



Exploring in “The Pacific Ring of Fire” for world class Copper/Gold porphyry systems

Kalia Limited (ASX: KLH)
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www.kaliagroup.com

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Previous Exploration by Other Explorers

This presentation contains information sourced from the reports of Other Explorers. References to the original reports are provided as footnotes where the information is cited in this presentation. The Other Explorers reports cited include: the Geological Survey of Papua New Guinea. and The Federal Institute for Geosciences, Federal Republic of Germany Kalia does not vouch for the accuracy of these reports. Kalia has taken the decision to include this information as we assess it to be of relevance to shareholders and investors.

Competent Persons' Statement

The information in this presentation that relates to Exploration Results is based on information reviewed by **Mr Peter Batten** who is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and is an Executive Director, a full time employee and shareholder of Kalia. Mr Batten has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Batten consents to the inclusion of the information in the form and context in which it appears.

Information in this announcement that relates to Geophysics and Geophysical data is based on information reviewed by Dr. Amanda Buckingham who is a consultant geophysicist and principal of Fathom Geophysics. Dr. Buckingham was contracted by Kalia Limited and gives consent to the inclusion of the information in the form and context in which it appears.

Amanda Buckingham PhD has been involved in mineral exploration for 25 years. Amanda co-founded Fathom Geophysics in 2007, an award winning and industry leading geophysical consulting group that has developed worlds-best technology for interpretation under cover. Tools developed include structure detection and 3D geochemical footprint modelling of specific deposit styles as well as many other technologies; significantly increasing the chances of discovery under cover.

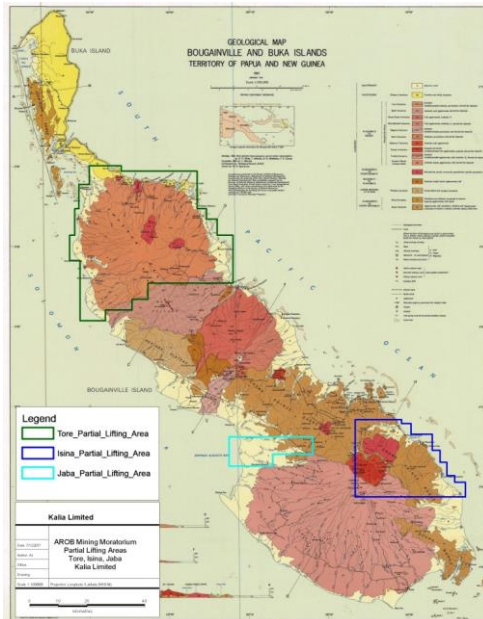
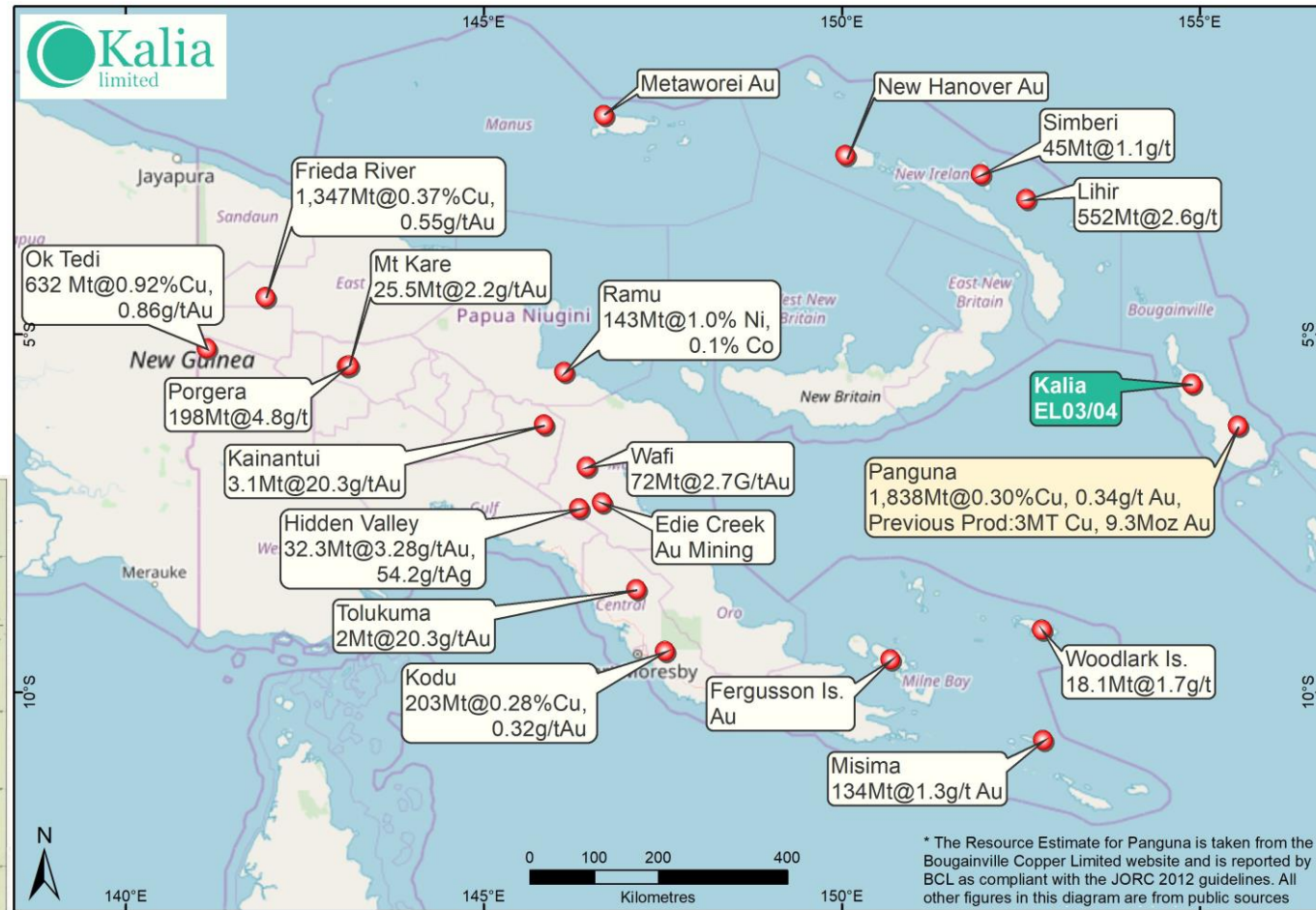
Dr Buckingham's early career involved work as a geoscientist and project manager at majors such as Rio Tinto as well as listed juniors in both Canada and Australia and several years consulting at SRK. Amanda has extensive exploration experience in North and Sub-Saharan Africa, Canada, US, Mexico, South America, South East Asia, Russia and several countries in the former Soviet Union.

Amanda's PhD at the University of Western Australia involved the design of enhancement filters and edge-detection programs for potential field data. These algorithms have made possible significant advances in methodology for the semi-automated interpretation of data.

Dr Buckingham is currently a research fellow at the University of Western Australia.

Bougainville on the “Pacific Ring of Fire”

Within the PNG section of the Pacific Rim only Bougainville remains with the vast majority of the accessible land mass not having been subjected to extensive and modern exploration techniques. Recent work, Kalia and SRMI, is the first exploration undertaken on Bougainville in the past 3 decades.



SolGold's recently (Nov. 2018) released mineral resource estimate #2 for the Alpala deposit in Ecuador. Indicated + Inferred Resource = 2.95 Bt @ 0.52% Cu eq (15.4 Mt Cu eq) containing 10.9 Mt Cu and 23.2 Moz Au at 0.2% Cu eq cut-off, 79% of which is in the Indicated category (by metal content). Taken from www.solgold.com.au

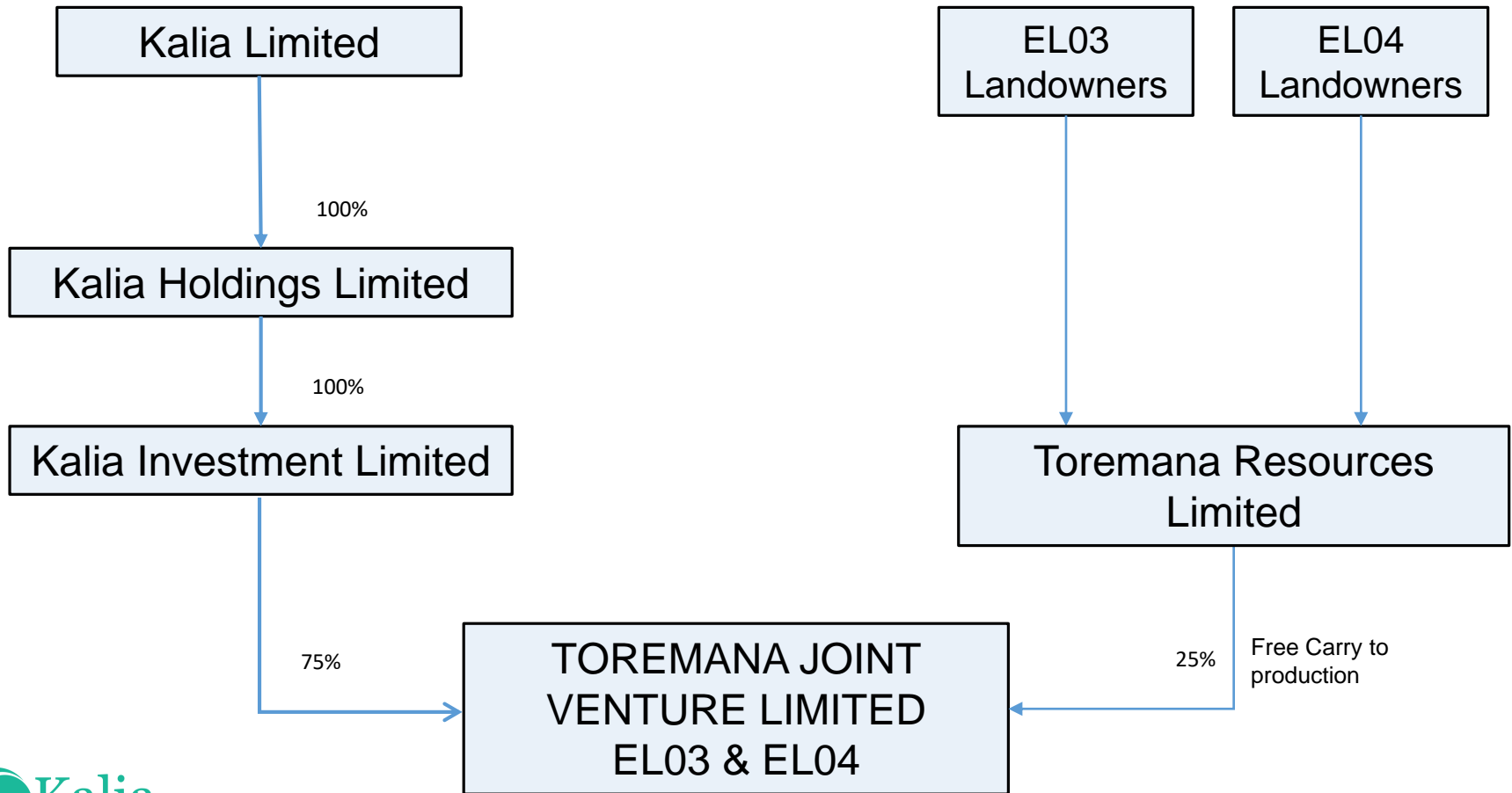
Bougainville Mining Environment

- Autonomous Regional Government within PNG
- Supportive environment for exploration and mining
- Own Mining Act of 2015
- Bougainville moratorium on mining in place since 1980's
- Kalia has been active in Bougainville since 2016 in expectation of change and have been engaged in:
 - Landowner discussions
 - Awareness programmes
 - Relationship development with suppliers, officials, interest groups, churches
- The Moratorium partially lifted for 3 specific areas in May 2017
- 4 undisputed valid licences in operation in the 3 areas – Kalia has a 75% interest in two (EL03 and EL04) of them covering 1,704 km²
- Kalia is focused on the highly prospective area in the North of the island with supportive and engaged landowner base

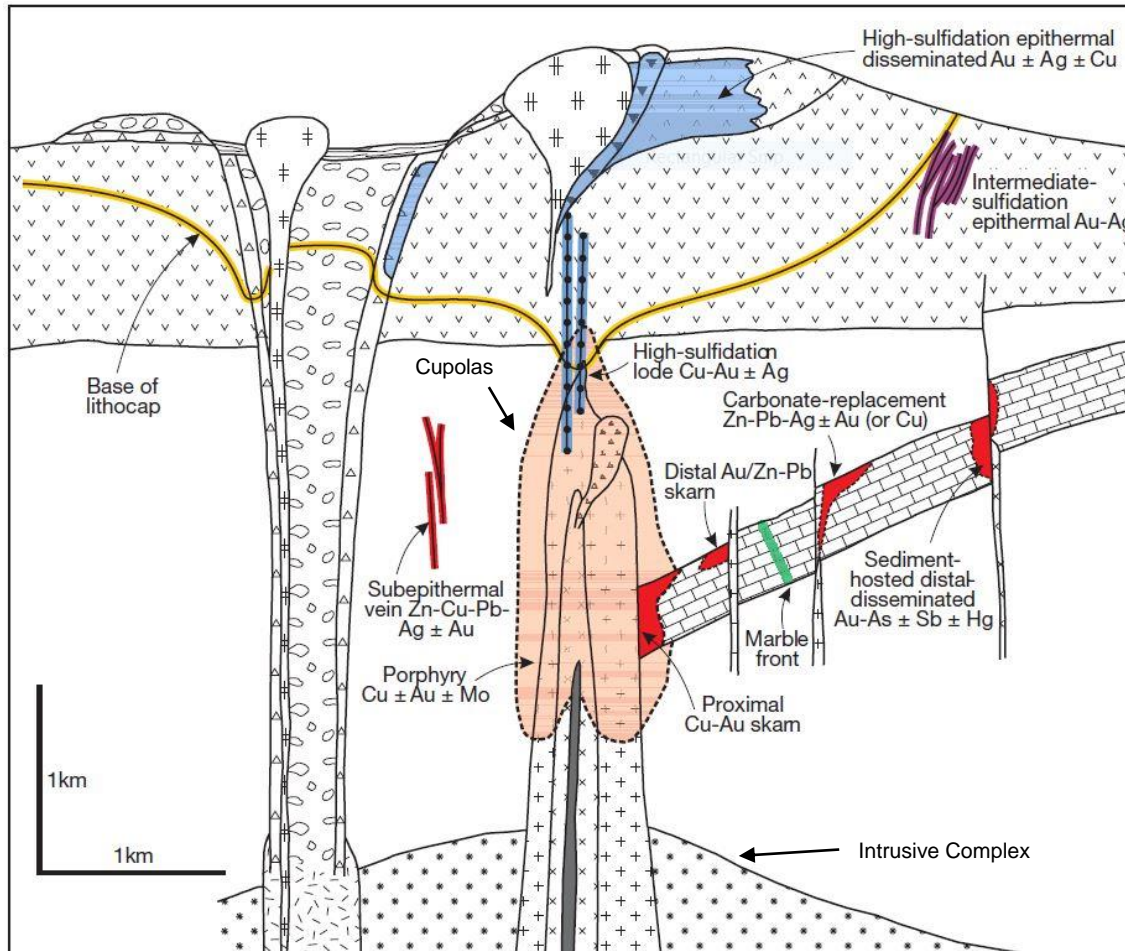


Tore Joint Venture Limited 1-119206

UNITY – COMMITMENT – ACTION – RESPONSIBILITY - RESULTS



Geological Model



The model to the left is taken from Sillitoe 2010.

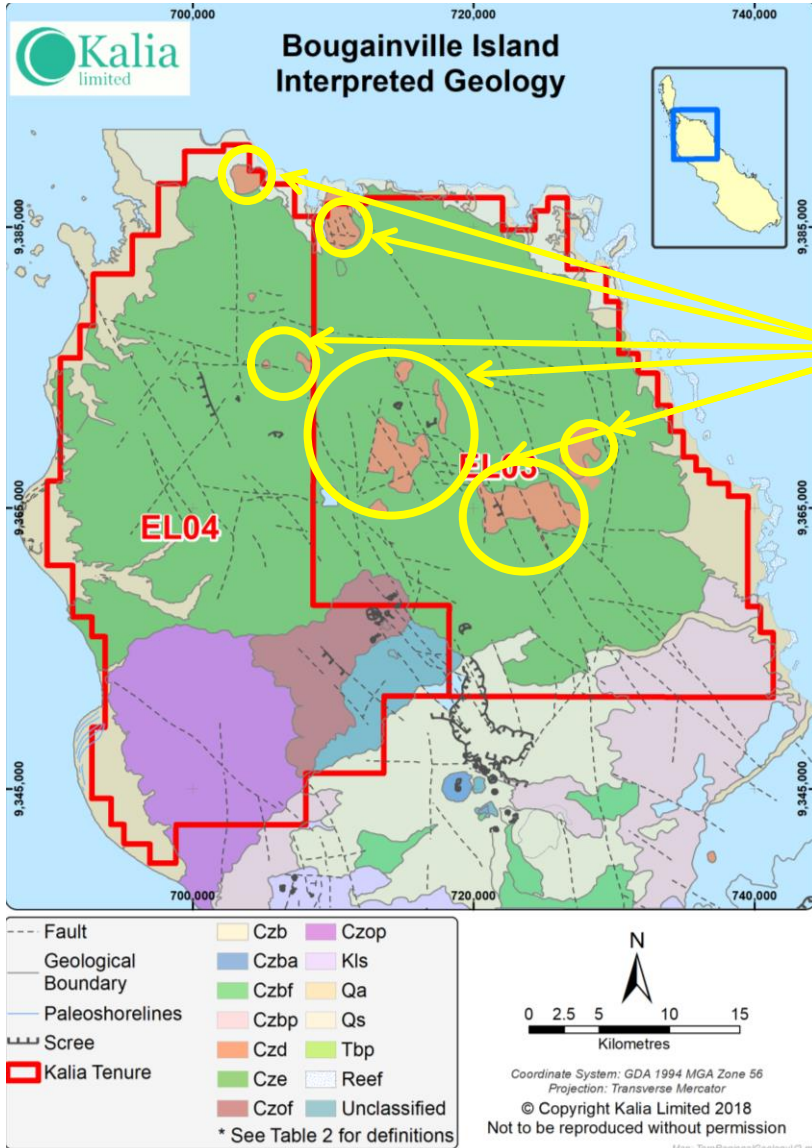
The north Tore region is considered to be an intact epithermal terrane.

To the south erosion has acted to reduce the profile such that the porphyry is exposed.

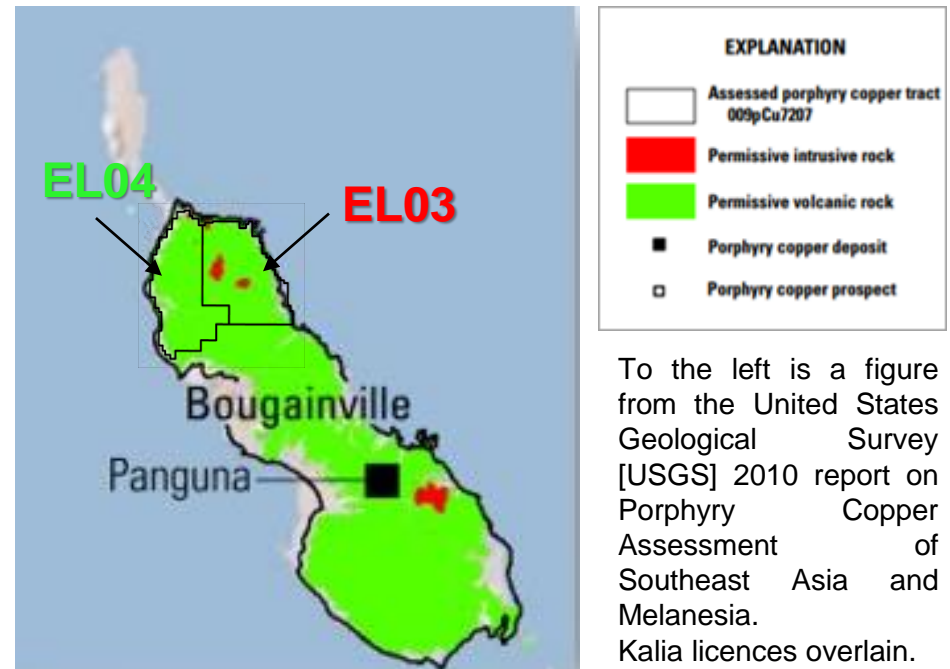
The opportunity exists in the north Tore region for all styles of mineralisation to occur within the company's licences.

PORPHYRY STOCK	▲▲▲▲ Late-mineral porphyry	LITHOCAP	▽▽▽ Phreatic breccia
	×××× Intermineral magmatic-hydrothermal breccia		⊕⊕⊕ Dacite porphyry plug-dome
	++ Early porphyry		▬▬▬ Lacustrine sediment
PRECURSOR PLUTON	* Equigranular intrusive rock	MAAR-DIATREME COMPLEX	○ Late phreatomagmatic breccia
	⊕⊕ Dacite dome		△ Early phreatomagmatic breccia
	▲▲▲ Felsic tuff unit		□ Late-mineral porphyry
HOST ROCKS	▽▽▽ Andesitic volcanic unit		
	▬▬▬ Subvolcanic basement / carbonate horizon		

Interpreted Geology

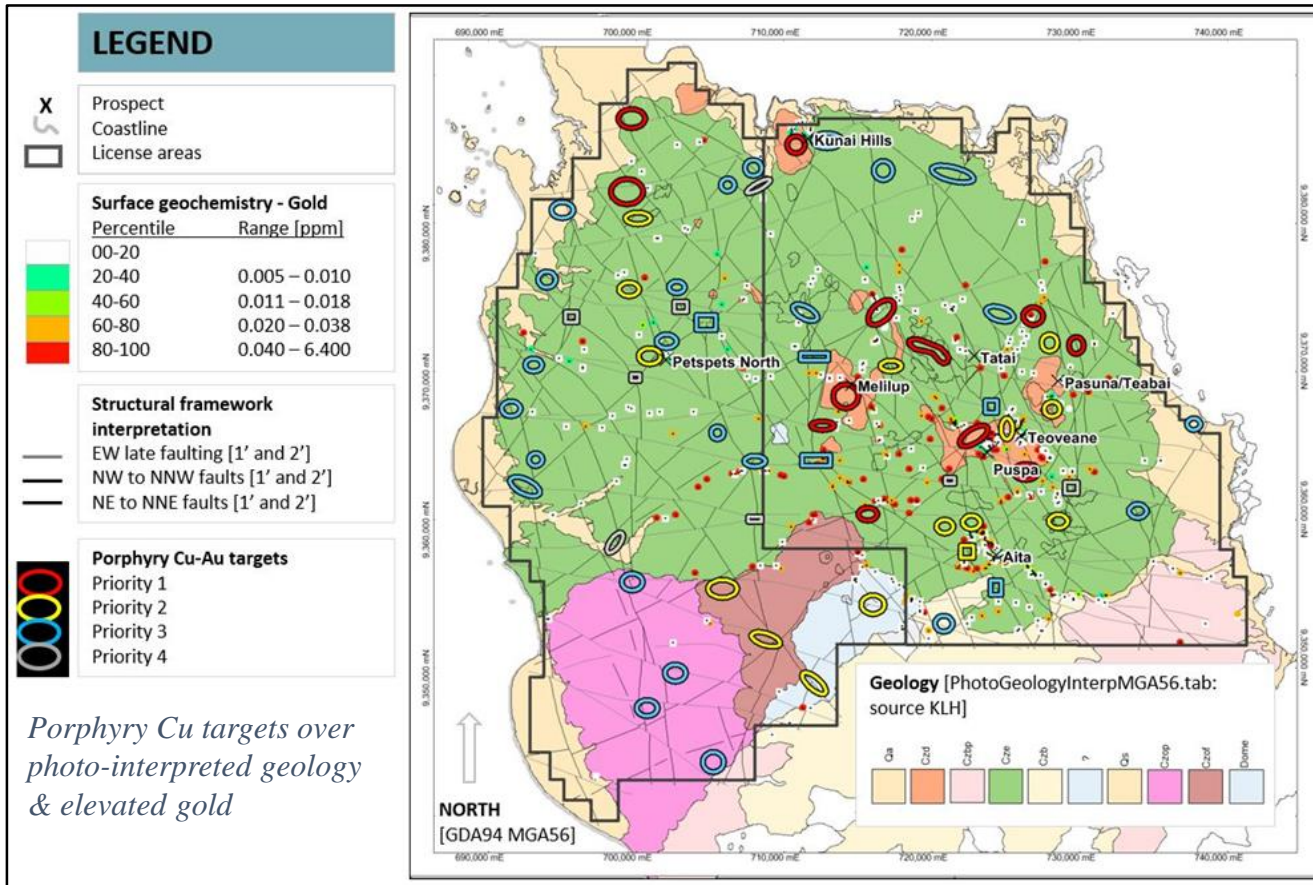


- To consider an area prospective for porphyry copper style intrusive deposits you first need the right host volcanic rocks and then the right intrusive rocks (USGS below)
- Resulting from Kalia's desktop studies the interpreted geology is indicating multiple sites displaying the right rocks and potential (areas circled).



To the left is a figure from the United States Geological Survey [USGS] 2010 report on Porphyry Copper Assessment of Southeast Asia and Melanesia. Kalia licences overlain.

2019 Target Zones Defined by Geophysics



The processing of the data collected during the 2018 heliborne Geophysical Survey completed by Airborne Logistics, Thomson Aviation and Fathom Geophysics has resulted in a catalogue of targets for porphyry copper and epithermal styles of mineralisation.

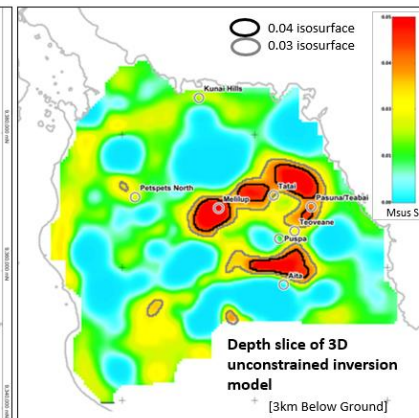
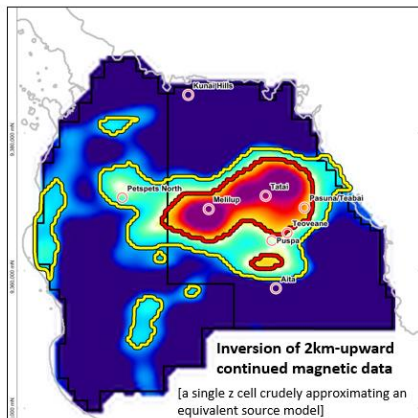
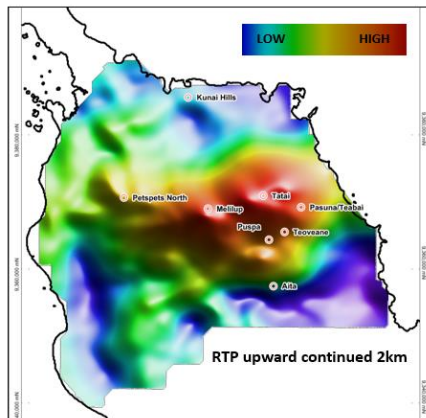
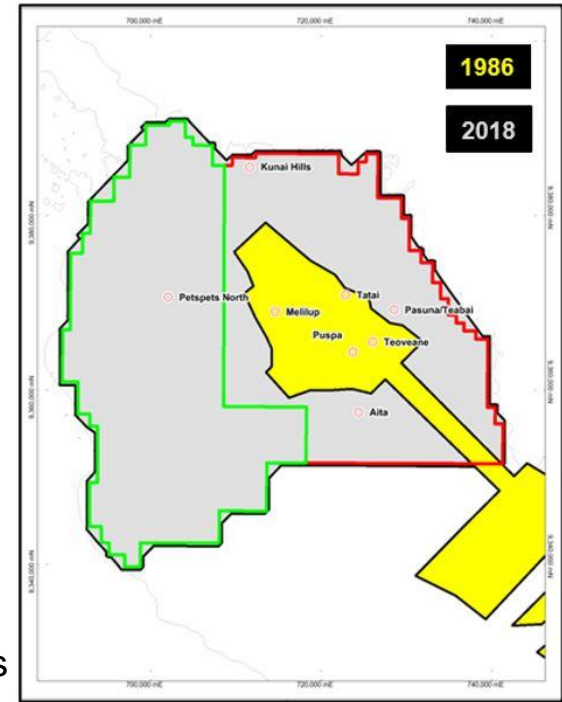
A number of these anomalies are consistent with existing targets derived from the collation of historic data and more recent sampling but several are new targets and importantly the total coverage of the

tenement areas has produced the first supporting evidence for porphyry copper targets in the western EL04.

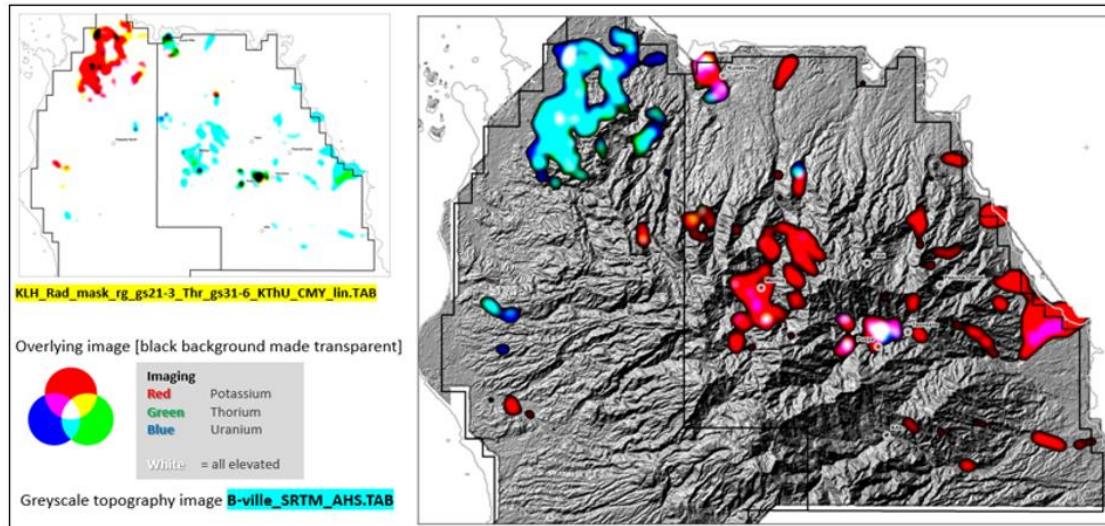
The targets were derived by applying filters to the magnetic and radiometric data and using discrete coincident anomalism combined with radial symmetry and depth persistence and rating these based on existing deposit model signatures.

Geophysical Survey

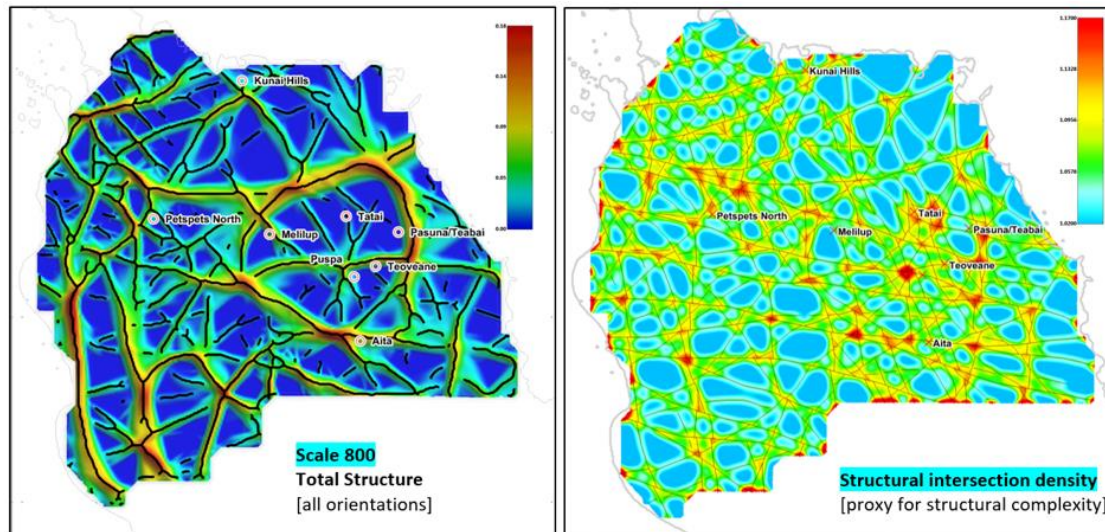
- First airborne geophysical survey conducted in Bougainville since 1987
- Survey covers 100% of the 1,704km² license areas EL03 and EL04
- Independent data analysis confirms the intrusive complex is larger than previously thought, with multiple shallower cupolas thrown up from the main dome
- **64 porphyry and epithermal targets identified across the area including 12 Priority 1 targets**
- First time geophysical targets have been generated in the west Tore area including two Priority 1 targets
- Independent correlation between geophysics and geochemistry highlights the robustness of the modelling and high prospectivity of the region



Developing the Data

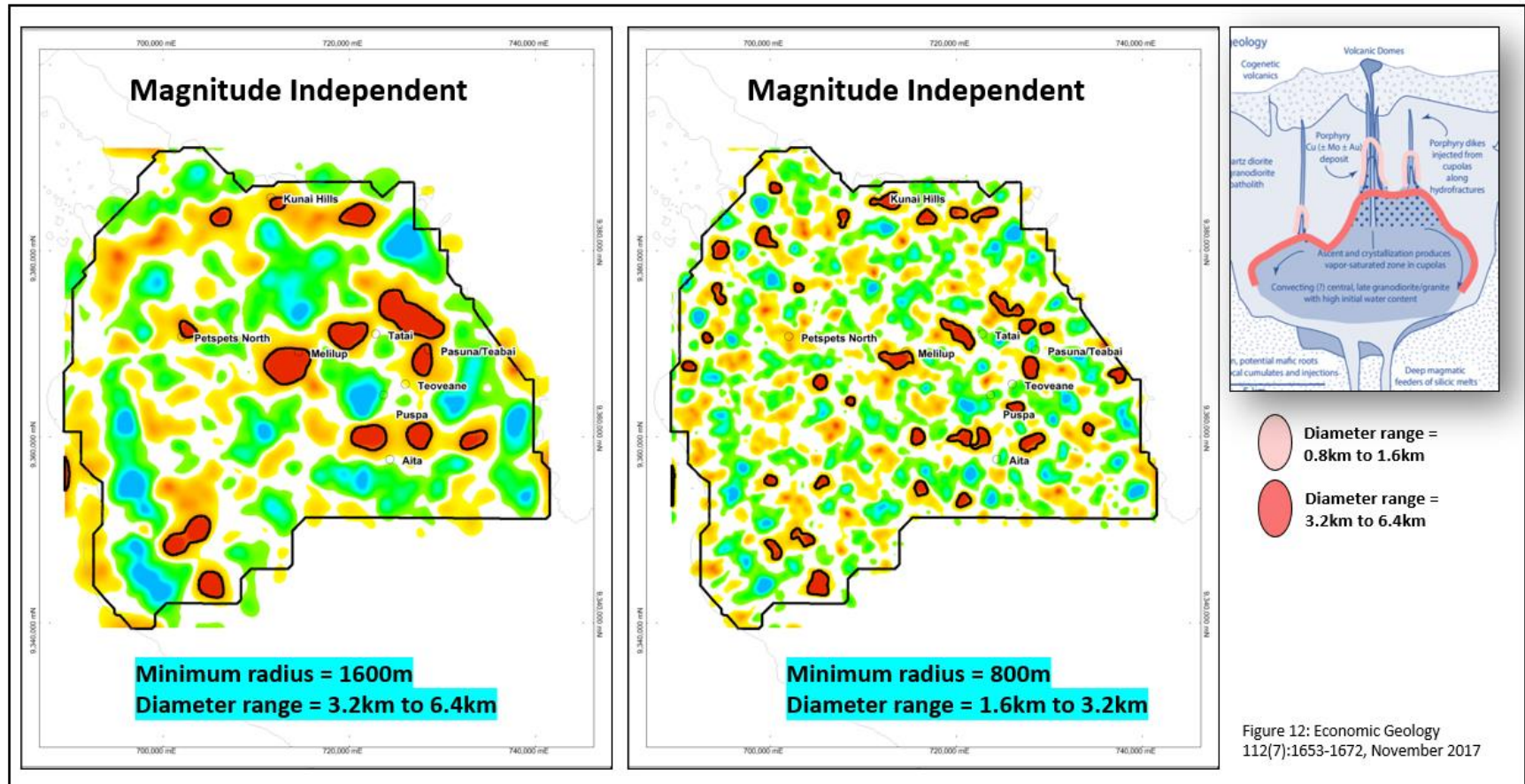


The combined ternary display of Potassium-Thorium-Uranium using a CMY colour scheme. RIGHT: the same radiometric image overlying the greyscale SRTM topography. Red shows where there is [relatively] anomalous Potassium, Pink where there is anomalous Potassium and Uranium, Cyan where there is anomalous Thorium and Uranium etc. White indicates an elevated response in all channels - Potassium, Thorium and Uranium.



Left: Coarse magnetic edges [scale 800 Fathom structure detection results using all orientations, input grid = RTP AGC]. Right = The structural intersection density image, used as a proxy for structural complexity. The structural framework layers were combined and rasterized, then a gaussian smoothing filter applied [size 61, standard deviation 9].

Developing the Data



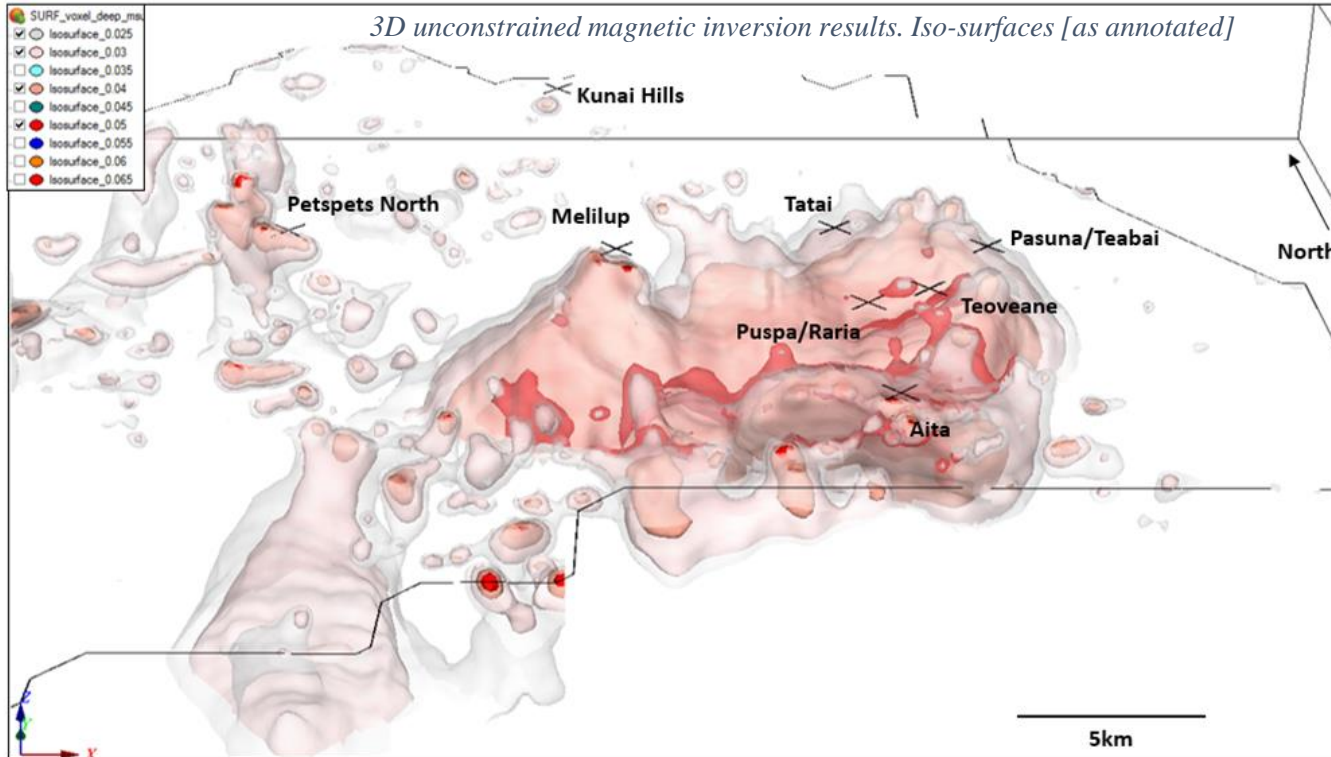
The radial symmetry of the magnetic data at various scales is tested to determine if stacked anomalies, consistent with intruded complexes, are persistent over a range of depths.

The varying radii represent different parts of the complex, with the smaller diameters indicating cupolas (potential porphyries) and the larger radii the magma base required for this style of deposit.

3D Slice Through

Looking North [0], 30 degree inclination

3D unconstrained magnetic inversion iso-surfaces displayed [0.025, 0.03, 0.04, 0.05 msus SI]



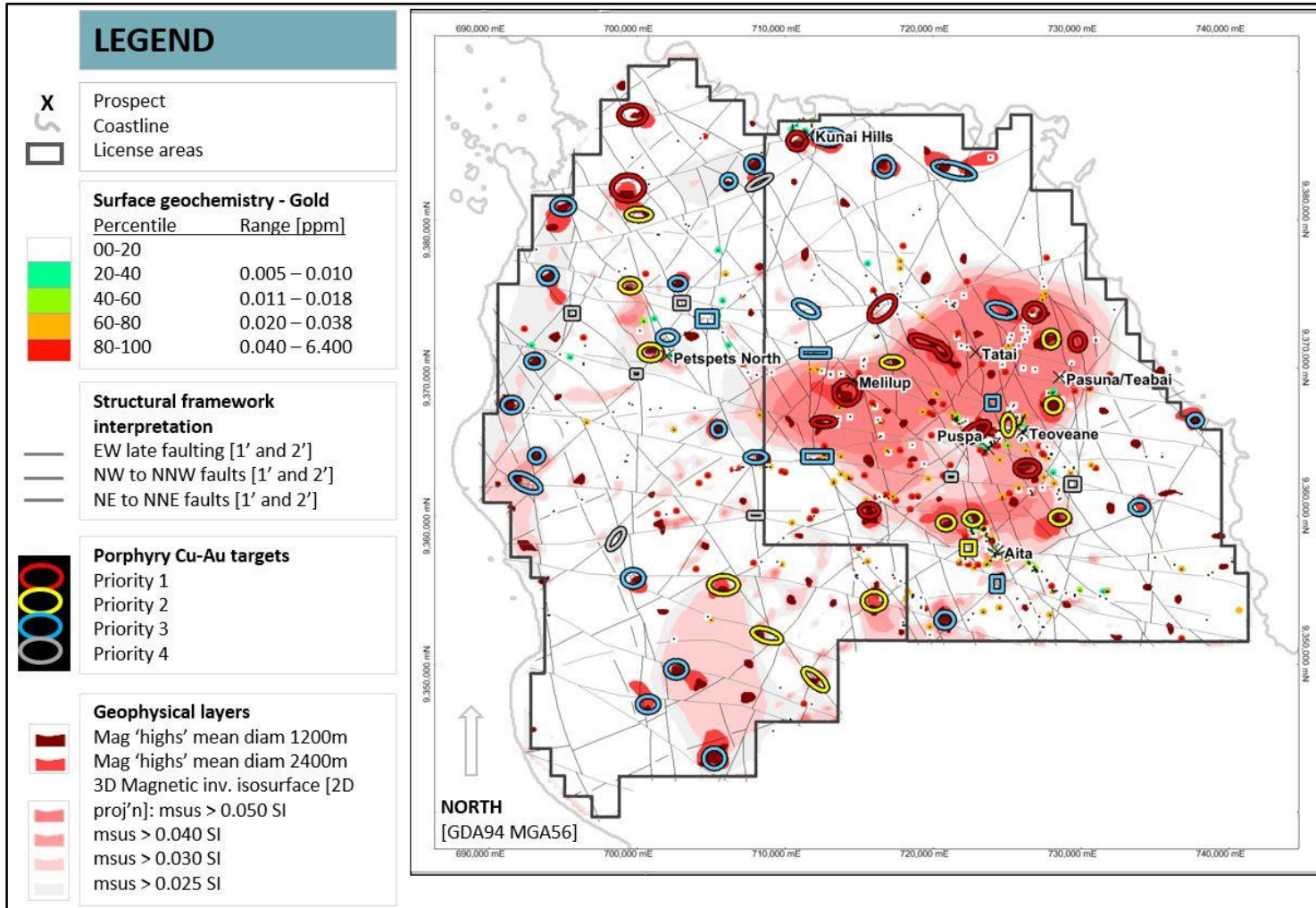
Deep cores are necessary as the parental magma or pathway for subsequent (much shallower) porphyry stocks/phases and potential porphyry and epithermal vein mineralisation. The inversion model produced clearly defines the intrusion complex, centred around Melilup, and to the west, possible pathways of deep vertical accretive structures.

The 3D iso-surfaces using four levels of intensity (magnetic susceptibility) have been used to represent the model. The grey is the lowest level and encompasses the greatest volume, the small red shape, located north west of Petspets, has the highest intensity.

The red zone represents the strongest magnetic response exhibited in the model. Economic porphyry deposits often occur within these strong discrete magnetic volumes; or on the gradients of these bodies (at Panguna and Tampakan for example).

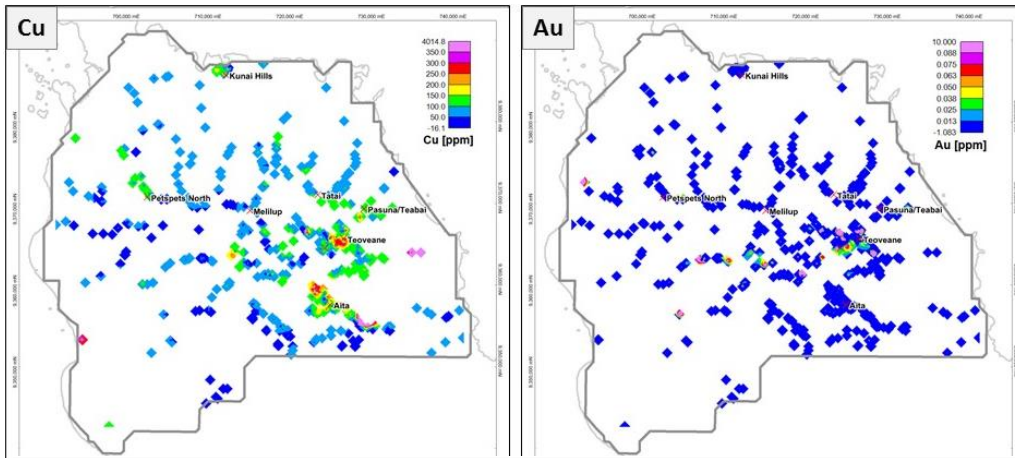
The iso-surfaces are less accurate at depth but show clearly where the magnetic intensity is centred. As the layers become shallower, they define potential pathways from underlying batholiths; and at the shallowest depths (pink to red zones) locate potential cupolas and obvious locations for field-oriented exploration.

The next phase



The next stage of analysis is to scrutinize these geophysical targets with the geochemistry data to upgrade or downgrade the targets and define a key set of field sites to visit for focussed exploration (ground geological mapping, 'ridge & spur' soils etc; before drilling).

Geochemistry



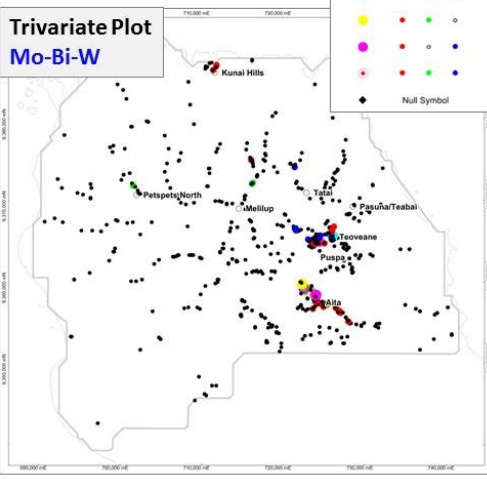
Early work is producing a set of data that when combined with the geophysical target data will allow for a better definition of the various styles of epithermal geology and will more closely focus the ongoing fieldwork.

The number of positive results within the database, despite the paucity of samples, is highlighting the regions potential with several areas standing out in preliminary analysis.

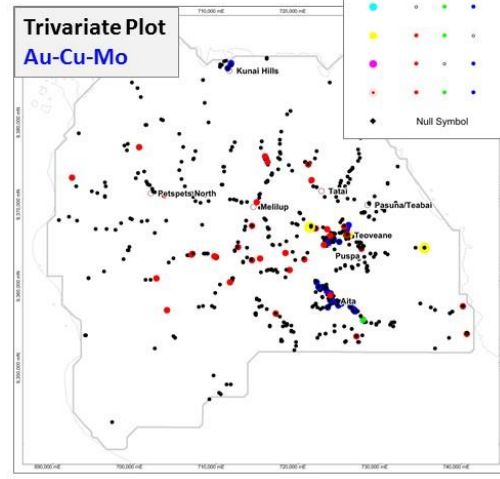
A desktop study has been commissioned and will be undertaken by Dr Steve Garwin in March.

GEOCHEMISTRY

It is worth looking at a couple of trivariate plots to see the distribution of key elements used for porphyry exploration. Here we have Moly-Bismuth-Tungsten.



Here we have Gold-Copper-Moly.



The expected result from this is a clearer understanding of the various profiles, at sampled locations, within the epithermal terrane and should produce a number of clear priority targets for future work, including the best potential project for future drilling.

Summary of exploration results to date

- Historical geophysical data and geochemistry results analysed and targets derived
- Initial fieldwork has confirmed historical geochemical anomalies and discovered new locations
- Improved access in late 2018 is resulting in more sampling and mapping and a better understanding of the mineralised locations
- Teoveane, Teosiriata and Baiano have all returned positive results
- Completed first airborne geophysical survey conducted in Bougainville since 1987
- Independent data analysis confirms the intrusive complex is larger than previously thought, with multiple shallower cupolas thrown up from the main dome
- 64 porphyry and epithermal targets identified across the area including 12 Priority 1 targets
- First time geophysical targets have been generated in the west Tore area including two Priority 1 targets
- Independent correlation between geophysics and geochemistry highlights the robustness of the modelling and high prospectivity of the region
- Independent assessment of geophysics and geochemistry commissioned
- First drill project expected in Q2, 2019

Q2/2019 Geological Activity

Planned exploration areas East

- Teosiriata – March
- Melilup – April
- Gitovea – April
- Melilup / Wasinobus – May
- Baiano/Turiviki - May

Planned exploration areas West

- Rapoma – March
- PetsPets North –March and April

Work toward drill site definition

- Review of all geochemistry (historic and recent) in conjunction with new geophysical modelling to locate potential cupolas and epithermal sites
- Rock chip sampling
- Infill stream sediment sampling focus on potential location

Kalia's Bougainville Proposition

- Positioned on Ring of Fire and Panguna an indicator of development potential
- **64 porphyry and epithermal targets** identified across the area including 12 Priority 1 targets
- Supportive landowners and government
 - Approved Environmental and Community Engagement Plans operating
 - All social licence processes are in place
- Management team with proven government, community and landowner relationships in Bougainville
- Clear geoscientific path to ground follow-up and commencement of drilling in Q2 2019
- Potential further opportunities

Corporate Snapshot

CAPITAL STRUCTURE

Shares on issue	2,514,347,391
Options on issue	394,500,000
Market capitalisation (@ A\$0.003 per share)	A\$7.54m
Cash on hand (28 February 2019)	A\$0.27m
Secured (undrawn) from total \$4 million loan facility (28 February 2019)	A\$0.25m

KEY PERSONNEL

Chairman	The Hon. David Johnston
Managing Director	Terry Larkan
Technical Director	Peter Batten
Non-Executive Director	Sean O'Brien
Comp. Secretary / CFO	Phillip Hartog

TOP 20 SHAREHOLDERS 14 March 2019

Name	Units	%
GLOBAL RESOURCES INVESTMENT	480,000,000	19.09
NIKOLAJS ZUKS	225,000,000	8.95
GLENEAGLE SECURITIES NOMINEES	122,905,985	4.89
KSLCORP PTY LTD	110,000,000	4.37
J P MORGAN NOMINEES AUSTRALIA	106,918,202	4.25
ENZED NOMINEES PTY LTD	75,301,205	2.99
ENZED NOMINEES PTY LTD	67,934,157	2.70
GREYWOOD HOLDINGS PTY LTD	62,000,000	2.47
MRS MELANIE THERESE VERHEGGEN	60,000,000	2.39
TYGOLA PTY LTD	55,150,000	2.19
PILLAGE INVESTMENTS PTY LTD	55,000,000	2.19
MAYSTAR PTY LTD	54,216,867	2.16
CARLA MICHELLE PTY LTD	45,031,988	1.79
JESSIKA ERIN PTY LTD	40,662,651	1.62
PETER BATTEN	36,144,578	1.44
FINROW LIMITED	31,200,000	1.24
LSAF HOLDINGS PTY LTD	30,000,000	1.19
MR JOHN MALCOLM BURRELL &	27,000,000	1.07
VANAVO PTY LIMITED	25,100,000	1.00
IAN SANDOVER & ASSOCIATES PTY	25,000,000	0.99
Total	1,734,565,633	68.99

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- **Topographic correction of magnetic data on rugged topography with application to Río Blanco-Los Bronces and El Teniente porphyry copper districts, Southern Andes, Chile.** Exploration Geophysics, 2018, 49, 595–607. Gonzalo et al., 2018;
- **Exploration and Discovery of Base – and Precious - Metal Deposits in the Circum - Pacific Region - a 2010 Perspective**, Sillitoe, R.H.