



PAPUA NEW GUINEA

The Surprising Paradise





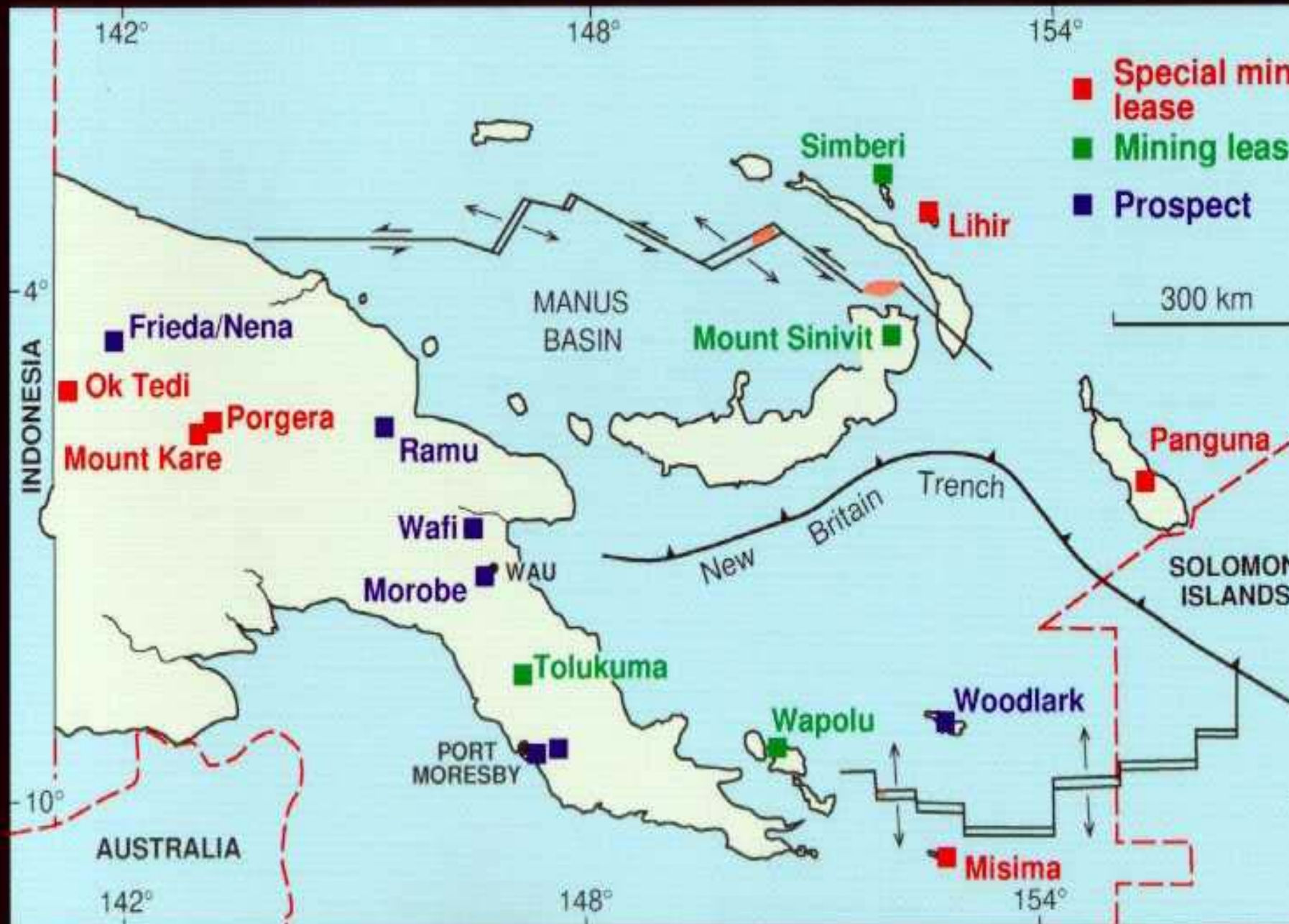
Papua New Guinea Exploration of Potential Mineral Resources:

**Third PECC Minerals Network Meeting
JinCi Hotel, Taiyuan, China**

8-11 September 2005

**Mr. Howard Lole
Chief Inspector of Mines, Papua New Guinea**

Papua New Guinea - Mineral Deposits





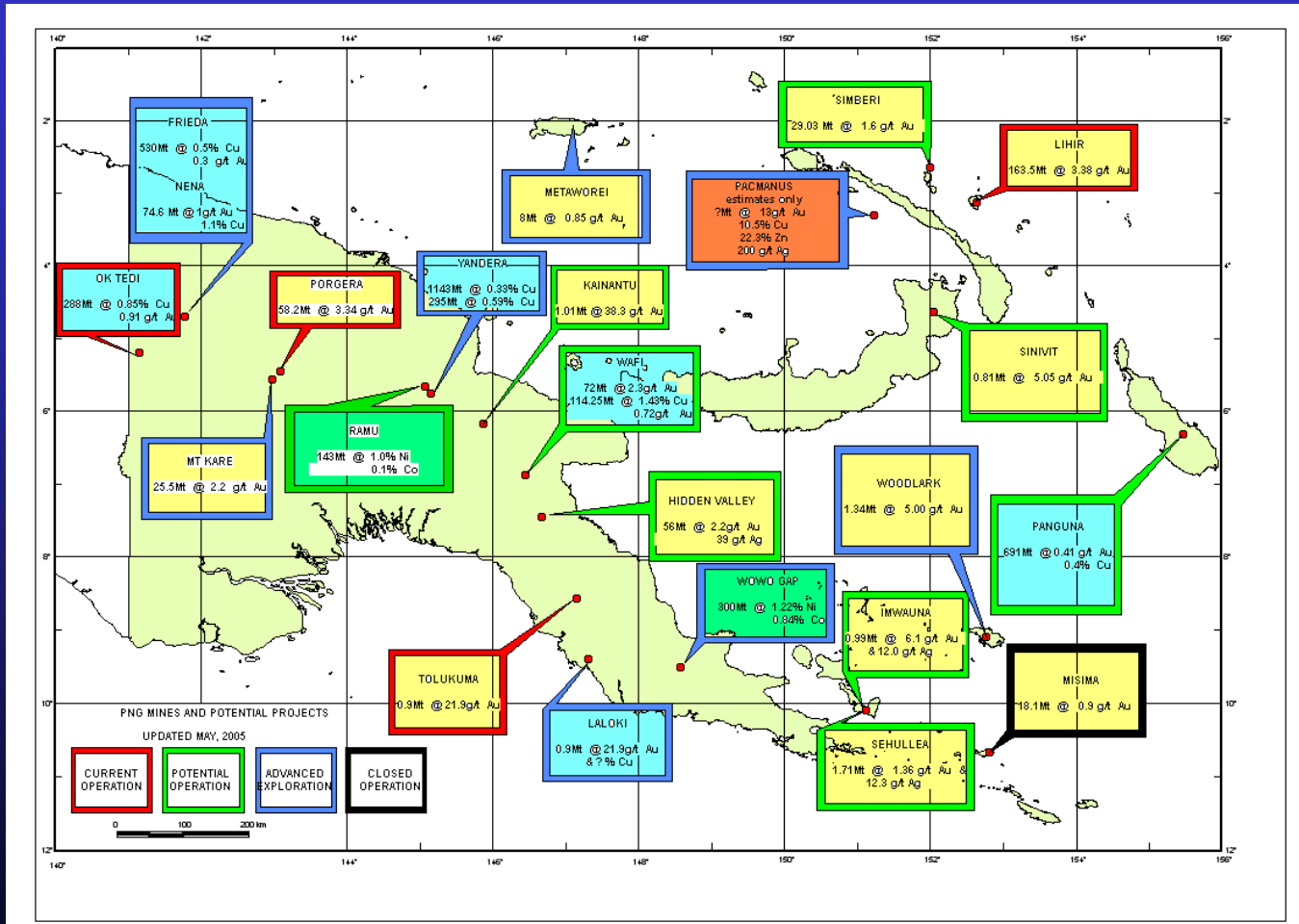
MINERAL RESOURCES IN PNG



- Gold
 - Copper gold deposits
 - Disseminated and vein gold deposits
 - Alluvial gold deposits
- Copper
 - Porphyry Copper Gold deposits
- Nickel and Cobalt
 - Lateritic, Saprolitic and Limonite (Wowo) Ore
- Oil and Gas
- Chromite and Limestone



Existing Projects





Existing Mines

Mine

Production Rate

• Ok Tedi	500,000 oz Au	200,000 t Cu
• Misima	60,000 oz Au	(closed already)
• Porgera	900,000 oz Au	
• Tolukuma	90,000 oz Au	
• Lihir	600,000 oz Au	
• Small Scale	70,000 oz Au	
• Total	<u>2,220,000 oz Au</u>	<u>200,000 t Cu</u>



Ok Tedi



200 kt Copper / yr
500 koz Au / yr

Environmental
challenges remain

235,000 tpd mined
80,000 tpd milled





Porgera



900,000 oz /yr
11 Moz reserves
(increasing)

Flotation and
Pressure
oxidation and CIP
220,000 tpd mined
17,000 tpd milled



Lihir



6-700,000 oz per year
14 Moz in reserves
Pressure oxidation
followed by CIL

Long mine life +- 40
years





Tolukuma



90,000 oz /yr

Us\$ 250 / oz Cash Cost

Totally helicopter
supported mine

No road access

Most gold from
underground operations
Avge Grade 21.9g/t Au





Umuna Pit

Quartz
Mountain
Pits

Misima
Plant Site

Misima



Closure in May
2004

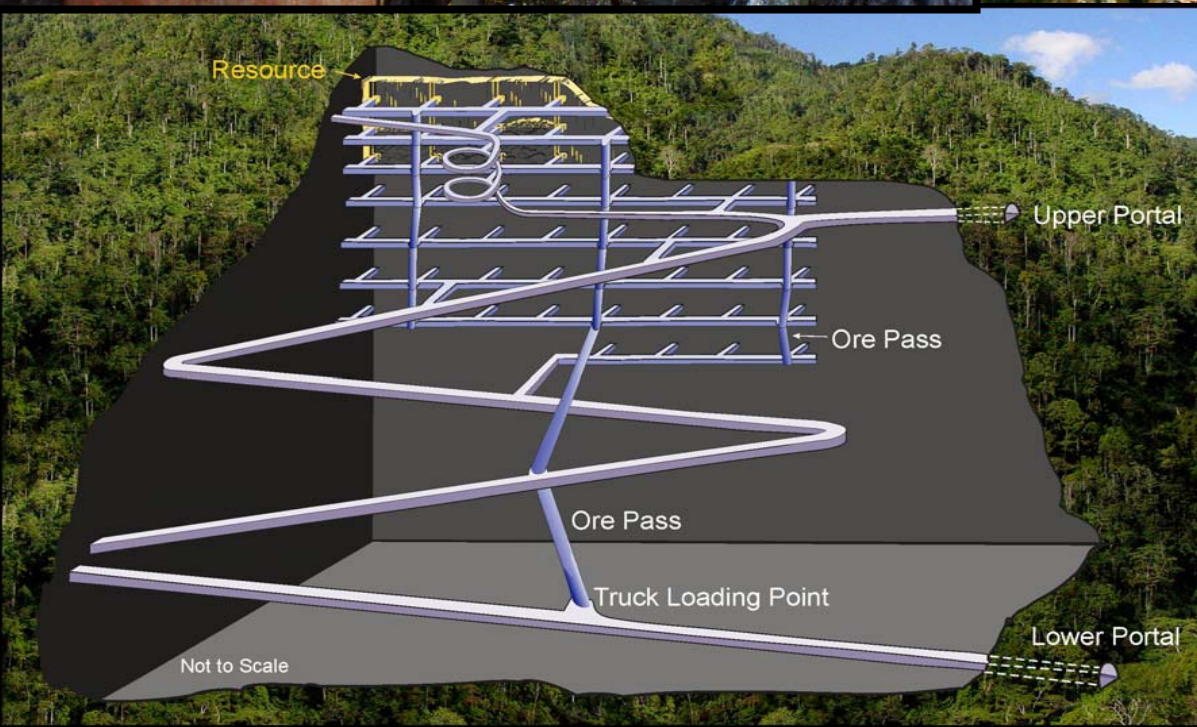
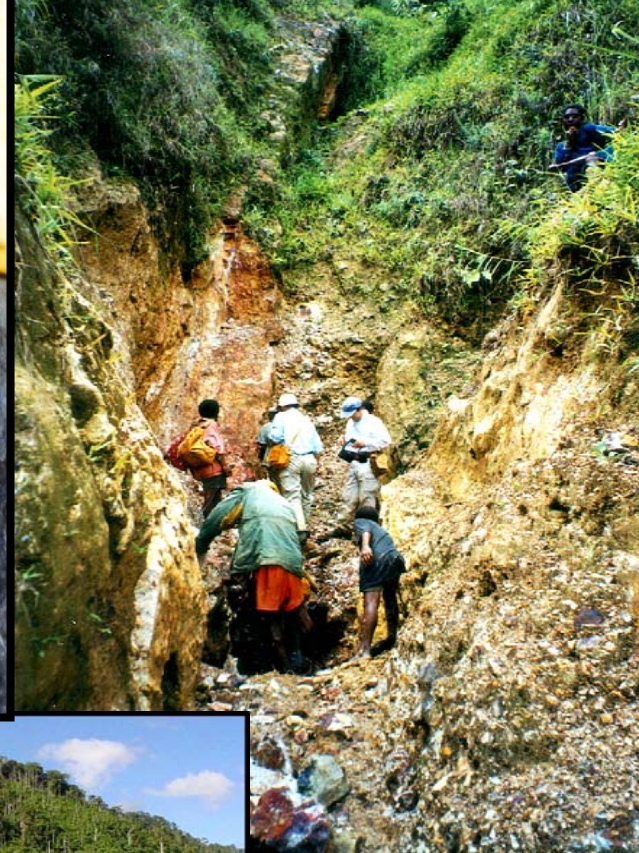
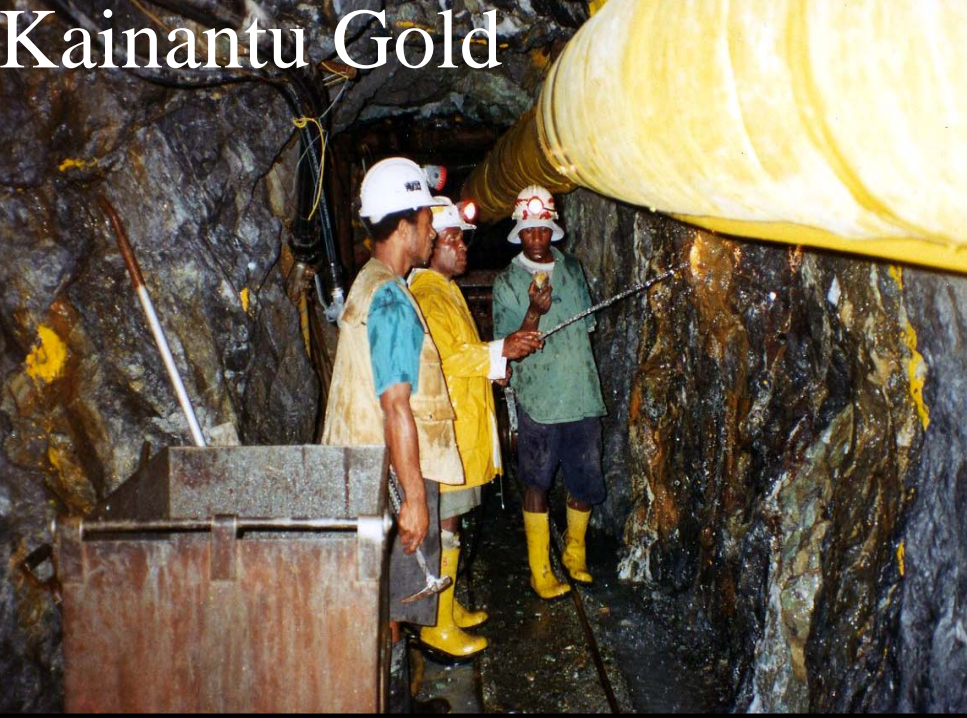
Mining from
stockpiles
Closure and
rehabilitation
plan complete



Up-coming Developments

Mine	Commodity	Likely Annual Rate	Startup
• Kainantu	Au	115,000 oz Au	2005
• Simberi	Au	40,000 oz Au	2005
• Morobe	Au	350,000 oz Au	2005
• Sinivit/Sehulea	Au	20,000 oz Au	2005
• Wafi	Au	300,000 oz Au ?	2006
• Ramu	Ni/Co	33,000 t Ni 3,200 t Co	2006
• Woodlark	Au	75,000 oz Au	2007?
• Golpu	Cu	80,000 t Cu ?	2007?
• Mt Kare	Au	100,000 oz Au	2007?
• Frieda	Cu/Au	220,000t Cu 365,000 oz Au	2008?

Kainantu Gold



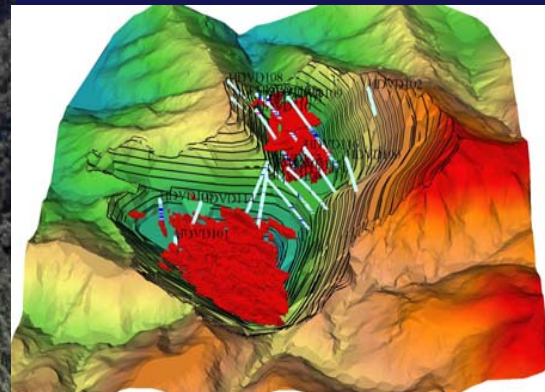
Gold project now
In development
Reserves of
1.7Mt @ 22 g/t Au
Expected production
rate of 115,000 oz/yr
Starting in Qtr1 2005

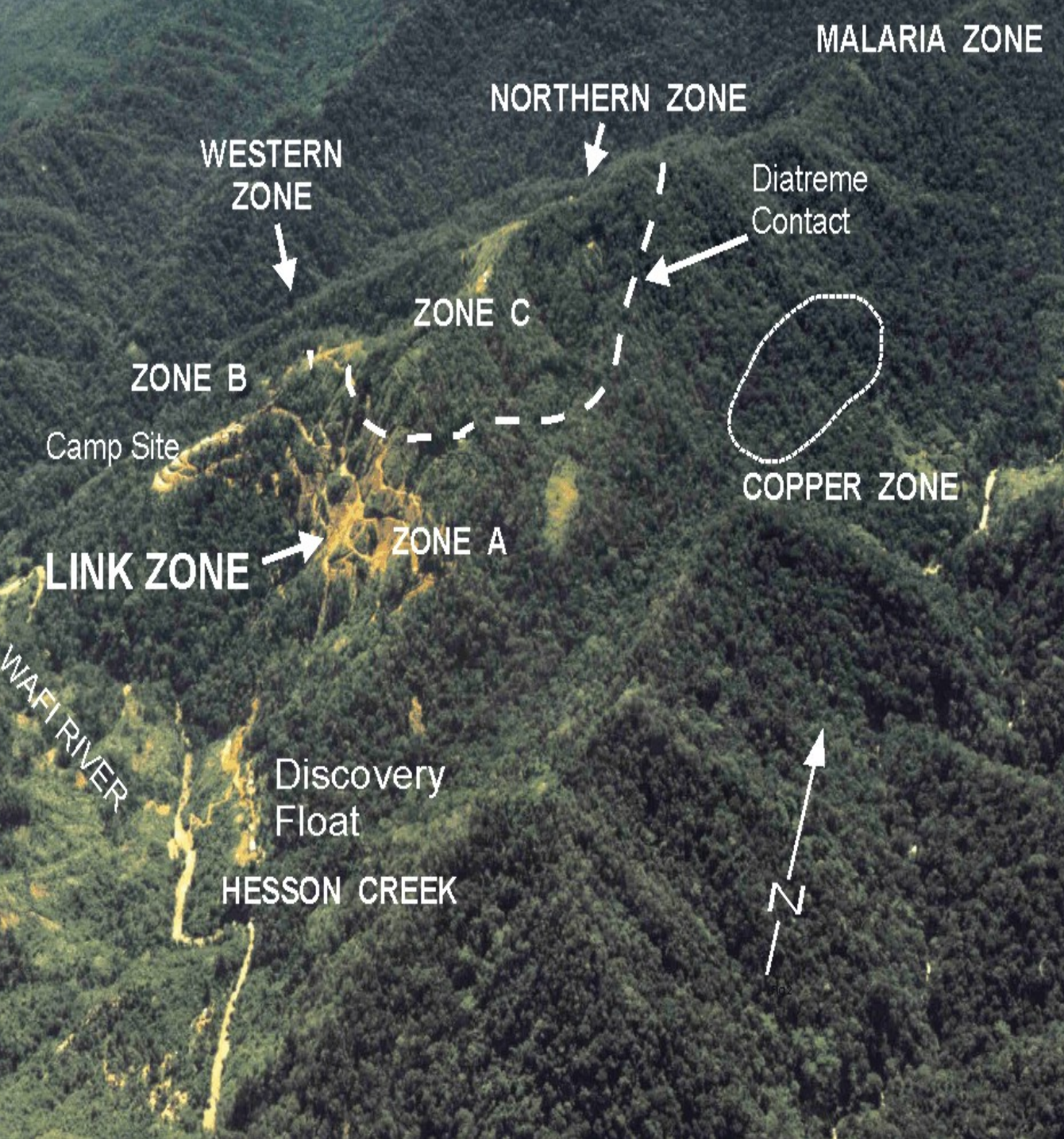


Morobe Gold Project (Hidden Valley)



Feasibility Study
Completed.
Mining Lease
Granted.
Resource of:
56Mt@ 2.2g/t Au
& 39 g/t Ag
4.0 Moz resource
at Hidden Valley
with 1.2 Moz in
satellite deposits





MALARIA ZONE

NORTHERN ZONE

WESTERN ZONE

Diatreme Contact

ZONE C

ZONE B

Camp Site

LINK ZONE

ZONE A

COPPER ZONE

WAFI RIVER

Discovery Float

HESSON CREEK

N



Wafi & Golpu

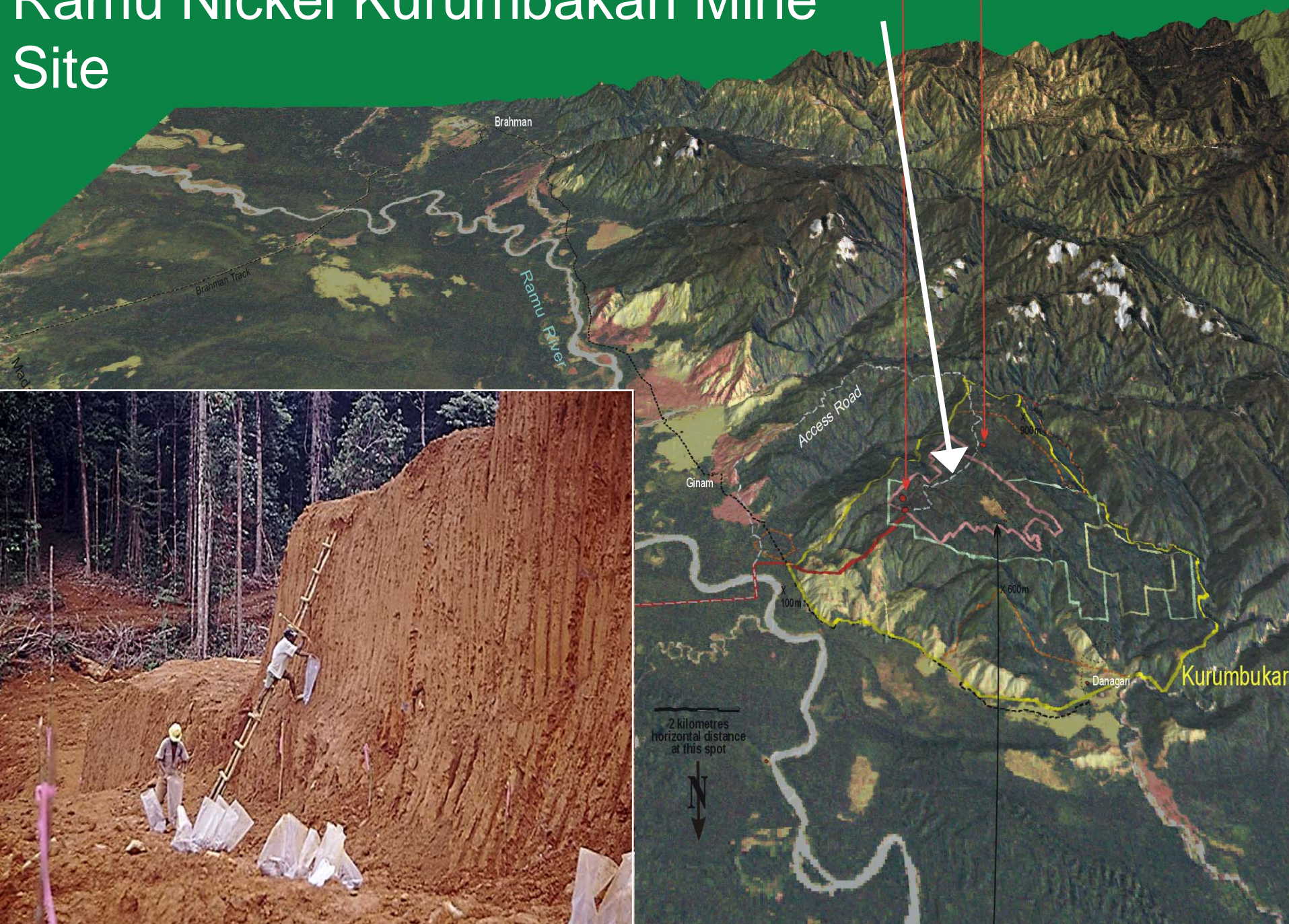
Au and Cu

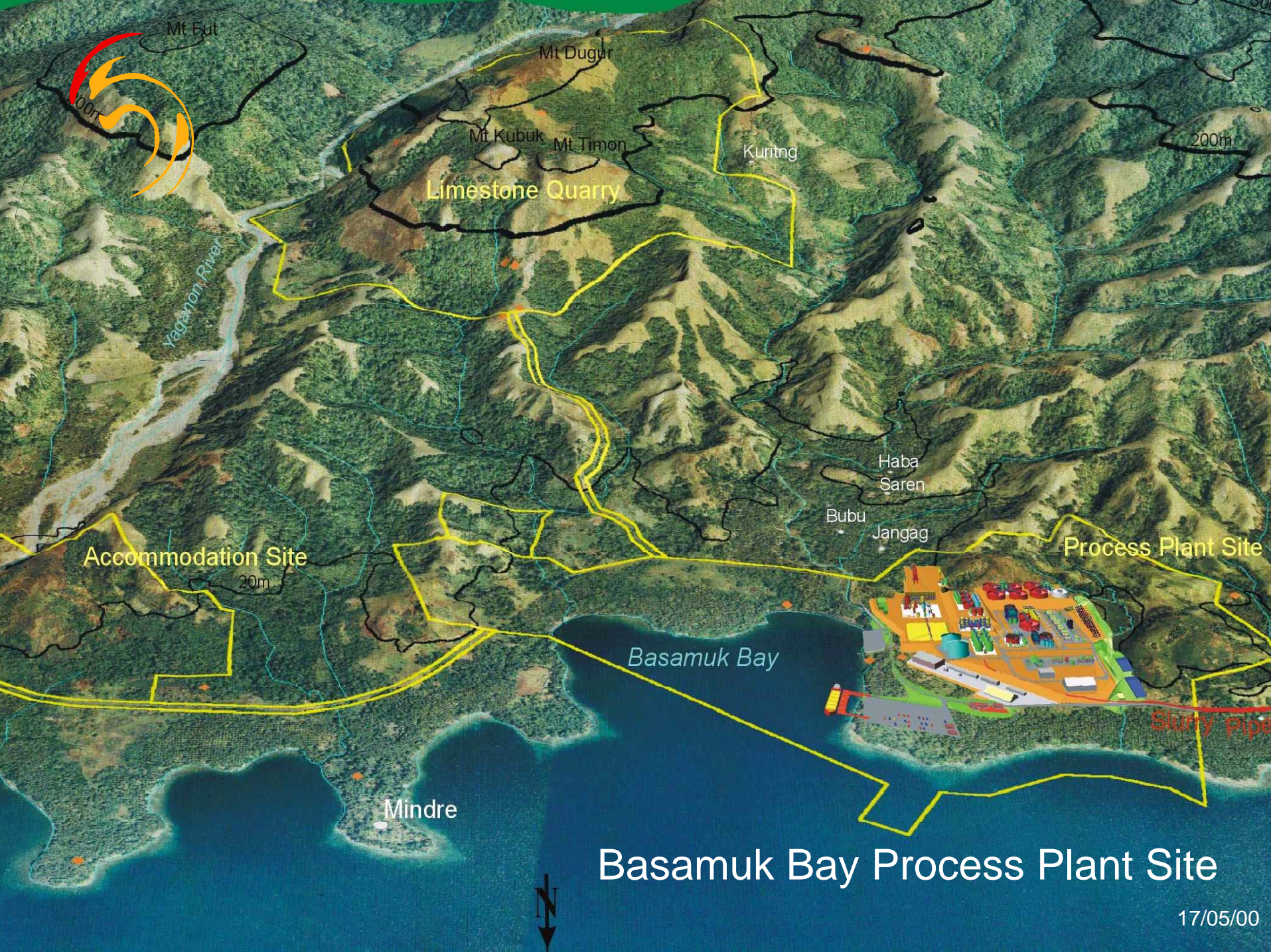
62Mt @2.3g/t Au
4.5 Moz resource

103Mt @1.27%Cu
& 0.67g/t Au

Both owned by
Harmony

Ramu Nickel Kurumbakari Mine Site





Basamuk Bay Process Plant Site



Project Overview



- World class project
- Nickel 33,000 t/yr.
Cobalt 3,200 t/yr.
- Cash costs:
 - Pre-cobalt credit US\$1.38/lb of Nickel
 - After cobalt credit US\$0.41/lb (at US\$10.00 /lb Co)
- US\$ 838 million capital cost
- Resource will support a 35-40 year mine life
- China Metallurgical and Construction Company (MCC) has Framework and Master Agreements in place to develop it



Ramu

Reserves & Resources



Ramu Resource ^{1,2} (Measured, Indicated & Inferred)	143.2mt	1.01% Ni	0.11%Co
Ramu Reserve ² (proved & probable - 20 years mine life)	75.7mt	0.91% Ni	0.10% Co
Annual Autoclave Feed	3.2mt	1.09% Ni	0.12% Co



Wowo Gap Nickel Deposit



Parameters	Wowo Gap		
Resources:	Mt	%Ni	%Co
Measured	15.95	1.42	.081
Indicated			
Inferred	40	1.22	.08
Global	307	1.6 Ni(eq)	



Frieda Cu/Au Prospect



Total resource >1000Mt @ 0.5% Cu & 0.3g/t Au

Nena high sulphidation resource 60Mt @ 2.0% Cu & 0.6g/t Au





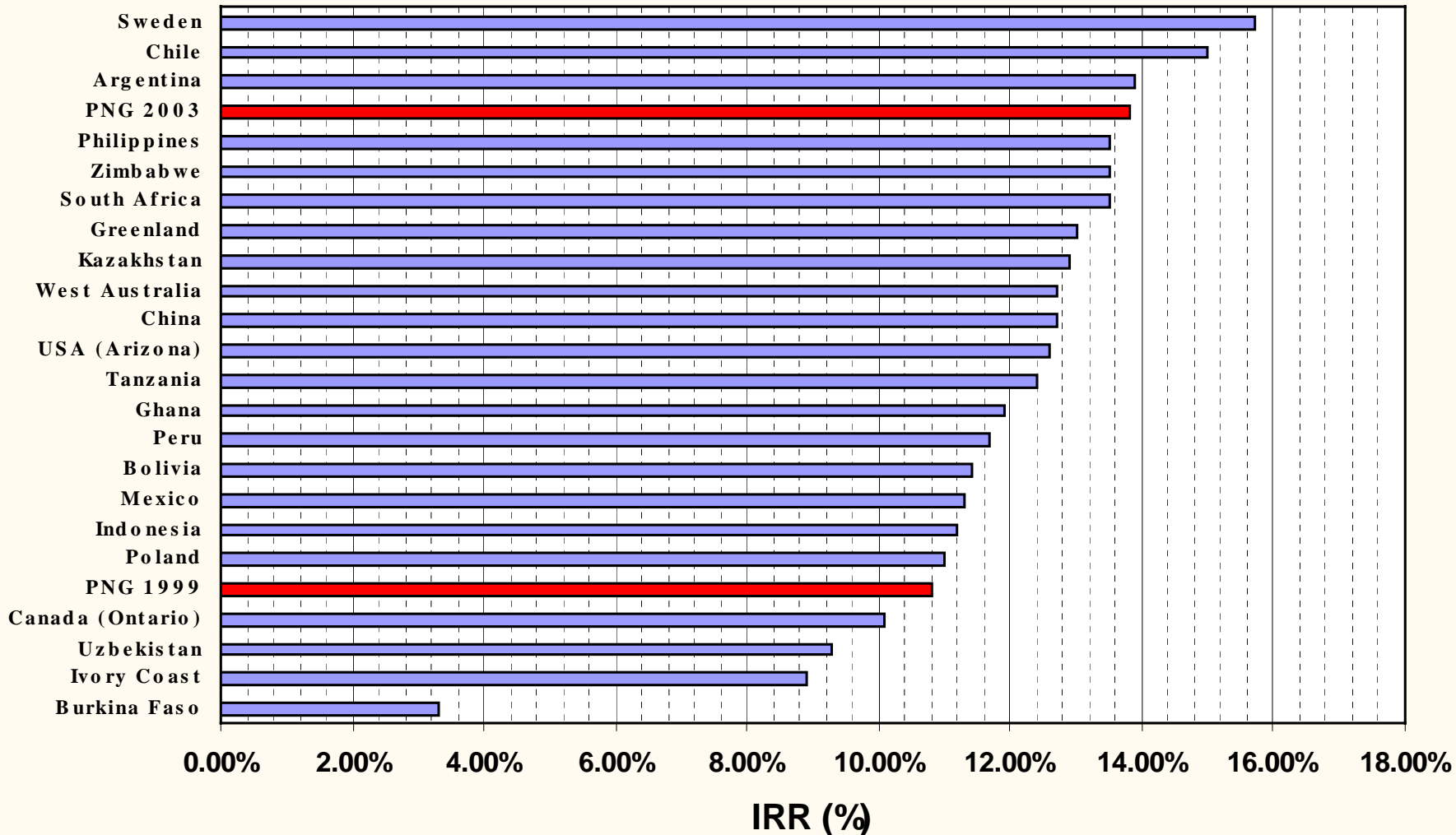
New Fiscal Regime



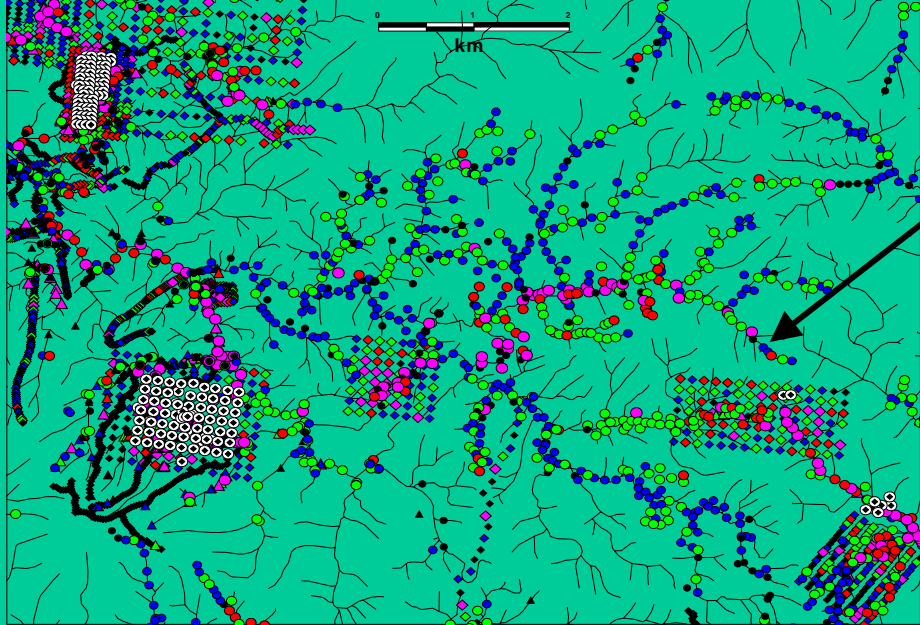
• Income Tax rate	30%
• Dividend Withholding Tax Rate	10%
• Accelerated Depreciation allowance	25% DB Pool
• Royalty Rate	2%
• Deductions of Exploration Expenditures	200%
• Additional Profits Tax	Abolished
• Ring Fencing	Relaxed
• Mining Levy	Abolished
• Capital Gains Tax	None
• State Equity	Under Review
• Fiscal Stability for 10 years	Optional at 2% premium

New Fiscal Regime

COPPER -AFTER TAX RATES OF RETURN (IRR)



Improved Digital
Data availability
and
WWW access



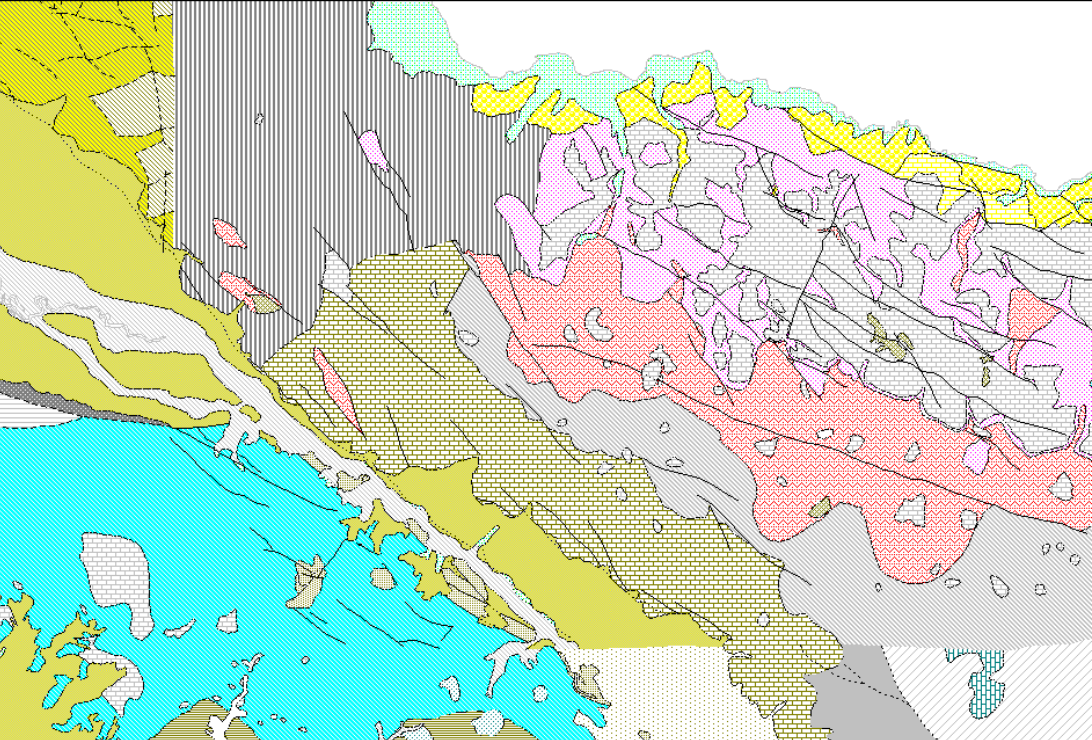
Info Tool

Prospect_Code: MANUS
Company: KNMJV
Sheet_Number: 8293
Sample: 25143
Data_Type: SSS
Mesh: -80#
Locality: Mt Kren
Amg_N: 9,762,534.07
Amg_E: 495,965.16
Lith1:
Au: 30
Cu: 234
Pb: 91
Zn: 63
Ag: -1
As: -50
Mo: 0
Job_No: PPIL85003
Tenement: 534
Report: 1985/012

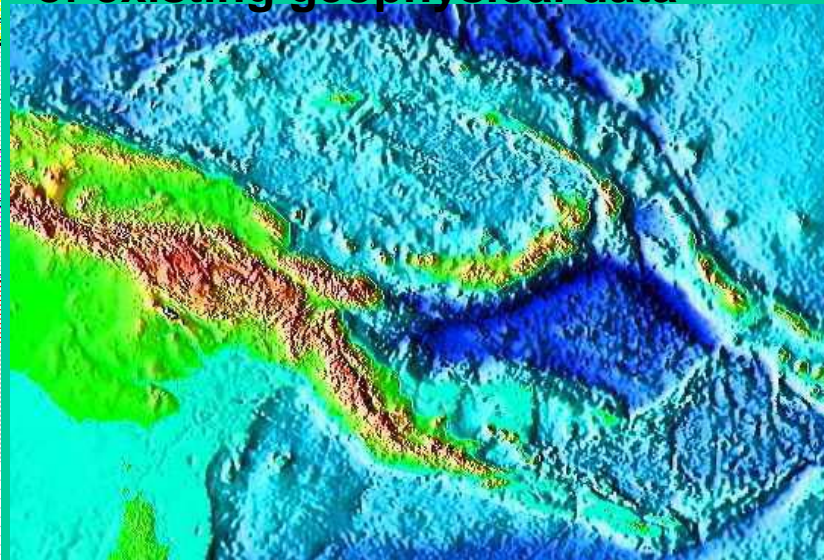
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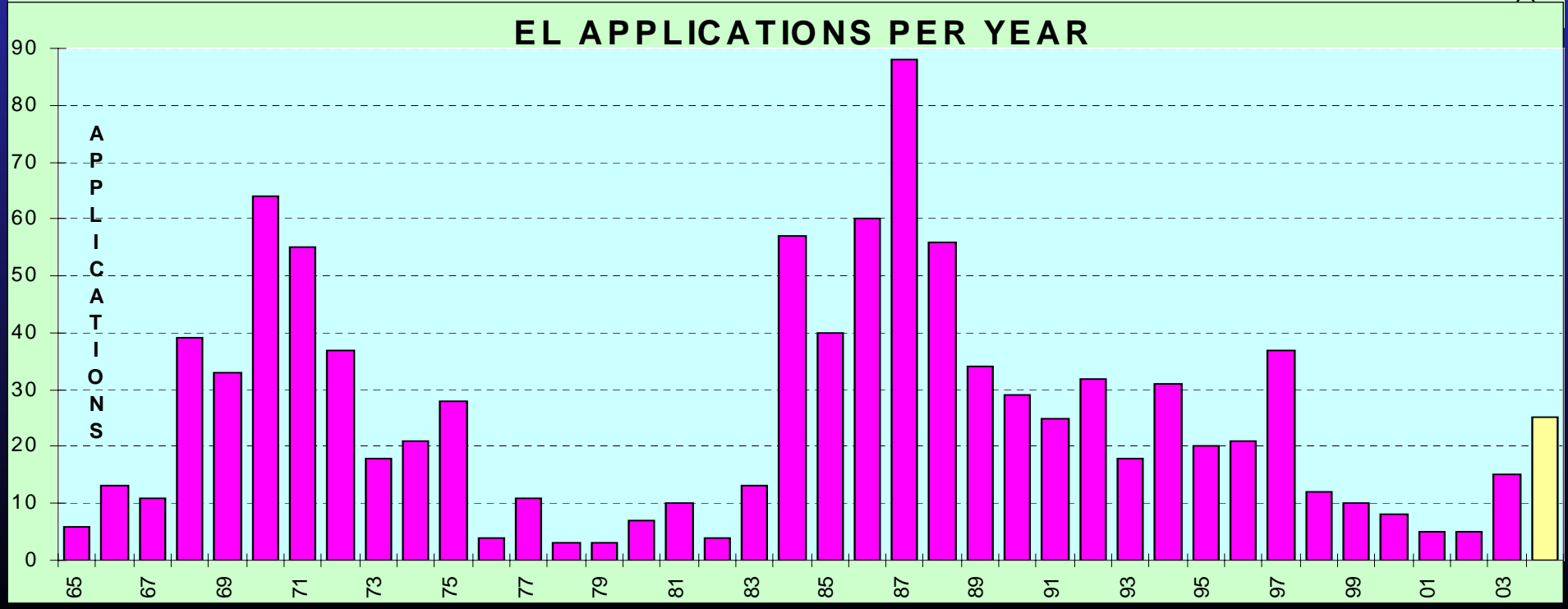
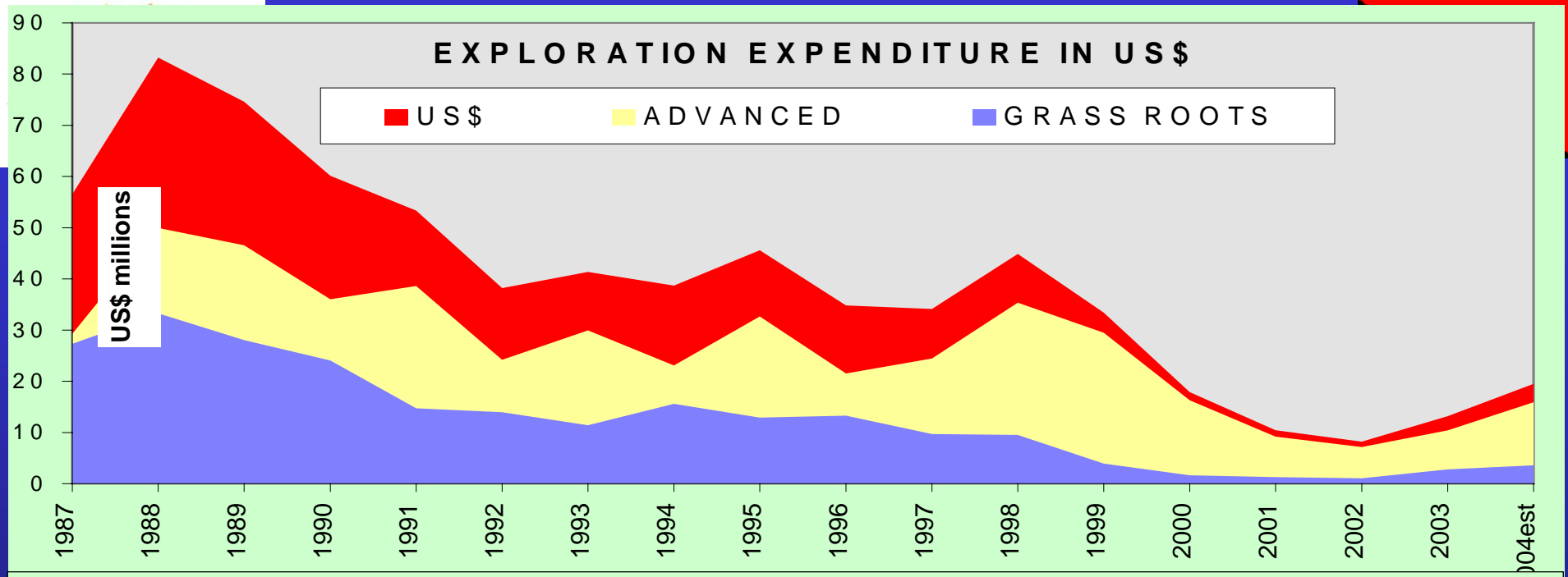
Gfs_Seds

Digitisation of existing maps & geochemical data



Standardisation and interpretation
of existing geophysical data







Golden Steps



- EL APPLICATION
- COMMUNITY CONSULTATION
- LAND INVESTIGATION AT PREFEASIBILITY
- BANKABLE FEASIBILITY
- NEGOTIATION BETWEEN STAKEHOLDERS
- APPLICATION FOR ENVIRONMENT PERMIT
- APPLICATION FOR ML/SML
- MOA SIGNED BY STAKEHOLDERS
- MINING SAFETY ACTS, MINING ACT, MOA AND ENVIRONMENT ACTS COME INTO PLAY
- MINE CLOSER



Conclusions

- Mining has a significant role in the long term future development of PNG
- PNG has a track record of successful developments
- Several new projects are either under development or on the near horizon and advanced prospects continue to be explored
- Grass roots exploration rapidly expanding by Canadian and South African companies, Chinese also becoming active in acquiring advanced projects
- Geologically highly prospective for new discoveries
- New fiscal regime and improved terms
- Government continues new initiatives to improve access to geological and geophysical data

Papua New Guinea

A Great Place to Explore



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