



28 February 2014

## TROPICANA MINERAL RESOURCE AND ORE RESERVE ESTIMATES AS AT 31 DECEMBER 2013

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Independence Group NL ("Company") (ASX: IGO) is pleased to announce Tropicana Mineral Resource and Ore Reserve (IGO Share 30%) updates as at 31 December 2013 in accordance with the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves [JORC (2012)], set out in the attached Tables 1 and 2, and Appendix A.

Tropicana Ore Reserves at 31 December 2013 are estimated at 3.76M oz Au with the majority of the change from December 2012 relating to depletion due to mining and milling, and minor changes to the resource model.

Tropicana Mineral Resources at 31 December 2013 are estimated at 7.72M oz Au with the majority of the change from December 2012 relating to depletion due to mining and milling, and minor changes to the pit design.

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**Table 1: Tropicana Gold Project – 100% Project (IGO Share 30%) - December 2013 Mineral Resources**

		Mineral Resource – 31 December 2013		
	Classification	Tonnes (Mt)	Au g/t	Contained Au (M Oz)
Open Pit	Measured	28.6	2.06	1.89
	Indicated	74.0	1.88	4.48
	Inferred	5.8	2.57	0.48
	<b>Sub-Total</b>	<b>108.4</b>	<b>1.97</b>	<b>6.85</b>
Underground	Measured	-	-	-
	Indicated	2.4	3.58	0.27
	Inferred	6.1	3.07	0.60
	<b>Sub-Total</b>	<b>8.5</b>	<b>3.21</b>	<b>0.87</b>
Total Tropicana	Measured	28.6	2.06	1.89
	Indicated	76.4	1.94	4.75
	Inferred	11.9	2.83	1.08
<b>GRAND TOTAL</b>		<b>116.8</b>	<b>2.06</b>	<b>7.72</b>

## Notes:

1. For the Open Pit Mineral Resource estimate, mineralisation in the Havana, Havana South, Tropicana and Boston Shaker areas was calculated within a US\$1,550/oz pit optimisation at an AUD:USD exchange rate of 1.03 (A\$1,500/oz).
2. The Open Pit Mineral Resources have been estimated using the geostatistical technique of Uniform Conditioning, using cut-off grades of 0.3g/t Au for Transported and Saprolite material, 0.4g/t Au for Transitional and Fresh material.
3. The Havana Deeps Underground Mineral Resource estimate has been reported outside the US\$1,550/oz pit optimisation at a cut-off grade of 1.73g/t Au, which was calculated using a gold price of US\$2,000/oz (AUD:USD 1.05) (A\$1,896/oz). The Havana Deeps Underground Mineral Resource was estimated using the geostatistical technique of Ordinary Kriging using average drill hole intercepts.
4. Resources are inclusive of Reserves.
5. The Competent Persons statement is incorporated in the JORC Code Statements below.
6. JORC (2012) Table 1 Parameters are set out Appendix A to this report.

**Table 2: Tropicana Gold Project – 100% Project (IGO Share 30%) – December 2013 Ore Reserves**

		Ore Reserve – 31 December 2013		
	Classification	Tonnes (Mt)	Au g/t	Contained Au (M Oz)
Open Pit	Proved	24.9	2.26	1.81
	Probable	29.9	2.02	1.95
<b>GRAND TOTAL</b>		<b>54.8</b>	<b>2.13</b>	<b>3.76</b>

## Notes:

1. The Proved and Probable Ore Reserve (31 December 2013) is reported above economic break-even gold cut-off grades of 0.4 g/t for Transported/Upper Saprolite material, 0.5 g/t for Lower Saprolite material, 0.6g/t for Sap-Rock (Transitional) material and 0.7g/t for Fresh material at nominated gold price US\$1,100/oz, and exchange rate 0.88 AUD:USD (A\$1,249/oz Au).
2. The estimate is based on the actual survey position for the end of September 2013 with Resource models depleted by the monthly forecast production for the remainder of CY2013.
3. The Competent Persons statement is incorporated in the JORC Code Statements below.
4. JORC (2012) Table 1 Parameters are set out Appendix A to this report.

**JORC Code Statements - Tropicana Gold Project Mineral Resource and Ore Reserve estimates**

The information in this report that relates to Mineral Resources estimates was based on information compiled by Mr Mark Kent, a full-time employee of AngloGold Ashanti Australia Limited, 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 release of the Mineral Resource estimate, based on the information in the form and context in which it appears in this report.

The information that relates to Ore Reserves estimates was based on information compiled by Dr Salih Ramazan, a full-time employee of AngloGold Ashanti Australia Limited, who is a member of the Australasian Institute of Mining and Metallurgy. Dr Ramazan 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. Dr Ramazan has consented to the release of the Ore Reserve estimate, based on the information, in the form and context in which it appears in this report.



## APPENDIX A

**JORC Code, 2012 Edition – Table 1**  
**Section 1 Sampling Techniques and Data**

Criteria	Commentary
<i>Sampling techniques</i>	<p>AngloGold Ashanti Australia (AGAA) has carried out all the drilling within the Tropicana deposit. The sampling methodology with RC drilling has changed over time. Sample collection prior to 2007 was via a cyclone, dust collection system and multi-stage riffle splitter attached to the drill rig. From the beginning of 2007 sample collection was via a cyclone, dust collection system and cone splitter attached to the drill rig.</p> <p>All NQ2 and HQ diamond holes have been half-core sampled over prospective mineralised intervals determined by the geologist.</p> <p>Within fresh rock, core is oriented for structural/geotechnical logging wherever possible. In oriented core, one half of the core was sampled over one metre intervals and submitted for fire assay. The other half of the core, including the bottom-of-hole orientation line, was retained for geological reference and potential further sampling such as metallurgical test work. In intervals of un-oriented core, the same half of the core has been sampled where possible, by extending a cut line from oriented intervals through into the un-oriented intervals. The lack of a consistent geological reference plane, (such as bedding or a foliation), precludes using geological features to orient the core.</p>
<i>Drilling techniques</i>	<p>Reverse Circulation drilling has been utilised to an average depth of 150m in the shallower, up-dip, western portions of the resource and as pre-collars to diamond holes. All Reverse Circulation drilling has been via face sampling hammer.</p> <p>Diamond drilling has predominantly been NQ2 with limited HQ2, HQ3 and PQ in the upper saprolite and for holes drilled for geotechnical and metallurgical purposes. The majority of diamond holes have been drilled as tails to RC drilling. From 2011 many deeper holes were drilled with shorter RC pre-collars (~60m), or HQ from surface to minimise deviation.</p>
<i>Drill sample recovery</i>	<p>The sample recovery is currently recorded on selected intervals to assess that the sample is being adequately recovered during RC drilling. Prior to April 2008, no systematic assessment of sample recovery data was made for RC drilling. A subjective visual estimate was used where weights were recorded as 25, 50, 75 or 100%. Since April 2008 a systematic sample recovery program has been implemented where for 1:25 intervals, the Primary (lab weight), Secondary (archive weight) and Reject splits are weighed and recorded in the database. These weights are combined and then compared to a theoretical recovery of the interval based on the regolith and rock type of the interval being analysed.</p> <p>For diamond drilling recovered core for each drill run is recorded and measured against the expected core from that run. Core recovery is consistently very high, with minor loss occurring in regolith and heavily fractured ground.</p>
<i>Logging</i>	<p>All RC chips and diamond drill cores have been geologically logged for lithology, regolith, mineralisation and alteration utilising AGAA's standard logging code library. Diamond core has also been logged for geological structure. Sample quality data recorded includes recovery, sample moisture (i.e. whether dry, moist, wet or water injected) and sampling methodology. Diamond drill holes are routinely orientated, photographed and structurally logged with the confidence in the orientation recorded. Geotechnical data recorded includes QSI, RQD, matrix, and fracture categorisation.</p> <p>All logging data is digitally captured via Field Marshall Software and the data is validated in Micromine prior to being uploaded to an SQL database. DataShed has been utilised for the majority of the data management of the SQL database. The SQL database utilises referential integrity to ensure data in different tables is consistent and restricted to defined logging codes.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p>Since the commencement of exploration activities at Tropicana, sample preparation and analysis has been carried out by two laboratories, as detailed below:</p> <p>Prior to November 2006 - SGS (formerly Analabs) Welshpool performed all gold and multi-element analysis.</p> <p>November 2006 to present – Genalysis Perth has performed all gold and multi-element analyses.</p> <p>SGS routinely prepared half-core diamond samples by crushing in a jaw crusher followed by pulping in an LM5 to 90% passing 75µm. One metre RC samples were pulped in an LM5 to 90% passing 75µm. 50-gram samples were then assayed by fire assay. Sieve tests were carried out on 5% of samples.</p> <p>At Genalysis, core samples weighing approximately 2.5kg are prepared via a robot. The samples are then crushed to &lt;3mm in a Boyd crusher and automatically split, down to a sample of ~1kg for pulping and analysis. The remainder of the material was retained as a coarse split for metallurgical test-work. One metre RC samples were pulped in a mixer mill to 90% passing 75µm. Wet sieve tests were carried out on 5% of the samples</p> <p>A coarse blank sample is inserted as the first sample in each laboratory job. The purpose of this sample is to check that laboratory crushing and grinding equipment is kept clean. Results from the blank analysis show that no contamination is occurring within the pulverising process.</p> <p>Standards are inserted into batches of samples at a frequency of three standards in every 100.</p>



Criteria	Commentary
<i>Quality of assay data and laboratory tests</i>	At SGS 50-gram samples were assayed by fire assay. SGS inserted blanks and standards (one in 20 samples) in every batch. Every 20th sample was selected as a duplicate from the original pulp packet and then analysed. Repeat assays were completed at a frequency of one in 20 and were selected at random throughout the batch. In addition, further repeat assays were selected at random by the quality control officer, the frequency of which was batch dependent. Analysis was by fire assay with similar quality assurance (QA) for RC and half core samples. Genalysis inserted internal standards and blanks randomly through each batch. Every 25th sample was selected as a duplicate from the original pulp packet and then analysed at the end of the batch. Finally, 6% of the batch was selected for re-analysis. Internal laboratory checks and internal and external check assays such as repeats and check assays enable assessment of precision. Contamination between samples is checked for by the use of blank samples. Assessment of accuracy is carried out by the use of certified Standards (CRM). Check assay campaigns generally coincide with each resource update. QAQC results are reviewed on a batch-by-batch and monthly basis. Any deviations from acceptable precision or indications of bias are acted on with repeat and check assays. Overall performance of both laboratories has been satisfactory.
<i>Verification of sampling and assaying</i>	On receipt of assay results from the laboratory the results are verified by the Data Manger and by geologists who compare results with geological logging. Analysis of twinned drill holes showed that no significant down hole smearing was occurring in RC holes when compared to the twinned diamond holes in Tropicana and Havana.
<i>Location of data points</i>	All hole locations within the resource area to date have been pegged with a standard GPS, or by RTK GPS. Once the holes are drilled the collar location is then surveyed with an RTK GPS. A regional Digital Terrain Model was then created to cover the Tropicana JV tenement area from Shuttle Radar Topography Mission (SRTM) data. The data was sampled at 3 arc-seconds, which is 1/1200th of a degree of latitude and longitude, or about 90 metres.
<i>Data spacing and distribution</i>	Drill hole spacing on sections, and between sections, typically range from 25 x 25m to 100 x 100m. The majority of the Open Pit resource area has been drill tested at a nominal density of 50 x 50m with the spacing closed up to 25 x 25m within the Tropicana and Havana Starter Pits. An area of 100 x 100m within the Havana pit was drilled on a 10 x 10m grid to validate the resource model and provide data to optimise the proposed grade control methodology. The drill spacing at Boston Shaker is nominally 50 x 50m. The down-plunge extension of the Havana Deeps area is drilled at 100 x 100m or 100 x 50m closer to the pit area. 1m samples are composited to 3m prior to Resource Estimation.
<i>Orientation of data in relation to geological structure</i>	The majority of drilling is orientated to intersect normal to mineralisation. The chance of bias introduced by sample orientation is thus considered minimal.
<i>Sample security</i>	Samples are sealed in calico bags, which are in turn placed in large poly-weave bulka-bags for transport. Filled poly-weave bulk-bags are secured on wooden crates and transported directly via road freight to the laboratory with a corresponding submission form and consignment note. Genalysis checks the samples received against the submission form and notifies AGAA of any missing or additional samples. Once Genalysis has completed the assaying, the pulp packets, pulp residues and coarse rejects are held in their secure warehouse. On request, the pulp packets are returned to the AGAA warehouse on secure pallets where they are documented for long term storage and retrieval.
<i>Audits or reviews</i>	Field quality control and assurance has been assessed on a daily, monthly and quarterly basis. Field QA/QC was assessed by Quantitative Group (QG) as part of their audits of the Tropicana and Havana resource between 2007 and 2009.

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	Tropicana is a joint venture between AngloGold Ashanti Australia Limited (AGAA) and Independence Group NL (IGO) (AGAA:IGO, 70:30) AGAA is the manager of the JV. There are no known heritage or environmental impediments over the leases covering the Mineral Resource and Ore Reserve. The tenure is secure at the time of reporting. No known impediments exist to operate in the area.
<i>Exploration done by other parties</i>	AngloGold Ashanti Australia (AGAA) has carried out all the drilling within the Tropicana deposit.
<i>Geology</i>	The Tropicana and Havana gold deposit host rocks are predominantly gneisses.
<i>Drill hole Information</i>	No new exploration results are announced within this report.
<i>Data aggregation methods</i>	No new exploration results are announced within this report.
<i>Relationship between mineralisation widths and intercept lengths</i>	No new exploration results are announced within this report.
<i>Diagrams</i>	No new exploration results are announced within this report.
<i>Balanced reporting</i>	No new exploration results are announced within this report.
<i>Other substantive exploration data</i>	No new exploration results are announced within this report.



Criteria	Commentary
<i>Further work</i>	No new exploration results are announced within this report.

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
<i>Database integrity</i>	<p>AGAA uses various software programs to collect the different forms of drilling data obtained during exploration. The main packages are from Microsoft (SQL Server and Access) and Micromine Pty Limited (Micromine and Field Marshall), Maxwell Services Limited (DataShed) and Karjeni Pty Limited (dPipe).</p> <p>The database is managed with Microsoft's SQL Server and Maxwell's DataShed. DataShed was developed as a front end interface to MS Access or SQL Server. DataShed was specifically created for the exploration and mining community and contains special queries and data management utilities unique to the mining industry. Many of these or additional processes have been modified or added to by AGAA.</p> <p>Drilling data is captured in the field directly into handheld Husky, LXE, Toughbook or laptop computers with Field Marshall software. Daily drilling forms (Plods) are completed by the driller in hard copy and signed off by the geologist. Sampling and Magnetic Susceptibility (MagSus) readings are entered by field staff.</p> <p>The merging of logging data into the database is semi-automated via a file transfer program called dPipe. Karjeni Pty Limited developed dPipe to facilitate the transfer of data from one format into another into SQL databases. This program has the ability to read a file to split, composite and append data into the desired format.</p> <p>Semi-automatic loading of data is preferred so that any problems can be addressed immediately. These problems may include inconsistent intervals, wrong logging codes or incorrect initials for the person who collected the data. During the loading process some logging files are split into several tables, i.e. regolith, geology and alteration, to allow better management and access to data. Errors are held in the buffer until corrected.</p> <p>Assay results received from the laboratories are emailed to the Perth office and stored on the server. An invoice is mailed to AngloGold Ashanti along with a hard copy or digital PDFs of the results. The hard copies are filed in folders and PDFs stored on the network for future auditing purposes.</p>
<i>Site visits</i>	Mining activities are ongoing and the site is visited regularly by the Competent Persons.
<i>Geological interpretation</i>	<p>3D solids are created by flagging the principal rock types and structures defined during section interpretation. The highest priority geological domains are the Garnet Gneiss, Dykes and Shears, as these are the most visually distinctive units, are the least subjective when being logged. These are considered to have a high level of confidence in interpretation. The Garnet Gneiss unit is an important unit, as it is generally found in the hanging wall to the mineralisation and acts as a precursor to mineralisation, as well as being the dominant waste rock unit. The dykes are locally important as they post-date mineralisation and are barren of gold mineralisation. Modelling of the shears is critical to understanding geotechnical aspects and assessing the spatial controls on the mineralisation. Measurements of structural data from drill core are used to generate 3D disks in Vulcan that assist in correctly modelling the orientation of dykes and shears.</p> <p>Modelled lithological boundaries and shears formed a framework for subsequent definition and triangulation of mineralised lenses in the Tropicana and Havana zones. A 0.3g/t gold cut-off was applied with internal lower grade zones (&lt;3m) included in the model. The Tropicana mineralised zone was clipped at the saprock contact, consistent with observations in diamond drill core. Havana zone mineralisation extends above the saprock contact and 0.3g/t gold triangulations were clipped at the base of transported cover. Mineralisation envelopes were projected down dip below the limit of assayed drill core and RC samples on average by 100m.</p> <p>Interim solids were validated and refined using structural readings measured in drill core.</p>
<i>Dimensions</i>	<p>The Open Pit Mineral Resource is reported within an A\$1500 optimisation shell that is 4.7km long, up to 1km wide, and up to 460m deep.</p> <p>The Havana Deeps Underground Resource extends to a depth of approximately 1km below surface.</p>
<i>Estimation and modelling techniques</i>	<p>The Mineral Resource is reported from open pit and underground Mineral Resource models, estimated with differing estimation techniques and with different cut-off grades applied to each model. The Open Pit Mineral Resources have been estimated using the geostatistical technique of Uniform Conditioning using average drill hole intercepts and are reported above a marginal (break-even) cut-off grade of 0.3g/t for Transported and Saprolite material, and 0.4g/t for Transitional and Fresh material. The Havana Deeps Underground Mineral Resource has been estimated at a cut-off grade of 1.73g/t using the geostatistical technique of Ordinary Kriging using average drill hole intercepts. The cut-off grade calculation is based on an underground scoping study completed in late 2010, and a gold price of US\$2000 (A\$1896).</p> <p>3m down-hole composites are used for both estimates.</p> <p>Gold is the only element modelled, as no other significant element has been detected in sampling to date which would be deleterious to mine and mill performance.</p> <p>The Open Pit estimate uses block sizes of 15m (X) by 30m (Y) by 10m (Z) with an SMU of 5m (X) by 7.5m (Y) by 3.33m (Z).</p> <p>The Underground estimate uses a block size of 15m (X) by 30m (Y) by 3.33m (Z).</p> <p>Both Resource Estimates are compared to the input data using swath plots to check for bias in the estimation, and to previous estimates.</p> <p>A trial grade control pattern of ~100m by 100m was drilled during the BFS which provided confidence that the Mineral Resource Estimate was accurate in that volume. Reconciliations of the resource model to date indicate no significant flaws in the grade estimate.</p>
<i>Moisture</i>	Tonnage estimates are on a dry tonne basis.



Criteria	Commentary
<i>Cut-off parameters</i>	The Open Pit Mineral Resources use a cut-off grade of 0.3g/t for Transported and Saprolite material, and 0.4g/t for Transitional and Fresh material, based on contract mining costs and BFS-level estimates of processing and administration costs, and a gold price of US\$1600 (A\$1606). The Havana Deeps Underground Mineral Resource has been estimated at a cut-off grade of 1.73g/t. The cut-off grade calculation is based on an underground scoping study completed in late 2010, and a gold price of US\$2000 (A\$1896).
<i>Mining factors or assumptions</i>	Open Pit mining assumes selectivity of SMU's of 5m (X) by 7.5m (Y) by 3.33m (Z), with no external dilution accounted for in the Mineral Resource. Underground mining is based on a modified Long-Hole Open Stope method, with 20m vertical intervals between ore drives. No external dilution is included in the Mineral Resource Estimate.
<i>Metallurgical factors or assumptions</i>	Metallurgical recovery is taken into account in the optimisation of both Open Pit and Underground Resource optimisations, with an average project recovery of 90.3% assumed, based on extensive metallurgical test work completed as part of the Feasibility Study for the Havana Open Pit.
<i>Environmental factors or assumptions</i>	Tropicana Gold Mine (TGM) operates under an environmental management plan that meets or exceeds all environmental and legislative requirements. TGM holds the license to operate and it is valid for the life of the Ore Reserve. Environmental rehabilitation plans are produced and cost of the rehabilitation work is accounted for in the financial evaluation model.
<i>Bulk density</i>	Dry Bulk Density (DBD) determinations have been routinely collected on the mineralised zones in all DDH core at one-metre intervals using water immersion methods. A coherent segment of core (>10cm length), representative of the metre interval, is selected. The weight is measured dry, in air, then measured submerged in water. Core was left to dry naturally on the core racks. Dry Bulk Density has been estimated using Ordinary Kriging where sufficient data exist. In non-estimated areas, the average measured value for that lithology and regolith type is used. Density values within units show little variation.
<i>Classification</i>	The estimates of the Mineral Resources presented in this Report have been carried out in accordance with the principles and guidelines of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). Mineral Resources have been classified based on the 15% rule whereby a Measured Resource should reconcile within plus or minus 15% over quarterly production volumes, 90% of the time, and an Indicated Resource should reconcile within plus or minus 15% over yearly volumes, 90% of the time, as per internal AngloGold Ashanti guidelines. This criterion defines a drill spacing of approximately 25 x 25 m to define a Measured Resource, and 50 x 50 m to define an Indicated Resource. Inferred Resources are defined when evidence of geological and grade continuity exists sufficient to generate an estimated grade. The average data spacing for Inferred Resources varies, but is generally 100 x 100m or less. The Resource classification is consistent between the Open Pit and Underground estimates, given that the underground mining will focus on large tonnage, low cost methods and the resource is mined at a relatively low cut-off grade. Material defined by relatively few drill-holes (down plunge from the Havana Deeps area) was manually recoded out of Resource classifications, and not reported as part of the Tropicana Resource for 2012.
<i>Audits or reviews</i>	The Open Pit Mineral Resource has been audited previously as part of the BFS by Quantitative Group (QG) between 2007 and 2009.
<i>Discussion of relative accuracy/confidence</i>	The relative accuracy of the Mineral Resource Estimates is reflected in the Resource Classification. A trial grade control pattern of ~100m by 100m was drilled during the BFS which provided confidence that the Mineral Resource Estimate was accurate in that volume. Reconciliations of the resource model to date indicate no significant flaws in the grade estimate.
<i>IGO Resource Model number</i>	TR_RSC_2013_12

## Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	All Ore Reserves estimated for Tropicana Gold Mine are based on the Mineral Resource model. No Ore Reserve exists outside of the Mineral Resource base. Mineral Resources are reported inclusive of Ore Reserves.
<i>Site visits</i>	A site visit was undertaken by Salih Ramazan on August 21st, 2013. In this visit, all active mining areas were inspected.
<i>Study status</i>	A Feasibility Study was completed in 2010, which determined a technically achievable and financially economic mine plan. The Ore Reserves are designed based on the current operational practices of the mine. All Ore Reserves are estimated by reporting physicals (volumes, tonnes, grades, material types, etc.) against the resource model within detailed staged pit designs. Ore Reserve physicals are then put through a financial model for economic evaluation. Performance of the on-going mining activities has demonstrated that current mine plans are technically achievable and economically viable considering the material modifying factors.
<i>Cut-off parameters</i>	The cut-off grades are determined based on the net return from the gold produced at the processing plant for each material type. Only the ore that has a grade above the cut-off grades are included in the Ore Reserves.
<i>Mining factors or assumptions</i>	The Ore Reserves are reported within detailed operational designs that are developed based on the geological resource model, geotechnical studies and financial information. Open pit mining method is based on using shovel and truck fleet system. The staged pit designs used for Ore Reserves are generated as three dimensional designs considering operational requirements such as equipment



Criteria	Commentary
	<p>access. Mining operations at Tropicana Gold Mine started in July 2012 and the operation has proven that the designs and plans are technically achievable; no issue preventing access or pre-strip is experienced or envisaged for the Ore Reserves.</p> <p>Overall pit slope angles for oxide and fresh rock types are assumed to be 36 degrees and 60 degrees, respectively. External and internal Geotechnical studies carried out to evaluate the operational designs have confirmed that the pit designs do not violate the geotechnical guidelines developed during Feasibility study. Grade control drilling is completed prior to ore mining on a 10 x 12m pattern using reverse circulation drill rigs.</p> <p>The Mineral Resource model used to develop the Ore Reserves uses blocks in 15m x 30m horizontal dimensions and 10m vertical bench height that are mined in 3 flitches (3.33m in average height), with a mining SMU 5 x 7.5m x 3.33m. The grades within the resource model have been diluted to reflect the average grade of this mineable block size. Therefore, no other mining dilution is applied.</p> <p>Mining recovery factor used is 1.0.</p> <p>In the designs, a minimum of 60m width is implemented for a pit base or some location with only one bench height, where it is technically possible to access. In the design work, a minimum of 80m mining width is implemented as a generic rule.</p> <p>Inferred material is excluded from the Ore Reserves and treated as waste material, which incurs a mining cost but is not processed and hence does not generate any revenue. The total quantity of the inferred material is less than 0.3% the Ore Reserve. Hence the reported Ore Reserve's financial outcome is not sensitive to the Inferred material within the pit designs.</p> <p>There is no infrastructure to be completed.</p>
<i>Metallurgical factors or assumptions</i>	<p>The metallurgical process, which was proposed and is currently in operation, was developed through a comprehensive series of test programs at scoping, pre-feasibility and feasibility study levels. Test work was mostly at batch scale but, where considered advisable, at pilot and demonstration plant scale.</p> <p>The majority of the process uses highly mature technology. The sole exception is the use of High Pressure Grinding Rolls to prepare ball mill feed. The equipment used for this technology itself dates back over twenty years, and is mature. Developments for the hard rock industry are more recent, but have now been successfully used in a number of plants worldwide and this is the part of the process that was extensively tested in a range of machines from pilot up to demonstration scale.</p> <p>Metallurgical test work consisted of comprehensive testing of a number of composite samples to develop the process design basis, and supplementary testing of a much larger number of samples to establish variability. These variability samples were taken on a grid pattern to ensure even coverage of the entire deposit. No metallurgical domains have been recognised to date other than by regolith type and some minor variation in one northern section of the deposit.</p> <p>The ore is exceptionally free of deleterious elements and base metals. No allowances have been made or are considered necessary.</p> <p>Pilot scale test work utilised PQ diameter core. Whilst only a relatively small number of PQ holes were drilled, their position was selected based on the prior variability test work to provide samples considered to be adequately representative of the orebody as a whole. The samples were also characterised by standard batch scale and geometallurgical style tests so that results could be related to the wider orebody.</p> <p>As a gold mine, the product is not defined by specification. No problems are envisaged, or have been encountered, in producing gold bars of saleable quality.</p>
<i>Environmental</i>	<p>Tropicana Gold Mine (TGM) operates under an environmental management plan that meets or exceeds all environmental and legislative requirements. TGM holds the license to operate and valid for the life of the Ore Reserve. Environmental rehabilitation plans are produced and cost of the rehabilitation work is accounted in the financial evaluation model.</p>
<i>Infrastructure</i>	<p>Adequate infrastructure has been completed and sustaining cost of the infrastructure (maintenance and replacement) is accounted in the financial model.</p>
<i>Costs</i>	<p>Capital costs of removing waste over ore are included in the evaluations for the applicable pits.</p> <p>Mining operating costs are provided by the contractor McMahon as rates. Processing operating costs have been derived from variety of sources including first principle estimates, metallurgical test work results, budget quotations for consumables and vendors, consultant advice on wear rates/component replacement frequency, baseline input parameters such as exchange rates, power cost, labour numbers etc., AGA Australia Ltd advice, Lycopodium and sub-consultants data and experienced based on similar sized operations.</p> <p>No allowances have been made or are considered necessary for the content of deleterious elements.</p> <p>Transportation cost for the produced gold doré is relatively small and charged on a contract base with the refinery.</p> <p>The source of the treatment and refinery charges is the contract with refinery and there is no specification and no penalty is considered for not meeting specifications.</p> <p>Total royalty cost allowance is 2.5% of the total revenue.</p>
<i>Revenue factors</i>	<p>The assumption made for the gold price is US\$1,100/oz, AU\$1,249/oz and the exchange rate is US\$0.88 per Au\$1.0.</p> <p>The assumptions are derived after reviewing historic commodity prices and exchange rates.</p>
<i>Market assessment</i>	<p>Long term market assessments are provided by a number of independent companies. AGAA does not provide advice or endorsement for using a specific forecasting company.</p>
<i>Economic</i>	<p>Tropicana Gold Mine (TGM) is now operating with mining costs based on contractor mining rates. Processing costs have been derived via comprehensive test work and studies. TGM is therefore not highly exposed to uncertainty in, or to inaccuracy in estimation of, mining or processing costs. The inflation rates assumed are based on prior AGAA</p>



Criteria	Commentary
	Treasury guidance provided, whilst discount rates utilised at AGAA is derived from the weighted average cost of capital for Australia.
	Sensitivity studies are carried out on various parameters including mining cost, processing cost, gold price and discount rate. Gold price is the most sensitive input for NPV and a 10% reduction would eliminate about 30,000 ounces (-0.80%) from the Reserves.
<i>Social</i>	Tenement status is in good standing.
<i>Other</i>	There is no foreseeable TGM specific risk. There are typical risks of an open pit mine operations such as heavy rain events and geotechnical risks. These risks are managed through implementation of various risk management mechanisms as much as practical.
<i>Classification</i>	Exploration drill-hole spacing is the basis of the classification. Proven material is defined for the areas drilled with 25m spacing and probable is defined on 50m drill spacing.
	The methodology of classification is appropriate for the deposit.
	Proportion of the Proved Ore Reserves is a sub-set of Measured Mineral Resources. Probable Ore Reserves are derived from Indicated Mineral Resources.
<i>Audits or reviews</i>	A Mineral Resource and Ore Reserve audit was completed in 2011. No unexpected results came from the audit.
<i>Discussion of relative accuracy/confidence</i>	As part of the Ore Reserve estimation process, a review is performed for the actual reconciled extraction against previous year's reserve estimation.
	Reconciliation of the Ore Reserves to actual mined during the last year showed that Ore Reserve estimation is slightly conservative.