



# **MMJV Analyst Tour**

## **Wafi Golpu – A World Class Project**

March 2011

# Harmony Gold Mining Company

## Safe Harbor 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. 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; (vii) estimates of reserves, and statements regarding future exploration results and the replacement of reserves; and (viii) statements regarding modifications to then Company's hedge position. 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, as well as political 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, see the Company's latest Annual Report on Form 20-F for the year ended June 30, 2010, 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 Persons Statement**

The information in this presentation that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Greg Job for Harmony Gold Mining Company who is a Member of The Australasian Institute of Mining and Metallurgy, and a full-time employee of Harmony. 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 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Job consents to the inclusion in this presentation of the matters based on this information in the form and context in which it appears. For details of Exploration Results, Mineral Resources and Ore Reserves refer to the Harmony website.

### **Competent Persons Statement**

The information in this presentation that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by C. Moorhead, EGM Minerals for Newcrest Mining Limited who is a Member of The Australasian Institute of Mining and Metallurgy, and a full-time employee of Newcrest Mining Limited. Mr Moorhead 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 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Moorhead consents to the inclusion in this presentation of the matters based on this information in the form and context in which it appears. For details of Exploration Results, Mineral Resources and Ore Reserves refer to the Newcrest website.

### **Forward Looking Statement**

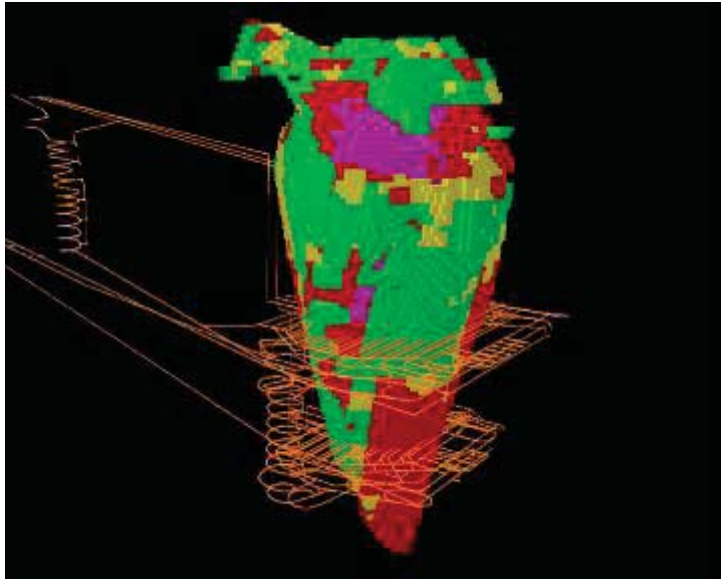
These materials include forward looking statements. Forward looking statements inherently involve subjective judgement and analysis and are subject to significant uncertainties, risks and contingencies, many of which are outside of the control of, and may be unknown to, the company. Actual results and developments may vary materially from those expressed in these materials. The types of uncertainties which are relevant to the company may include, but are not limited to, commodity prices, political uncertainty, changes to the regulatory framework which applies to the business of the company and general economic conditions. Given these uncertainties, readers are cautioned not to place undue reliance on such 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, the company does not in providing this information undertake any obligation to publicly update or revise any of the forward looking statements or any change in events, conditions or circumstances on which any such statement is based.

### **Ore Reserves and Mineral Resources Reporting Requirements**

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. 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 and that Newcrest's Ore Reserve and Mineral Resource estimates comply with the JORC Code.

### **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)

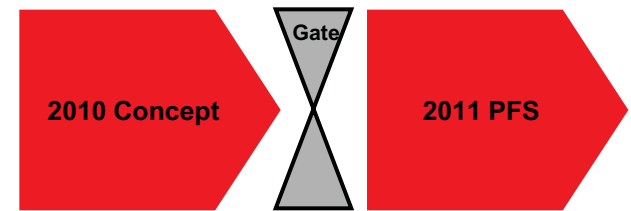
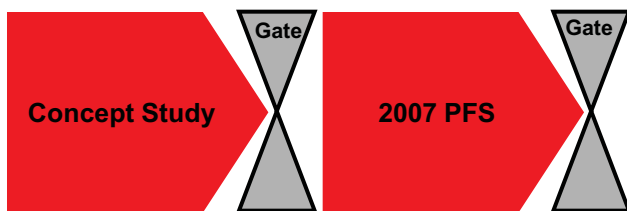


## 2007 Pre-Feasibility Study;

- Technically and financially viable mining operation
- 100Mt block cave on Golpu
- ~US\$0.64/lb cash cost
- US\$1.5B Capital
- 13 year mine life
- Positive NPV but needed improving

## 2007 Recommendations

- Seek capital reduction
- Improve metallurgy
- Prove up additional Resources



**2010 Resource upgrade has now transformed Wafi Golpu into a World Class project**

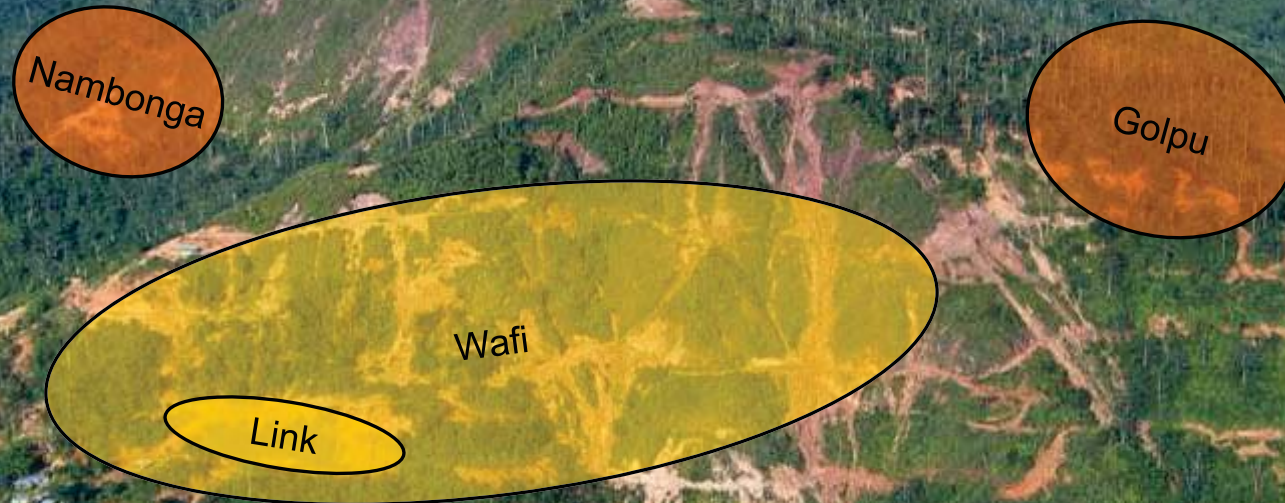




# Geology and Resources

Stuart Hayward

# World Class Resource



Deposit	Tonnes (Mt)	Gold g/t	Copper %	Gold Moz	Copper Kt	Gold equivalent* Moz
Golpu	501	0.54	0.95	8.8	4767	30.9
Nambonga	40	0.79	0.22	1.0	86	1.4
Wafi	96	1.55		4.8		4.8
Wafi Link	7	6.62		1.4		1.4
<b>Total</b>	<b>644</b>	<b>0.77</b>	<b>0.75</b>	<b>16</b>	<b>4853</b>	<b>38.5</b>

<sup>1</sup> Resource figures quoted as 100%. Gold equivalent based on US\$ 950 oz Au, US\$4,412 /t Cu at 100% recovery for both metals.

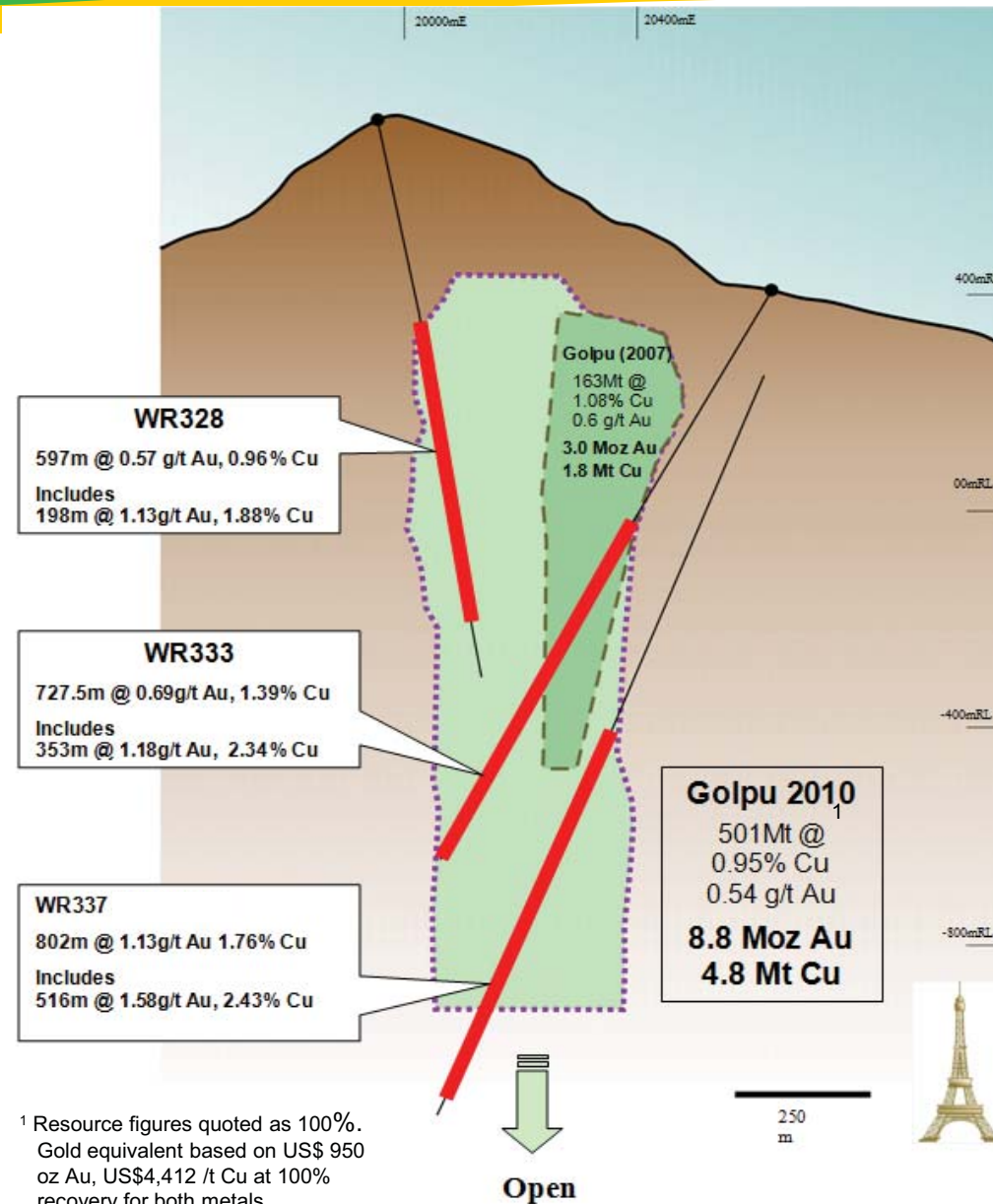
# Significant Resource upgrade and open at depth

## Golpu July 2010 resource upgrade:

- Gold increased from 3.0 to 8.8 Moz
- Copper increased from 1.8 to 4.8 Mt
- Molybdenum increased from 22kt to 55 kt
- On an ounce equivalent basis<sup>1</sup> the Golpu deposit increased to 30.9 Moz Au

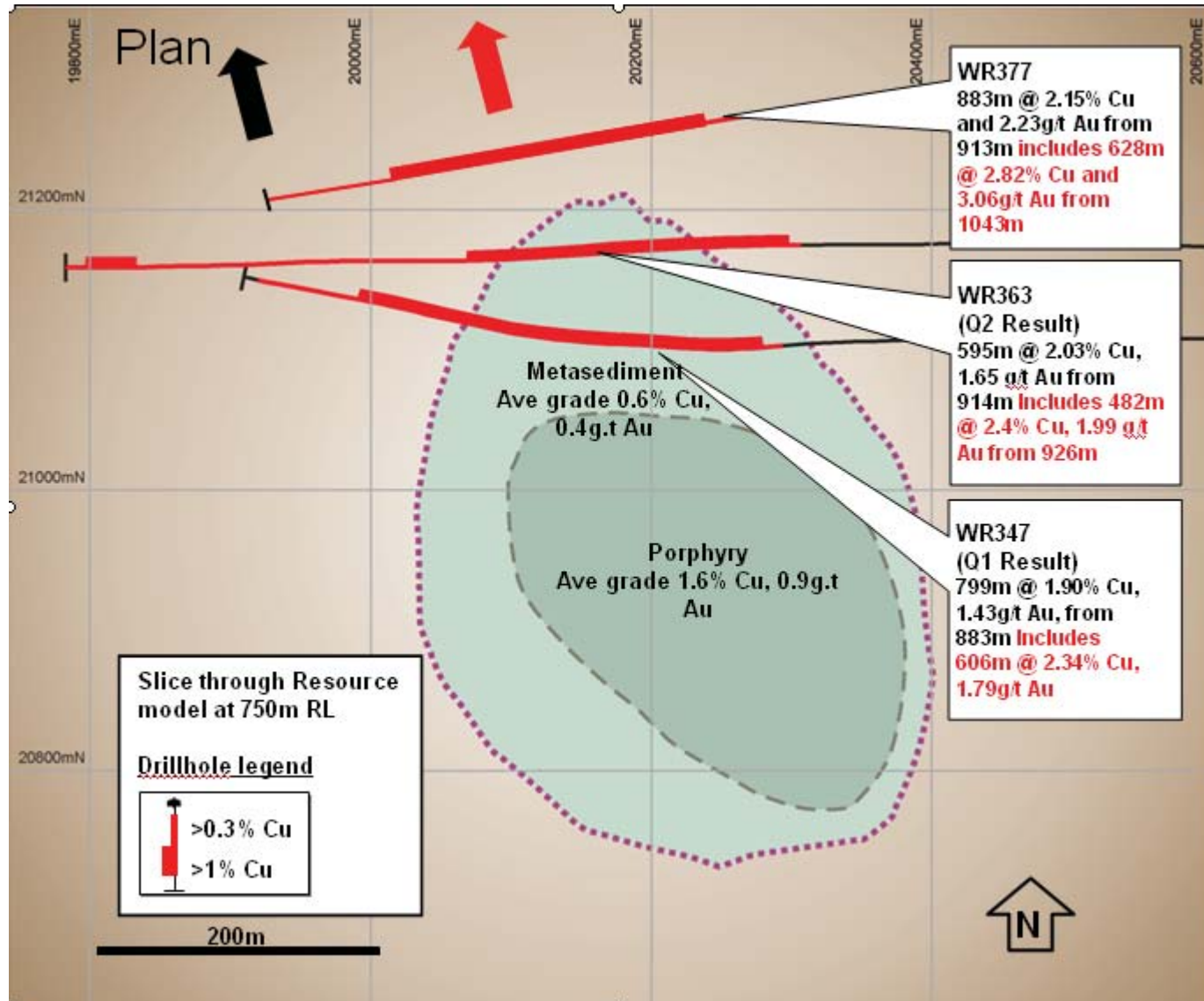
## Drilling continues to grow the resource:

- Remains open to the north with additional new high grade zones of mineralised porphyry intersected in subsequent drilling
- The deposit remains open at depth & to the north





# Open along strike – Recent Success



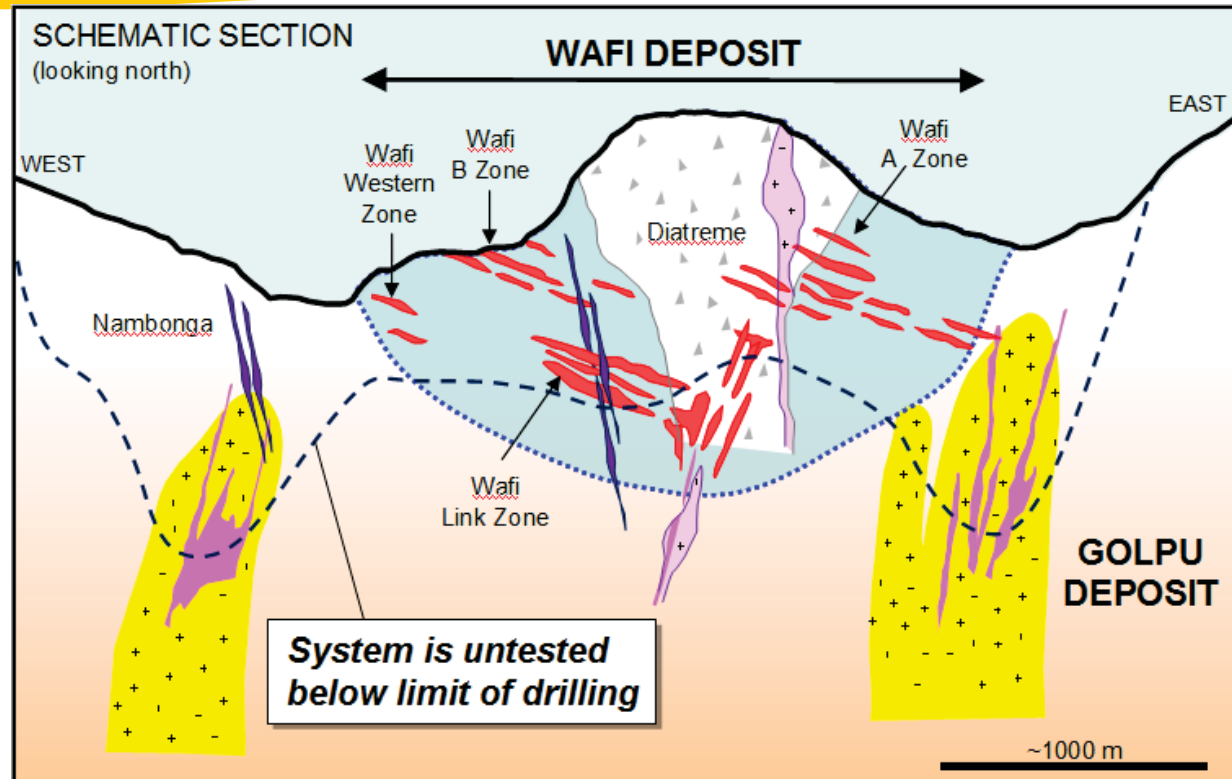
# Resource characteristics

## ■ GOLPU

- large copper gold porphyry – high grade
- Cylindrical shape amenable to block caving
- “Standard” metallurgy

## ■ WAFI

- Structurally controlled epithermal gold deposit.
- High sulphidation system (+oxide)
- Require more complicated metallurgical recovery
- Amenable to open pit and/or bulk underground mining



Wafi

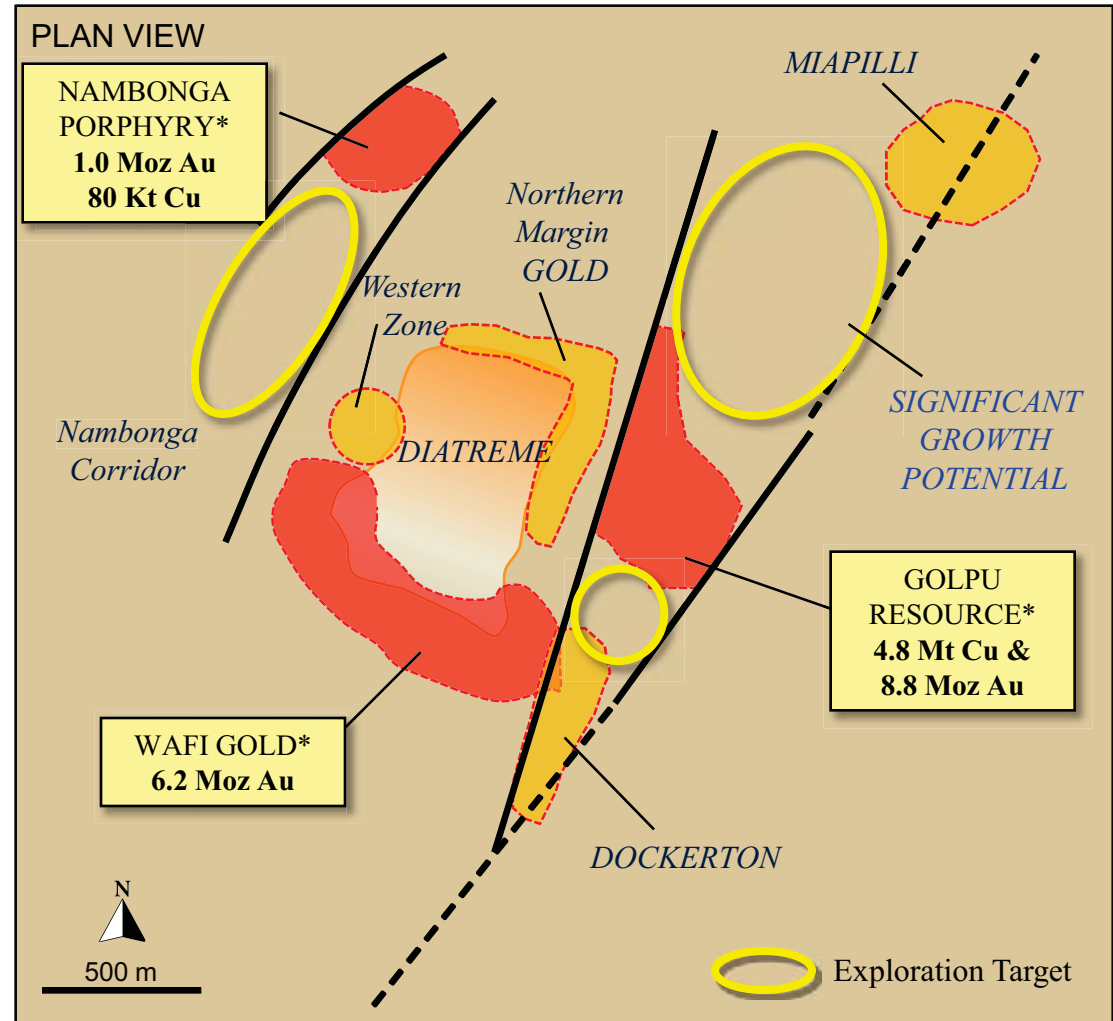
Golpu



\*Gold equivalent is calculated using a gold price of US\$950/oz Au and US\$4 412/t Cu at 100% recovery for both metals

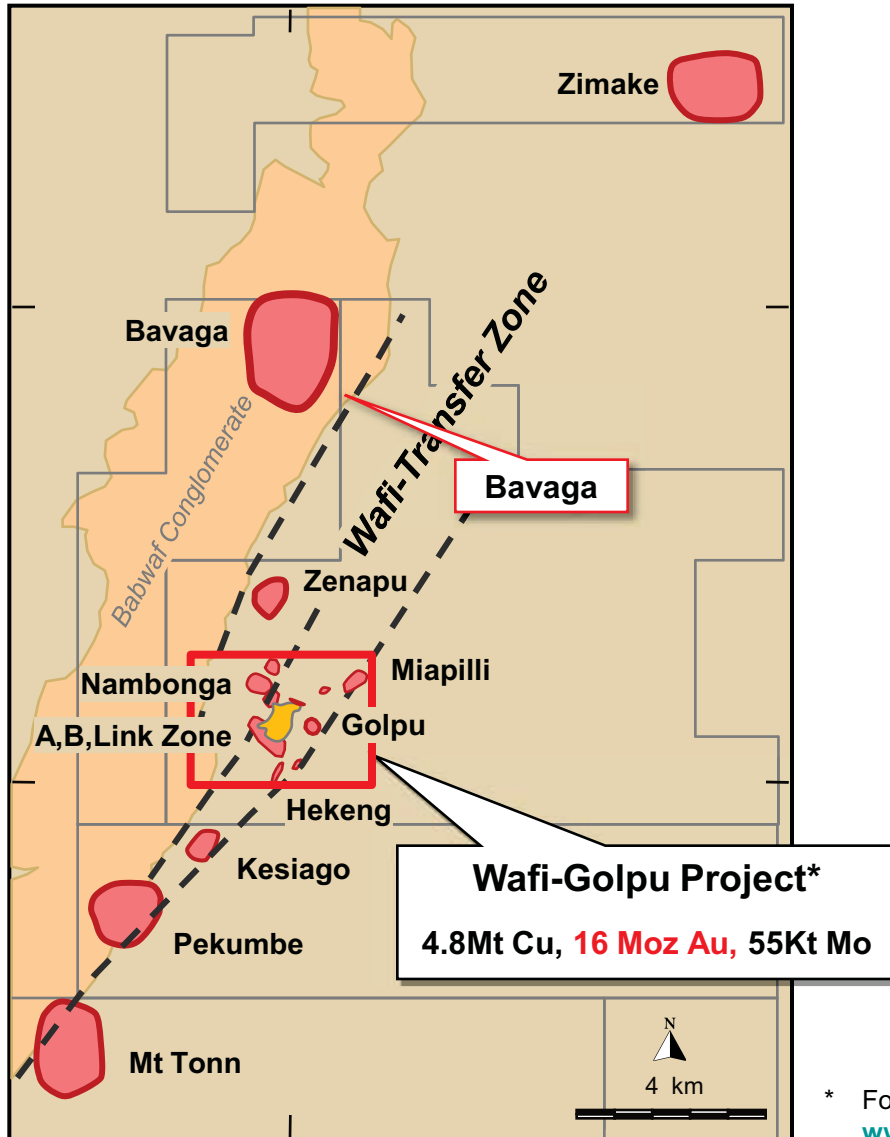
# Exploration Potential

- Major mineralised system with multiple phases
  - **Copper – gold**
  - **Gold**
- The system currently contains resources comprising 644Mt:
  - **16 Moz gold**
  - **4.8 Mt copper**
  - **55 Kt molybdenum**
  - **39 Moz Au Eqv.\***
- Excellent near mine and regional exploration potential
- Exploration target (includes current Resource):
  - 900 – 1400Mt ore
  - 30Moz gold
  - 8Mt Copper
  - (67Moz Au equiv\*)



\*refer Harmony or Newcrest website for July 2010 resource statement. Resource figures quoted as 100%. Gold equivalent based on US\$ 950 oz Au, US\$4,412 /t Cu at 100% recovery for both metals. Molybdenum not included in metal equivalents.

# Wafi Transfer Zone

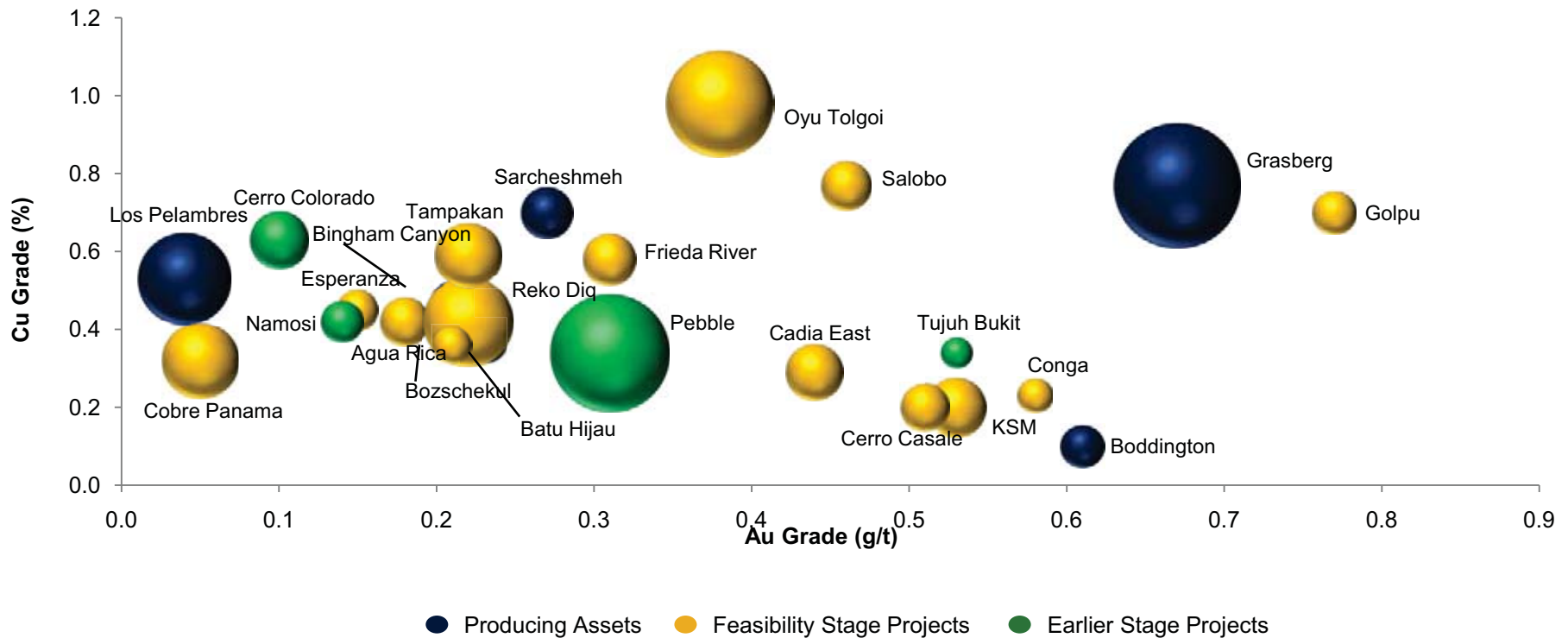


- Excellent prospectivity for major porphyry Cu/Au Systems and related epithermal Au mineralisation
- Regional exploration programs currently focussed at Bavaga, Zenapu, Zimarke and Mt Tonn
- 17km trend
- High tenor, cohesive gold surface geochemical anomalies
- Little to no previous exploration

\* 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)

# Resource Benchmarking Gold and Copper Grade

- Highest gold and one of the highest copper grade porphyry deposits in the world
- Resource size significant and growing

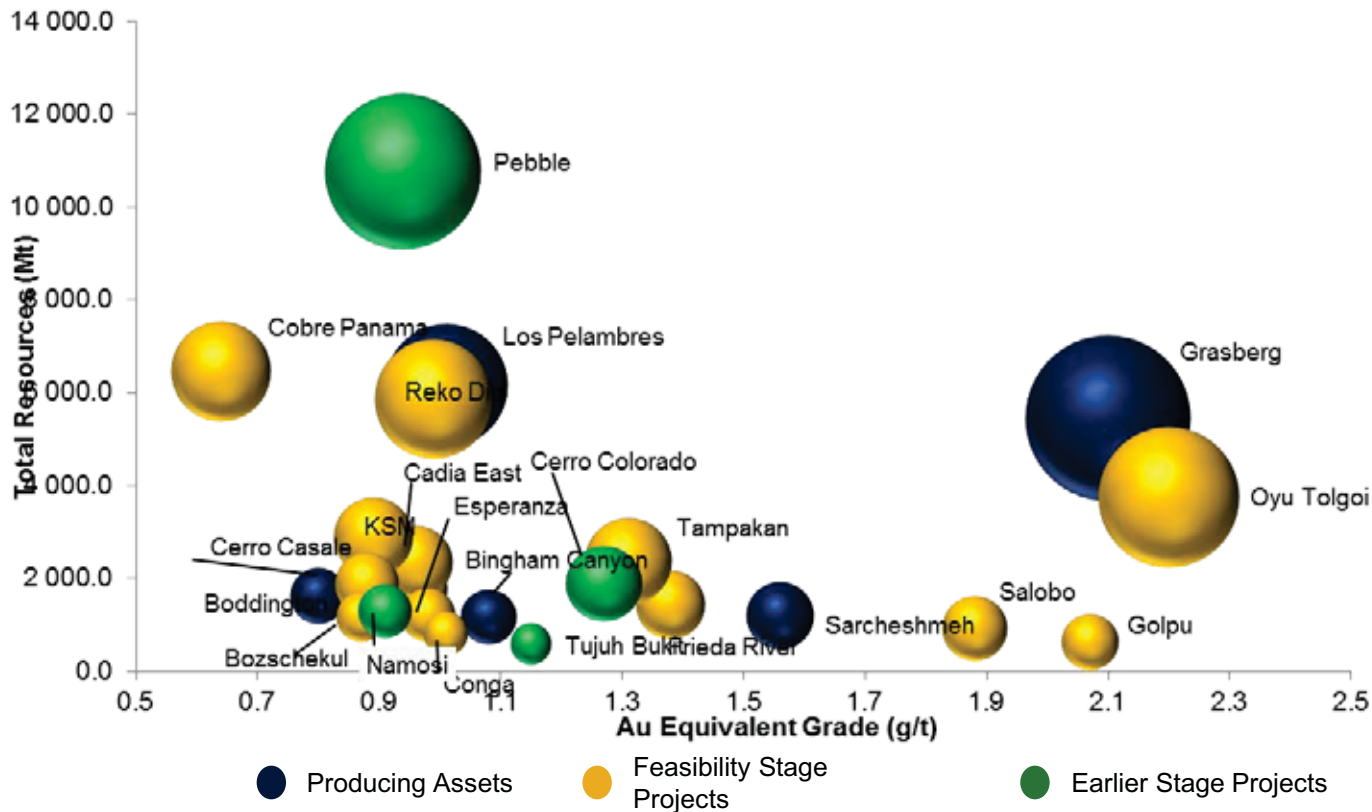


(1) Note: Bubble size represents total reserves and resources equivalent gold

# Resource Benchmarking

## Resource size and gold equivalent grade

- Only Grasberg and Oyu Tolgoi high gold equivalent grades
- Resource size significant and growing



(1) Note: Bubble size represents total reserves and resources equivalent gold

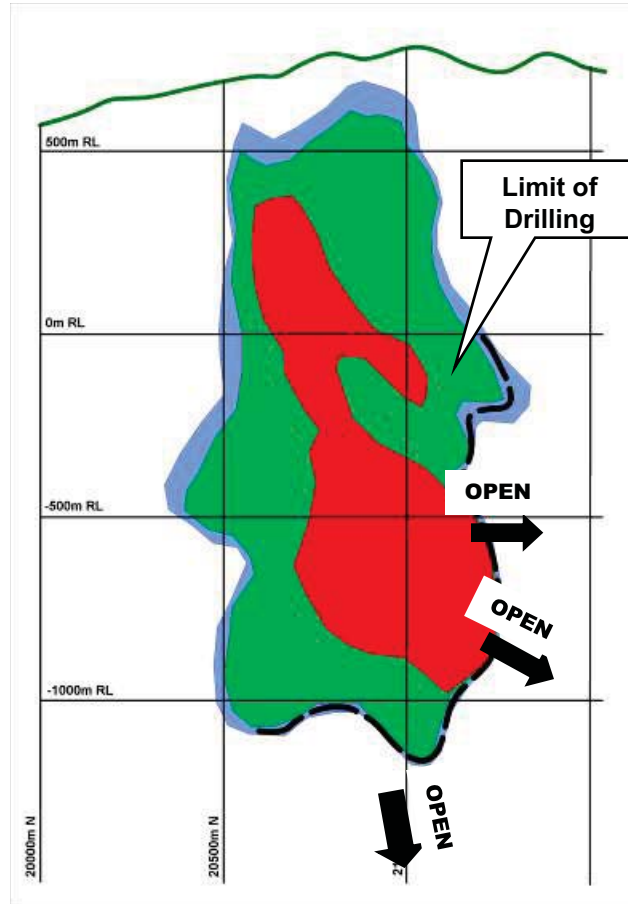
# Golpu – Grasberg Comparison

Golpu has similar characteristics as the Grasberg Resource

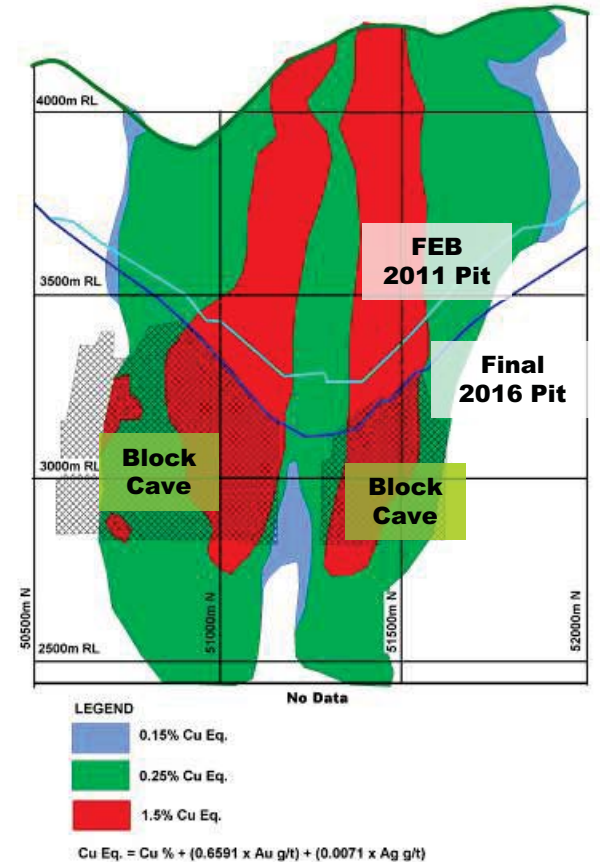
Golpu is approaching Grasberg size in long section (shown here). Grasberg has greater thickness

Golpu highest grades are on the northernmost portion of the model which is completely open

## Golpu



## Grasberg



500m



# Operations and Studies

Charles De Villiers



## ■ Drilling

- Currently 5 drill rigs operations
- Will increase rigs as study progress, targeting:
  - Resource infill & expansion
  - geotechnical & metallurgical properties
  - hard rock
  - (Exploration department testing for limestone sources)

## ■ Road Construction

- Portal access road commenced

## ■ Camp and Health Services

- 3 camps to accommodate workers at main project locations
- Project health services are extended to local communities

## ■ Pre Feasibility

- Field work for environmental, social impact and technical studies



# Environmental Management

- Environmental consideration will drive many development decisions
- Currently developing Environmental Management Plan
- Gathering environmental baseline data
- Water quality monitoring
- Flora and fauna surveys
- Establishing nurseries for rehabilitation



# Supporting the Community

Support based on stakeholder consultation and feedback on priorities with sustainable outcomes:

- Health
  - Clinical services
  - Construction of new aid post at Babuaf
- Educational
  - School fee assistance
  - Maintenance of schools
- Water Supplies
  - Constructing water supplies in partnership with LLGs & NGOs



# Establishing Community Support

- Social Impact Assessment
- Cultural Sensitivity Training for JV Employees
- Project Awareness and Engagement
- Consultation and Information
- Capacity Building for Landowner Groups
- Training, Preparation for Employment and Business Opportunities



# Supportive Government



- Mining Minister very supportive of project
- Land Titles Commission progressing
- Open door to MRA and DEC

- PFS will determine scale of operation, current Resource indicates;
  - 600Mt – 800Mt mining inventory
  - 20 – 30Mtpa throughput
  - 300 – 700oz gold/yr
  - 200 – 320kt copper/yr
  - Lowest quartile cash cost
  - Multiple mining and infrastructure options
- Potential to increase size of operation with further Resource upgrades

## Golpu

- Robust Resource
- Block Cave or Panel cave
- Testing optimal level placement, NPV optimisation

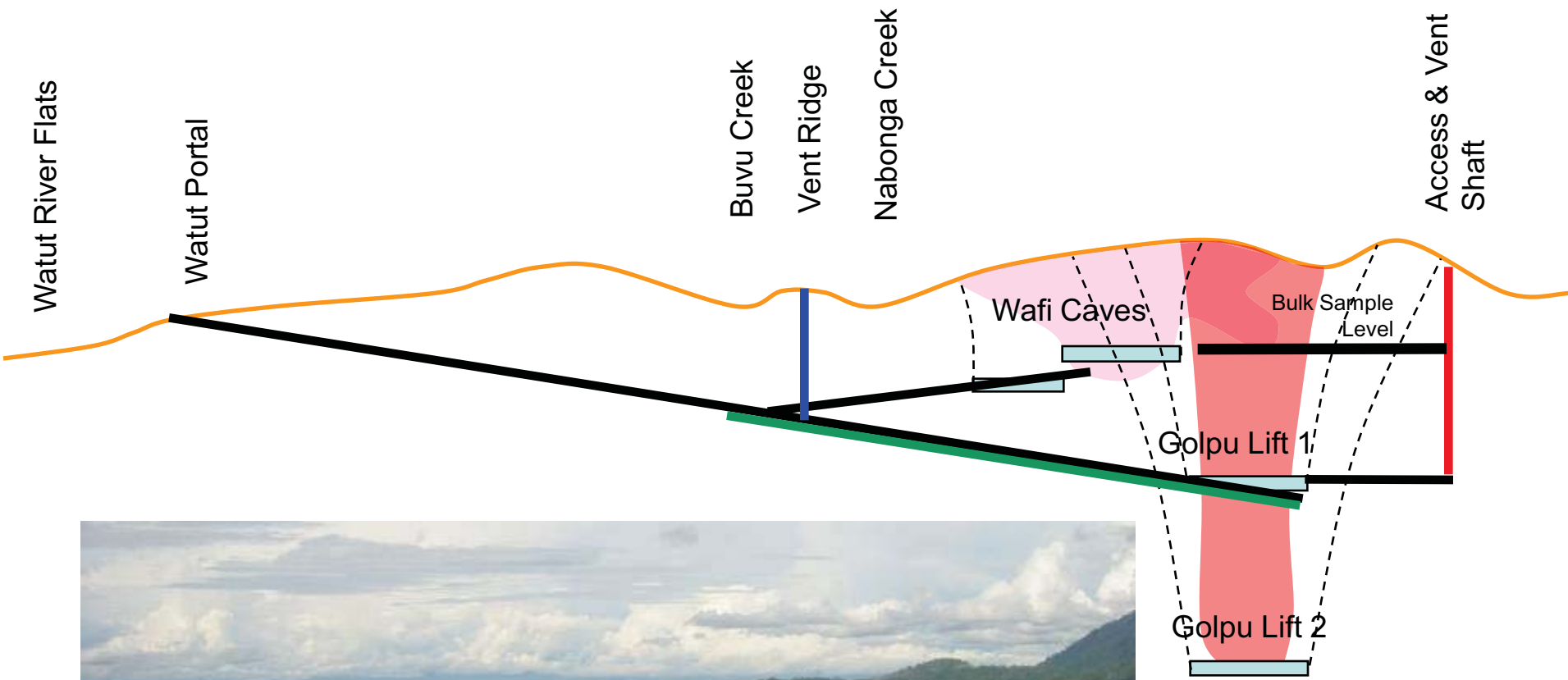
## Wafi

- Open pit and Underground options
- Metallurgy difficult
  - POX
  - Pre – treatment oxidation

## Nambonga and other prospects

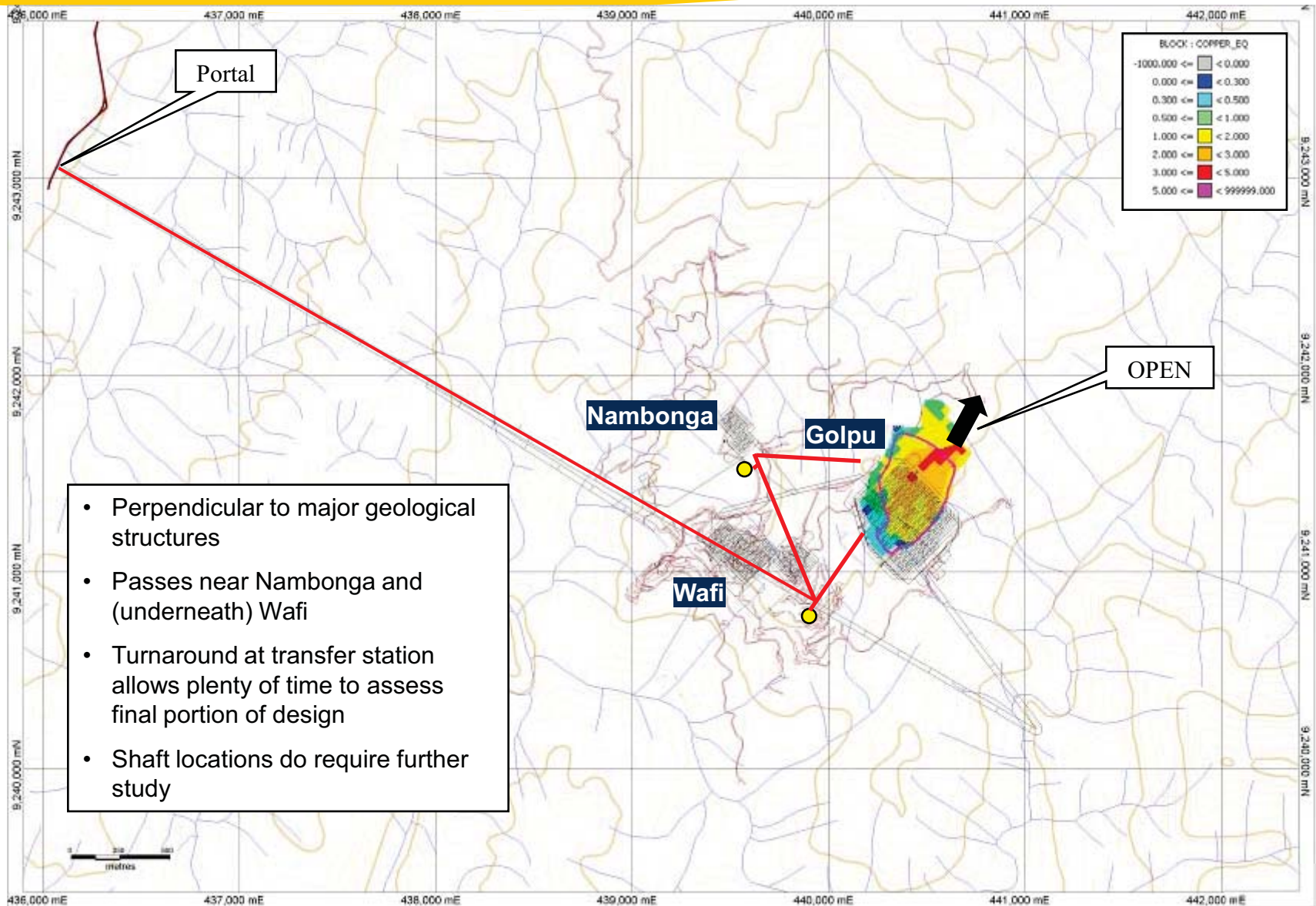
- Requires further exploration but infrastructure to incorporate options

# Early Access

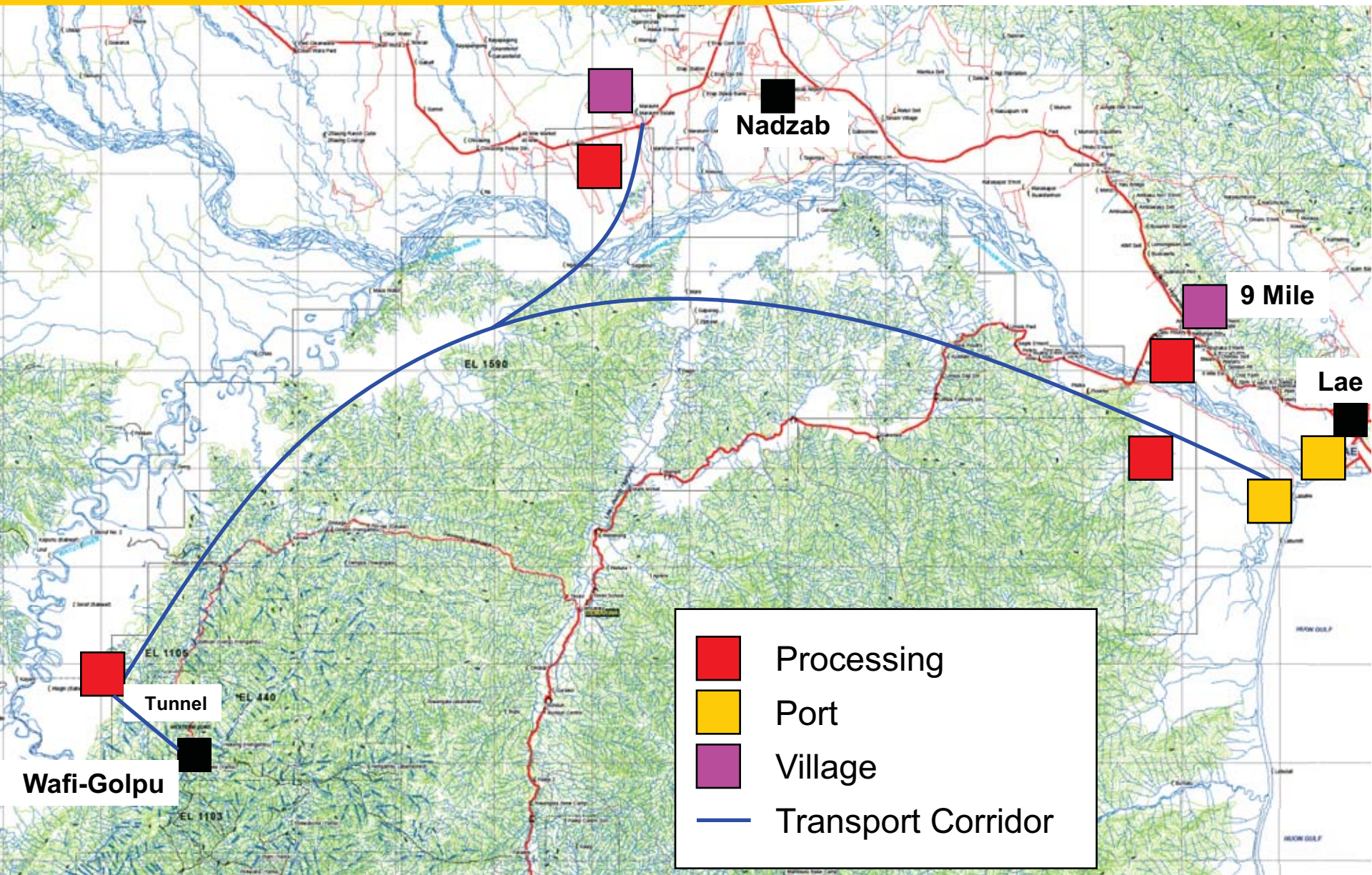




# Optimal Decline Path allows flexibility for Growth



# Infrastructure Options



# Summary – Wafi Golpu

## A world class project

- Quality resource – tonnes, grade, morphology, metallurgy (Golpu)
- Targeting lowest quartile C1 cash costs
- Close proximity to good infrastructure
- Established in Morobe with an experienced team
  - Already have built a mine at Hidden Valley
- Stable regulatory environment and supportive government
- Good relationship with land owners
- Significant upside potential with Wafi and Nambonga and Transfer structure exploration

# Tomorrow's Tour

1. Drive to 9 Mile

2. Chopper to Wafi

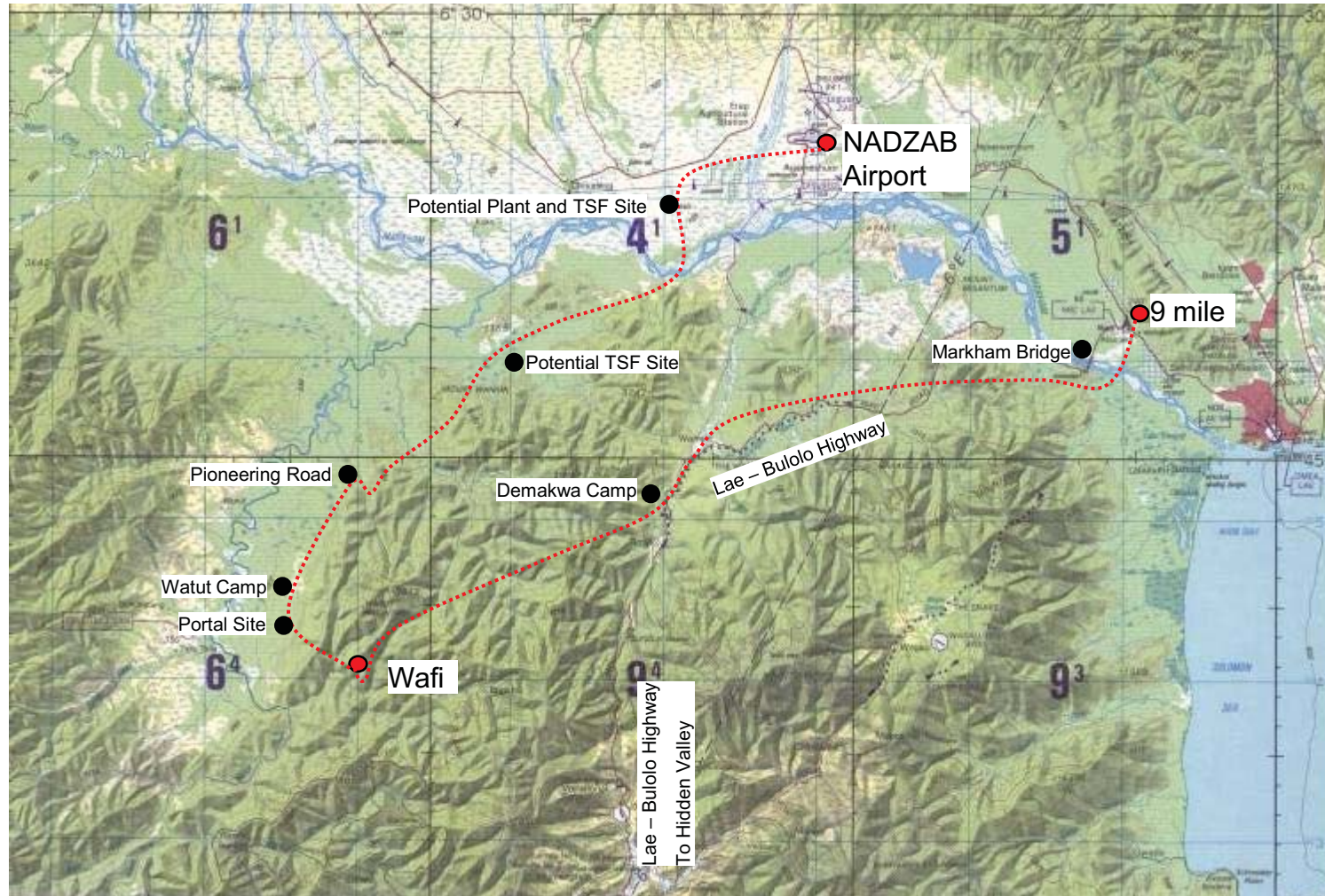
- Markham Bridge
- Lae Bulolo Hwy
- Demarkwa
- Access track
- Circuit Wafi

3. Wafi Site Tour

- Camp / General
- Drill core
- Drill site

4. Chopper to NADZAB

- Decline Route
- Portal site
- Camp site
- Pioneering road
- TSF options
- Plant options
- NADZAB





# Em Tasol