

**MIL**

**RESOURCES**

**L I M I T E D**

**Papua New Guinea Mining  
and Petroleum Investment  
Conference 2010**

**8<sup>th</sup> December 2010**

# MIL RESOURCES LTD

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*The information contained in this document that relates to Exploration Results or Mineral Resources or Ore Reserves is based on information compiled by John Haggman who is a Member of the Australian Institute of Geoscientists. Mr. Haggman is a director of MIL Resources Ltd. Mr. Haggman has sufficient experience which is relevant to the style of mineral 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 Mineral Resources and Ore Reserves". Mr Haggman consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.*

# Capital Structure

## Issued Capital

- **339,879,819 Fully Paid Ordinary shares**
- **61,328,928 Listed Options**
- **Market Cap : \$12M**

# MIL RESOURCES

## EXPLORATION AND MINING ASSETS

- Amazon Bay Ironsands Project (PNG) - 42% interest in Titan Mines Limited (earning 90%)
- Titan Metals Limited (PNG) - 100% - 11 prospective gold and copper EL's and ELA's in eastern PNG.
- Myrtle Springs Magnesite Mine (S.A)– currently in production
- MIL – Dow Magnesium Smelter Technology





Manus

Mussau

Legusulum

LIHIR

Tanga

Palabong

NEW BRITAIN

North New Britain

South New Britain

BOUGAINVILLE

PAPUA NEW GUINEA

PAPUA NEW GUINEA

Port Moresby

Golden Peak

Domara

Amazon Bay

Poi

200 km

MIL RESOURCES LIMITED

PROJECT LOCATION

# MIL RESOURCES SNAPSHOT

- **AMAZON BAY**

- Exploration target of 3 – 4 billion tonnes of vanadium rich magnetite ironsands potentially containing +200Mt of magnetite concentrate;
- Preliminary metallurgy produced concentrate grading 1.02%  $V_2O_5$ , 52.3% Fe, 17.3%  $TiO_2$ , 3.5%  $SiO_2$ , 1.8%  $Al_2O_3$

- **POI**

- Large geophysical anomaly striking over 11km long and 1.5km wide with coincident gold geochemistry over 9 prospects
- 20m @7.17 g/t Au, 0.5% Cu in trenching at Aladdins
- Characteristics of large porphyry gold copper systems found in island arc settings such as PNG

# AMAZON BAY

## Previous Work

- Previous work in the 1970's by AOG Minerals, reported a Non JORC compliant resource of iron sands of 445Mt of +10% magnetics to 9m depth from 785 holes totaling 1,940m
- Vanadium rich titanomagnetite could be extracted by screening, gravity and magnetic separation
- Reduction and smelting by CSIRO reduced titanomagnetite concentrate with carbon monoxide at 800° C then melted the DRI at 1570° C to produce;
  - Metallic Iron: 96.2% Fe ; 1.7% V<sub>2</sub>O<sub>5</sub> ; 2.8% C
  - Titaniferous Slag: 32% TiO<sub>2</sub>
- CSIRO recommended the design of a large scale industrial process to treat the Amazon Bay iron sands

# MIL Work Conducted to Date:

- **Scope out size of resource**
  - **Geophysical Survey**
    - Magnetics
    - Radiometrics
  - **Reconnaissance & Sampling**
- **Metallurgy**
  - **Auger drilling**
  - **Bulk sampling**
  - **Testwork**
    - Metcon Laboratories
    - Titanatek
    - Spectrolabs
    - IMO
  - **Mineralogy**
- **Engineering Studies**
  - Promet Engineers
  - Downer EDI
- **Marketing**
  - CRU Strategies

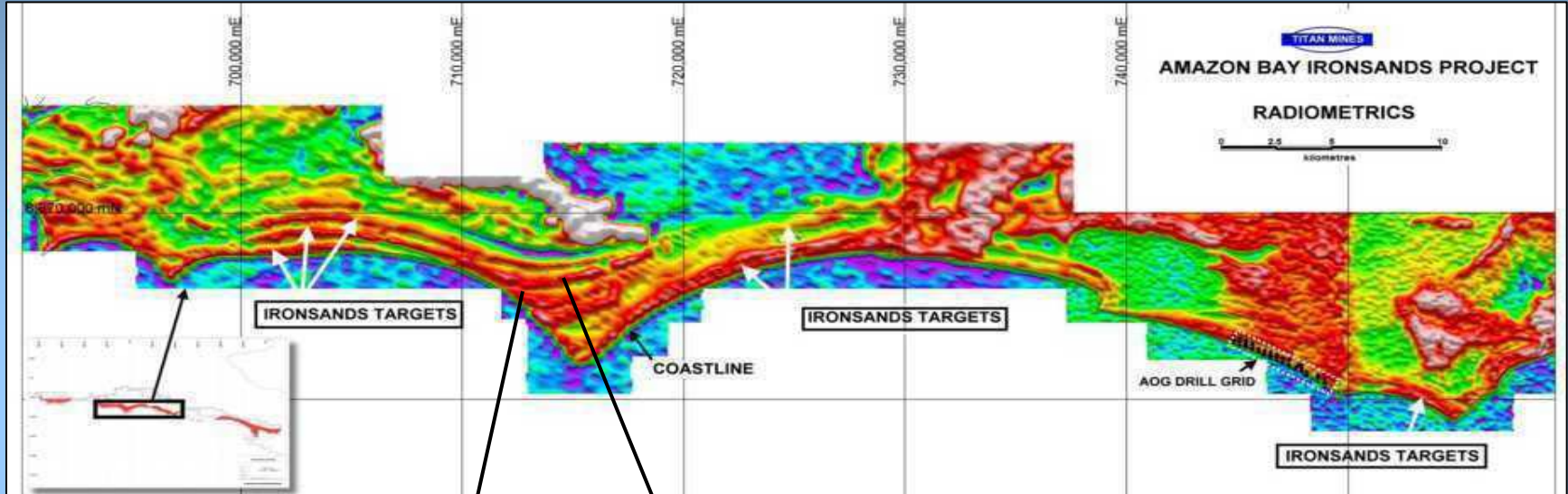


*Metallurgical testwork - Titanatek*

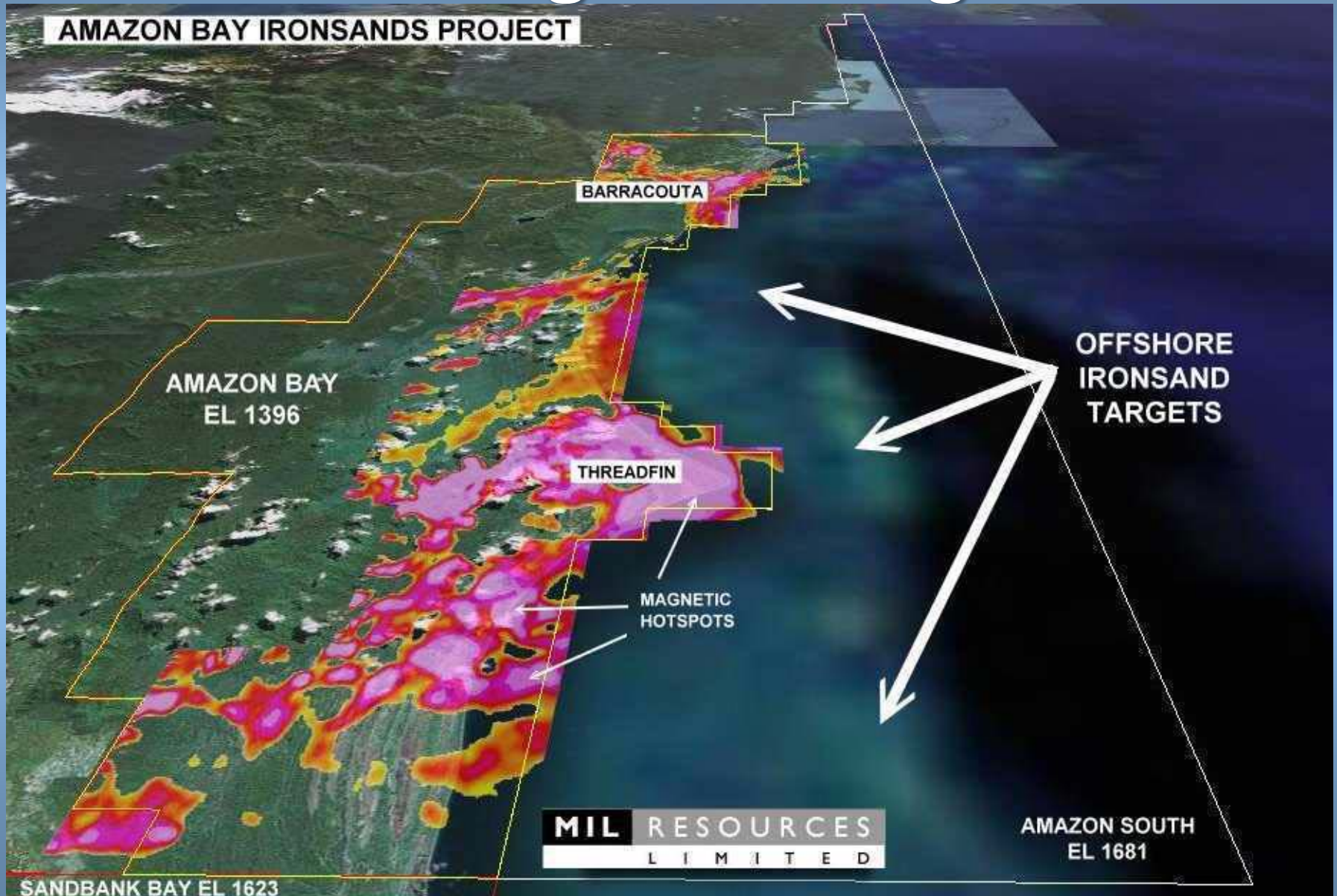


# Radiometrics

Highlights strandlines along 70km of coast



# Aeromagnetic Targets



# Metallurgical Testwork

- Dry and wet magnetic separation trials carried out by IMO achieved concentrate grades of:

- Fe	52.3%
- V <sub>2</sub> O <sub>5</sub>	1.02%
- TiO <sub>2</sub>	17%
- SiO <sub>2</sub>	3.5%
- Al <sub>2</sub> O <sub>3</sub>	1.8%





# Marketing

- Market study by CRU Strategies
- Concluded that the potential size of the market in China into which the Amazon Bay concentrate product could be supplied is;

**17 million tonnes per annum**



# Scoping Study

- Scoping Study by Downer EDI – Mineral Technologies
- Concluded that at product delivery rate of 2.5 Mt/year of titanomagnetite concentrate:
  - Capital cost – most likely \$415m
  - Operating Cost – most likely \$30 per tonne
  - Annual operating and capex servicing costs – around \$55 per tonne



# Processing Concepts

- 2 x floating bucket wheel dredges at 1300 tph each
- Process flow includes:
  - wet concentrator plant
  - magnetic separation by gravity and electrostatic concentration
  - milling flotation and product handling circuits
- Product is stockpiled near wharf designed for handysize ships



*Typical iron sands pilot plant*

# Millport Harbour



# TITAN METALS



**TITAN METALS LIMITED**  
**Gold, copper, molybdenum & nickel**



Manus

Mussau

Legusulum

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Port Moresby

Golden Peak

Domara

Poi

200 km

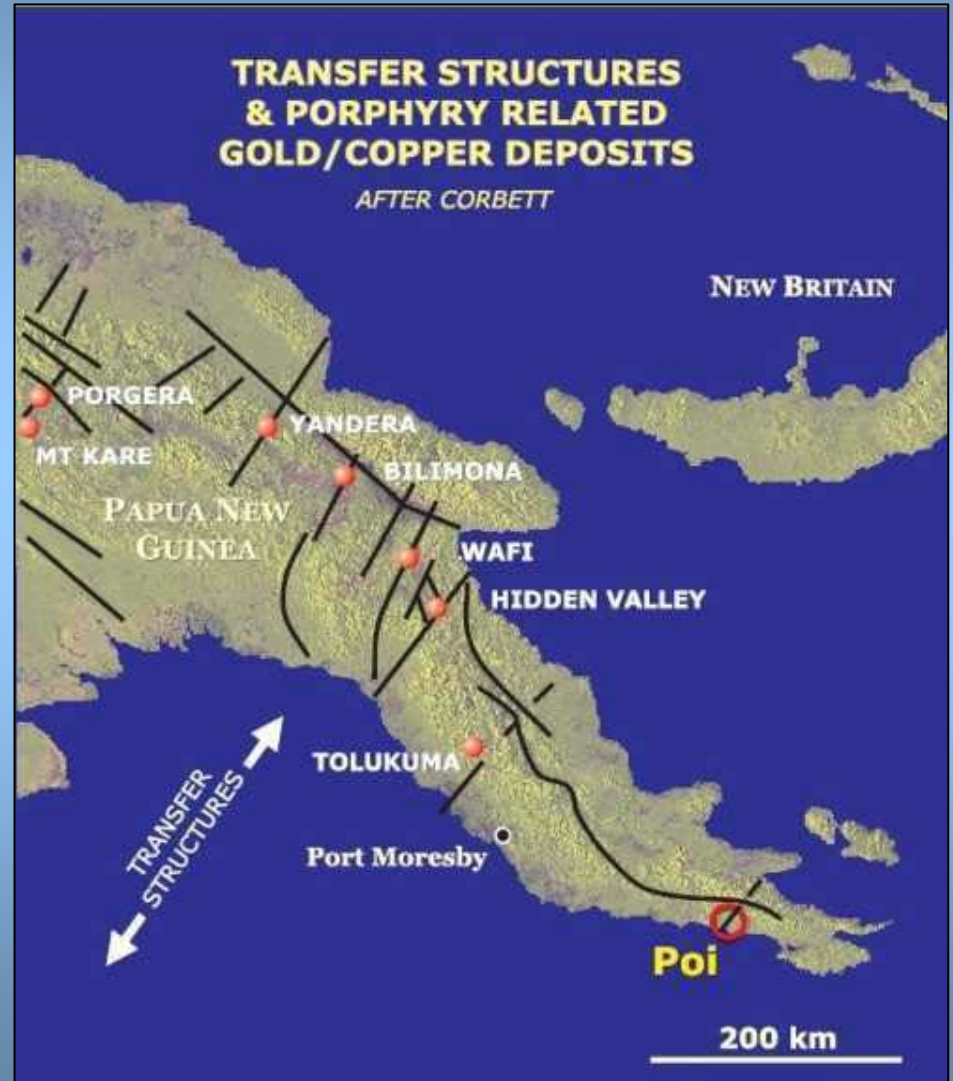


PROJECT LOCATION



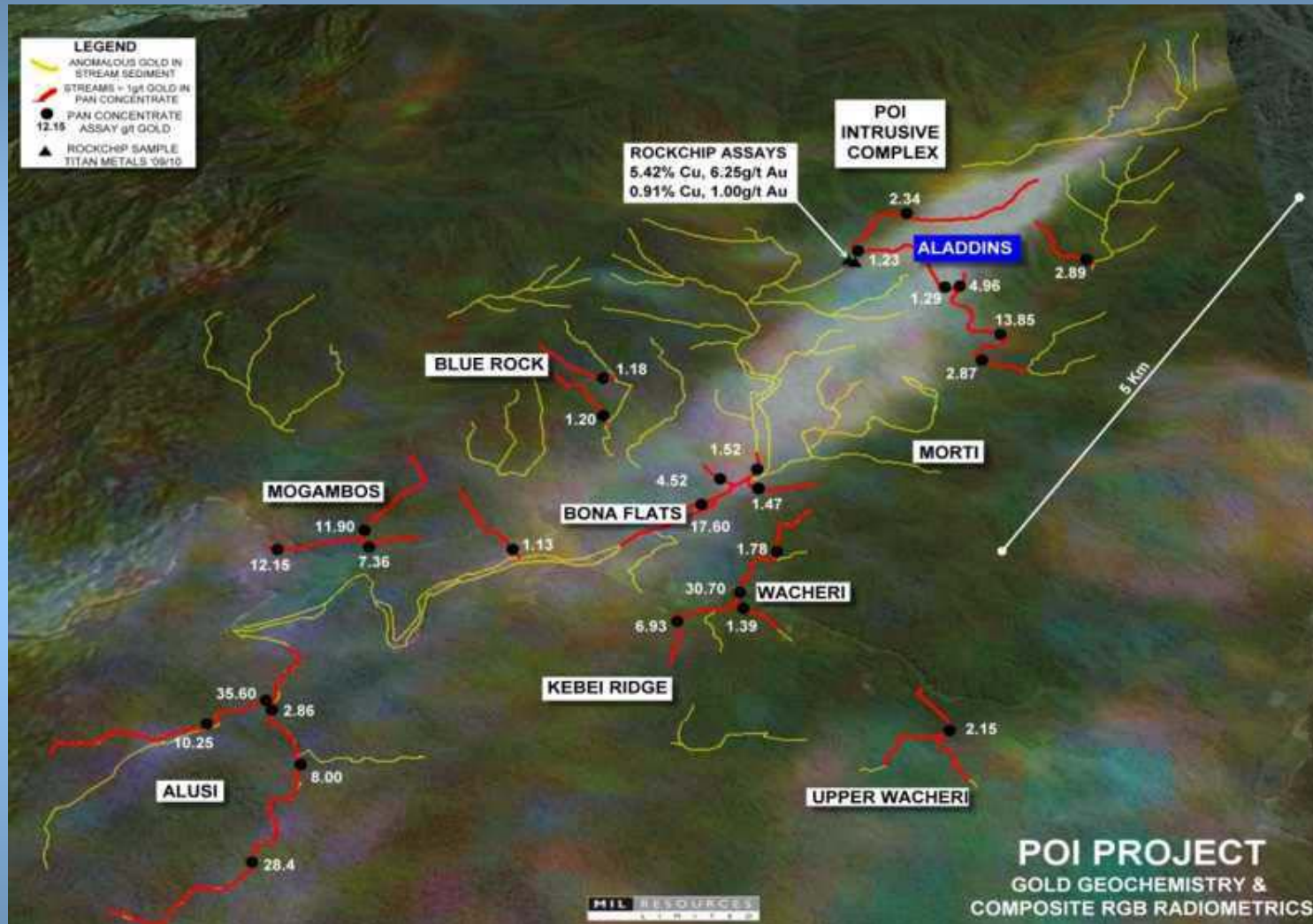
# POI

- Located 15km NE Amazon Bay and 10km Nth of Millport Harbour
- Porphyry gold-copper
- Radiometric anomaly 11km x 1.5km open along strike
- Coincident with cross-cutting radiometric structures and anomalous geochemistry
- Prominent NE – SW transfer structure
- 9 gold zones defined by stream geochemistry over 27 km<sup>2</sup>
- Visible gold in streams
- Working to identify drill targets





# POI



Airborne radiometrics and gold anomaly in stream sediments

# POI – Gold Geochemistry

## MOGAMBOS

- 12.2 g/t
- 11.9 g/t

## BONA FLATS

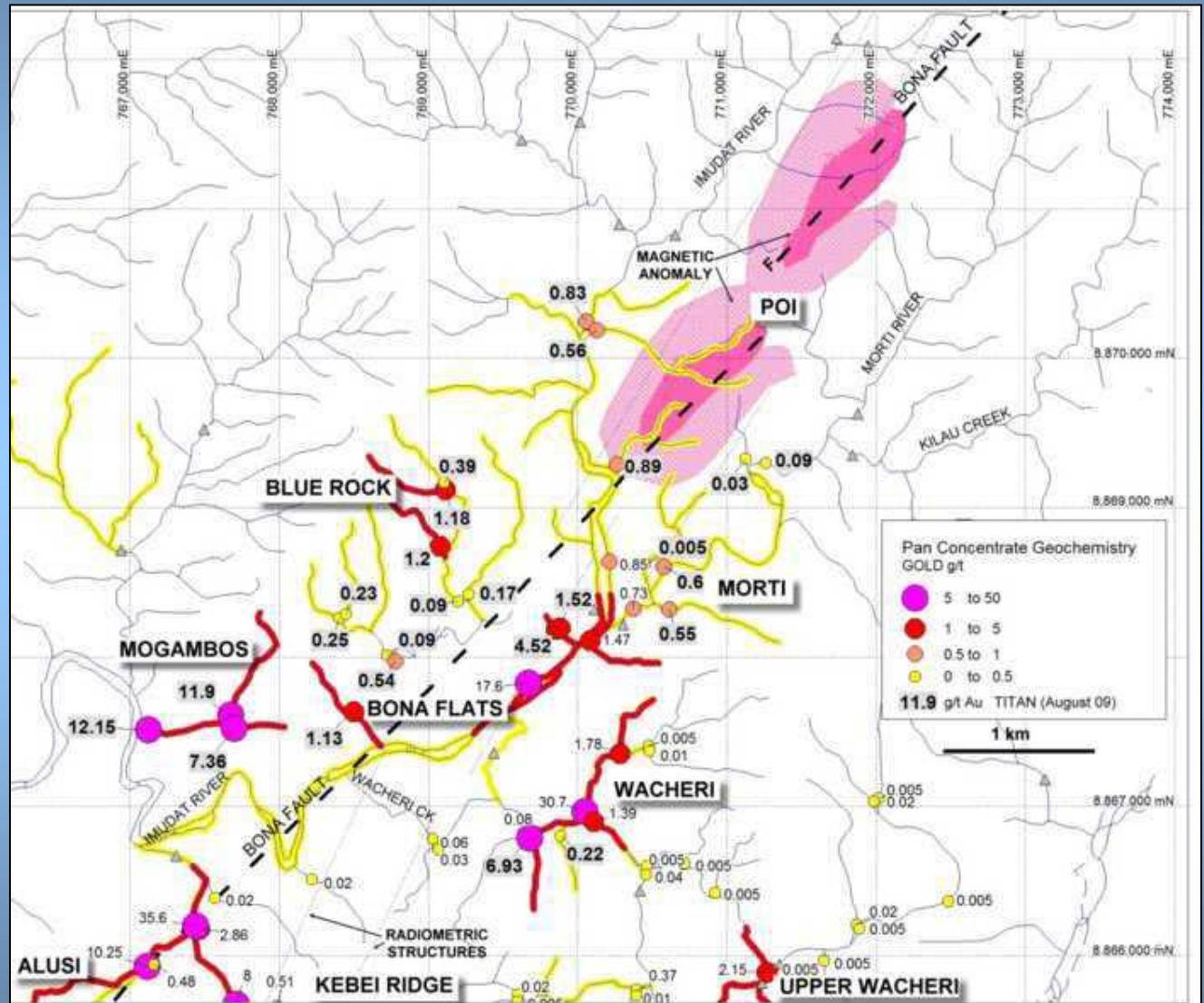
- 17.6 g/t

## WACHERI

- 30.7 g/t

## ALUSI

- 35.6 g/t
- 28.4 g/t
- 10.3 g/t



Pan concentrate gold assay results

# POI

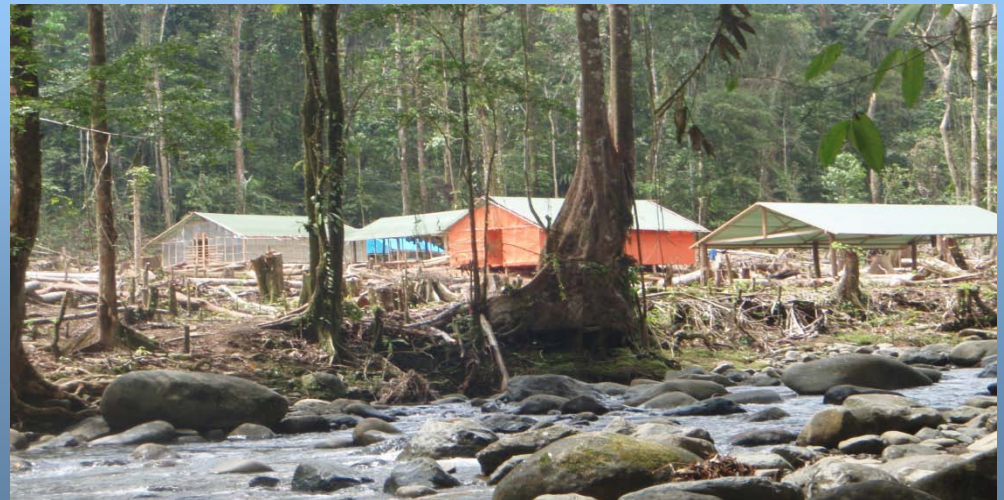
## Channel sampling

- 20m @ 7.17 g/t Au and 0.50% Cu including 2m @ 41.5 g/t Au and 1.7% Cu

## Soil sampling

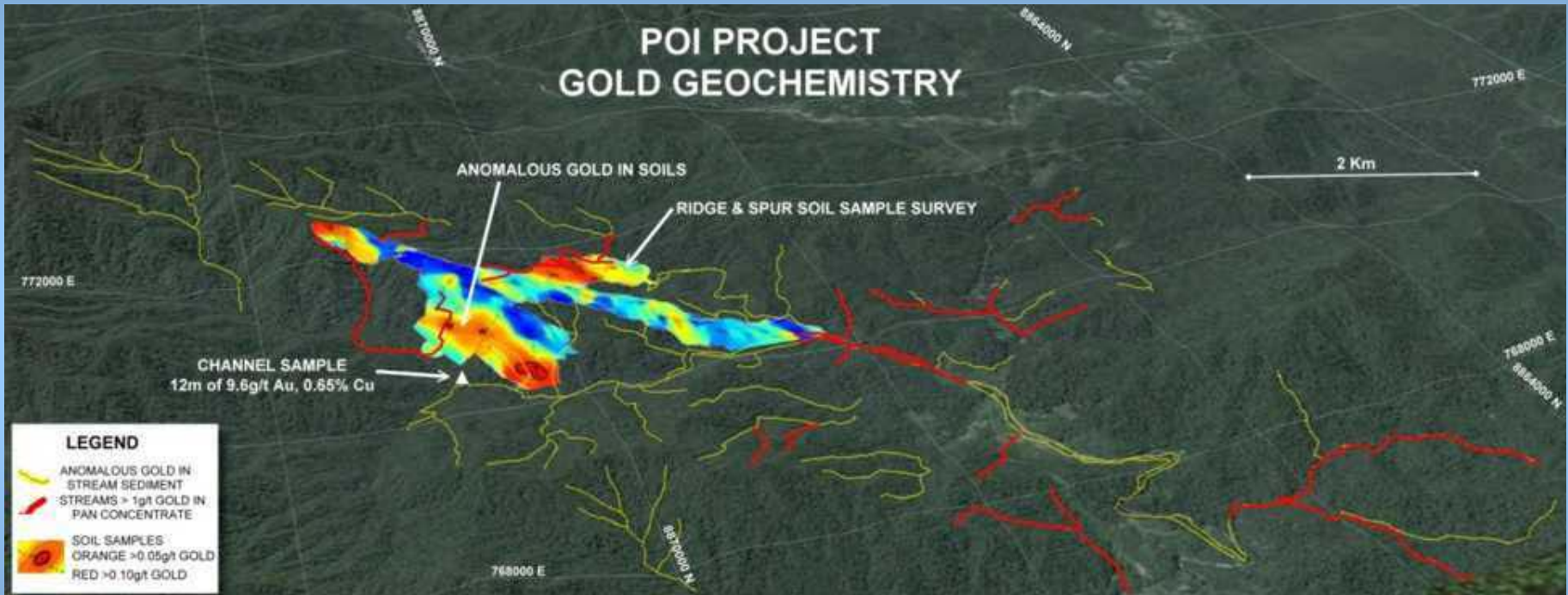
- 300m @ 0.24 g/t Au incl. 125m @ 0.55 g/t Au
- 800m @ 0.05 g/t Au including 100m @ 0.21 g/t Au,
- 100m @ 0.11 g/t Au.
- 525m @ 0.03 g/t Au incl. 50m @ 0.18 g/t Au

Poi exploration camp

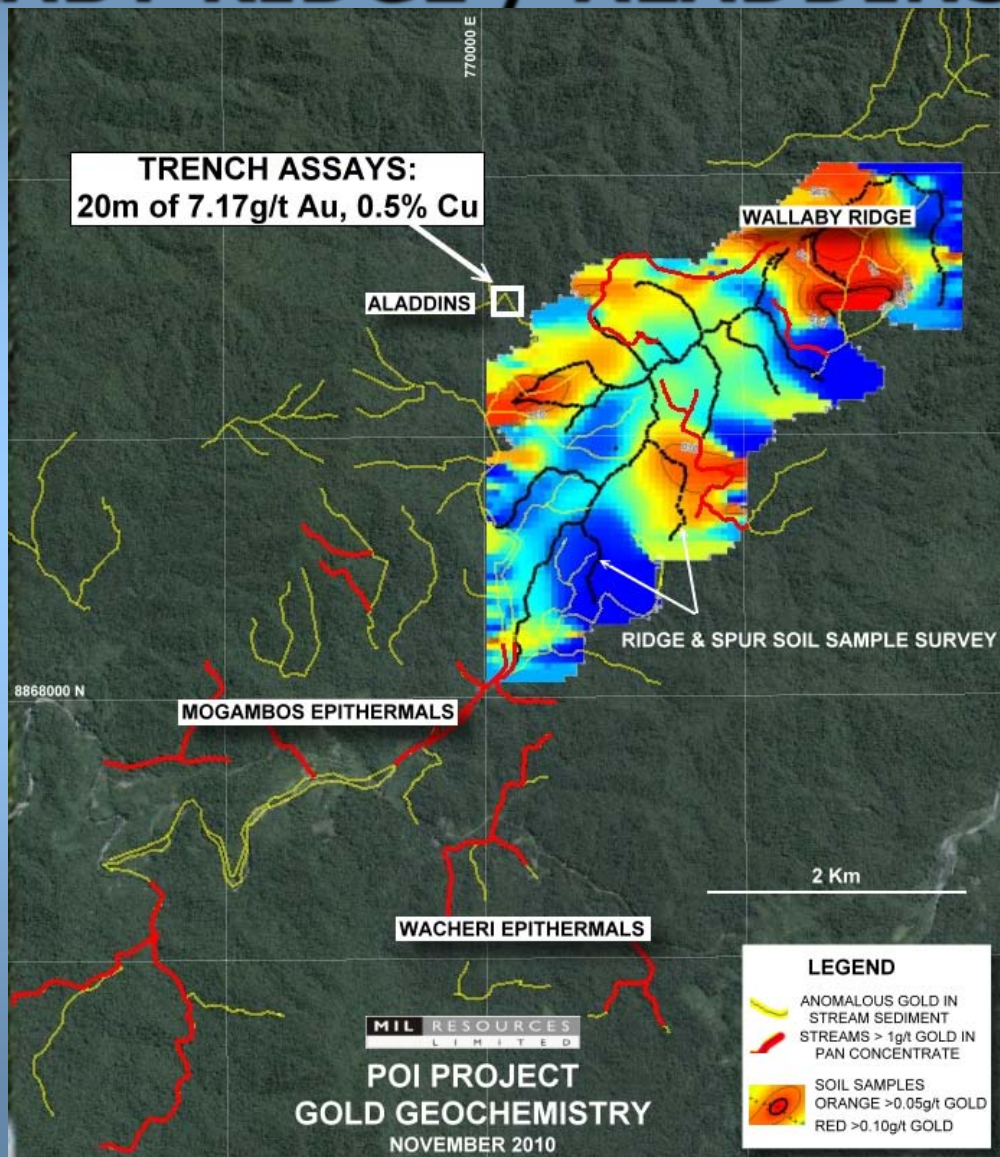




# POI GOLD GEOCHEMISTRY

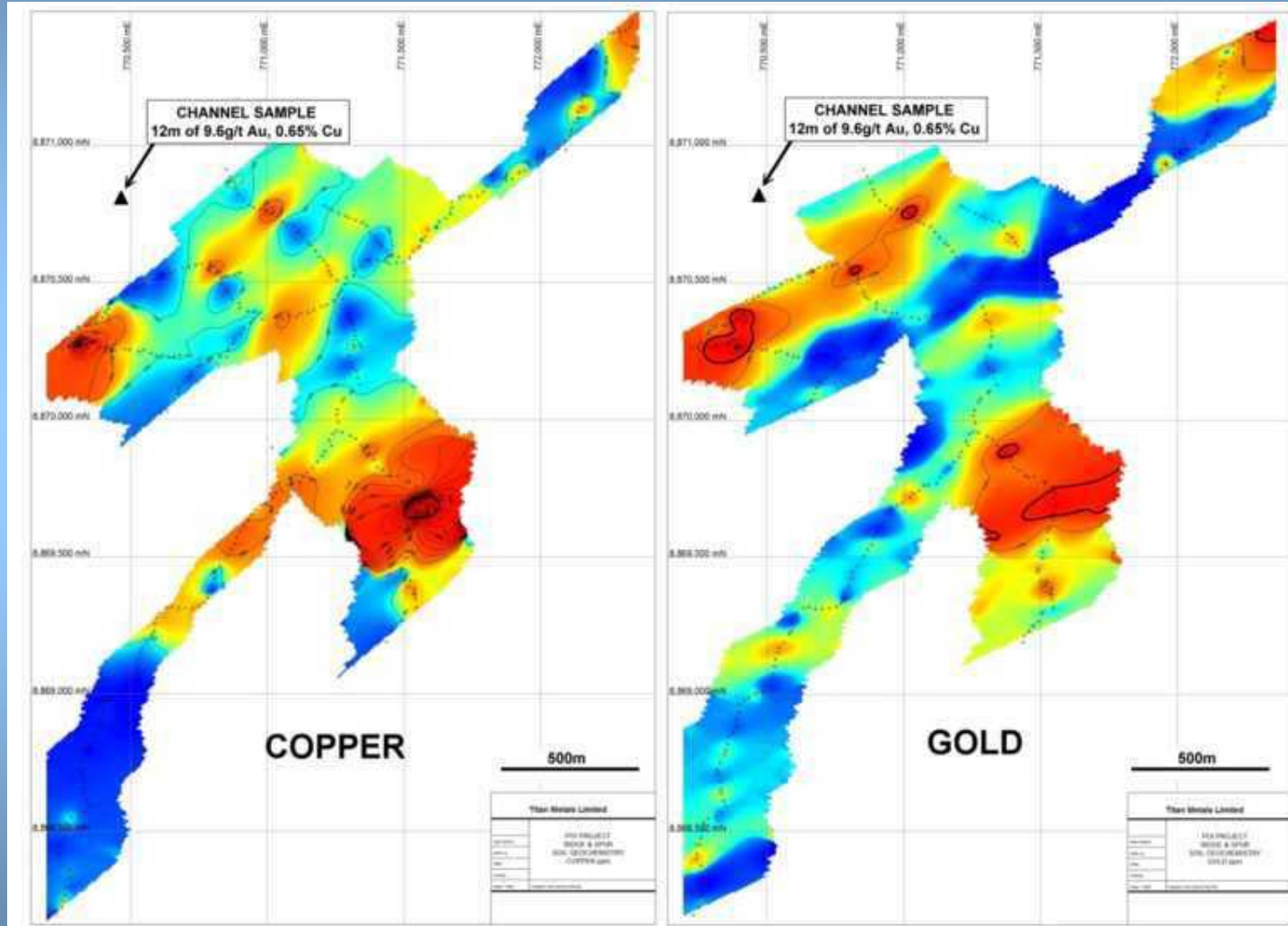


# POI WALLABY RIDGE / ALADDINS TRENCH





# POI COPPER - GOLD GEOCHEMISTRY



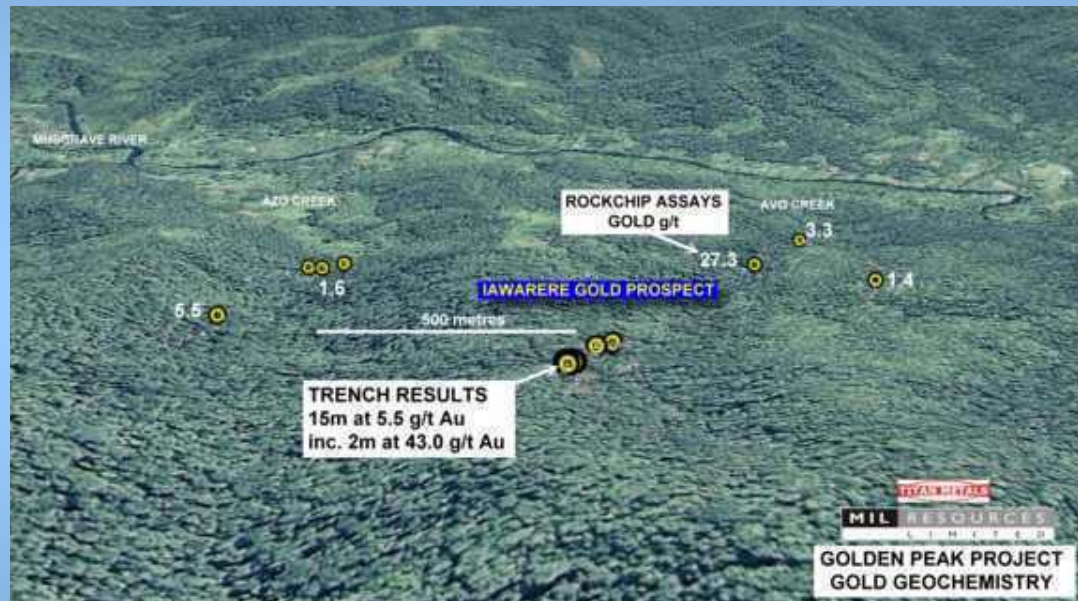
# POI

## Epithermal Jasperoidal Silica



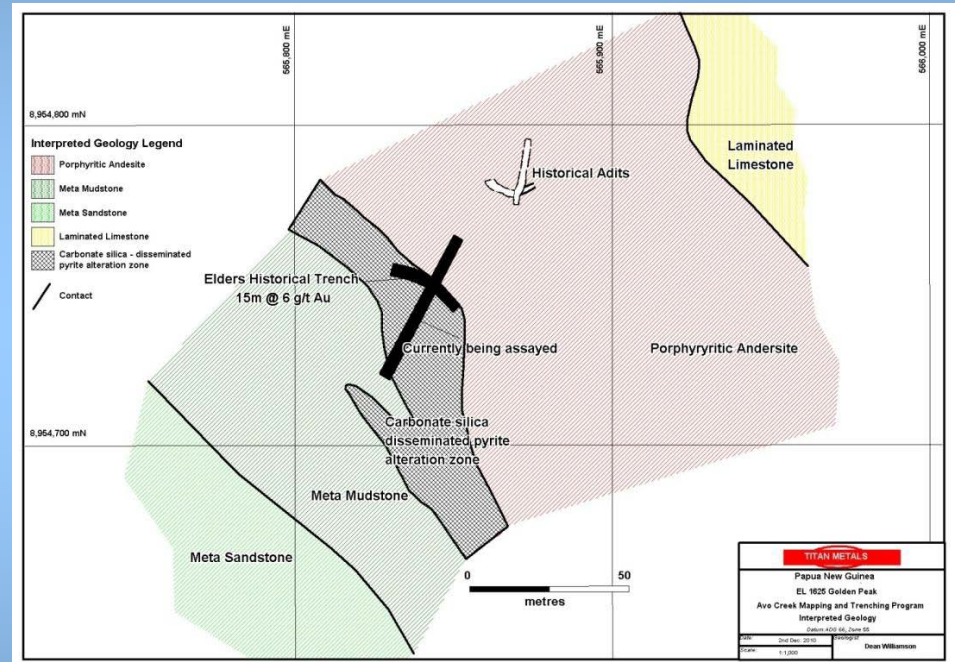
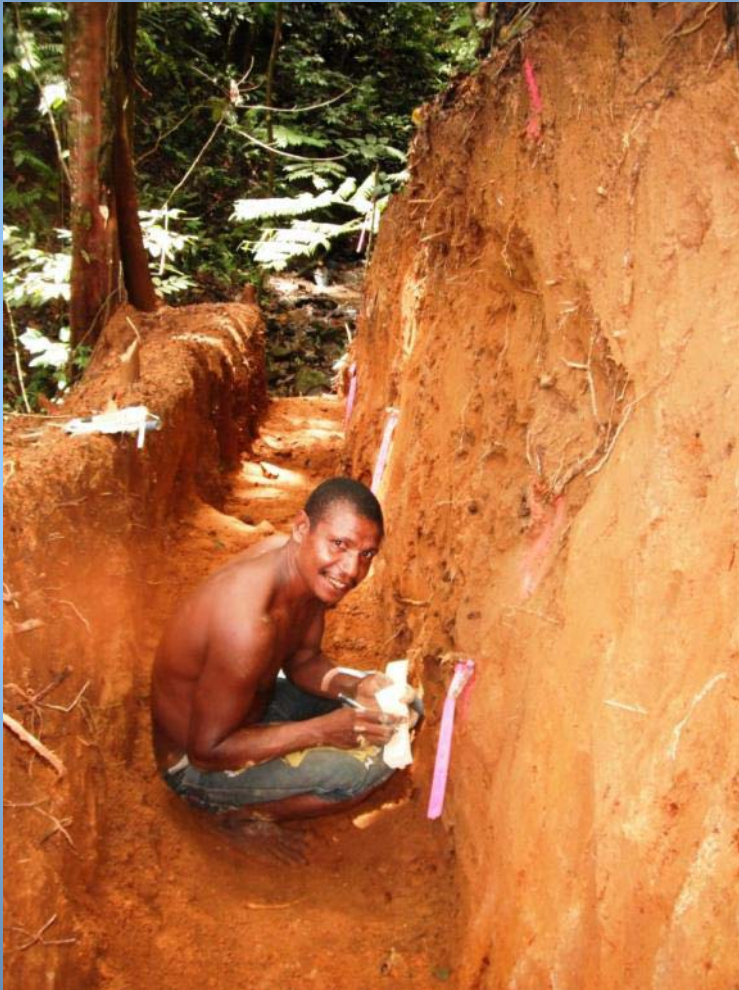
# Golden Peak

- 40km east of Port Moresby
- Iawerere alteration zone
  - 800m X 2000m
- Previous exploration CRA 1985 & Elders 1989
- Gold geochemistry over several km<sup>2</sup>
- High-grade gold mineralization
- Trench assays:
  - 15m of 5.5 g/t Au
  - Incl 2m of 43.0 g/t Au





# Golden Peak Trenching





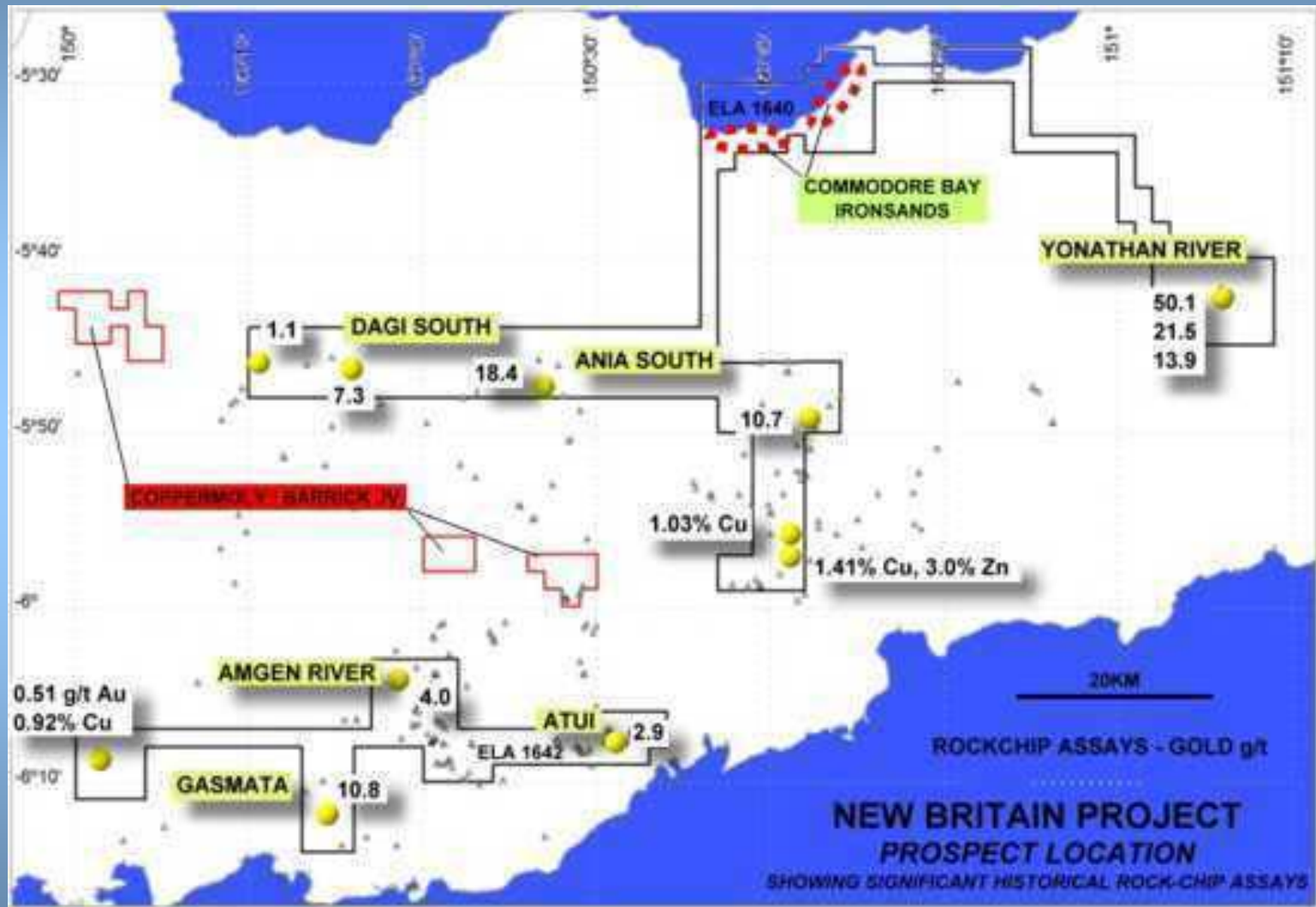
# New Britain

- 1360 km<sup>2</sup> tenement
- Copper-molybdenum-gold systems
- ELA's located close to :
  - Barrick / Coppermoly \$20M JV area
  - Ok Tedi / Frontier's \$36 million JV areas
- Esso Minerals (1982-3) & CRA (1985) identified high-grade gold:
  - Dagi South – 18.4g/t Au
  - Ania South – 10.7g/t Au
  - Gasmata – 10.8g/t Au
  - Yonathan R – 50.1g/t Au

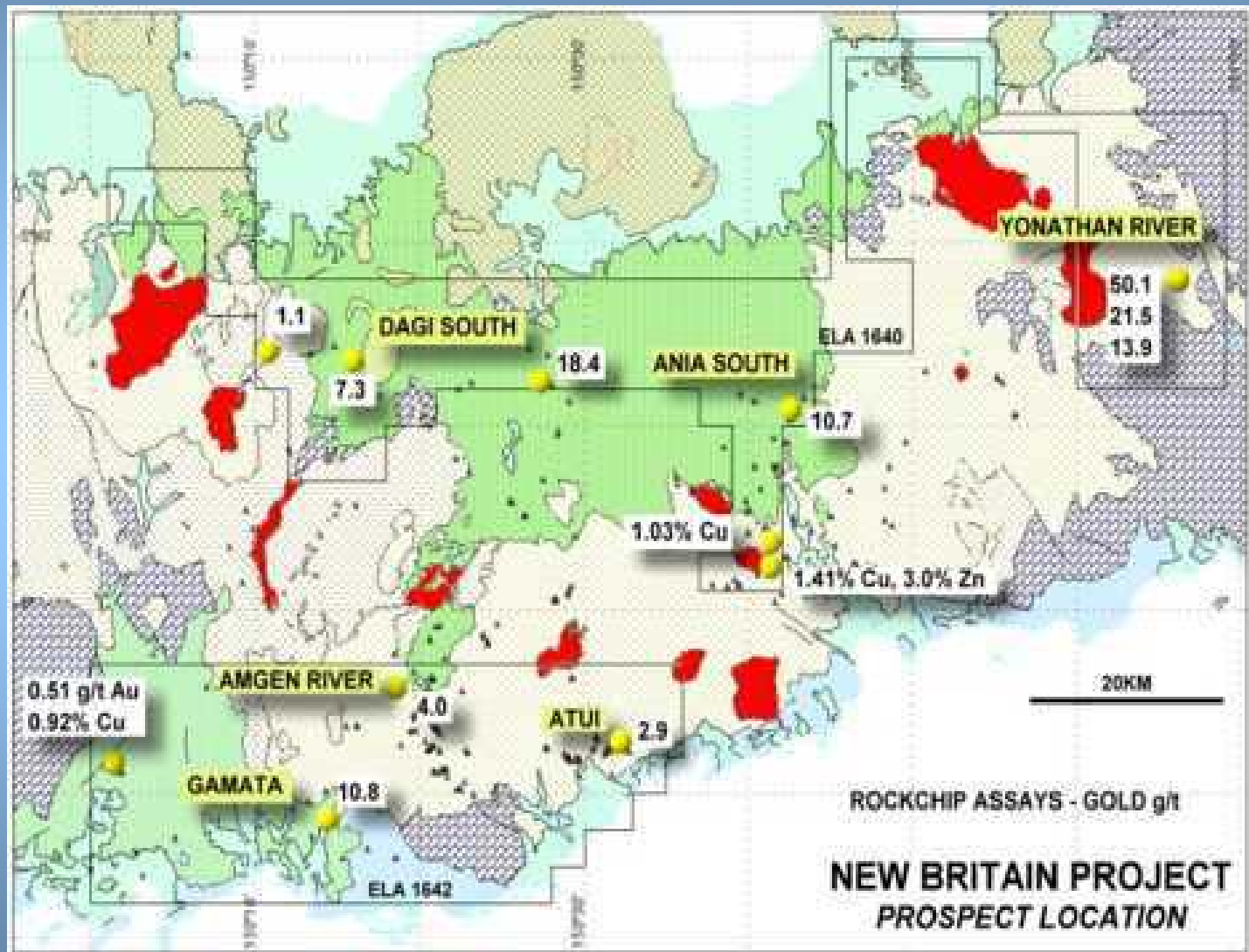


*Prospect location*

# New Britain



# New Britain



# Legusulum

- Porphyry copper-gold prospect
  - 70m thick leached cap over 1km<sup>2</sup>
  - Rockchips to 6.1g/t Au
- Explored by Swiss Aluminum during early 1970's
  - 13 DDH's total 1500m
  - Av depth 115m
  - Av grade 0.25% Cu
- Targets
  - Breccia pipes
  - Talus and swamp
  - Open geochem to south
  - Buried porphyry deposits





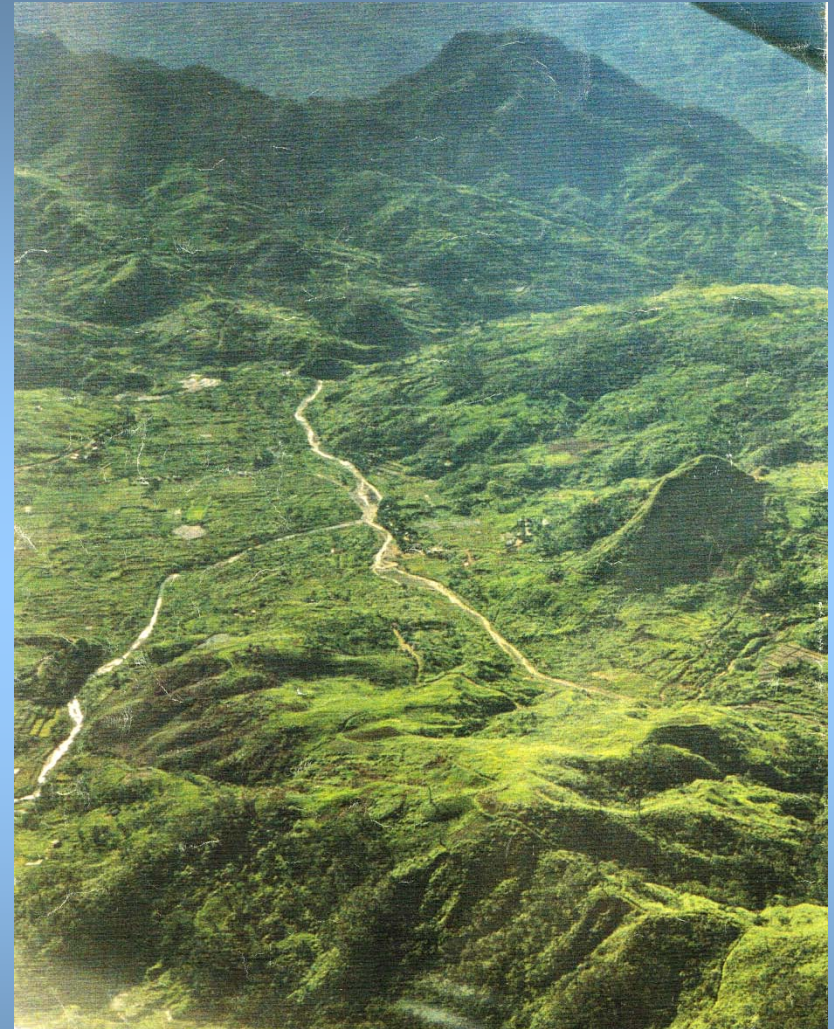
# CALDERA'S



**Lihir 43M oz**



**Legusulum ??**

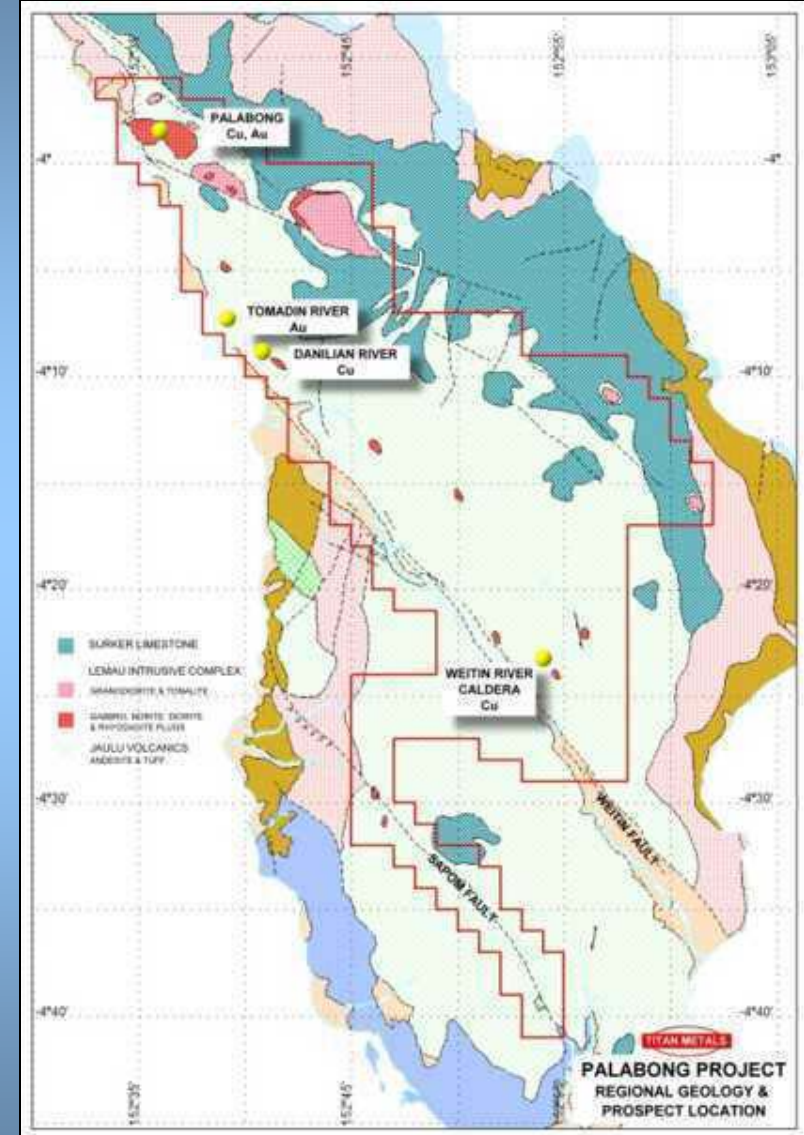


**Didipio (Phils) 1.65M oz**



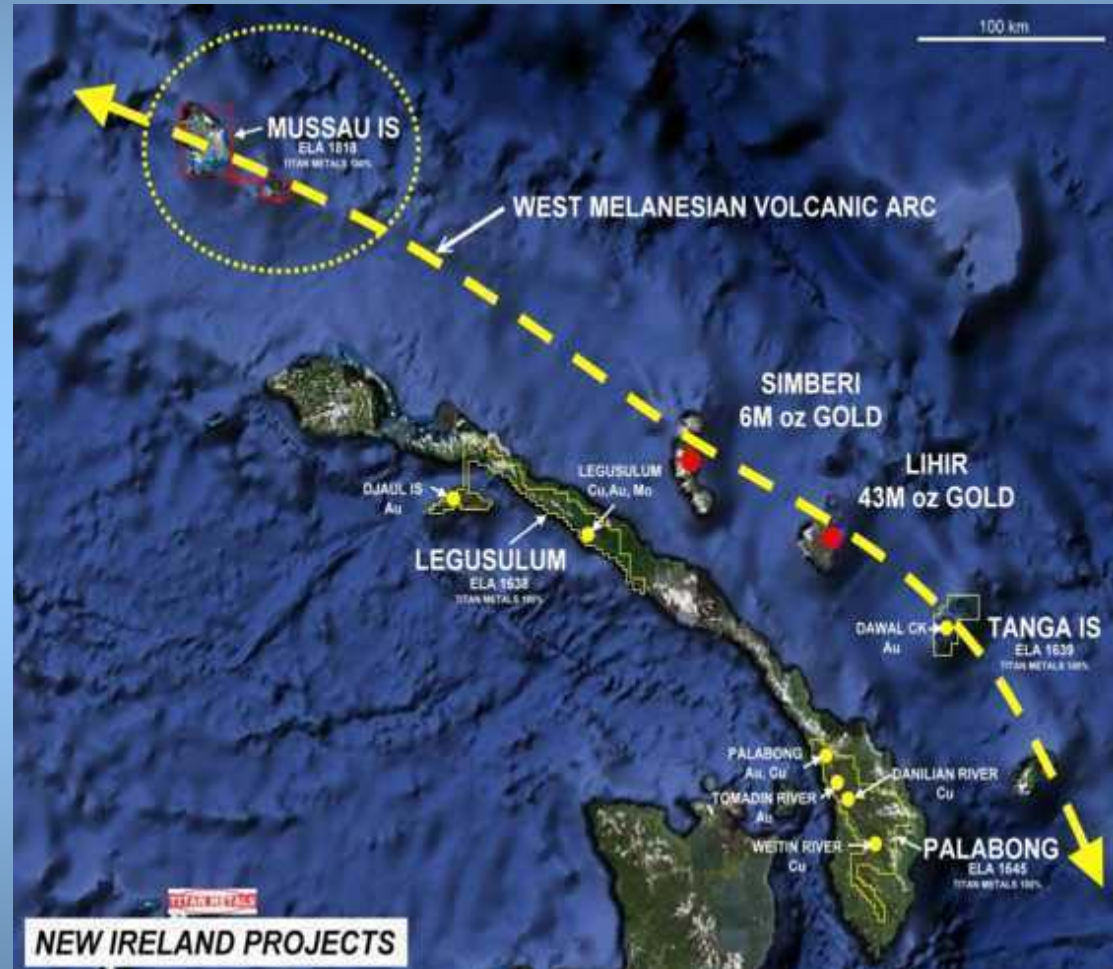
# Palabong Project

- Palabong
  - Porphyry copper-gold
  - Weitin River caldera with copper stream sediment anomaly



# Mussau & Tanga Gold Projects

- Mussau Is located on the Simberi – Lihir – Tanga - Feni Island chain – hosts resources of over 49 million oz of gold.
- 10km x 5km zone of epithermal quartz float - rock chips returning 28 g/t Au.
- Previous work :
  - CRA (1969-70)
  - Kennecott – Niugini Mining (1984-85)
  - BHP-Auralia (1986-87)
- Tanga Island located 70km SE of Lihir gold mine - epithermal gold with assays to 2.0g/t Au





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