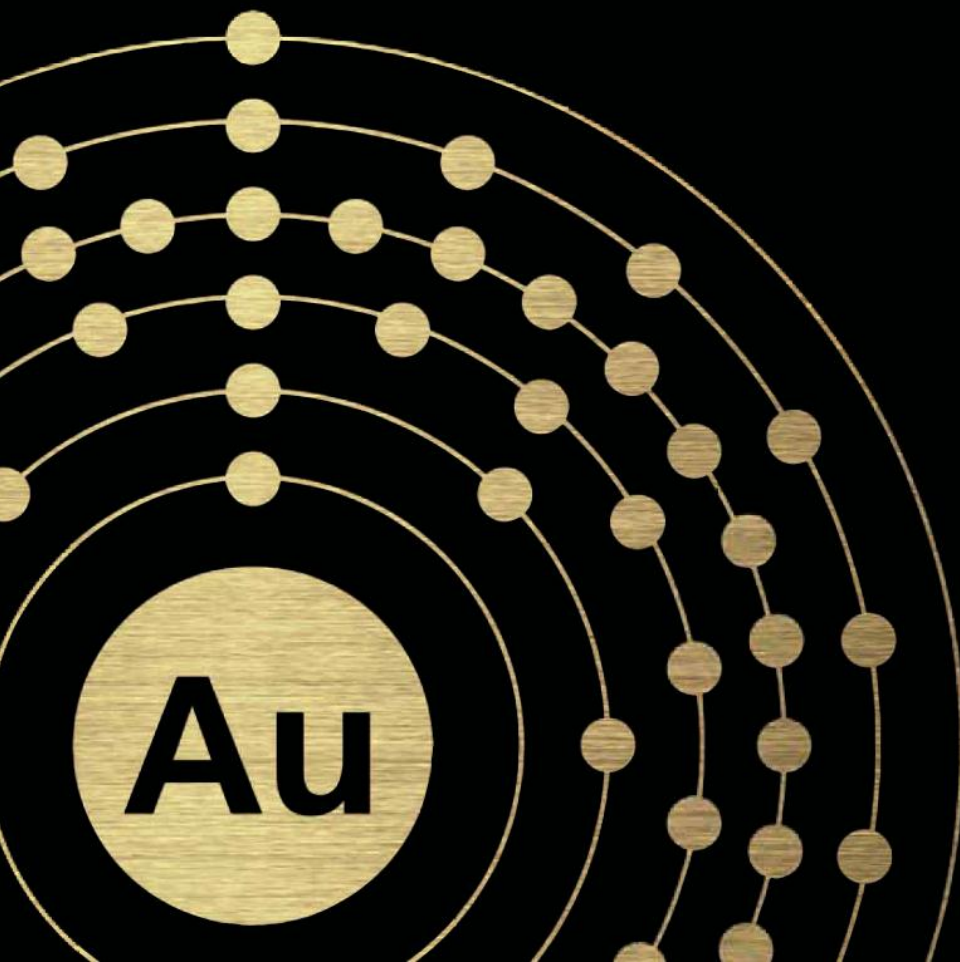


# MMJV EXPLORATION

Conrad Palaulo



*Analyst site visit*  
25 September 2012



# Private Securities Litigation Reform Act Safe Harbour Statement and Competent Person 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. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, gold and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, project cost overruns, as well as political, economic and operational risks in the countries in which we operate and governmental regulation and judicial outcomes. For a more detailed discussion of such risks and other factors (such as availability of credit or other sources of financing), see the Company's latest Annual Report on Form 20-F for the year ended June 30, 2011 which is on file with the Securities and Exchange Commission, as well as the Company's other SEC filings. The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement" to reflect events or circumstances after the date of this presentation, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

## **Competent Person Statement**

The information in the presentation that relates to Exploration Results was compiled by Mike Humphries, Exploration Executive, Harmony Southeast Asia Region who is a member of the Australian Institute of Geologists, and a full time employee of Harmony Gold Mining Company Limited. Mr Humphries 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 2004 Edition of the "JORC Code". Mr Humphries consents to the inclusion in this presentation of the matters based on this information in the form and context in which they appear.



## Vision statement

- Creating a world class mineral province in PNG

## Mission statement

- Discovering, developing and operating gold mines in Morobe Province to build a sustainable long term business to benefit all our stakeholders

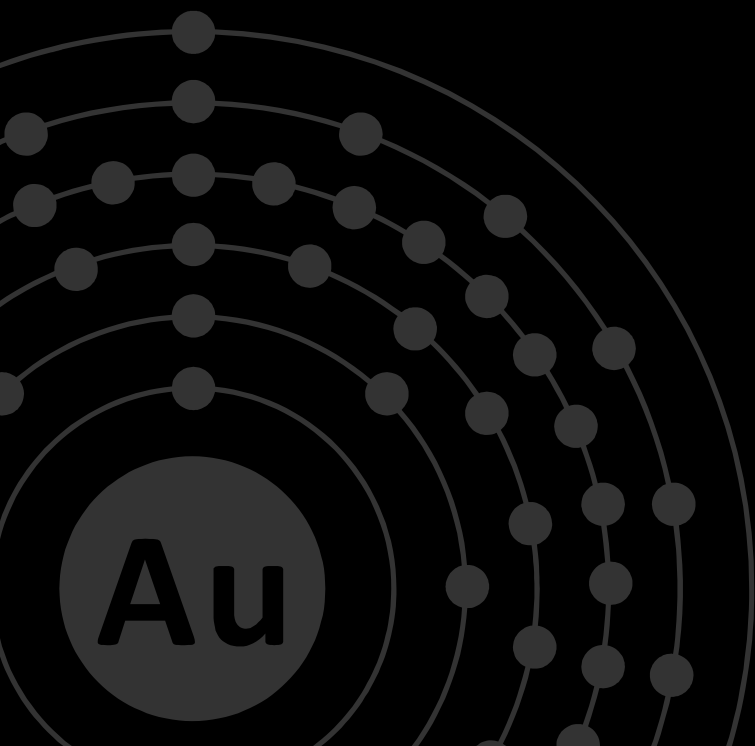
## Strategic objectives / context

- Growth of the mineral resource base through focused exploration
  - Hidden Valley: Expand resources to replace mining depletion and support expansion, displace low-grade feed with high-grade satellite discoveries
  - Wafi Golpu: Development of a second mining operation for MMJV, key exploration focus on the Wafi Transfer to capitalise on new infrastructure
  - Greenfields exploration: Develop a project pipeline capable of delivering additional quality resources and sustaining future growth and operations in the district
- Environmental and safety standards recognised as industry best practice

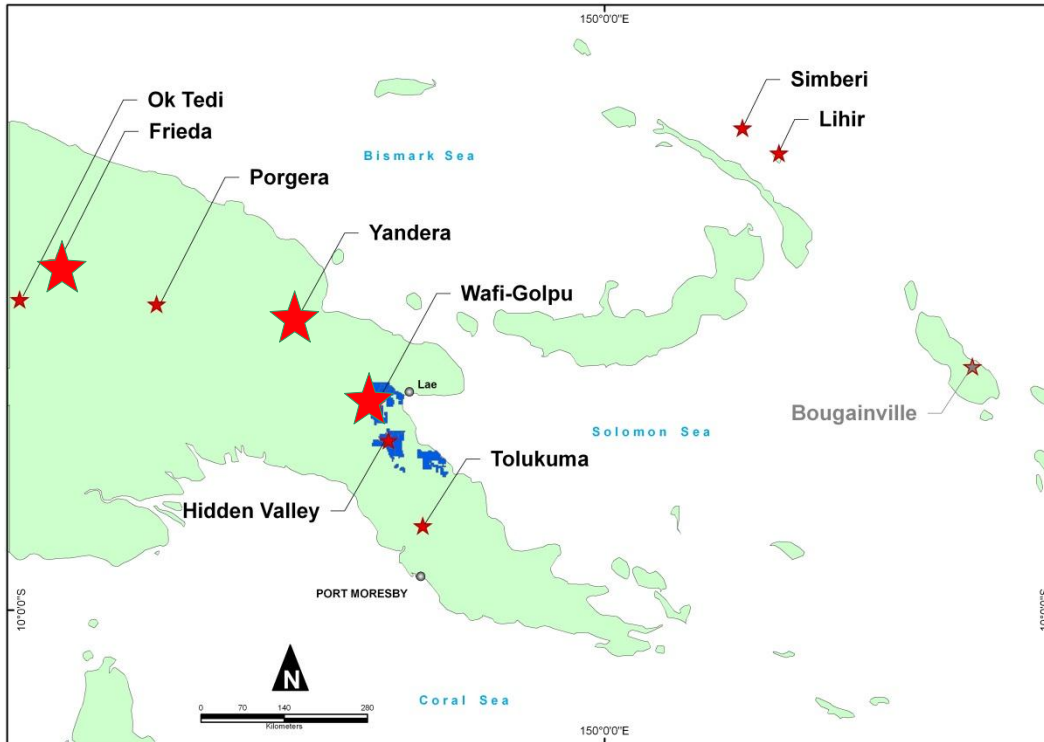
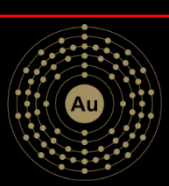


- 1 PNG overview
- 2 MMJV exploration
- 3 Wafi-Golpu and Wafi-Transfer district  
(Kesiago | Zimake)
- 4 Hidden Valley – Wau District  
(Kerimenge | Project Generation)
- 5 Regional exploration  
(Garawaria)

## PNG overview



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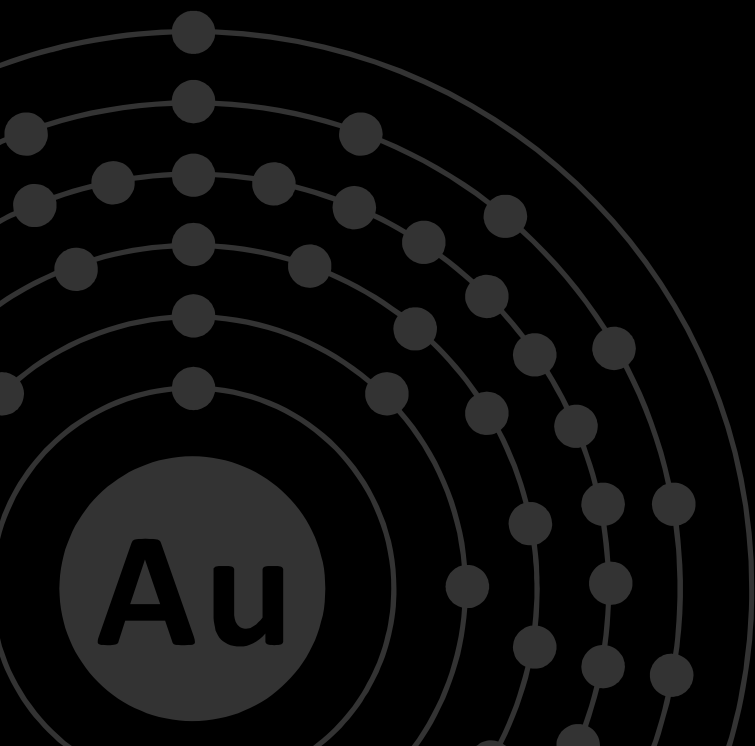
## Belt pedigree

- Production in excess 2.1 Moz Au and 160 Kt Cu annually
- 11th largest gold producing country in the world
- Project resources of 50 Moz Au, 24 Mt Cu under consideration for development
- Undergone a resurgence in exploration

## Favorable operating environment

- Stable mining law
- Transparent grant and renewal process for tenure
- Tax regime
- Business conducted and laws written in English
- Communities welcome mining development

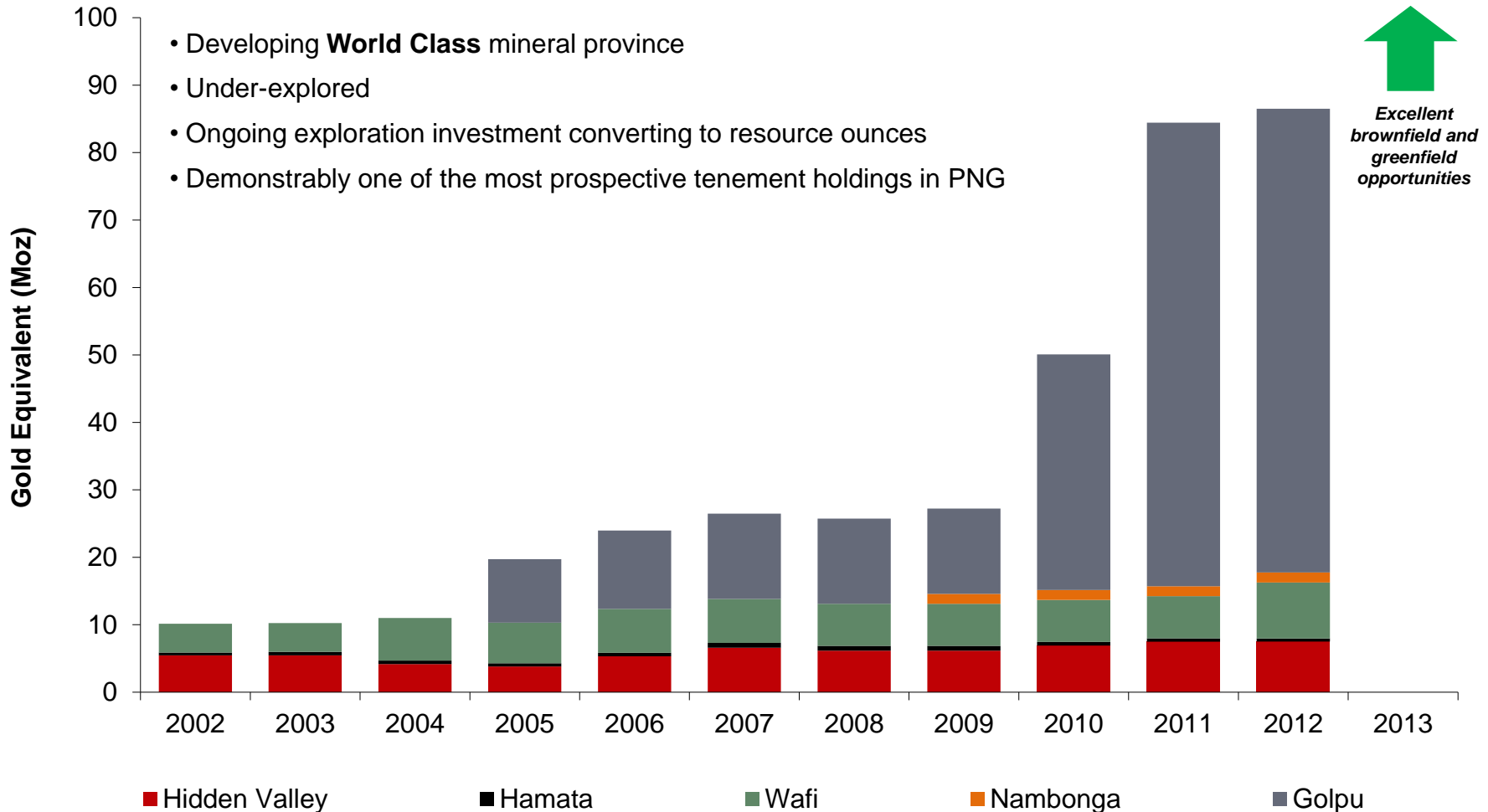
# MMJV Exploration



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### Morobe Mining JV Resource Inventory<sup>1</sup>

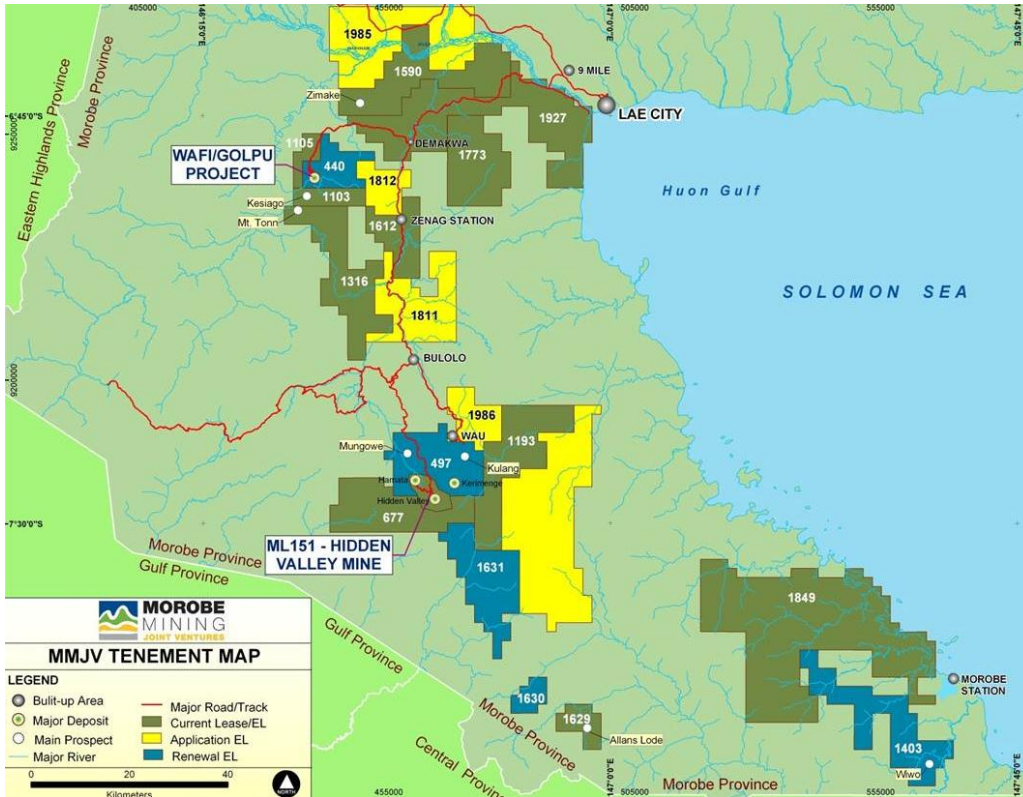


<sup>1</sup> Resource figures quoted as 100% with gold equivalent based on US\$ 1400 oz Au, US\$ 7714 /t Cu at 100% recovery for both metals. Molybdenum not included in metal equivalents. Refer [www.harmony.co.za](http://www.harmony.co.za) or [www.newcrest.com.au](http://www.newcrest.com.au) for full July 2012 resource stat





# MMJV land position



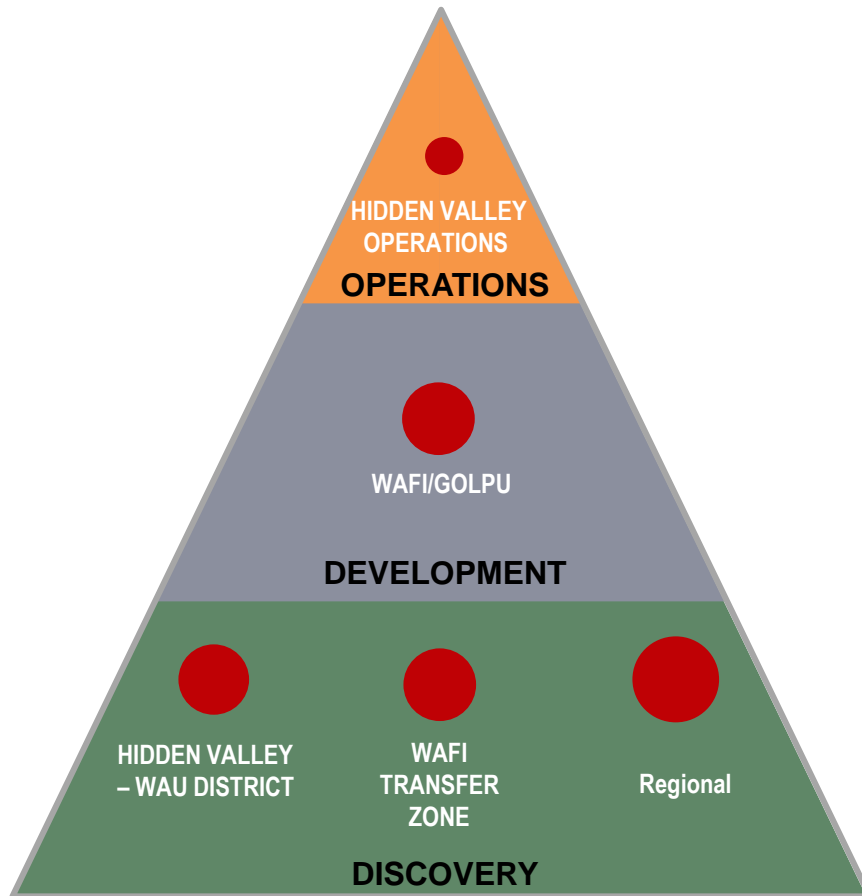
- 11 Granted ELs; 2 810km<sup>2</sup>
- 5 Renewal Els; 1 142km<sup>2</sup>
- 5 EL Applications; 1 292km<sup>2</sup>
- 1 Granted ML; 41km<sup>2</sup>
- Total MMJV Tenure; 5 386 km<sup>2</sup>



- Establish relations and negotiate access with landowners (ongoing task)
- Logistics - physical access and supply
- Contractor availability
- Mobilise exploration team - develop skills and safety culture
- Geological reconnaissance and prospect identification
  - Stream sediment sampling
  - Mapping
  - Ridge and spur soil sampling
  - Data compilation and interpretation
- Prospect turnover and ranking
  - Drill testing
  - Interpretation and tollgate review
- Tenement renewals



- 187 employees
  - 20 National geologists
  - Support professionals in database/ Geographic information system, safety, community affairs and logistics
- 70% local employment with flow-on benefits to local communities
  - Training
  - In excess of 150 Locals employed through drill contractor
- proactive community relations
- 4 years and 23 days Lost Time Injury Free



## Operations

- Sustaining and improving

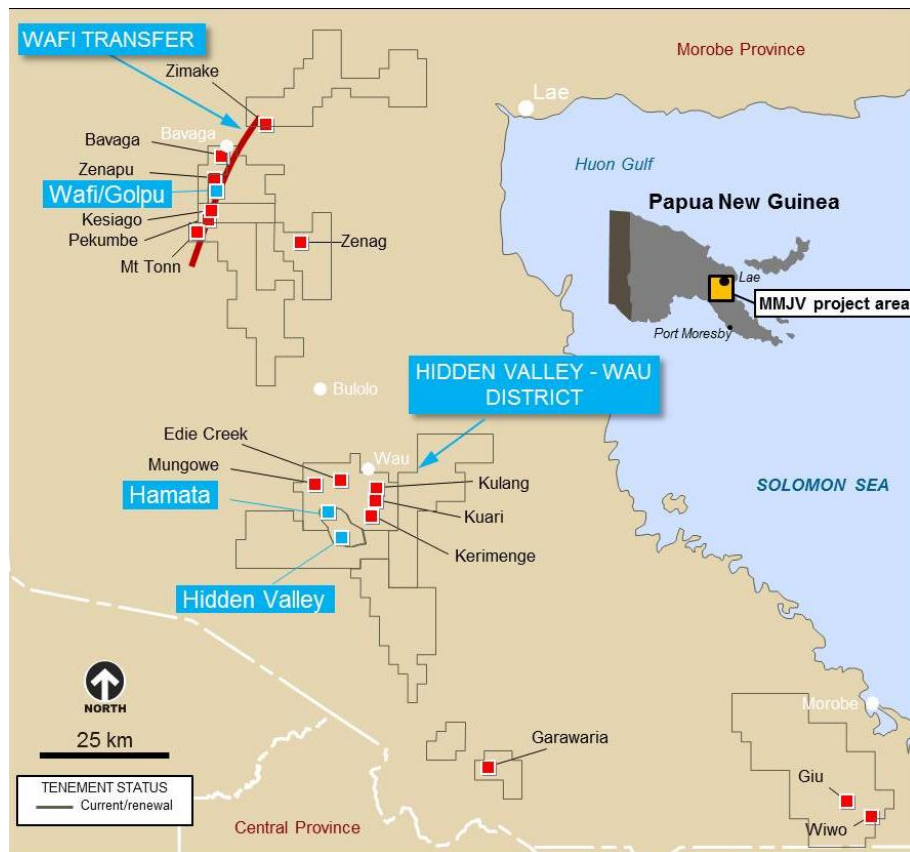
## Development

- Unlocking value

## Discovery

- Creating opportunities





## Wafi Transfer

- 8 000m drilling
  - Upside potential in the Wafi-Golpu system
  - Kesiago, Mt Tonn, Zimake
  - Regional target generation

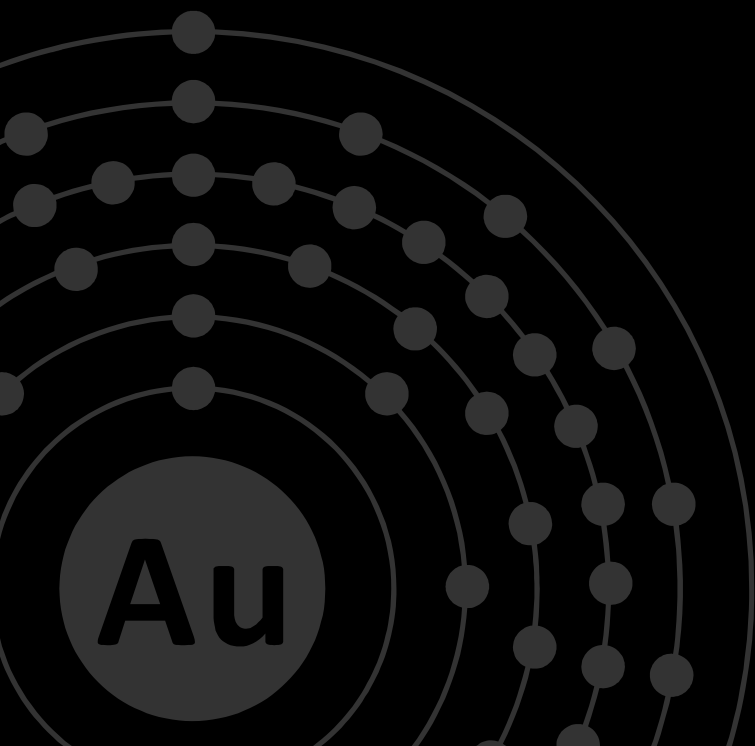
## Hidden Valley-Wau district

- 6 400m drilling
  - Kerimenge, Heyu, Limestone
  - Target generation focused Upper Watut, Kerimenge and escarpment structure

## Regional exploration

- 7 400m drilling
  - Garawaria and regional prospects
  - Includes 3 400m follow-up

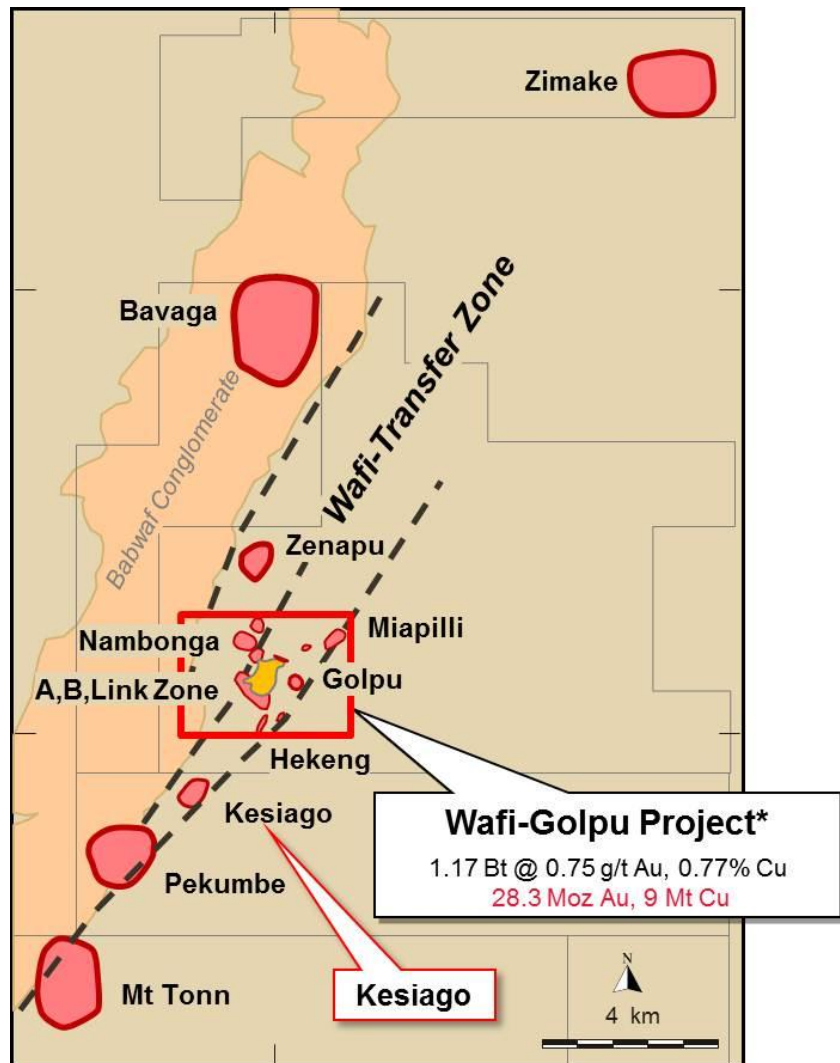
# Wafi-Golpu and Wafi-transfer district



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# Wafi transfer zone

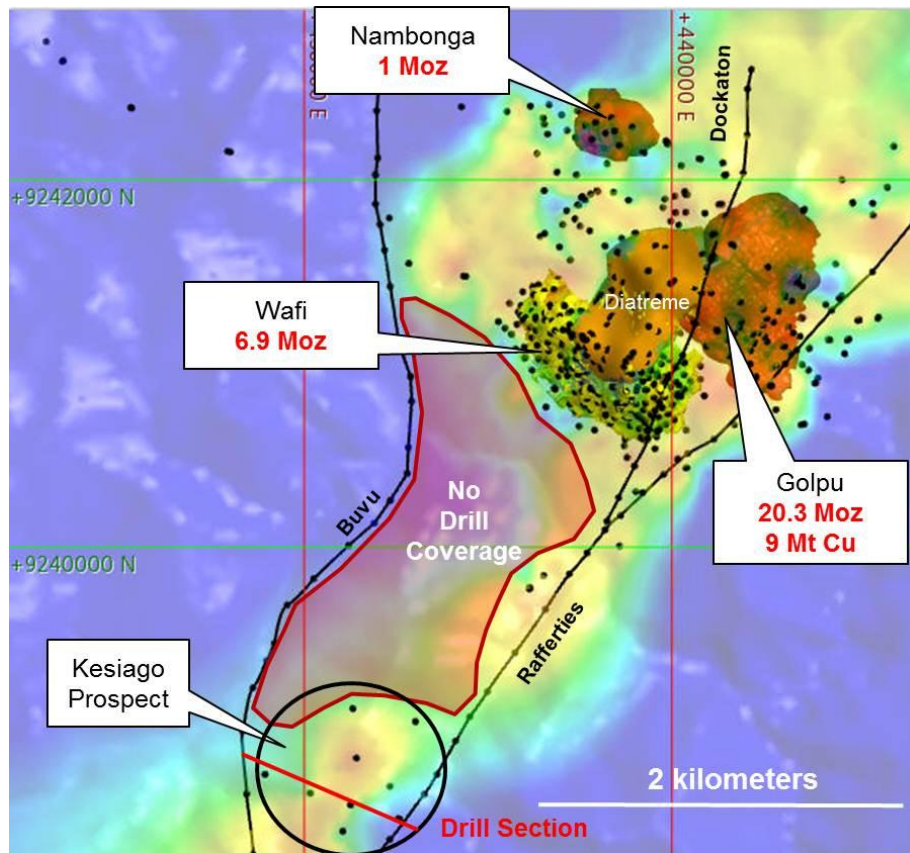


- Excellent prospectivity for major porphyry Cu/Au Systems and related epithermal Au mineralisation
- Regional exploration programs currently focussed at Zimake, Mt Tonn, and Kesiago
- 25km trend
- High tenor, cohesive gold surface geochemical anomalies
- Little to no previous exploration

For July 2012 resource statement refer [www.harmony.co.za](http://www.harmony.co.za) or [www.newcrest.com.au](http://www.newcrest.com.au)

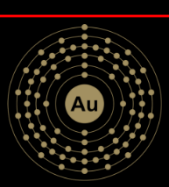


# Kesiago prospect

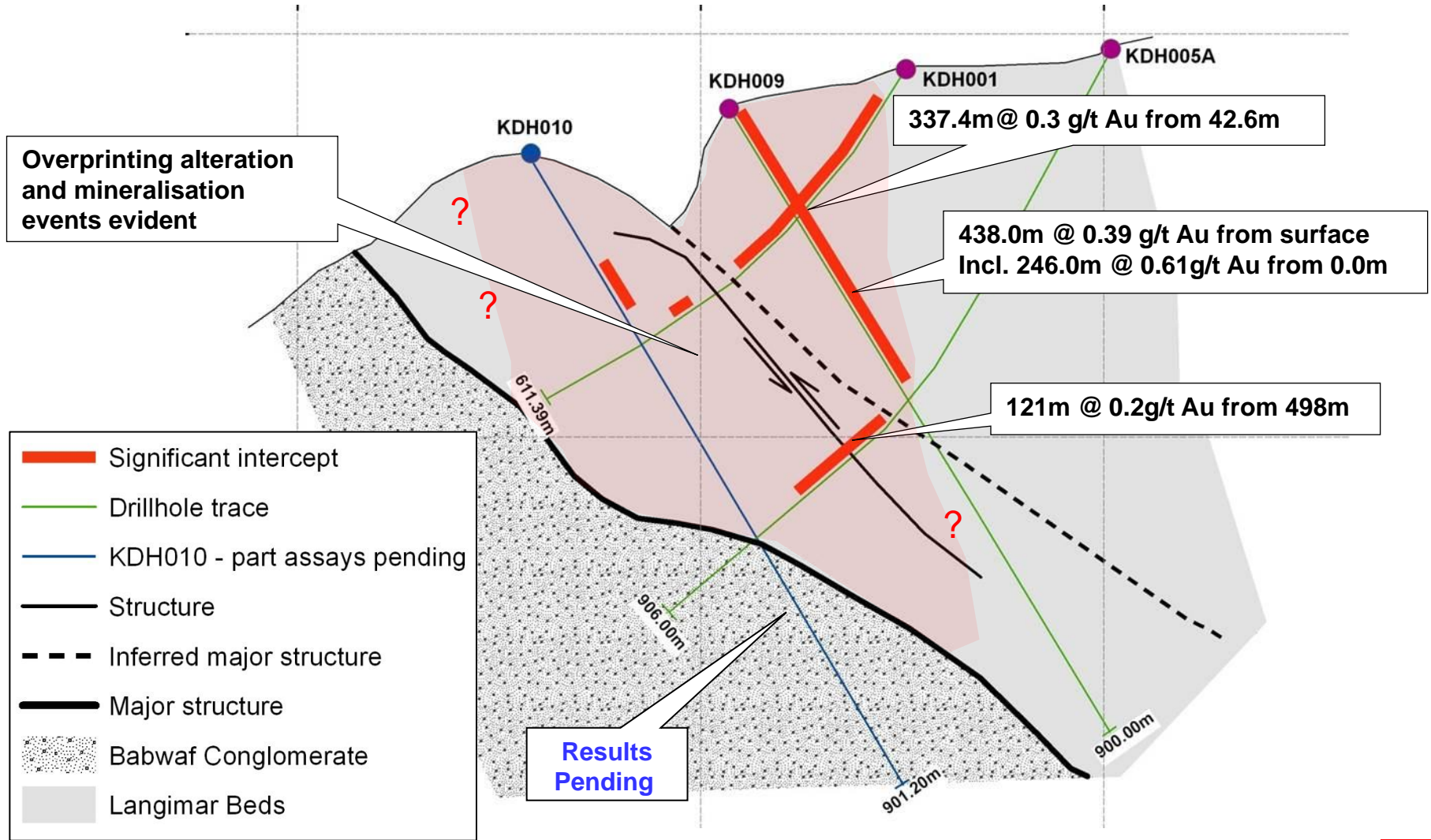


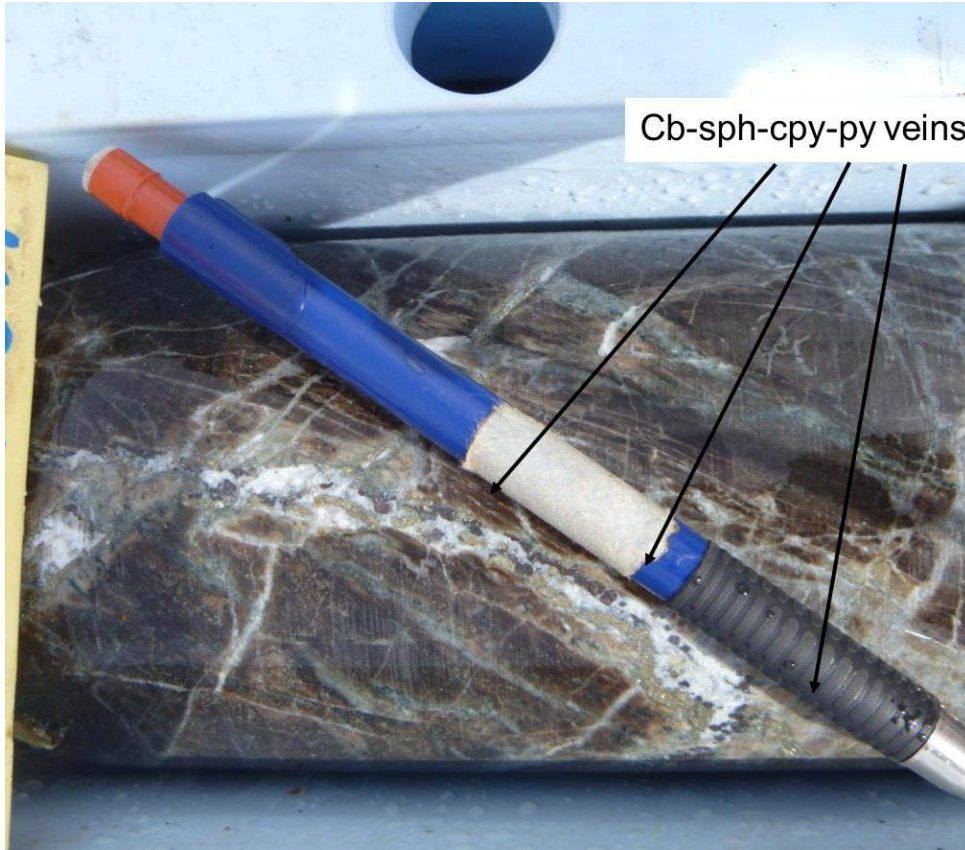
- Located 3 km southwest of Wafi-Golpu
- Recent Kesiago drilling with multiple alteration and mineralisation events
- Drill coverage with significant gaps and understanding continues to develop
- Imaged alteration (potassic + intermediate argillic) highlights system potential 5km of strike – open ended
- Thrust faulting better understood with potential for concealed mineralisation





# Kesiago section: simplified geology and structures

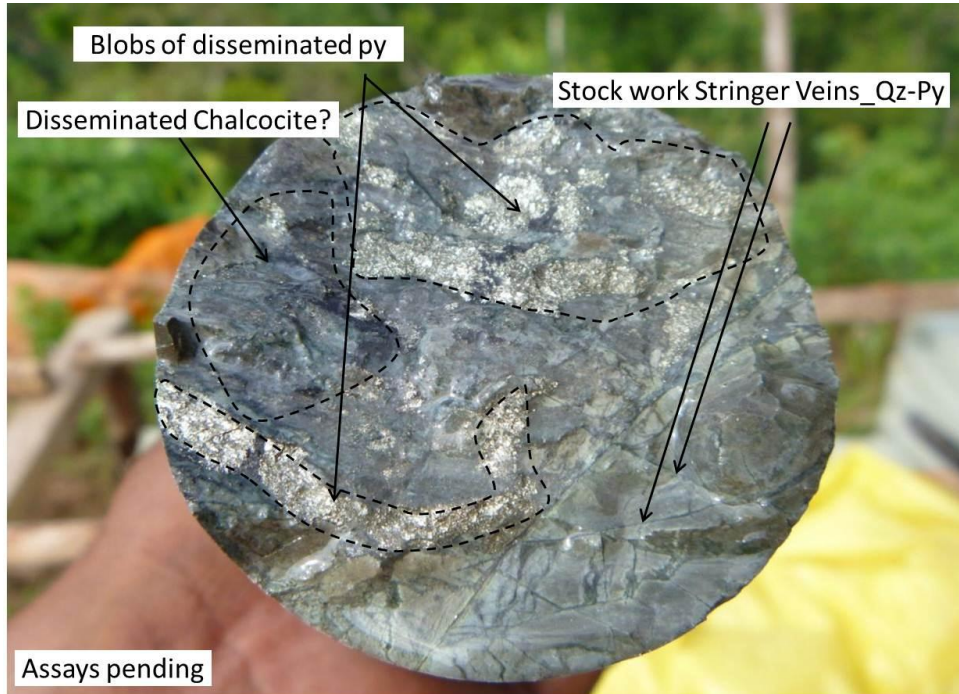




## Alteration

- Biotite (potassic) altered metasediments with crosscutting base metal carbonate veins

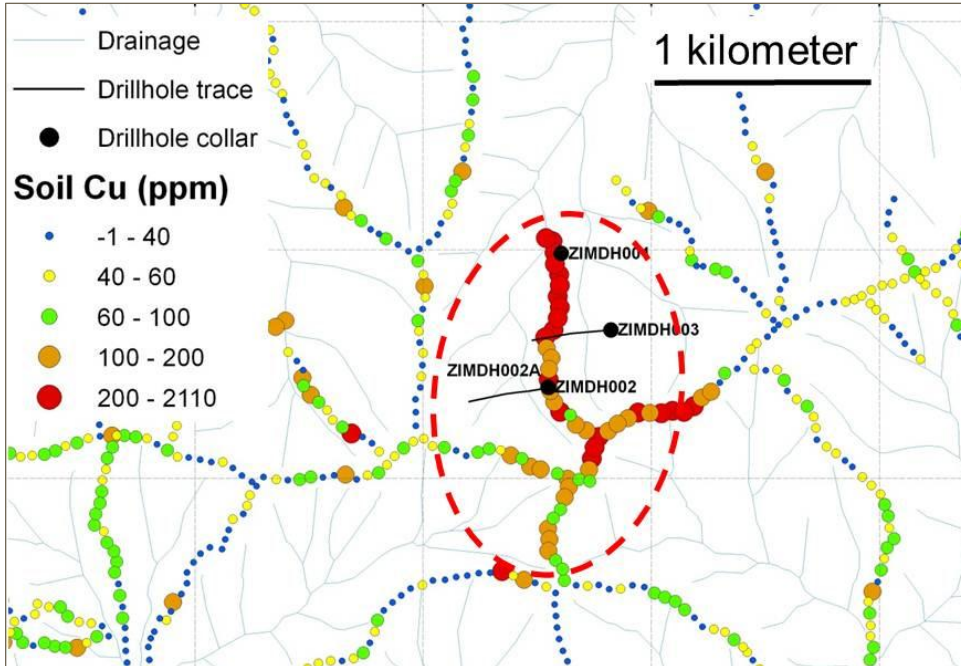
Hole_ID	From	To	Au (g/t)	Ag (g/t)	Cu (ppm)	Pb (ppm)	Zn (ppm)
KDH09	122	123	0.69	5.09	769	396	1 180



## Alteration

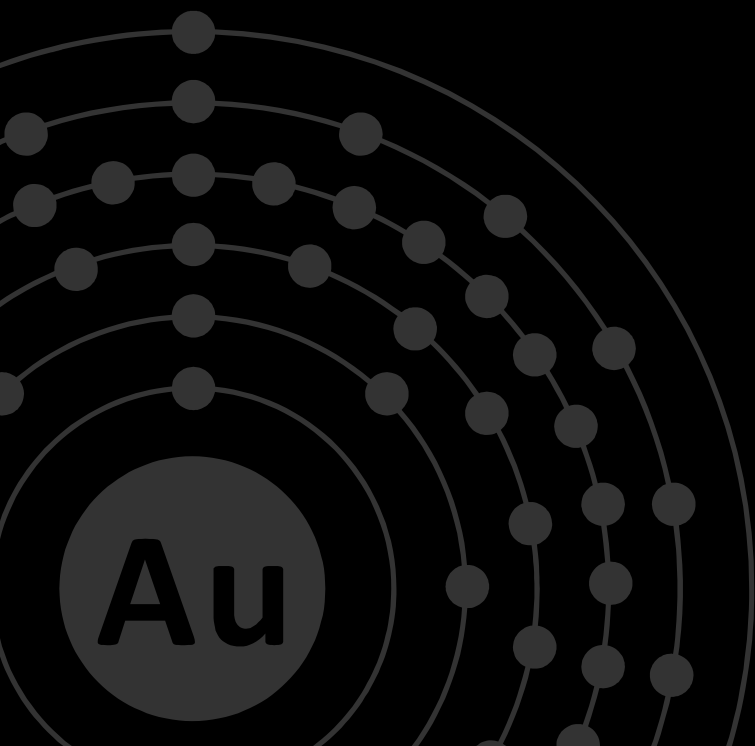
- Biotite (potassic) altered metasediments; brecciated and overprinted by illite, sericite, pyrite (intermediate argillic alteration)





- Three drill holes for 1 900m completed Q1
- Drill assays pending but initial results include broad anomalous zones
- ZIM001
  - 50m @ 0.2g/t Au, 815 ppm Cu from 295m
  - 60m @ 0.26 g/t Au, 928 ppm Cu from 481m

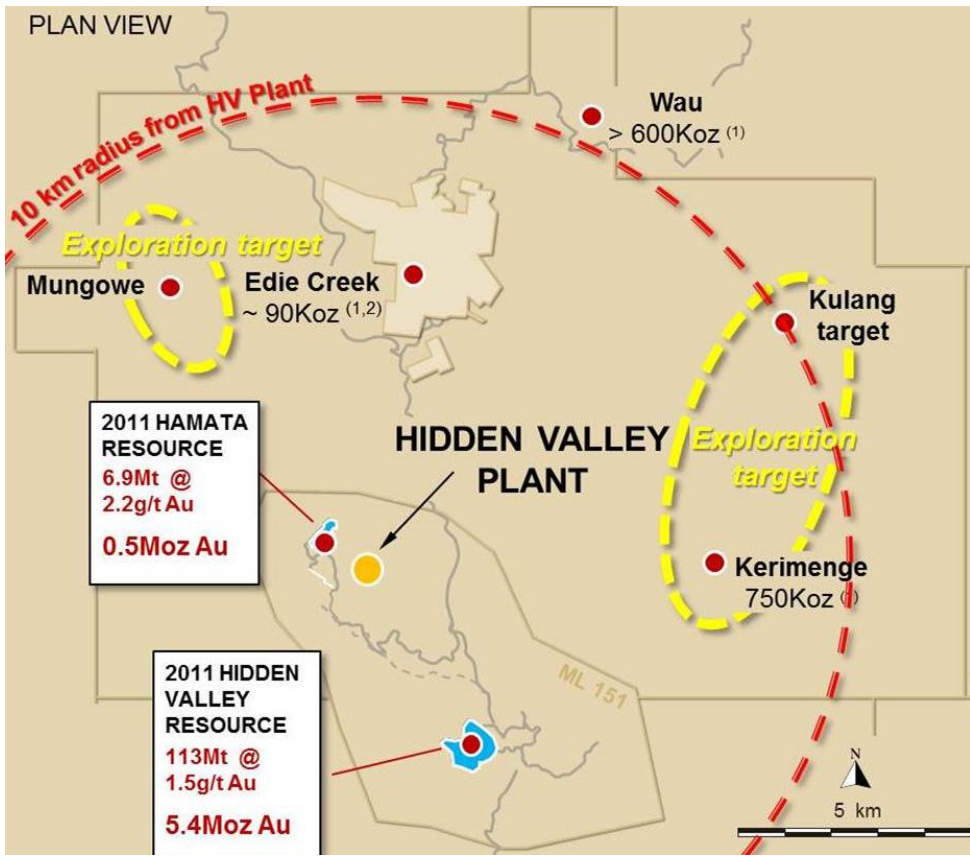
## Hidden Valley – Wau District



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# Hidden Valley – Wau district

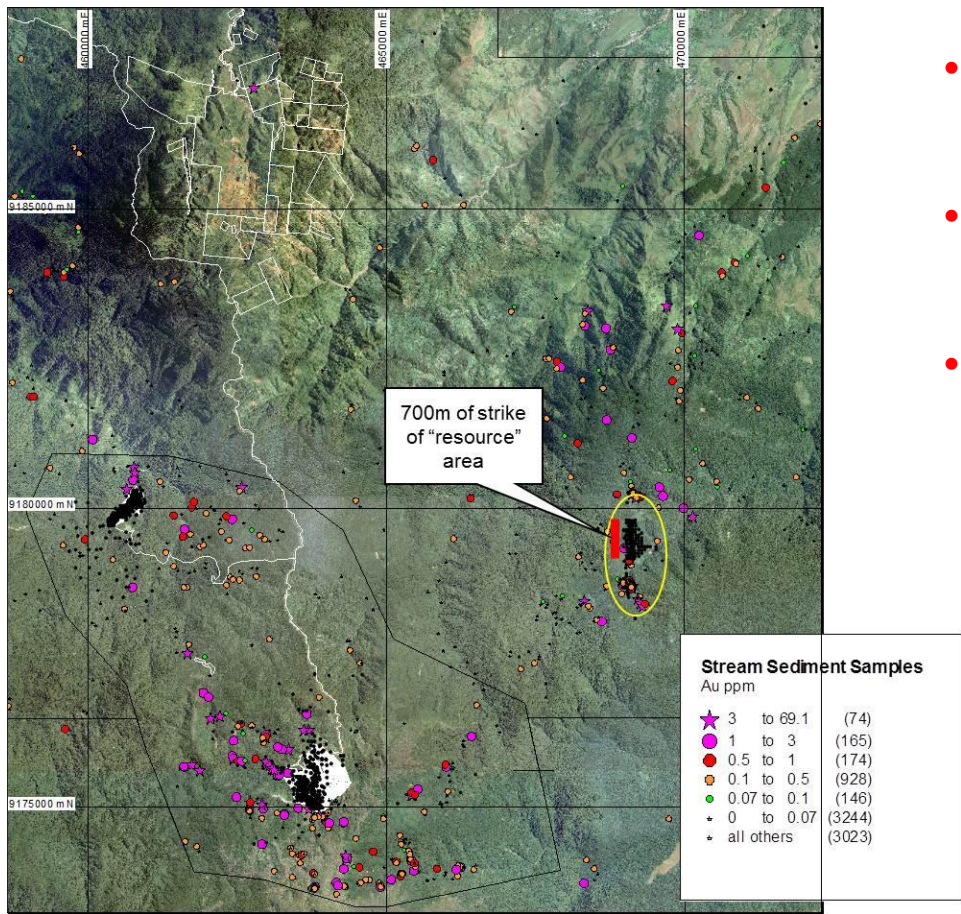


- Gold rich district, endowment >8Moz
- Portfolio of highly prospective exploration targets within 10km radius of Hidden Valley Plant
- Current focus
  - Kerimenge
  - Upper Watut soil geochemistry
  - Limestone

Endowment includes significant portion of alluvial mining and historic production and non-jorc compliant resources.

Edie creek leases are not controlled by MMJV

For July 2010 resource statement refer [www.harmony.co.za](http://www.harmony.co.za) or [www.newcrest.com.au](http://www.newcrest.com.au)



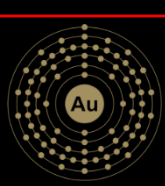
- Located approximately 6km northeast of the Hidden Valley Deposit
- Discovered by RGC through stream sediment sampling in 1984
- Intensive drilling between 1988 & 1991
  - 128 holes completed for 15 362m
  - Mineralisation defined over 700m of strike, with some isolated intercepts to the south (known as Waurike Prospect)



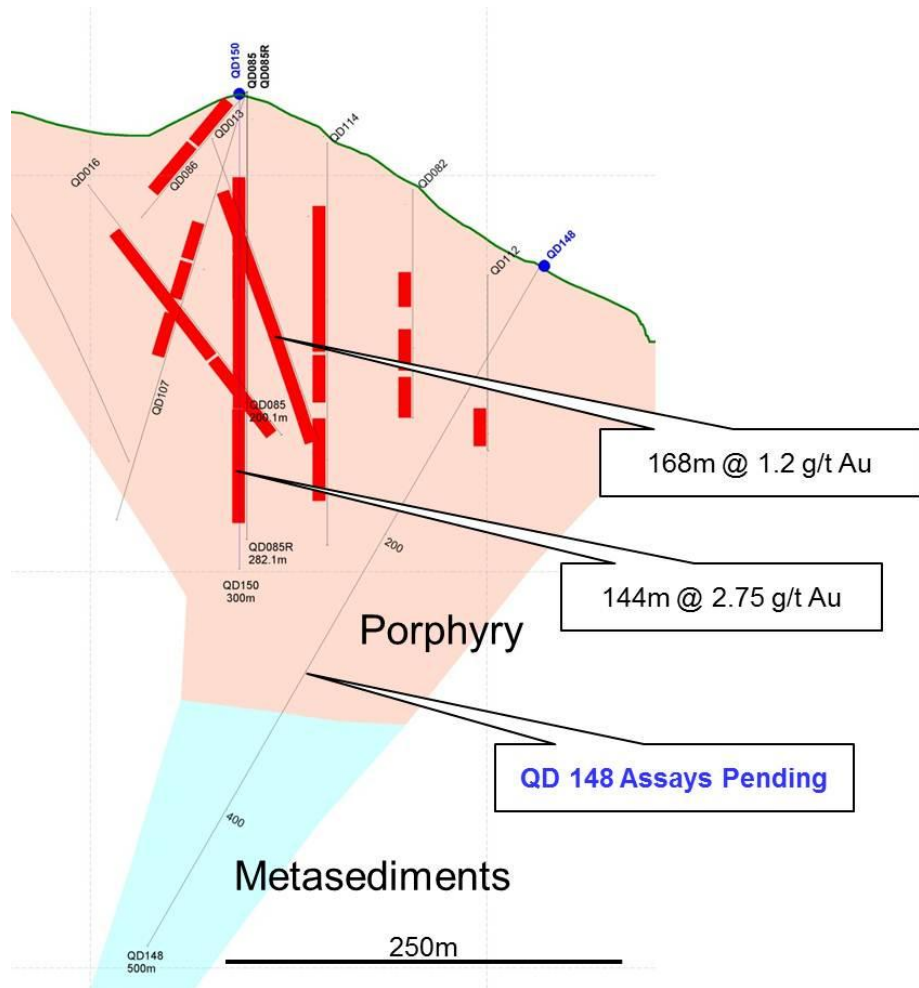
## **Historic resource: 15 Mt @ 1.8 g/t for 750Koz**

- Resource not reportable with issues including
  - Geometry and grade continuity of the stockwork mineralisation
  - Refractory mineralisation in fresh rock
- Current drilling
  - Drilling at depth and along strike for a step change in the geological understanding of the mineralisation
  - High grade feeder structure below QD85
  - Alteration styles suggest potential for porphyry at depth

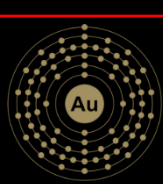




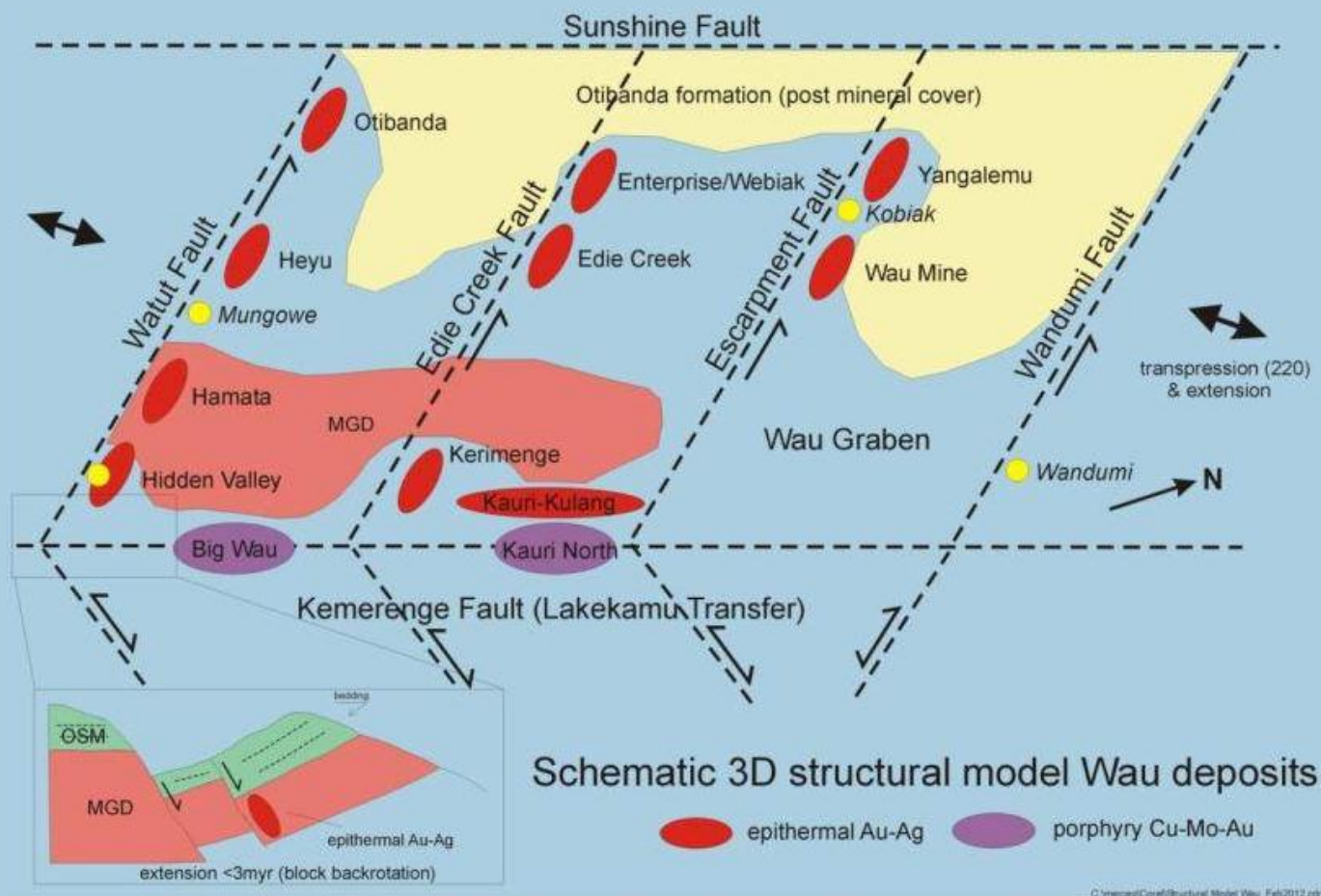
# Kerimenge QD148



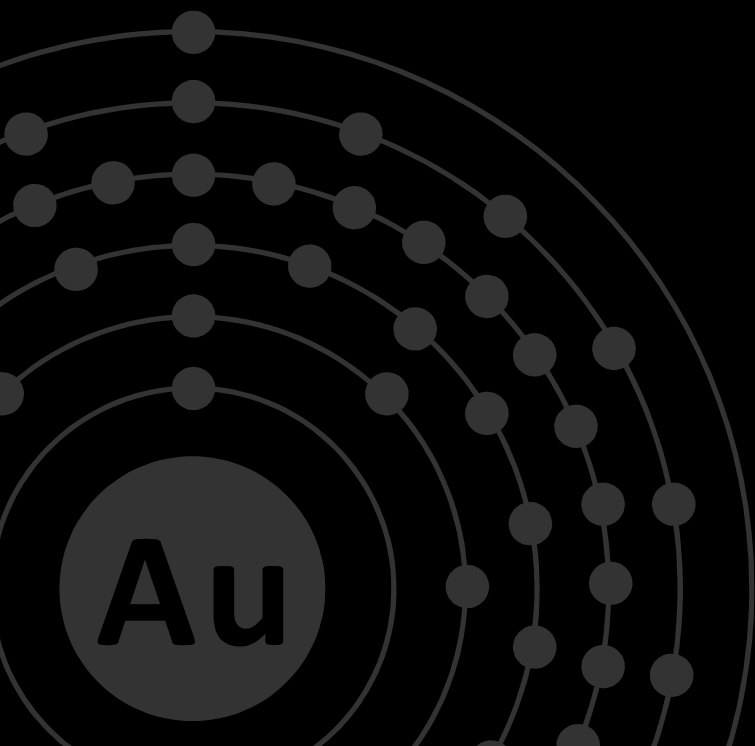
- Drilling completed with assays pending
- Initial hole to test below QD 85 for high grade feeder structure
- Several zones of alteration accompanied by carbonate base metal veining
- Pervasive sericite altered metasediments intersected over bottom interval



# Hidden Valley district – project generation



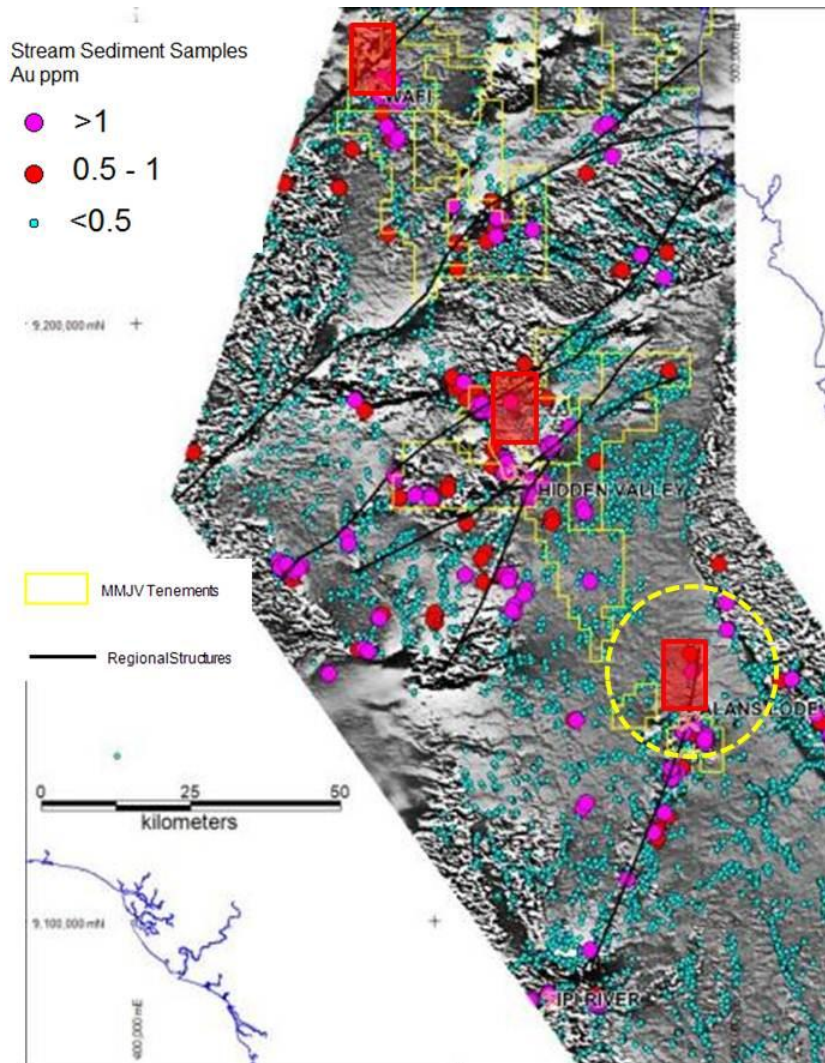
## Regional exploration



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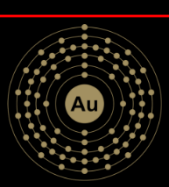


# Garawaria – regional setting



- Located 54km southwest of Hidden Valley
- One of the largest, highest order Au anomalies ever developed on the Morobe tenement package
- +1 500m open ended anomaly with assays up to 3.4 g/t in soils
- Regional geochemistry indicates fertile transfer
  - Ipi River intercept of porphyry Cu mineralisation
  - Emerging new mineral district
- High sulphidation characteristics – suggesting porphyry potential
- Never been drill tested

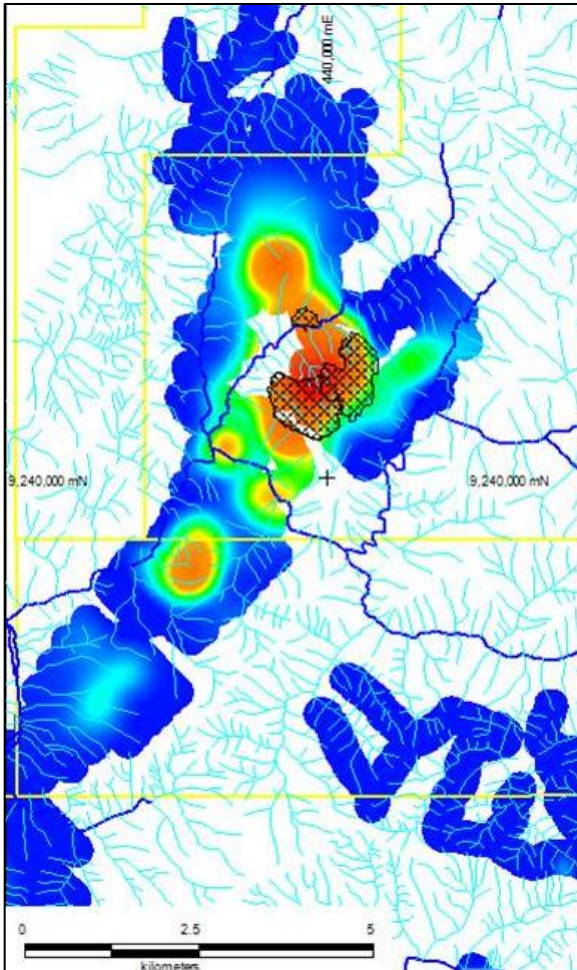




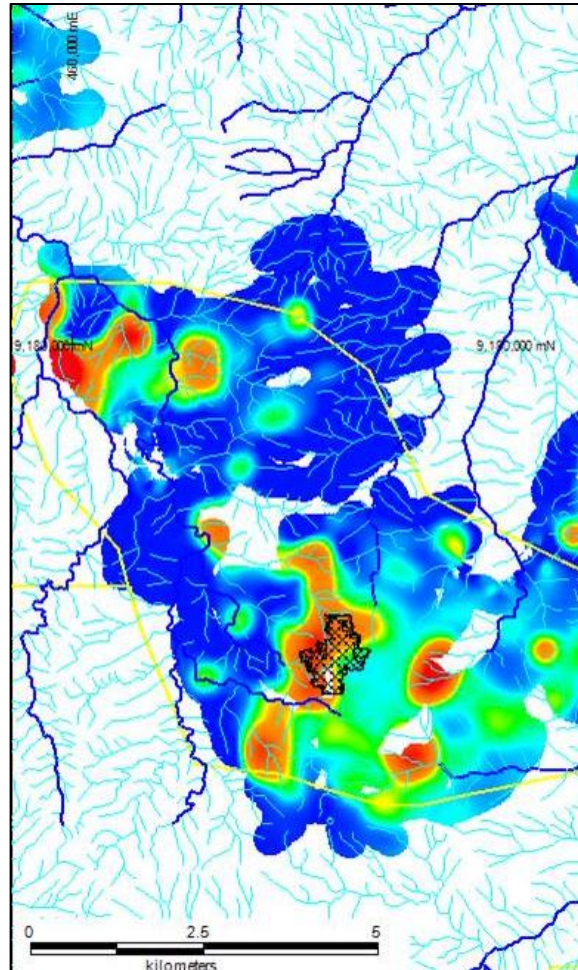
# Garawaria – Au surface geochemical footprint



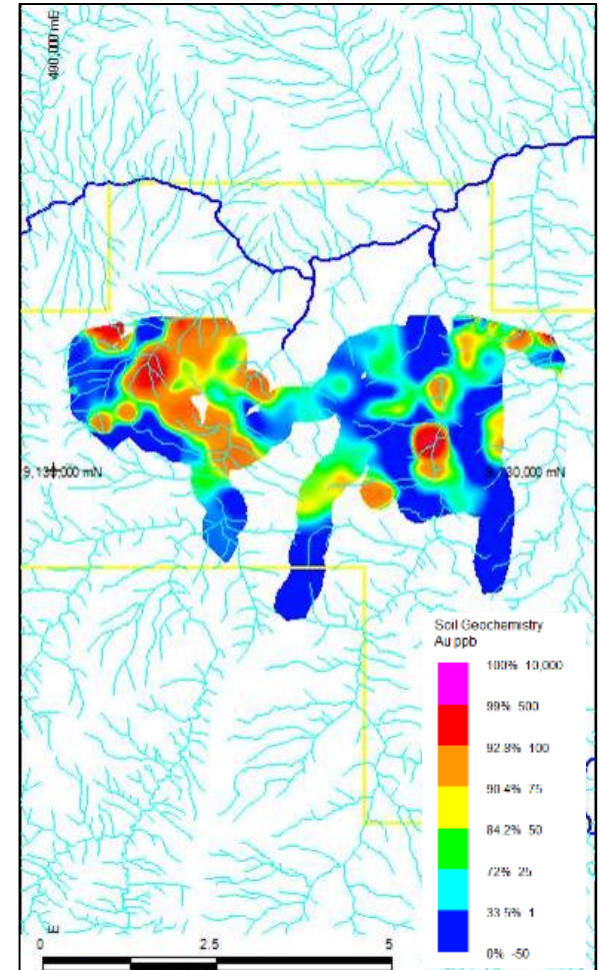
## Wafi-Golpu

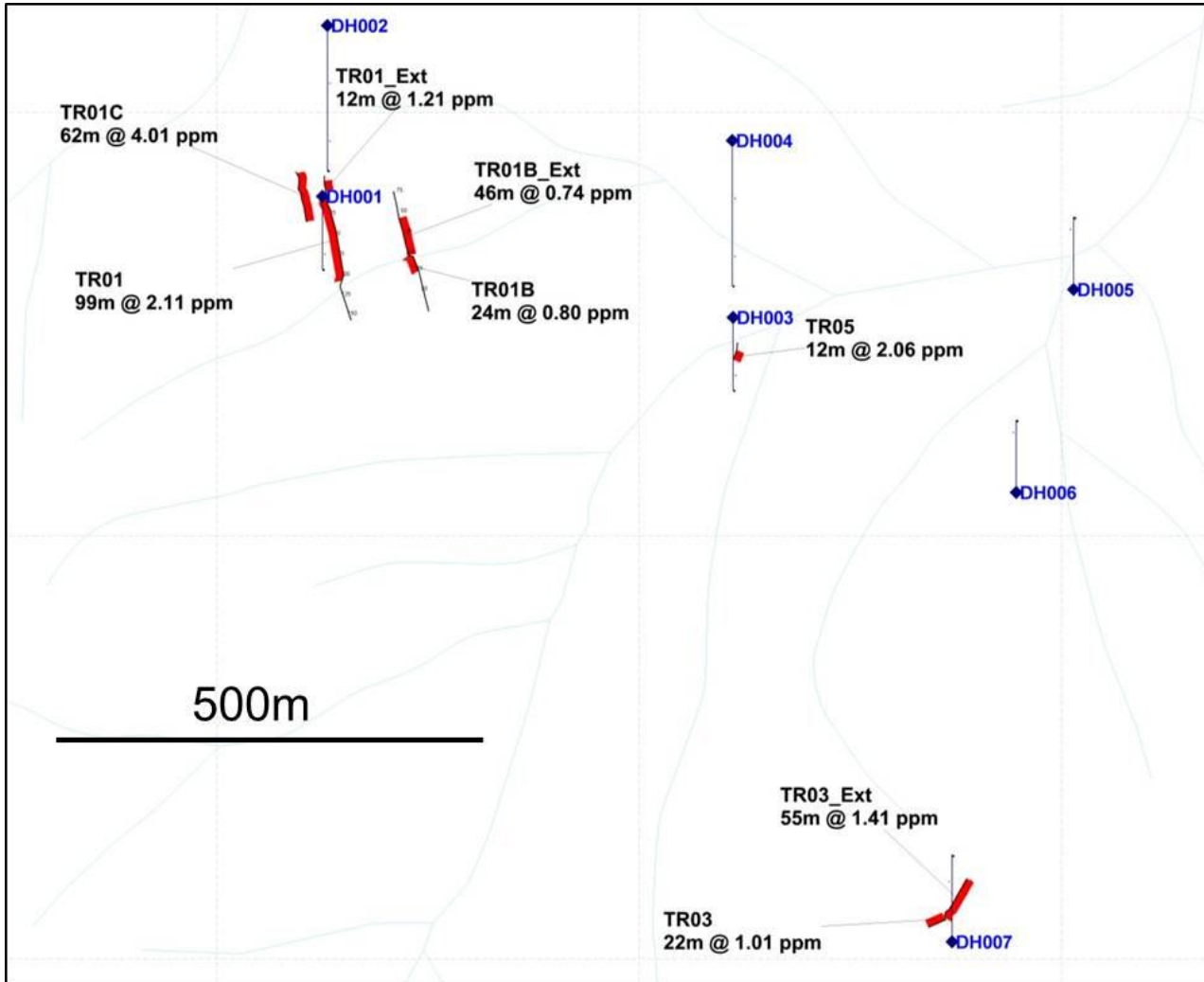


## Hidden Valley



## Garawaria

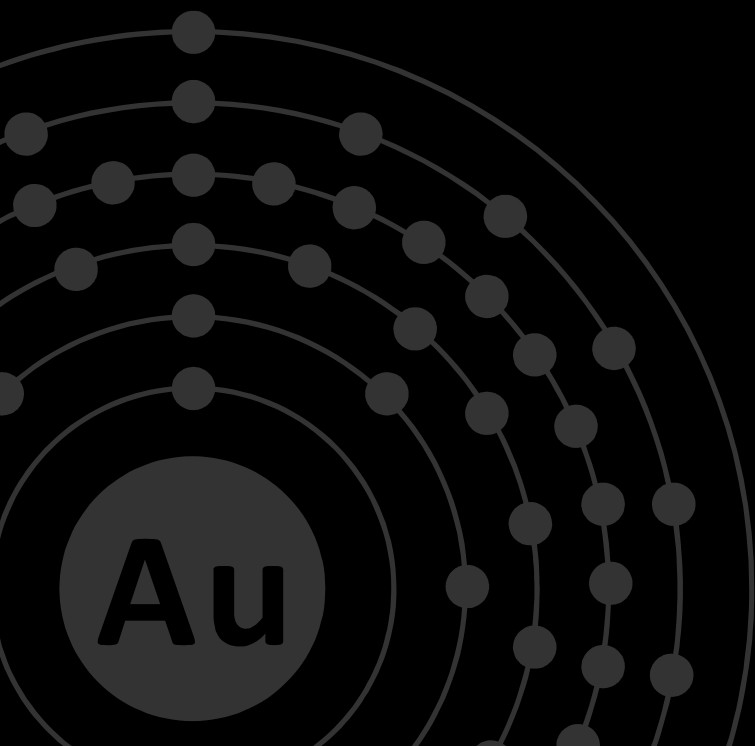




## Work program

1. Initial trenching for optimising drill direction and geology
  - +1 g/t Au in bedrock from all trenches with some outstanding assays returned
  - High temperature acid clay alteration confirms epithermal nature and potential for porphyry copper gold mineralisation
2. Drill pad construction underway

In conclusion



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## Wafi-Golpu

- Drilling continues to develop orebody knowledge and highlight excellent potential to expand the resource base

## Hidden Valley-Wau district

- Mineralisation model developed for satellite deposit exploration, with work currently focussed at Kerimenge for high grade mineralisation

## Regional exploration

- Garawaria represents a growth opportunity for a new mining front for MMJV - a first class gold target with multi million ounce potential, about to be drill tested



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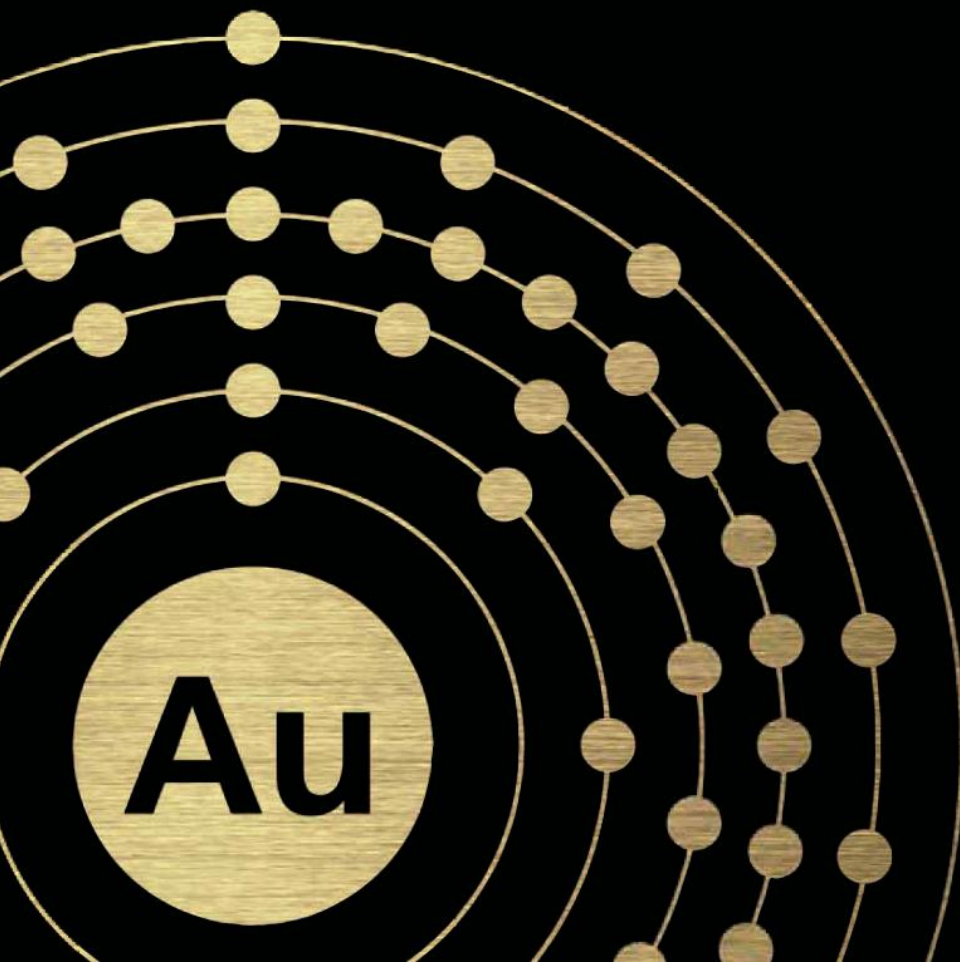
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