Tropicana

Tropicana, the first greenfields gold discovery to be brought into production in Australia for more than a decade, poured first gold in September 2013 after two-and-a-half years of construction and eight years after the initial discovery.

Location: 330 kilometres east-northeast of Kalgoorlie-Boulder on the western edge of Western Australia's Great Victorian Desert.

Ownership: AngloGold Ashanti Australia Ltd (70% and manager) and Independence Group NL (30%) through the Tropicana Joint Venture.

Project Parameters (100% project)

Production 2016: 417,000 oz
Gold Production to end 2016: 1.5 million oz
Mine Life: 10+ years
Current Annual Plant Throughput Rate: 7.5 Mtpa
Head Grade 2016: 2.10g/t
Gold Recovery: 89%
Total Cash Costs CY2016: US$630/oz (AGA)
All in Sustaining Cash Costs CY2016: US$970/oz (AGA)
Ore Reserve (as at December 31, 2016): 60 million tonnes grading 1.97 g/t for 3.80Moz of contained gold.
Mineral Resource (inclusive, as at December 31, 2016): 148.1 million tonnes grading 1.68 g/t for 8.02Moz of contained gold.

The Ore Reserve and Mineral Resource estimates for Tropicana are updated on an annual basis. AngloGold Ashanti and Independence Group provide full details of these estimates, including the applicable JORC statements, on their websites: www.anglogoldashanti.com and www.igo.com.au.

Key Contractors

Mining: Macmahon Holdings
Power Generation: Kalgoorlie Power Systems
Village & Administration: ESS
Aviation: Network Aviation, Goldfields Air Services
Dayworks Services: Bundarra
Light Vehicle Workshop: Triodia

Subcontractors

Ancillary Equipment and Personnel: Carey Mining
Explosive Supply: Dyno Nobel
Grade Control: Wallis Drilling

Workforce

Approximately 270 employed by AGAA and 500-550 employed by contractors.
Overview

Tropicana was officially opened in March 2014 by the then Western Australian Minister for Mines and Petroleum, the Hon. Bill Marmion, and produced its 1 millionth ounce on schedule in December 2015, just over two years after pouring first gold.

The large-scale, open pit operation features a modern processing plant which uses conventional carbon-in-leach technology and includes high pressure grinding rolls (HPGR) for energy-efficient comminution. Mining is carried out under an alliance-style contract with Macmahon.

Gold production in 2016 was lower than in 2015 due to the planned reduction in the annual head grade, which decreased from 2.48 g/t in 2015 to 2.10 g/t in 2016. A grade streaming strategy was implemented at Tropicana to increase cashflow in the early years, to achieve early payback. Grade streaming involved the preferential treatment of higher grade ore in the first 3 years of mining. During this period low and medium grade ore was stockpiled. The head grade to the plant was therefore higher in the early years, gradually declining to the life-of-mine average head grade of approximately 2 g/t.

The declining grades mined in 2016 were partially offset by an increase in processing plant throughput to 6.9Mt (2015: 6.2Mt) as the plant optimisation project was completed towards year end. This project, which was introduced as a strategy to address the planned decline in production following the end of grade streaming, has successfully lifted throughput capacity of the processing plant to 7.5 Mtpa.

Metallurgical recoveries remained steady at approximately 89%, and mine-to-mill reconciliation, for both tonnes and grades, continued to align extremely well. Mining was carried out in the Tropicana, Havana and Boston Shaker pits during the year.

In the last quarter of 2016, a Caterpillar 6060, 600-tonne class shovel was introduced to the open pit mining fleet at Tropicana to increase mining rates to an annualised rate of 80 Mtpa and to better match the higher throughput requirements of the processing plant.

The higher mining and throughput rates introduced in late 2016 will enable the resumption of grade streaming from mid-2017 for at least two years. This is expected to increase gold production to between 450,000-490,000 ozpa (at 100%) from the second half of calendar 2017.

Work continued in 2017 on the Long Island study, which is investigating large cutbacks to the pits utilising low-cost mining options. These include strip mining of the depth extensions to the Tropicana mineralised system using the completed Tropicana pit as a void into which waste will be backfilled. The proposed backfilling of the Tropicana pit, in conjunction with strip mining, is expected to reduce the cost of waste mining significantly by introducing short horizontal hauls instead of the long uphill hauls out of the pit to surface waste dumps that would be required by conventional mining.
TROPICANA

If the mining method is implemented, the initial Long Island cutback will begin in 2019 when the Tropicana pit has been mined to its full depth. An extensive 161,000 metre programme of Reverse Circulation and diamond drilling carried out in 2015 and 2016 resulted in a 43% increase in the mine’s Ore Reserve and a 27%, or 1.73Moz, increase in the Mineral Resource, as at 31 December 2016. The increase in the Mineral Resource was achieved largely through significant additions to the Havana South and Boston Shaker zones following application of the Long Island mining methods and costs, and through an increase to the underground Mineral Resource along the entire strike length of the Tropicana mineralised system. Further increases are anticipated at the end of 2017, depending on the outcome of the Long Island study.

Also during 2016, the Processing Plant Optimisation project was successfully completed for a capital cost of A$25 million (US$20 million).

History

Tropicana was discovered in 2005 after AngloGold Ashanti Australia followed up an unexplained gold-in-soil anomaly Independence Group had recognised in public domain regional data collected in the 1990’s.

Subsequent exploration identified the Havana deposit and led to a Pre-Feasibility Study before a decision in July 2009 to commit to a Feasibility Study based on resources at the time of 5.01Moz and reserves of 3.3Moz. The project was approved by the Boards of the JV partners in November 2010 and had received all regulatory approvals by the end of that year.

Environment

The Environmental Impact Assessment for Tropicana was completed in the second half of 2010 and received Federal and State environmental approval by year end. The EIA documents can be viewed at www.tropicanajv.com.au. The approach to the approval for the Tropicana JV has been recognised as a benchmark in environmental approvals in WA.

Biodiversity is a feature of the safety and environmental management plan developed for Tropicana. As part of the operation’s biodiversity offsets strategy in its approved environmental management plan, the Great Victoria Desert Biodiversity Trust was established. A condition of the Federal Environmental Protection and Biodiversity Conversation Act approval for the mine, the Trust reflects the Tropicana Joint Venture partners’ recognition of the need to base environmental management decisions on robust science. The Trust funds research on the remote Great Victoria Desert, where the mine is located. In November 2015 the first round of projects to be funded by the Trust were awarded. Updates on the Trust and its research projects can be found at www.gvdbiodiversitytrust.org.au.

Biodiversity is a feature of the safety and environmental management plan developed for Tropicana.
Community
A ‘Think Local, Buy Local, Employ Local’ strategy has been adopted at Tropicana to promote the growth of local supply networks.

AGAA is heavily involved in the community of Laverton, supporting local training and employment opportunities, medical services and community development programmes. The company supports and facilitates programmes in Laverton and Kalgoorlie-Boulder that are designed to remove barriers to employment, including the Keys for Life Driver Training Programme, which helps young people to gain a driver’s licence and a range of life skills.

In Laverton, this programme is delivered by the Laverton Leonora Cross Cultural Association (LLCCA) of which the company is a founding member. A collaborative partnership between local mining companies, Aboriginal organisations and government agencies, the LLCCA delivers a range of programmes and activities for youth, adults and children. It also provides community meeting facilities along with an art gallery for the sale of artwork produced by local people.

To heighten consciousness of indigenous traditions, employees at Tropicana undergo cross-cultural training.

Employment
The remote location of Tropicana necessitates a fly-in, fly-out operation with flights arranged to cater for employees and contractors based in both Kalgoorlie-Boulder and Perth. The site operates a combination of 8:6 and 2:1 rosters. Tropicana places an emphasis on recruiting locally where possible.

Contact Details
AngloGold Ashanti Australia Ltd
Ph: 08 9425 4600
Email: AGAACorporateAffairs@anglogoldashanti.com
Website: www.tropicanajv.com.au