

# TROPICANA

## 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)

**Average annual production:** 330,000-350,000 ozpa or 3.6 million oz in total

**Production 2014:** 511,000 oz

**Mine Life:** 11+ years

**Plant Throughput:** 5.8 Mtpa

**Average Head Grade:** 2.01 g/t

**Gold Recovery:** 90%

**Total Cash Costs 2014:** US\$545/oz

**All in Sustaining Cash Costs:** US\$752/oz

**Ore Reserve (as at December 31, 2014):** 50.0 million tonnes grading 1.99 g/t for 3.20Moz of contained gold.

**Inclusive Mineral Resource (as at December 31, 2014):** 114.7 million tonnes grading 1.95 g/t for 7.19Moz of contained gold.

*The Ore Reserves and Mineral Resources 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.independencgroup.com.au](http://www.independencgroup.com.au).*

## Key Contractors

**Mining:** Macmahon

**Power Generation:** Kalgoorlie Power Systems

**Village & Administration:** ESS

**Aviation:** Network Aviation, Goldfields Air Services

**Dayworks Services:** Bundarra

**Cross-cultural Inductions:** Triodia

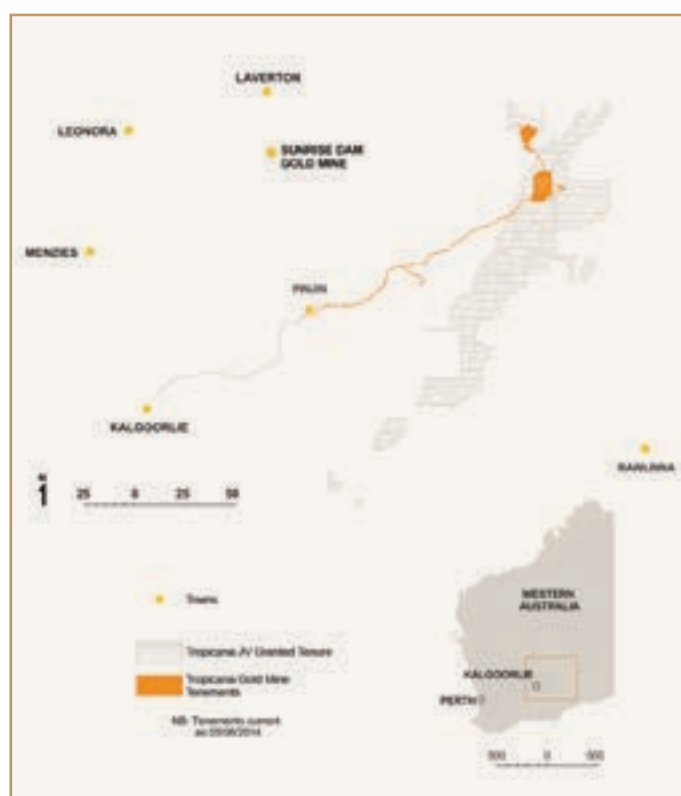
**Light Vehicle Workshop:** Triodia Tropicana

## Subcontractors

**Ancillary Equipment and Personnel:** Carey Mining

**Explosive Supply:** Dyno Nobel

**Grade Control:** Wallis Drilling





### Overview

Tropicana was officially opened in March 2014 by the Western Australian Minister for Finance, Mines and Petroleum, the Hon. Bill Marmion. In 2014, its first full year of production, the operation performed to guidance, producing 511,000 oz of gold from the treatment of 5.7 Mt grading 3.06 g/t at a metallurgical recovery of 90%.

The processing plant is based on a comminution circuit comprising two-stage crushing, a High Pressure Grinding Roll (HPGR) circuit and ball milling, along with a conventional CIL circuit. Additional maintenance and engineering work was carried out in the processing plant during the year to close out construction work following commissioning and to optimise sections of the plant with a view to lifting throughput beyond nameplate capacity in 2015.

Mine-to-mill reconciliation, in terms of both tonnes and grade, aligned extremely well, providing confidence in production forecasts going forward.

Together, the Tropicana, Havana, Havana South and Boston Shaker deposits define a northeast trending mineralised corridor spanning approximately a width of 1.2km and length of 5km and tested to a vertical depth of more than 1,200m. The Mineral Resource remains open down dip at Tropicana, Havana and the Boston Shaker deposits and has the potential to be extended to the north and south. Open pit mining focused on the Havana and Tropicana pits in 2014.

A grade-streaming approach has been adopted at the mine to deliver higher production in the first three years of operation and provide optimal payback. This will see head grades decline in a linear manner over the life of the mine. Work was underway in 2015 to optimise the processing plant in order to lift throughput capacity and partially offset the impact of the decline in grade over time.

In addition, exploration continues to target extensions to known ore bodies and new discoveries within trucking distance of the processing plant. Interpretation of a 3D seismic survey across the Tropicana ore bodies in 2014 has enabled more accurate and cost effective targeting of drill holes to test for resource extensions at depth.

This drilling data will augment work already carried out on the Havana Deeps study to determine if the down plunge extensions to the ore bodies continue to the north below Tropicana and Boston Shaker. The data will feed into conceptual work that is to be carried out on a different mining approach.

In July 2014, AGAA signed agreements with a natural gas infrastructure company for the transportation of natural gas to Tropicana as well as its 100%-owned Sunrise Dam mine. It is expected that this will provide continuity of fuel supply, reduce exposure to diesel price volatility and significantly reduce the number of trucks on the site access roads. Construction started in March 2015 and first gas is scheduled to be available at Tropicana in January 2016.



## 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 1990s.

Subsequent exploration identified the Havana deposit and led to a PFS 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. By the end of 2012 the Mineral Resource had grown by 2.8Moz to 7.89Moz.

By 2010 the JV had pegged 16,000 sq km of tenements along more than 300km of the ancient collision zone between the Yilgarn Craton and the Albany-Fraser Province. Systematic exploration had reduced this holding to approximately 3,000 sq km by 2015.

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.



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### 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 another 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, a model unique to the WA mining and environmental landscape, will fund research on the remote Great Victoria Desert, where the mine is located. Its aim is to promote knowledge and understanding of the Great Victoria Desert region and its biodiversity so as to benefit conservation and scientific knowledge.

### Community

A 'Think Local, Buy Local, Employ Local' strategy has been adopted at Tropicana to promote the growth of local supply networks. Procurement spend in the Goldfields-Esperance region, in which AngloGold Ashanti's operations are located,

is approximately 34% of total spend, with procurement from businesses in the rest of the state of WA making up a further 62% of the total.

An indigenous business development programme has resulted in five indigenous-owned businesses supplying goods and services to Tropicana.

Employment from the local region has a high priority, however with a low population base and the remoteness of the operation (250km from the nearest community), other initiatives need to be employed. Youth development programmes for example target the broader community of Kalgoorlie-Boulder and the North Eastern Goldfields with a particular focus on creating opportunities for young indigenous people. Work readiness programmes seek to support the transition of indigenous, female and disadvantaged youth to the workplace through training and work experience which can lead to employment in the mining industry.

### 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.

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