

# TROPICANA

## Tropicana

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

**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 2017:** 321,000 oz (AGAA 70%)

**Total Cash Costs CY2017:** US\$564/oz (AGA)

**All in Sustaining Cash Costs CY2017:** US\$885/oz (AGA)

**Processing Plant Throughput 2017:** 7.7 Mt

**Average Recovered Grade CY2017:** 1.87 g/t

**Gold Production to January 2018:** 2 million oz

**Mine Life:** 10+ years

**Annual Plant Throughput Rate:** 8.2 Mtpa (by end 2018)

**Ore Reserve (as at December 31, 2017):** 66.6 million tonnes grading 1.91 g/t for 4.08Moz of contained gold.

**Mineral Resource (inclusive, as at December 31, 2017):** 143.2 million tonnes grading 1.62 g/t for 7.45Moz 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](http://www.anglogoldashanti.com) and [www.igo.com.au](http://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

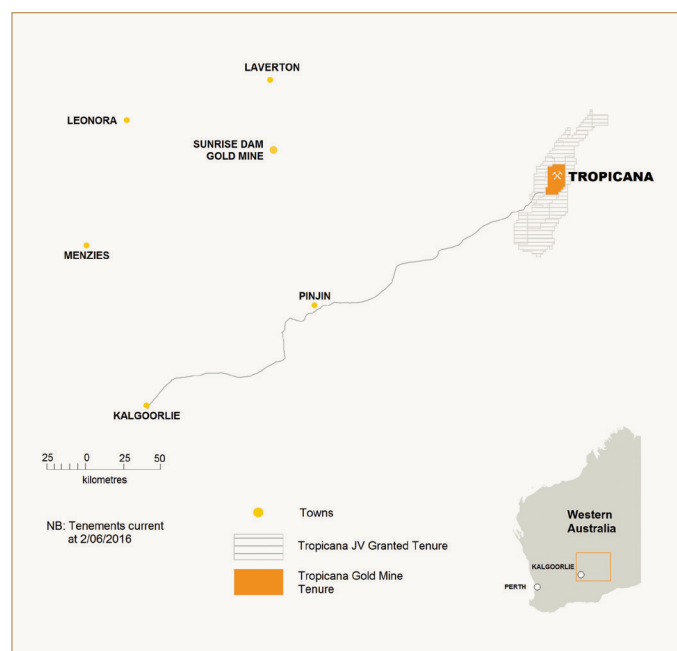
**Ancillary Equipment and Personnel:** Carey Mining

**Explosive Supply:** Dyno Nobel

**Grade Control:** Wallis Drilling

## Workforce

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



## TROPICANA



### 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 two millionth ounce in January 2018.**

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.

Optimisation and expansion of the processing plant lifted processing capacity to 7.7 Mtpa in 2017 and a fines pulping circuit was commissioned in November 2017, further improving efficiency by minimising downtime during maintenance shutdowns.

Following the introduction of a 600t face shovel to the mining fleet, mining rates increased to more than 90 Mtpa in 2017, enabling the resumption of grade streaming – the preferential treatment of higher grade ore while low-to-medium grade ore was stockpiled – during the second half of the year.

In December 2017, the Tropicana joint venture partners announced a commitment to the Long Island mining strategy, which has been driven by finding a more cost-efficient way to mine waste in pit cutbacks. It involves using a strip-mining approach that minimises waste haulage distances by using in-pit backfill essentially optimising haulage distances over the life of mine. The completed Tropicana pit will form the first backfill location.

Mining rates are expected to increase to between 95 Mtpa and 107 Mtpa under this approach. The project was enhanced by the decision to install a second 6MW ball mill in the processing plant, enabling throughput to be lifted to 8.2 Mtpa to match the increased mining rate. Through a reduction in grind size, baseline metallurgical gold recovery is expected to improve by up to 3% to approximately 92%. Production (at 100%) is forecast to be between 478,000oz and 492,000oz in 2018 and between 515,000oz and 535,000oz in 2019.

A Pre-feasibility Study incorporating infill drilling and underground mining options for the Boston Shaker orebody was underway in the first half of 2018. The target is to delineate an underground Ore Reserve grading more than 3 g/t to replace stockpiled mill feed after 2020. If the outcome of the PFS is positive, underground mining may begin in 2019.

Including gold until the end of 2017, Tropicana has delivered a 72% increase in its Ore Reserve since the project was approved in November 2010.

### 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.tropicana-jv.com.au](http://www.tropicana-jv.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. The Trust continued to make progress in 2017 with the adaptive management partnership (AMP), which represents a co-ordinated approach to implementing adaptive management in the GVD. The AMP will provide an 'umbrella' to co-ordinate activities, integrate science and action, and provide a monitoring and evaluation framework.

Updates on the Trust and its research projects can be found at [www.gvdbiodiversitytrust.org.au](http://www.gvdbiodiversitytrust.org.au).

Tropicana also maintained certification following combined ISO 14001:2004 and OHSAS 18001:2007 surveillance audits by Bureau Veritas.

The mine also fulfilled the 2017 reporting obligations under the annual National Greenhouse and Energy Reporting scheme (NGER), which forms part of a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information specified under the NGER legislation.







### Community

A ‘Think Local, Buy Local and Employ Local’ strategy has been adopted at Sunrise Dam to promote the growth of local supply networks.

AGAA is actively involved in communities across the Western Australian goldfields, from Laverton to Kalgoorlie-Boulder and beyond, including remote Aboriginal communities such as Tjuntjuntjara. The company supports education, youth, community development and health programmes and local training, along with offering employment and business participation opportunities.

Youth education and employment initiatives are delivered through long-term partnerships with indigenous academies such as the Goldfields Clontarf Academy and the Kalgoorlie Girls Academy, as well as Eastern Goldfields College and Kalgoorlie-Boulder Community High School.

Along with annual funding support for these organisations, AGAA offers mine site tours, exposure to a wide variety of careers in the mining industry and a transition-to-work programme.

During 2017 the company also partnered with local schools to provide pre-university educational support programmes, and reading, writing and numeracy support programmes.

In 2017, the company supported the Tjuntjuntjara Seed Collection Women’s Project, which seeks to train and support community women to collect, store and sell seeds for mining rehabilitation.

### 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](mailto:AGAACorporateAffairs@anglogoldashanti.com)

Website: [www.tropicanaajv.com.au](http://www.tropicanaajv.com.au)