



**MOROBE**  
MINING  
HIDDEN VALLEY JV

## Hidden Valley Mine Update

PNG Mining & Petroleum Investment Conference

Sydney, Australia, 2 December 2014

David Wissink – General Manager Sustainability



# Private Securities Litigation Reform Act Safe Harbour Statement



This presentation contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and 21E of the Securities Exchange Act of 1934, as amended, that are intended to be covered by the safe harbour created by such sections. These statements may be identified by words such as "expects", "looks forward to", "anticipates", "intends", "believes", "seeks", "estimates", "will", "project" or words of similar meaning. All statements other than those of historical facts included in this presentation are forward-looking statements, including, without limitation, (i) estimates of future earnings, and the sensitivity of earnings to the gold and other metals prices; (ii) estimates of future gold and other metals production and sales, (iii) estimates of future cash costs; (iv) estimates of future cash flows, and the sensitivity of cash flows to the gold and other metals prices; (v) statements regarding future debt repayments; (vi) estimates of future capital expenditures; and (vii) estimates of reserves, and statements regarding future exploration results and the replacement of reserves.

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## Forward Looking Statements

This document and its attachments include forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs. Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation. Forward looking statements are based on the company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the company’s business and operations in the future. The company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the company or management or beyond the company’s control. Although the company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

## Ore Reserves and Mineral Resources Reporting Requirements

Newcrest, as an Australian company with securities listed on the Australian Securities Exchange (“ASX”), Newcrest is subject to Australian disclosure requirements and standards, including the requirements of the Corporations Act and the ASX Listing Rules. Investors should note that it is a requirement of the ASX Listing Rules that the reporting of Ore Reserves and Mineral Resources in Australia comply with the JORC Code 2012 and that Newcrest’s Ore Reserve and Mineral Resource estimates comply with the JORC Code 2012. Newcrest ceased its listing on the Toronto Stock Exchange (“TSX”) on 4 September 2013, but will remain subject to certain Canadian disclosure requirements and standards until it ceases to be an Ontario Securities Commission registrant. Prior to that, Newcrest will continue, in accordance with the requirements of NI 43-101, to report its Ore Reserves and Mineral Resources estimates in compliance with the JORC Code 2012, along with a reconciliation to the material differences between the JORC Code 2012 and the applicable definitions adopted by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM Definition Standards). In relation to the December 2013 Resources and Reserves Statement, the reconciliation is set out in Newcrest’s Canadian News Release dated 14 February 2014, and is available at [www.sedar.com](http://www.sedar.com) and at Newcrest’s website [www.newcrest.com.au](http://www.newcrest.com.au). Except as otherwise noted in that document, there are no material differences between the definitions of Measured, Indicated and Inferred Mineral Resources, and Proven and Probable Reserves, under the CIM Definition Standards and the equivalent or corresponding definitions in the JORC Code 2012. The Explanatory Notes for the Annual Mineral Resource and Ore Reserve Statement – 31 December 2013 containing more detailed information on the methods and parameters used to estimate Mineral Resources and Ore Reserves are available on the Newcrest website at [www.newcrest.com.au](http://www.newcrest.com.au) and lodged with the ASX.

The information in this document and its attachments that relate to Mineral Resources and Ore Reserves is based on information compiled by Mr G Job, Executive General Manager Minerals and Strategic Planning for the Morobe Mining Joint Venture. Mr Job is a fulltime employee of Harmony Gold Mining Company, seconded into the Joint Venture. He is entitled to participate in Harmony’s long term incentive plan, details of which are included in Harmony’s 2014 Remuneration Report. He is a Member of The Australasian Institute of Mining and Metallurgy. Mr Job has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in The JORC Code 2012. Mr Job consents to the inclusion in this report of the matters based on his information in the form and context in which it appears including sampling, analytical and test data underlying the results.

## Non-IFRS Financial Information

This document and its attachments use Non-IFRS financial information including Underlying profit,

EBITDA, EBIT, All-In Sustaining Cost and Free cash flow. Underlying profit is presented to assist in the assessment of the relative performance of the Group. EBITDA and EBIT are used to measure segment performance and have been extracted from the Segment Information disclosed in the ASX Appendix 4D. Non-IFRS information has not been subject to review by Newcrest’s external auditor.

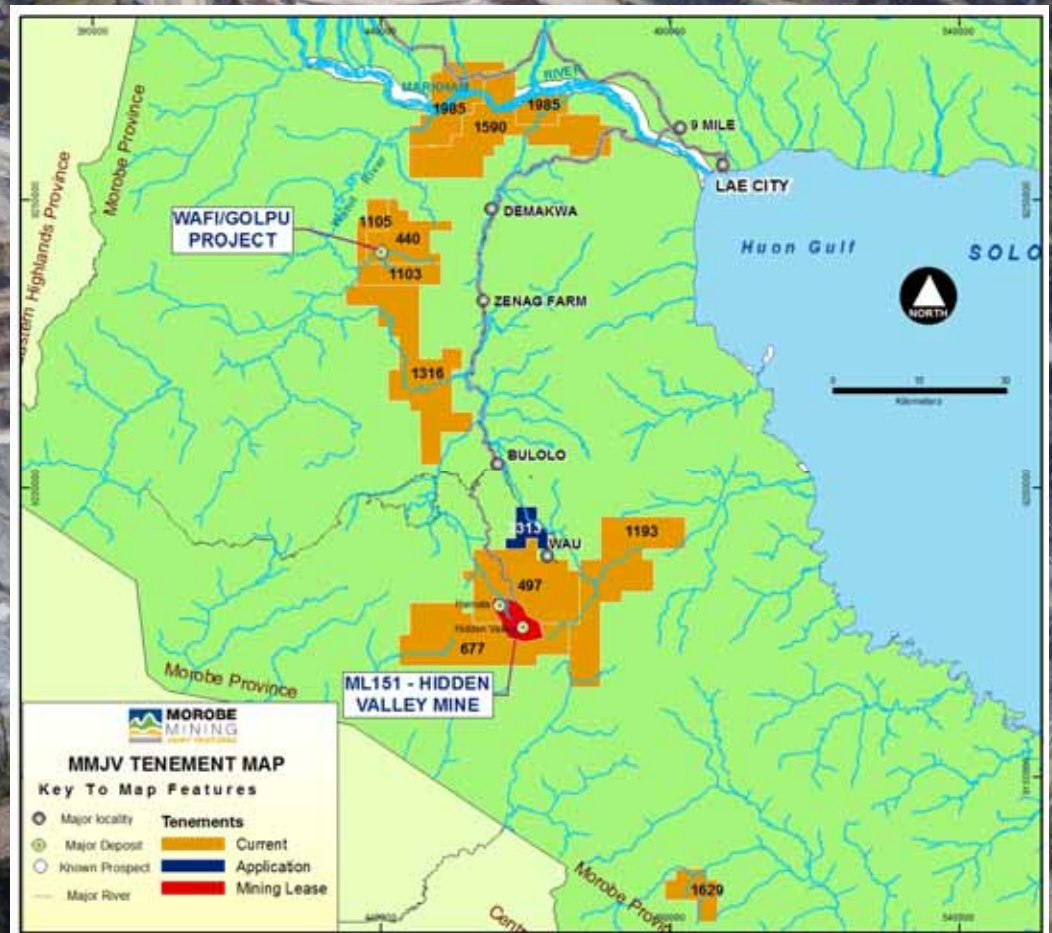
## Exploration Target

The potential quantity and grade related to Exploration Targets in this report is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource. Refer to Newcrest’s detailed exploration summary on our website at [www.newcrest.com.au](http://www.newcrest.com.au)



# Hidden Valley Mine

- 50/50 Joint Venture between Newcrest Mining Ltd and Harmony Gold
- Commenced Construction in 2007
- First Gold Pour in 2009
- Planned closure in 2028
- 150 km from Lae by road
- 2100 – 2800m ASL
- Steep mountainous terrain
- 2700 mm rainfall per year
- Conventional open pit mine
- Float and CIL processing plant
- ~220k oz gold production per year
- ~2.5m oz silver production per year
- 2,130 employees and direct contractors



# Resources & Reserves – June 2014

## Hidden Valley Operations Resource Table

Mineral Resource	Tonnes (Kt)	Au Grade (g/t)	Ag Grade (g/t)	Au Metal (Koz)	Ag Metal (Koz)
Hidden Valley	100,900	1.6	29.4	5,010	95,200
Hamata	4,570	2.1	0	308	0
<b>Total</b>	<b>105,470</b>	<b>1.6</b>	<b>28.1</b>	<b>5,320</b>	<b>95,200</b>

\*Note: Reported numbers have been rounded which may cause apparent computational discrepancies. The figures reported are 100%

## Hidden Valley Operations Reserve Table

Mineral Resource	Tonnes (Kt)	Au Grade (g/t)	Ag Grade (g/t)	Au Metal (Koz)	Ag Metal (Koz)
Proved	1,984	1.1	20.8	73	1,328
Probable	54,102	1.8	31.4	3,095	54,529
<b>Total</b>	<b>56,086</b>	<b>1.8</b>	<b>31</b>	<b>3,168</b>	<b>55,857</b>

\*Note: Reported numbers have been rounded which may cause apparent computational discrepancies. The figures reported are 100%

Refer to [www.harmony.co.za](http://www.harmony.co.za) or [www.newrest.com.au](http://www.newrest.com.au) for full Resource and Reserve disclosure.

# Open Pit Mine & Waste Dumps



- Conventional open pit mine with drill and blast, excavator and dump truck operation
- Engineered waste dump built from bottom up and incorporating ARD encapsulation

# Crusher & Overland Conveyor



- Ore taken from Hidden Valley pit to the processing plant via a crusher and overland pipe conveyor system
- Innovative system to cater for quantity of ore to transport over steep topography

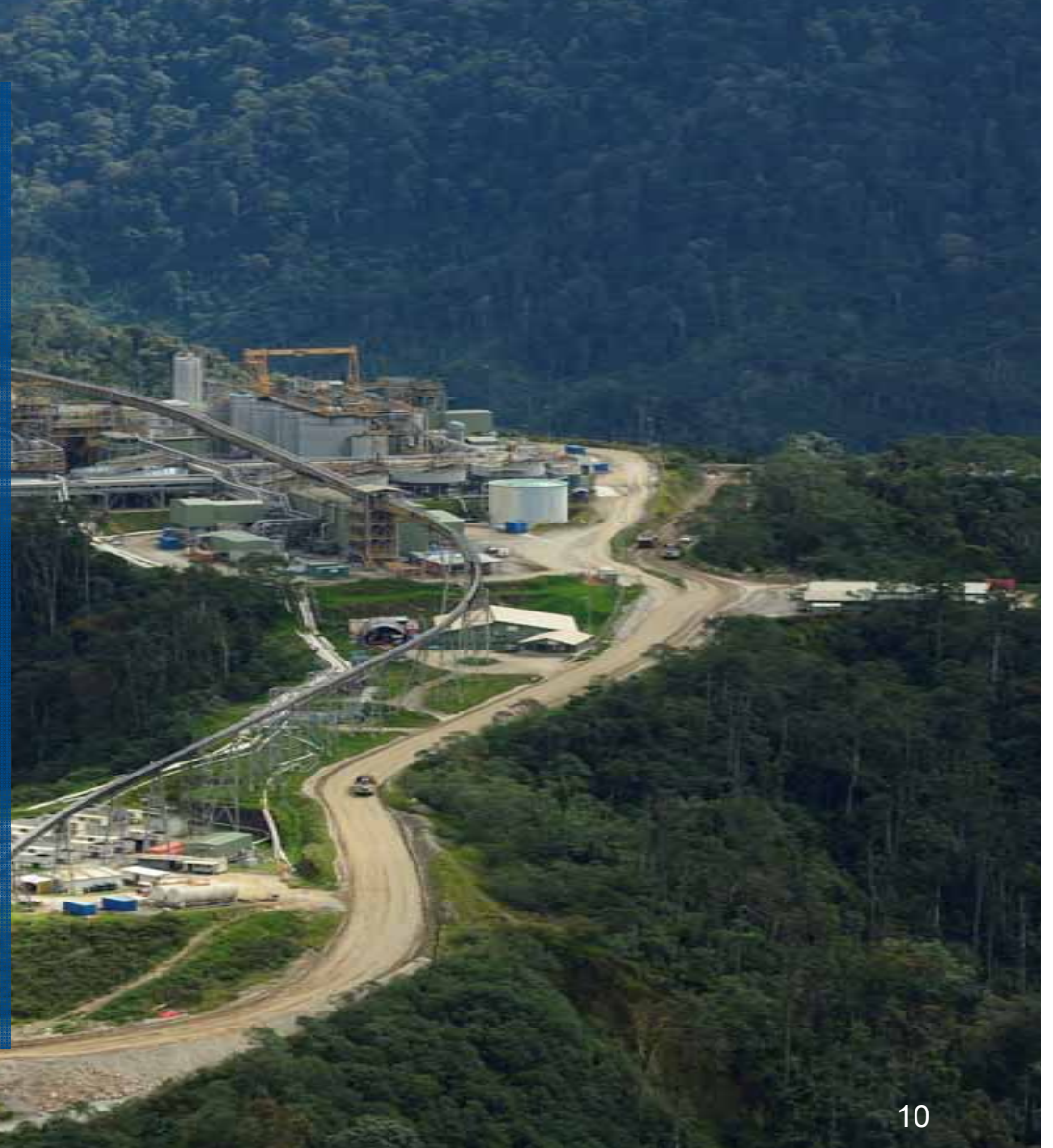






# Processing Facilities

- SAG mill, gravity, flotation, regrind, Merrill Crowe and CIL circuit for gold and silver
- Nameplate throughput is 4.2Mtpa
- Gold recovery around 89%
- Silver recovery averaging 77%
- HV crusher upgraded to provide capacity of 4Mtpa ore delivery
- Hamata crushers being upgraded to fixed jaw crusher installation
- Achieved ICMI compliance during Q4 of FY14



# Tailings Storage Facility



- All tailings from the Hidden Valley process plant are permanently stored in the engineered Tailings Storage Facility (TSF) at Hamata



08/08/2014

# The Way We Work

- One common goal
- One common message
- Visual Communication
- Focused upon:
  - Developing a new culture
  - Executing a common work system
  - Getting results

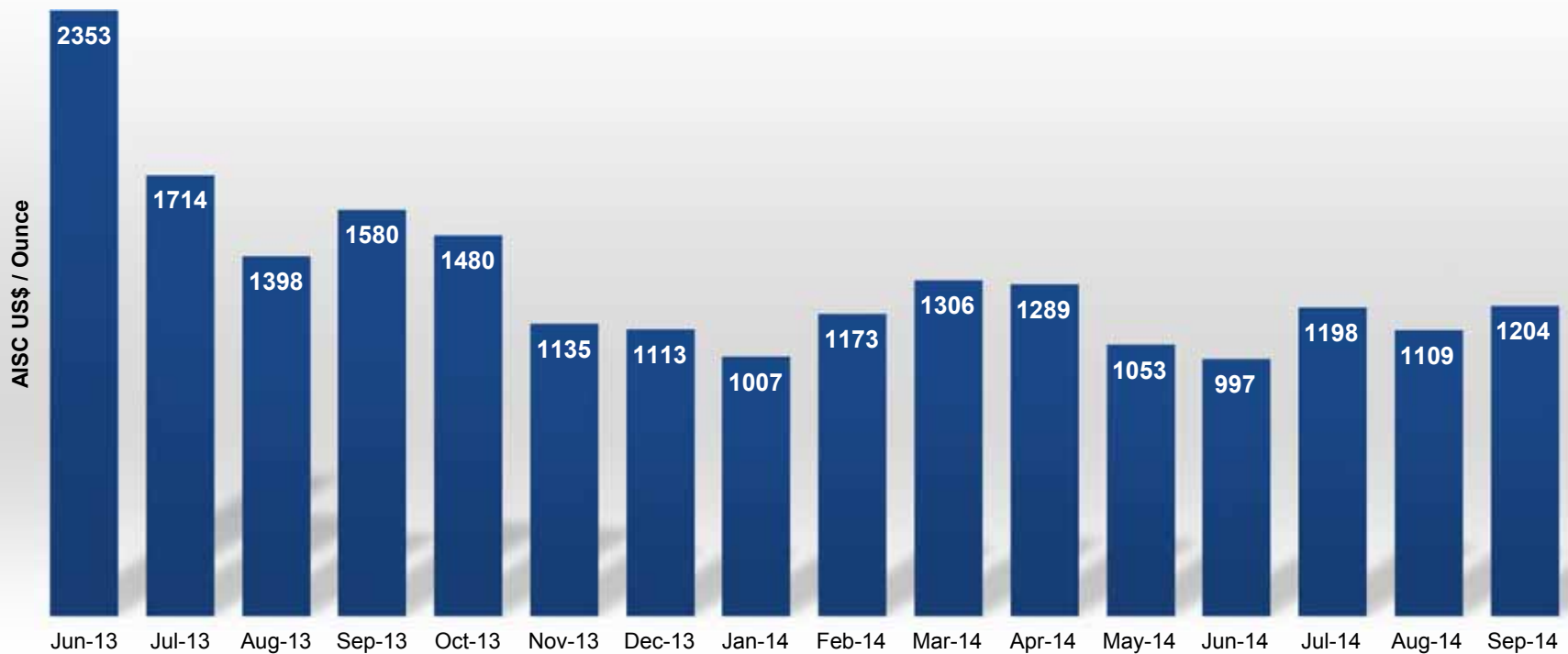


# The Way We Work

SHOW VIDEO

# Performance – All in Sustaining Costs

All-In Sustaining Costs US\$ / Ounce



Note: These are Hidden Valley site costs and exclude owners' corporate allocations

# Managing Environmental Impacts

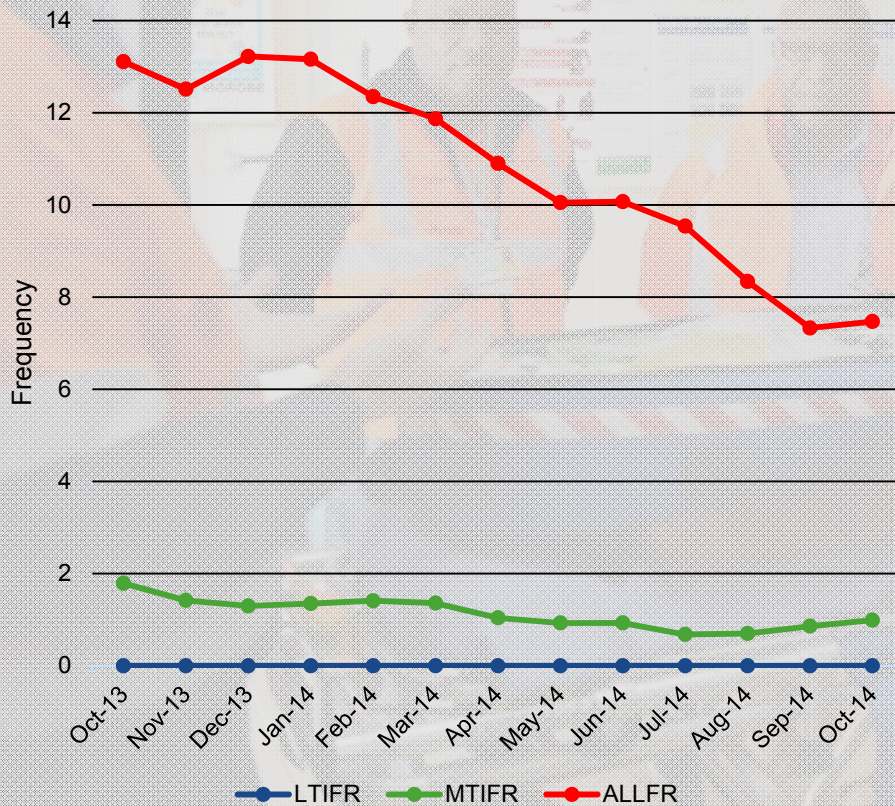


- Tailings from the processing plant are treated and stored in a purpose built tailings storage facility, the only one of its kind in Papua New Guinea
- Sediment is managed at the source through engineered waste dumps, sediment traps, and progressive rehabilitation
- Approximately 40 per cent of Hidden Valley's water needs are met by recycling treated surface water from the tailings storage facility
- Hidden Valley sources majority of its electricity from the national grid, generated by hydro-electricity
- The reduction in on-site generation means a significant reduction in greenhouse emissions as a result of Hidden Valley operations
- A 5.3Km OLC system conveying ore from HV to Hamata Plant helps reduces fuel consumption and reduction in CO<sub>2</sub> emissions



# Health & Safety

Hidden Valley Safety Statistics –  
12 Month Moving Averages



- Deploying behaviour based hazard identification and risk awareness program
- Medical laboratory, X-ray and clinic registered with Medical Board
- Disease control programs (TB, HIV, Malaria, etc)
- Established Public Private Partnerships with NDOH, MDOH and ANGAU Hospital
- Implementing and testing MMJV Crisis, Emergency and Incident Management (CMT / EMT) Plan

# Our People

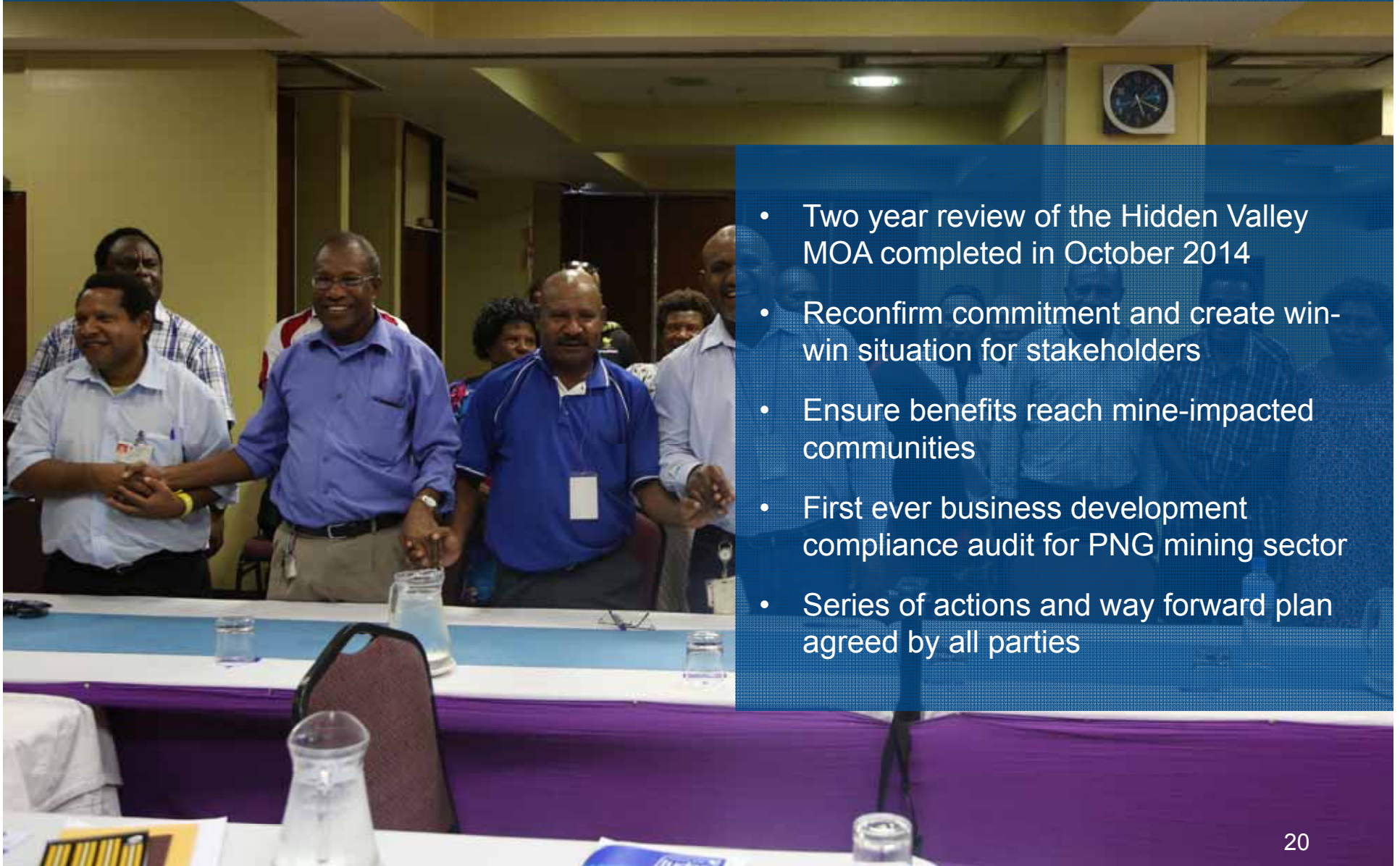


- 2,130 Employees and Contractors
  - 93% are PNG Citizens
  - 50% are from Morobe
  - 10% are female
- Strong focus on training and development of local employees
- Introduction of Line of Progression Program in FY14
- In FY14 Hidden Valley provided over 7,700 individual training events for over 70,000 training hours at a cost of K6.2 million

# Engaging Our Stakeholders

- Regular community liaison
- Government briefings – Local, Provincial and National
- Mine visits by community leaders and government officials
- Joint MMJV/Government community patrols
- Regular employee briefings and updates
- Capturing and responding to stakeholder grievances
- External Stakeholder Advisory Panel
- MMJV social media presence

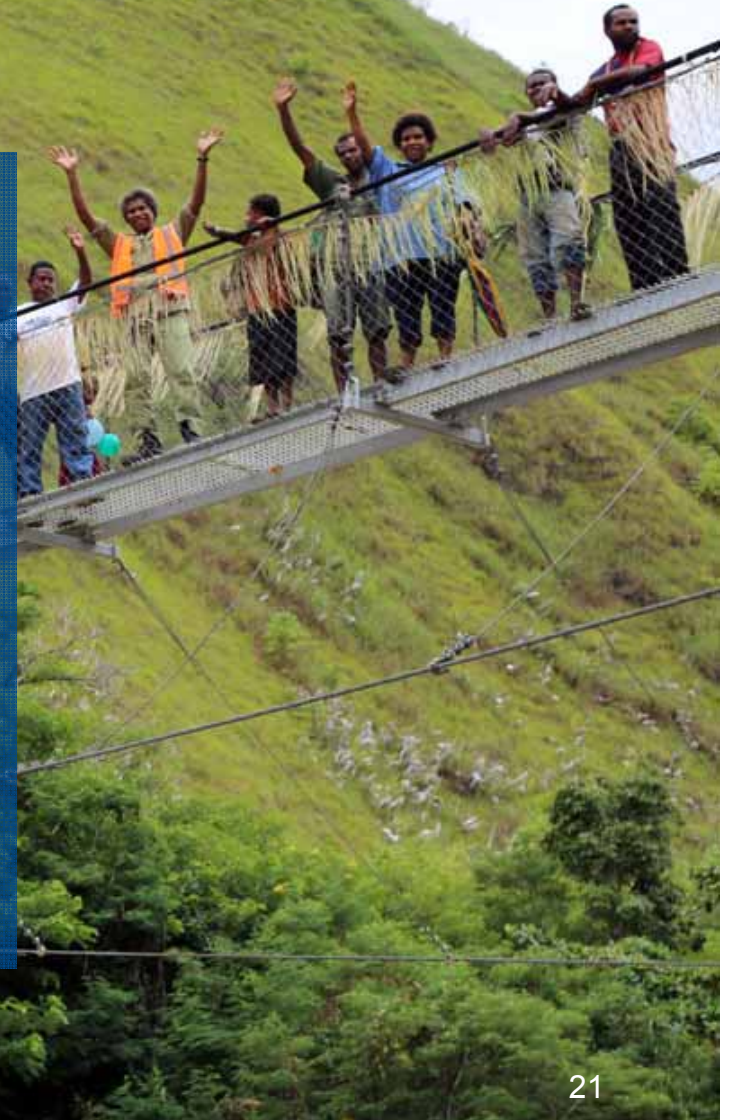
# Review of Hidden Valley MOA



- Two year review of the Hidden Valley MOA completed in October 2014
- Reconfirm commitment and create win-win situation for stakeholders
- Ensure benefits reach mine-impacted communities
- First ever business development compliance audit for PNG mining sector
- Series of actions and way forward plan agreed by all parties

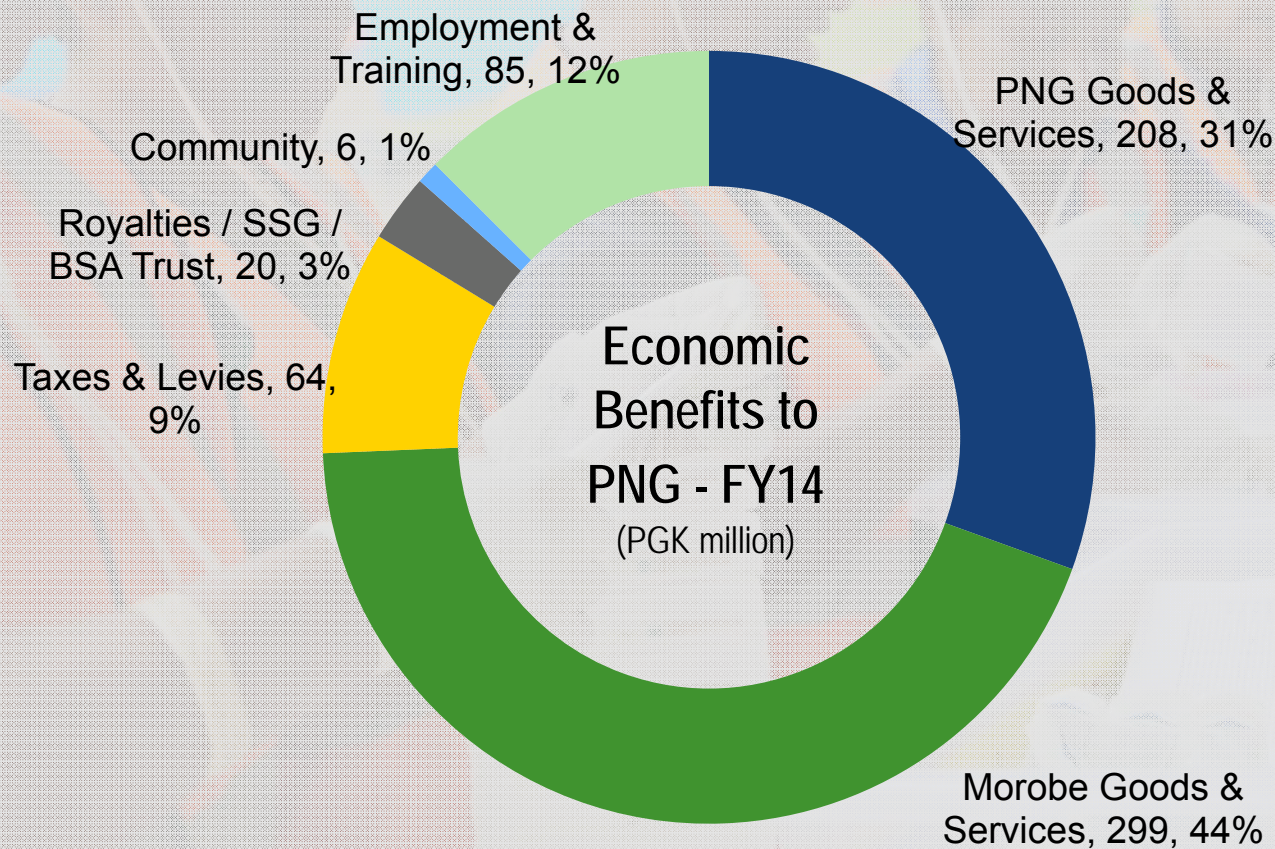
# Sustainable Development

- Development planning aligned with Community, Ward, LLG and District priorities
- Over K20 million invested in community and regional development in since 2010
  - Health
  - Water supply and sanitation
  - Education
  - Agriculture / aquaculture
  - Community infrastructure
  - Community capacity building programs
- Working to acquire additional development partnerships for the region



# Benefits to Stakeholders

In the period July 2013 to June 2014, Morobe Mining provided K682 million in benefits to the PNG economy



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