.6	4/10/2018	489.7	441	464	23	2.85	65.6
BSD174	DDH	652252.29	6763478.26	345.64	-64.9	312.9	5/10/2018	519.92	454	466	12	4.14	49.7
BSD180	DDH	652205.76	6763397.57	344.48	-63.9	312.1	6/10/2018	495.6	434	467	33	1.99	65.7
BSD181	DDH	652222.82	6763380.47	344.53	-66.0	310.7	7/10/2018	513.6	434	480	46	2.43	111.8
BSD182	DDH	652240.47	6763362.90	344.66	-68.1	312.8	7/10/2018	519.5	439	458	19	1.71	32.6
									466	488	22	2.26	49.7
BSD171	DDH	652251.94	6763549.26	354.56	-68.9	314.4	17/10/2018	508.8	453	475	22	4.68	103
BSD196	DDH	652428.62	6763726.14	356.90	-59.5	317.6	17/10/2018	433.05	406	416	10	3.15	31.5
BSD167	DDH	652250.80	6763621.13	355.22	-60.0	313.7	18/10/2018	475.1	432	438	6	4.94	29.6
BSD172	DDH	652269.63	6763531.56	354.59	-69.6	314.8	18/10/2018	507.6	464	473	9	7.66	68.9
									477	489	12	3.76	45.1
BSD170	DDH	652304.33	6763567.81	355.57	-69.9	316.9	20/10/2018	529.4	489	508	19	4.37	83
BSD165A	DDH	652285.01	6763622.52	355.46	-72.8	312.8	21/10/2018	510.4	470	486	16	4.62	74
BSD166	DDH	652304.67	6763602.68	355.64	-72.4	313.5	21/10/2018	507.6	470	486	16	5.37	86
BSD199	DDH	652319.93	6763763.66	354.64	-61.7	314.4	22/10/2018	360.4	312	325	13	5.01	65.1
BSD168A	DDH	652268.93	6763603.00	355.31	-66.2	316.2	8/11/2018	477.2	439	450	11	4.55	50

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 which approximates true width, noting true thickness/width not calculated. Coordinates and azimuths reported in MGA94 Zone 51.

APPENDIX B – JORC CODE TABLE 1 – TROPICANA GOLD MINE

Section 1: Sampling Techniques and Data – Boston Shaker PFS

Criteria	Commentary
Sampling techniques	• AngloGold Ashanti Australia Ltd. (AGAA) has used drilling and subsampling of the cuttings or cores as the data basis for the Mineral Resource estimates of the Boston Shaker underground deposit. Details are given in the following subsection. • Drill hole spacings range from 12mNx12mE (grade control) in the depleted Boston Shaker (BS01) open pit to 100m×100m grids at depth. • All holes are drilled plunging towards the west to intersect the east dipping mineralised zones.
Drilling techniques	• 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) ore 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 programmes.

Drill sample recovery	• RC recovery:
	  ○ Prior to 2008 semi-quantitative assessment was made regarding RC sample recovery with recovery visually estimated as 25%, 50%, 75% or 100% of the expected mass volume of a 1m drilling interval.
	  ○ 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.
	  ○ AGAA found that overall recovery in the regolith was >80% and total recovery in fresh rock.
	• DD Recovery:
	  ○ DD recovery has been measured as percentage of the total length of core recovered compared to the drill interval.
	  ○ 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 course material are considered unlikely.

Logging	• RC cuttings and DD cores have been logged geologically and geotechnically with reference to AGAA's logging standard library, to levels of detail that support Mineral Resource estimation, Underground 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, matrix and fracture characterisation. • The total lengths of all drill holes have been logged.

Sub-sampling techniques and sample preparation	• RC – Primary splitting
	  ○ 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 riffles splitters on all rigs.
	  ○ The RC sampling interval is generally 1m but from 2016, 2m intervals were introduced for RC pre-collars.

Section 1: Sampling Techniques and Data – Boston Shaker PFS

Criteria	Commentary
	○ The splitters collected a ≈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. ○ 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 ○ DD cores are collected of intervals determined by geological boundaries but generally targeting a 1m length. ○ All NQ cores have been half-core sampled with the core cut longitudinally with a wet diamond blade. ○ A few of the DD whole cores have been sampled from HQ3 cores drilled to twin RC holes in the regolith or for geotechnical or metallurgical testing. ○ 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 ○ Sample preparation has taken place at three laboratories since commencement of Mineral Resource definition drilling including SGS Perth (pre- 2006), Genalysis Perth (2006 to April 2016) and Tropicana site laboratory (2015 Boston Shaker samples and post-April 2016 samples). ○ RC samples were over dried then pulped in a mixer mill to a PSD of 90% passing 75 microns before subsampling for fire assay. ○ 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. ○ Genalysis prepared the samples in a Boyd crusher rotary splitter combo with nominally 2.5kg half-core lots crushed to <3mm then rotary split to ≈ 1 kg before pulverisation and sub-sampling for fire assay. ○ 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. ○ From May 2016, a jaw crusher has been used to crush half-core samples to a PSD of 100% passing 6mm. • Quality controls for representativity ○ 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 1:20 frequency in a random manner. ○ Sieve checks were completed on 5% of samples to monitor PSD compliance. ○ 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. ○ Tropicana laboratory used barren basalt and quartz to clean equipment between routine samples. • Sample size versus grain size ○ 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. ○ 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.
Quality of assay data and laboratory tests	• 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.

Section 1: Sampling Techniques and Data – Boston Shaker PFS

Criteria	Commentary
Verification of sampling and assaying	• 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.
Location of data points	• All completed drill-hole collar locations of surface holes have been 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. • A digital terrain model was prepared by 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.
Data spacing and distribution	• Drill hole spacings range from 12mNx12mE (grade control) in the depleted Boston Shaker (BS01) open pit to 100m×100m grids at depth. • Down-hole sample intervals are typically 1m with 2m compositing applied for Mineral Resource estimation work. • The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Underground Ore Reserve estimation procedures applied, and the JORC Code classification applied.
Orientation of data in relation to geological structure	• 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.
Sample security	• The chain-of-sample custody is managed by AGAA. • Samples were collected in pre-numbered calico bags, which are then accumulated into polyweave 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 drill-hole 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.
Audits or reviews	• Field quality control data and assurance procedures are review 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 consultant QG in 2007 and 2009. The conclusion of the audit was that the data was suitable for Mineral Resource estimation work.

Section 2: Reporting of Exploration Results – Boston Shaker PFS

Criteria	Explanation
Mineral tenement and land tenure status	• 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 Underground Ore Reserve and on-going exploration of the mining lease.
Exploration done by other parties	• 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	• 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 Origan 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 gneisses, amphibolites, granulites, meta-sedimentary cherts. • 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	• A summary of the many hole used to prepare the Mineral Resource estimate is not practical for this public report. The Mineral Resource estimate give the best-balanced view of all the drill-hole information.
Data aggregation methods	• No metal equivalent values are considered in the Mineral Resource estimate.
Relationship between mineralisation widths and intercept lengths	• All Mineral Resource drilling interests the mineralisation at a high angle and as such approximate true thicknesses in most cases.
Diagrams	• IGO has included representative diagrams have been included in prior ASX public reports.
Balanced reporting	• The Mineral Resource is based on all available data and as such provides the best-balanced view of the Boston Shaker underground Mineral Resource.
Other substantive exploration data	• Information relating to other exploration data, such as density, metallurgical assumptions are detailed in Section 3 further below.
Further work	• Exploration drilling is continuing the within tenement with a minor Mineral Resource update planned for early 2019.

Section 3: Estimation and Reporting of Mineral Resources – Boston Shaker PFS

Criteria	Commentary
Database integrity	• AGAA captures field data and drill hole logging directly in to handheld devices or laptop computers using Field Marshall and Geobank software. • The drill-hole data is managed in DataShed software, which is an industry recognised system for management of geoscientific drill hole 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-hole checks and so on.
Site visits	• The Competent Person is site based and is actively involved in the management and supervision of the Mineral Resource estimation.
Geological interpretation	• 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, the shears controlling higher grade mineralisation and the main waste rock units that are the footwall and hangingwall to the mineralisation.
Dimensions	• The Boston Shaker underground Mineral Resource extends approximately 700m below surface and 400m below the base of the Boston Shaker Open Pits.
Estimation and modelling techniques	• The total drill metres informing the PFS Mineral Resource model is 1,436 holes for 175,000 metres. • The estimate has been prepared using Ordinary Block Kriging in Isatis software into block dimensions 10mX×10mY×2mZ in the rotated coordinates. • Drill hole data were composited to 2m prior to estimation with no-top cuts applied. • There has been no mining of the Underground Resource to compare to the estimate. • Sulphur is modelled as a secondary (independent) variable.
Moisture	• The tonnages are estimated on a dry basis.
Cut-off parameters	• The Underground estimate cut-off grade is based on assumptions of a pre-feasibility study completed in 2013 which used a gold price of $US1,400/tr.oz ($A1,778/tr.oz) and underground mining and process cost assumptions for fresh Mineral Resource. • The cut-off grade for reporting the Underground Mineral Resource on this basis is ≥1.8 g/t Au.
Mining factors or assumptions	• The assumption for the Underground Mineral Resource is long-hole open stoping between 20m levels. • No Mineral Resource margin (extremal) dilution has been modelled in either estimate. • The Mineral Resource is reported.
Metallurgical factors or assumptions	• 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. • 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.
Environmental factors or assumptions	• 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.

Section 3: Estimation and Reporting of Mineral Resources – Boston Shaker PFS

Criteria	Commentary
	• 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	• AGAA routinely collects in situ bulk density measurements on ≈10cm long core segments using the Archimedes principle method of dry weight versus weight in water. There are ≈200,000 density measurements in the estimation database with the vast majority (~98%) of measurements from fresh rock and the remainder in the regolith or cover. • Measurements are collected over 1m to 5m intervals targeting intervals that are deemed representative of key lithologies 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 2.56t/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	• The basis of classification of the Boston Shaker underground estimates into different JORC Code confidence categories is drill hole spacing as follows:
	  ○ Measured Mineral Resources: average 12.5mE×12.5mN collar spacing
	  ○ Indicated Mineral Resources: average 25mE×50mN collar spacing
	  ○ 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 support 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.

Audits or reviews	• The Open Pit estimate methodology was audited by consultant QG in 2007, 2009 and 2011. • Consultants Golder Associates audited the 2015 estimate in 2015. • Consultants Optiro reviewed and endorsed the Mineral Resource Estimate in November 2017. • AGAA also conducts internal peer reviews on the completion of estimate updates.
Relative Accuracy/Confidence	• AGAA has carried out some 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. • Mine reconciliation for the life-of-mine to date is satisfactory.