

OPERATIONAL PROFILE 2017



TROPICANA
AUSTRALIA

Tropicana, a joint venture between AngloGold Ashanti (70% and manager) and Independence Group NL (30%), is located 200km east of Sunrise Dam and 330km east-northeast of Kalgoorlie. The operation began gold production in September 2013, following development approval in November 2010. The open-pit operation features a large-scale, modern processing plant which uses conventional CIL technology and includes higher-pressure grinding rolls for energy-efficient comminution. Mining is carried out by a contract mining company and the plant is owner-managed.



HIGHLIGHTS

IMPROVED PRODUCTION

IMPLEMENTATION

of Long Island strategy advances

COSTS DECLINE

- Total costs by 10%
- All-in sustaining costs by 9%

As at 31 December 2017:

- **MINERAL RESOURCE**

of 5.22Moz (inclusive)
(1.22Moz below infrastructure)

- **ORE RESERVE** of 2.85Moz

Operational performance

Production

At Tropicana, optimisation and expansion of the processing plant lifted processing capacity to 7.7 Mtpa (100%), resulting in a 10% increase in mill throughput, which delivered a 10% increase in attributable gold production. A fines pulping circuit was commissioned in November 2017, further improving efficiency by minimising downtime during maintenance shutdowns. This is expected to increase annual mill run times by approximately 2% to more than 98%.

Following the introduction of a 600t face shovel to the mining fleet, mining rates increased to more than 90Mtpa 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. Mining in 2017 focused on the Havana 3 and Tropicana 2 pits.

Costs

Both total cash costs and all-in sustaining costs were lower year-on-year. Decreased mining unit costs at Tropicana were offset by a stronger Australian dollar against the US dollar.

Growth and improvement

At Tropicana, the focus for 2018 and beyond will be on implementation of the Long Island strategy, which is expected to add 2.1Moz to Tropicana's business plan, extending mine life by approximately seven years to 2027.

In December 2017, the Tropicana joint venture partners announced a commitment to the Long Island mining strategy and approval for

an additional ball mill in the processing plant, to further lift plant throughput to 8.1Mtpa which is expected to increase gold recovery.

The Long Island strategy 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 approach comprises eight stages with three major decision points providing flexibility to tailor the approach at each decision point, depending on market and other prevailing conditions.

Phase one comprises mining of the Havana South pit and a cutback of the Boston Shaker pit, using the completed Tropicana pit as the first backfill location.

The Long Island development is expected to increase mining rates to between 95Mtpa and 107Mtpa over the next two years, to peak in 2019 and to continue at that rate for about four years. The project was enhanced by the decision to install a 6MW ball mill in the processing plant, enabling throughput to be lifted to 8.1Mtpa 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 530,000oz and 548,000oz in 2019.

This does not include potential underground production from mineralisation at the Boston

Shaker orebody, which remains open at depth. A prefeasibility study incorporating infill drilling and underground mining options will be undertaken in 2018. The target is to delineate the underground Ore Reserve at more than 3g/t to replace stockpiled mill feed after 2021.

The Long Island strategy was underpinned by an increase in the Ore Reserve to 66.59Mt, grading 1.91g/t gold, for a total of 4.08Moz. Including gold produced to date, Tropicana has delivered a 72% increase in its Ore Reserve since the project was approved in November 2010.

Capital expenditure

Capital expenditure related to Long Island, primarily for the expansion of the accommodation camp, heavy vehicle workshop infrastructure and for a second ball mill. The installation of a second ball mill in the Tropicana processing plant grinding circuit was approved in 2017 with commissioning scheduled for the fourth quarter of 2018.

Sustainability performance

For further information on sustainable development activities related to Tropicana, including safety and health, employee and labour relations, communities, regulatory changes and the environment, refer to:

- *Regional reviews – Australasia* in the <IR>, available at www.aga-reports.com
- <SDR>, also available at www.aga-reports.com

TROPICANA – KEY STATISTICS

	Units	2017	2016	2015
Operational performance				
Cut-off grade ⁽¹⁾	oz/t	0.020	0.020	0.020
	g/t	0.70	0.70	0.70
Recovered grade	oz/t	0.054	0.058	0.072
	g/t	1.87	1.87	2.48
Tonnes treated/milled	Mt	5.4	4.8	4.3
Gold production	000oz	321	292	344
Total cash cost	\$/oz	564	630	492
All-in sustaining cost	\$/oz	885	970	671
Capital expenditure (attributable)	\$m	91	77	48
Productivity	oz/TEC	55.20	48.36	65.69
Safety				
No. of fatalities		0	0	0
All injury frequency rate (AIFR)	per million hours worked	6.11	10.87	6.80
People				
Total average no. of employees		485	503	436
– Permanent		130	125	90
– Contractors		355	378	310
Environment				
Water use	ML	5,668	5,798	4,877
Water use efficiency	kL/t	0.74	0.84	0.79
Energy usage	PJ	4.14	3.59	3.17
Energy intensity per tonne treated	GJ/t	0.54	0.52	0.52
Greenhouse gas (GHG) emissions (CO ₂ e)	000t	250	223	220
GHG emissions intensity	t CO ₂ e/t	33	32	36
Cyanide use	t	2,809	3,452	2,770
No. of reportable environmental incidents		0	0	0
Total rehabilitation liabilities	\$m	46	42	31

⁽¹⁾Based on the Ore Reserve.