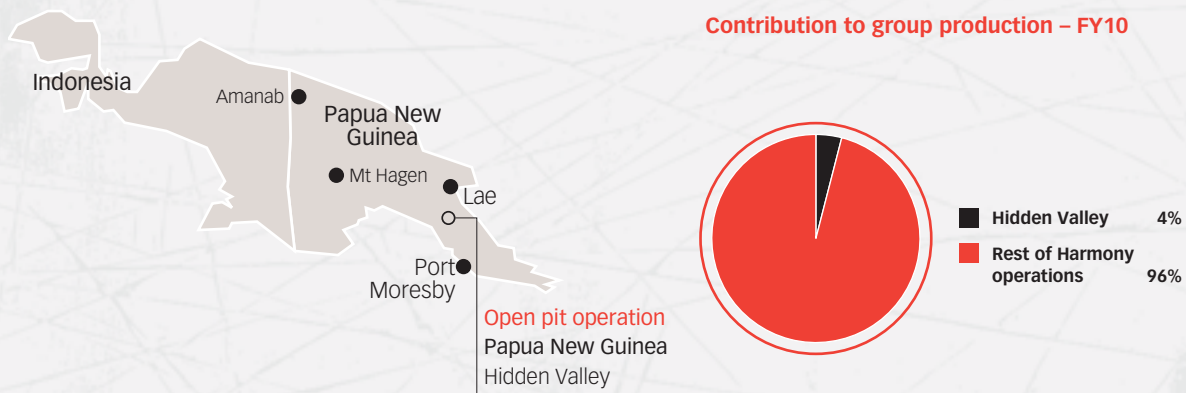


Review of operations – Papua New Guinea

Hidden Valley



Description

The Hidden Valley mine is located in Morobe Province, Papua New Guinea, around 300km north-west of Port Moresby, and is part of the 50:50 joint venture between Harmony and Newcrest Mining Limited. The mine, which has a significant gold and silver reserve, was commissioned during the year and had its first gold pour in June 2009. Ore mined was stockpiled ahead of the full commissioning of the carbon-in-leach gold and silver processing plant in FY10.

Hidden Valley has in production two pits, approximately 5km apart: the Hamata pit, which exploits the Hamata gold orebody, and the larger Hidden Valley pit, which exploits the Hidden Valley and Kaveroi gold and silver orebodies. The operation is located in a highly prospective area and current estimates are that at annual full production over 14 years, Hidden Valley will process an average of 4.7Mt from both pits to produce around 250 000oz of gold and 3.4Moz of silver annually. The joint venture is actively exploring and if potential new resources are identified on the mining lease, the life of the process facility could be extended. A resource development drilling programme is currently under way to support potential resource expansion, while potential plant expansion studies are being reviewed.

Hidden Valley employed 1 698 people in FY10, of whom 806 were employees and 892 contractors. Detailed information on Hidden Valley's resources and reserves are available in the *Mineral resources and mineral reserves* section of this annual report on pages 155 to 159.

Safety

With the start of full-scale operations and the ramping up of production at Hidden Valley, the joint venture has continued with the implementation of its risk management strategy, a key aspect of which is a safety analysis aimed at ensuring that each work function is completed safely and efficiently. Identifying and managing hazards is essential to improving and maintaining safety performance.

There was regrettably one fatality during the year, a result of a vehicle accident. The LTIFR of 0.7 per million hours worked was worse than the 0.1 reported in FY09 as fewer people were on site, once construction personnel had been demobilised.

More detailed information on safety performance and Harmony's sustainable development programme in PNG can be found in the online sustainable development section of the corporate website, www.harmony.co.za. A summary of this can be found on pages 26 to 46 of this annual report.

Hidden Valley key statistics

Production		FY10 production*†	capitalised*	Planned LOM annual average**
Volumes milled	000t (metric)	304	–	4 700
	000t (imperial)	335	–	5 180
Gold produced	kg	465	1 438	7 915
	oz	14 939	46 234	254 000
Silver produced	kg	2 423	4 504	123 300
	oz	77 896	144 821	3 400 000
Gold – average recovered grade	g/t	1.53	–	1.84
	oz/t	0.045	–	0.054
Silver – average recovered grade	g/t	7.97	–	32.1
	oz/t	0.233	–	0.94
Financial				
Revenue	R million	79	–	
	US\$ million	10	–	
Operating costs	R/kg	244 721	–	130 00
	US\$/oz	1 003	–	
Operating profit	R million	16	–	
	US\$ million	2	–	
Capital expenditure	R million	44	497	
	US\$ million	6	65	
Sustainability				
Number of employees				
	Employees	806		
	Contractors	892		
	Total	1 698		
Expenditure on training and development		R million	2.9	
Safety				
	No. of fatalities		1	
	LTIFR	per million hours worked	0.7	
Environment				
	Energy used	MWh	105	
	Water used for primary activities	000m ³	1 843	
	GHG emissions	Tonnes CO ₂ e	128	

* Commercial production began in May 2010.

** The LOM annual averages represent 100%.

† Represents Harmony's 50%.

A business, production and safety improvement programme, based on the Six Sigma Lean Programme, was developed at Hidden Valley in FY10. This programme is designed to actively involve management in the process of continually improving and meeting targets in all aspects of the business, especially safety.

Review of operations – Papua New Guinea

Hidden Valley cont.

Operations review

Commercial levels of production were achieved in May 2010 and by year-end monthly plant throughput had risen to 300 000t, equivalent to 87% of nameplate capacity. This reflected a more stable operating performance and consistent plant use. During FY10, 2.7 million tonnes were processed to yield 122 346 ounces of gold and 445 435 ounces of silver on a 100% basis, 50% of which is attributable to Harmony.

Despite construction delays resulting from unseasonably heavy rains which hampered progress and restricted site access by causing damage to the access road, both the overland conveyor and the Hidden Valley crushing facilities were completed by December 2009, following which ore from both pits was supplied to the plant.

A programme to systematically identify and address bottlenecks in the production pipeline, eliminate system constraints and improve critical performance efficiencies and plant availability is under way. The process plant is being modified to enable it to better deal with the oxidised material and greater incidence of fines and clay in the weathered feed that is currently being mined in the initial stages of the open pit and supplied to the plant. These modifications are expected to improve overall recoveries. As the mining in the pit progresses into more transitional and fresh material during the next financial year, plant metallurgical recoveries are expected to improve. A project to increase plant capacity to 112% of initial nameplate capacity of 4.2 million tonnes per annum, at a nominal additional cost, will be completed by the end of FY11.

An ongoing programme of employee recruitment and training to build up and enhance operational competence and capability has been instituted to address the problem of operator staff turnover which has had an effect on mining productivities.

The limited availability of competent fresh rock, which is linked to the deep weathering profile of the area at Hidden Valley, has restricted progress made in the construction of stable waste dump facilities. Supplies of suitable rock have been identified and established offsite, which together with innovative waste dump designs that require less rock, have overcome some of these problems. Construction of these stable waste dumps will be ongoing in the next few years.

Hidden Valley management continued its policy of community engagement and local employment as well as the training of local employees. Work continues to mitigate the miner's impact on the Watut River, with significant operational improvements made to date. Stakeholder engagement on this and other matters is continuing.

Progress is also being made with power supply to the mine and the intention is to connect Hidden Valley to the national electricity grid in FY11. Once fully connected to, this will enable the mine to reduce its reliance on diesel power generators.

Financial review

Revenue generated for the financial year amounted to R79 million (\$10 million) with total cash operating costs after silver credits of R244 721 (US\$1 003/oz). Attributable capital expenditure by Harmony during the year totalled R541 million (US\$71million), which included work on approved mine development (sustaining capital) projects, process plant de-bottlenecking, mine expansion feasibility studies and final close-out costs for the Hidden Valley construction project.

Outlook*

The post-commissioning and performance improvement programme under way will enable Hidden Valley to achieve consistent full-scale mining and production levels in FY11 and to ultimately achieve increased annual plant capacity of 4.7 million tonnes. Capital requirements over the next three years will consist of the project services fleet replacement, which will be used for the construction of the tailings dam and waste dumps, which will be ongoing for the next few years and the de-bottlenecking of the mill.

Estimated attributable gold production from Hidden Valley in FY11 is between 100 000 and 120 000**ounces. Attributable capital expenditure for project completion, development and sustaining capital is expected to be A\$50 million (US\$42.5 million)** in FY11.

* Please refer to the forward-looking statements

** June 2010 money terms.



Hidden Valley, PNG