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

Kalia Limited (ASX: KLH)
December 2018
www.kaliagroup.com

Bougainville Mining Environment

- Autonomous Regional Government within PNG
- Supportive environment for exploration and mining
- Own Mining Act of 2015
- The Landowners own the mineral rights, not the State
- 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 of them covering 1,704 km^2
- Kalia is focused on the highly prospective area in the North of the island with supportive and engaged landowner base

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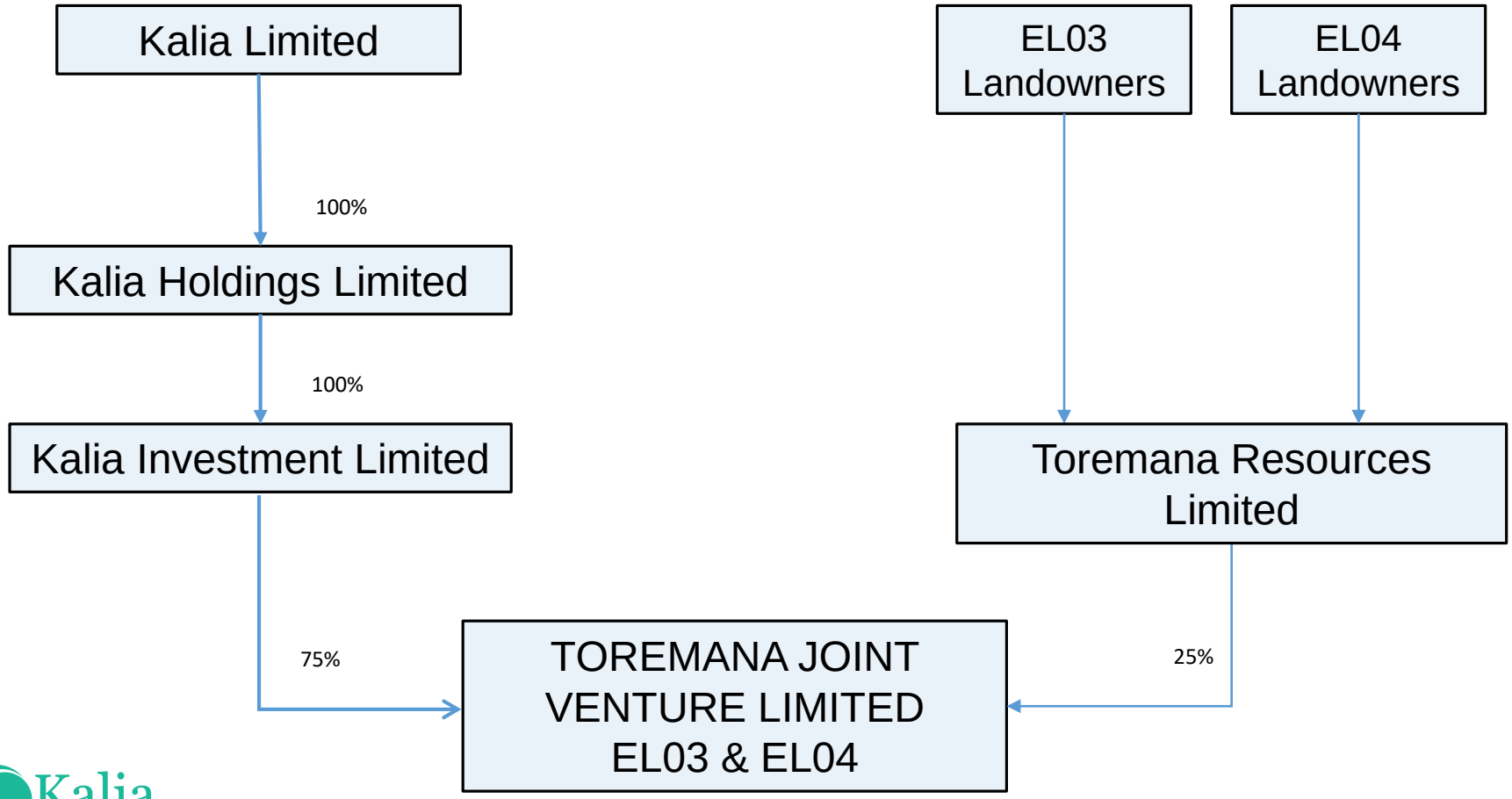
Tore Joint Venture Limited 1-119206

UNITY – COMMITMENT – ACTION – RESPONSIBLITY - RESULTS



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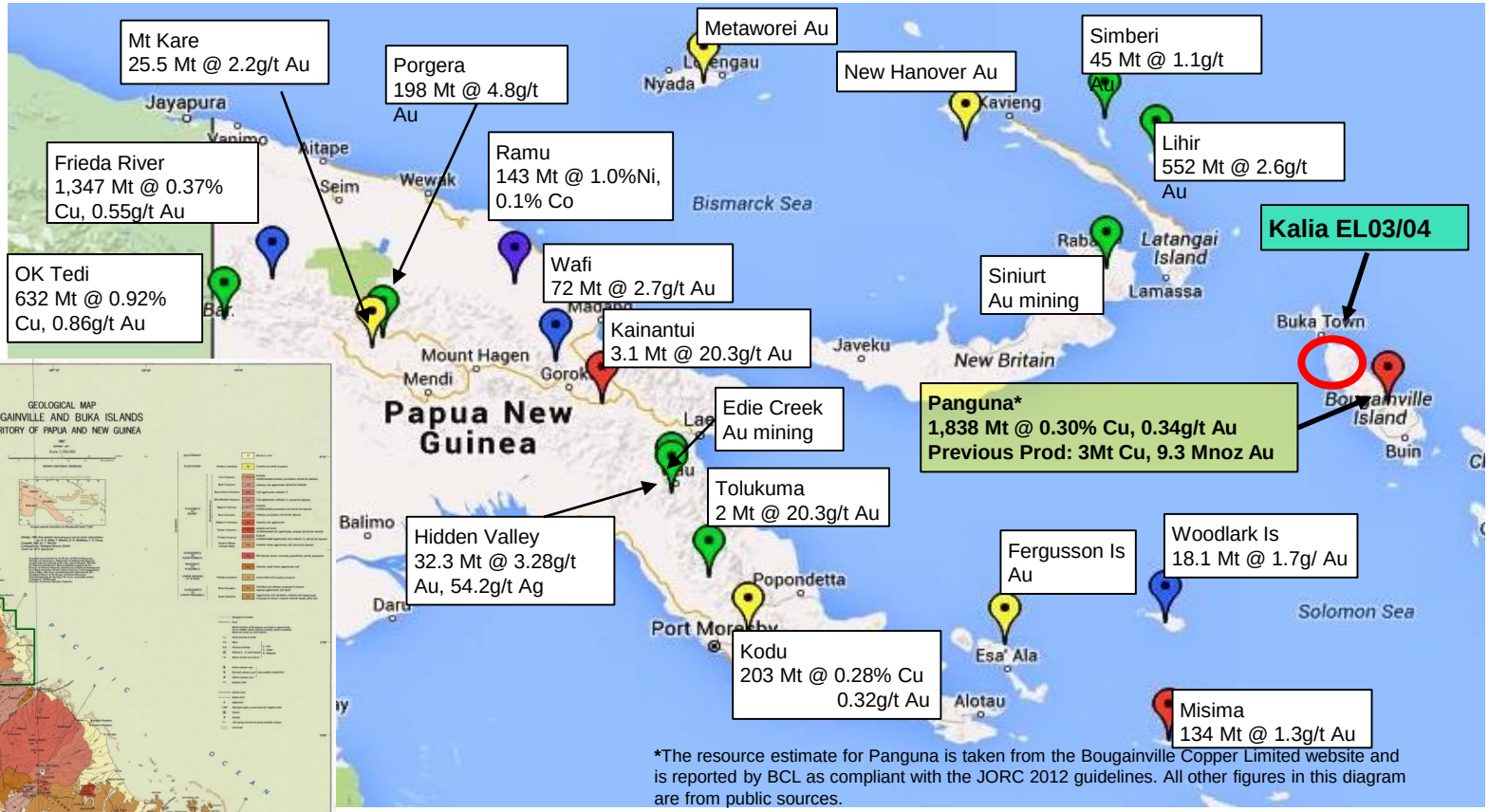
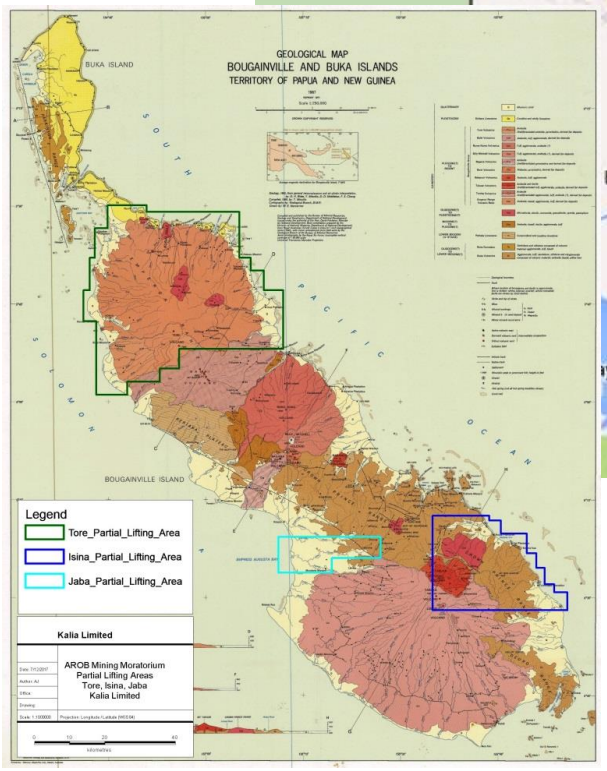
Bougainville on the "Pacific Ring of Fire"





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

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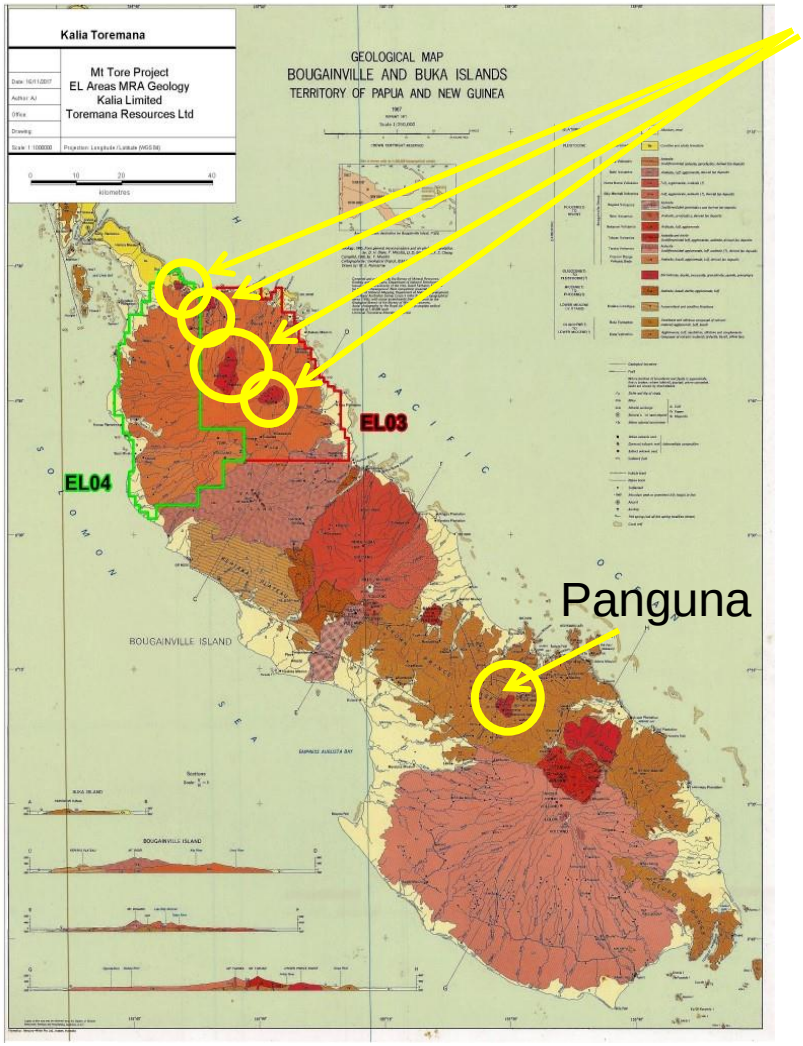
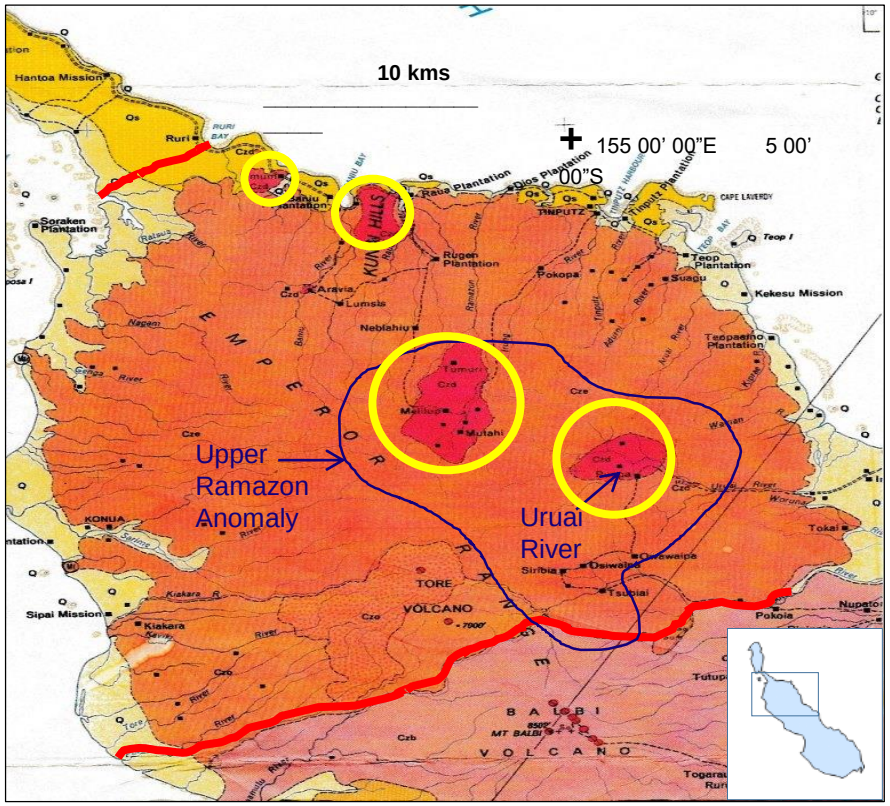
4 MRA 1:250,000 Geology in TJV EL areas



- Panguna styles intrusives identified on EL03
- Major anomalous province identified – The Upper Ramazon Anomaly



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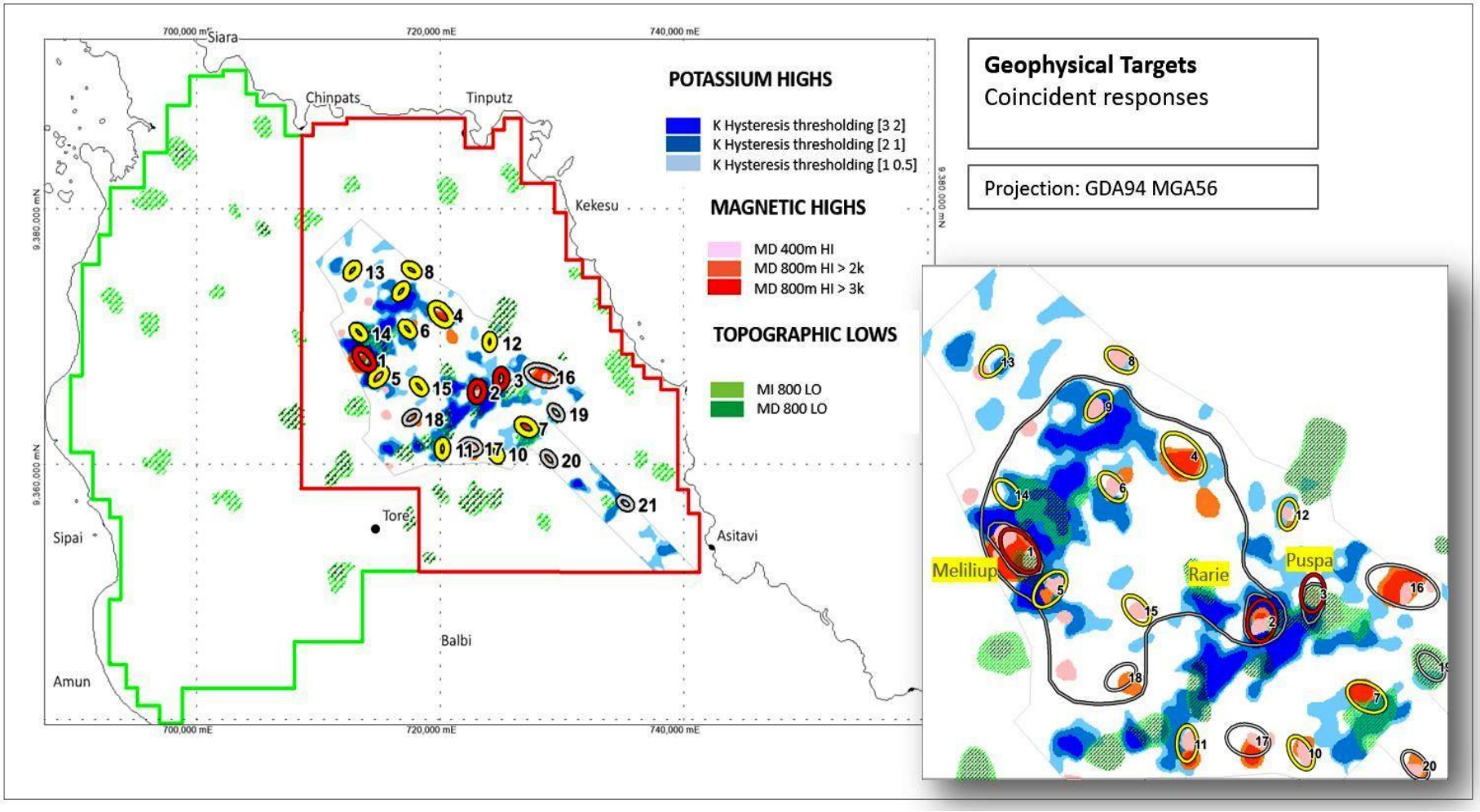
Initial Target Zones Defined



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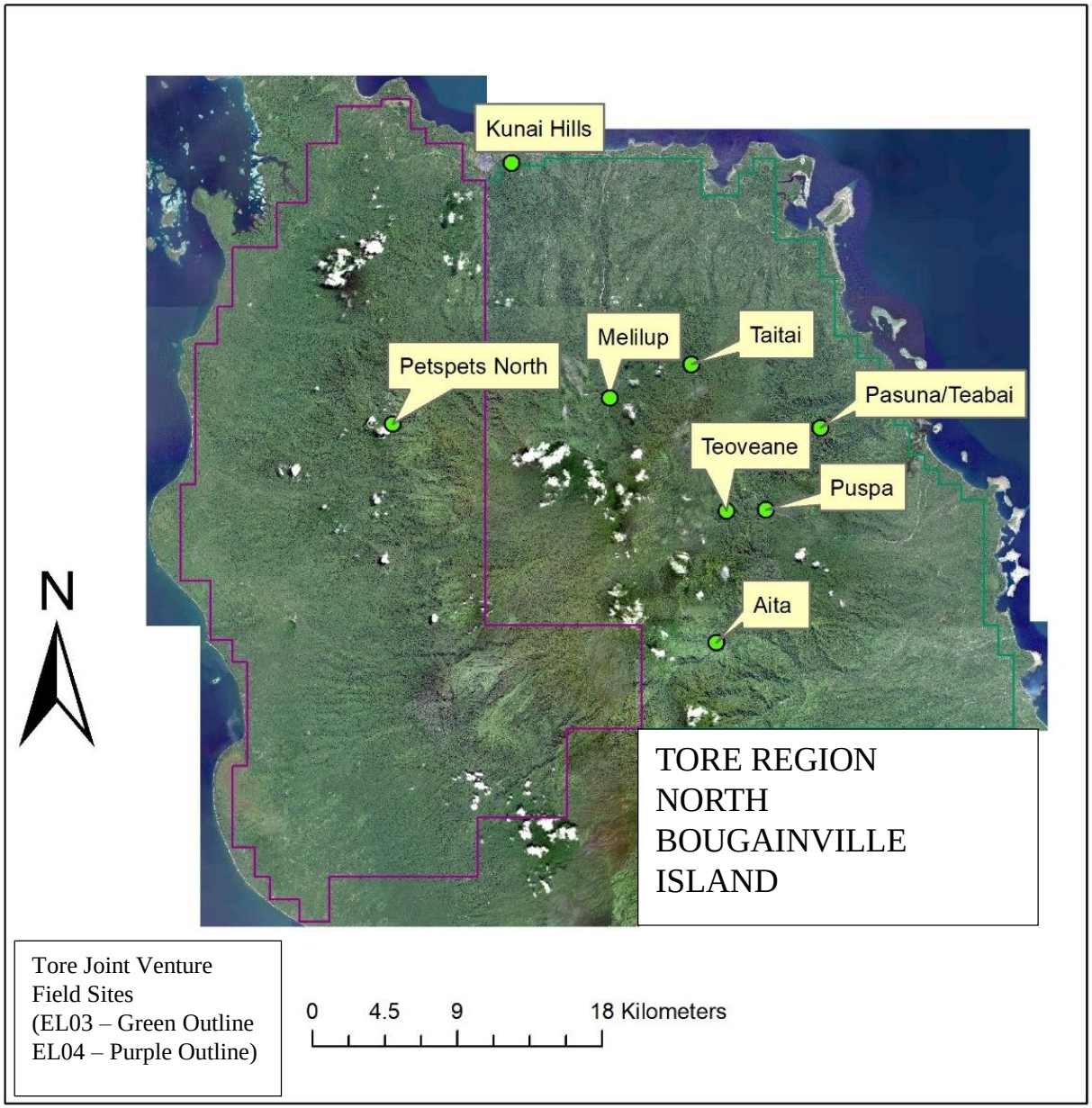
TJV Exploration expedition areas to date



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Exploration results – Teoveane 1

Two expeditions to access the desktop study derived priority target at Rarie/Puspa.

Trips curtailed with heavy rain preventing physical access on one trip and cultural considerations diverting the second trip.

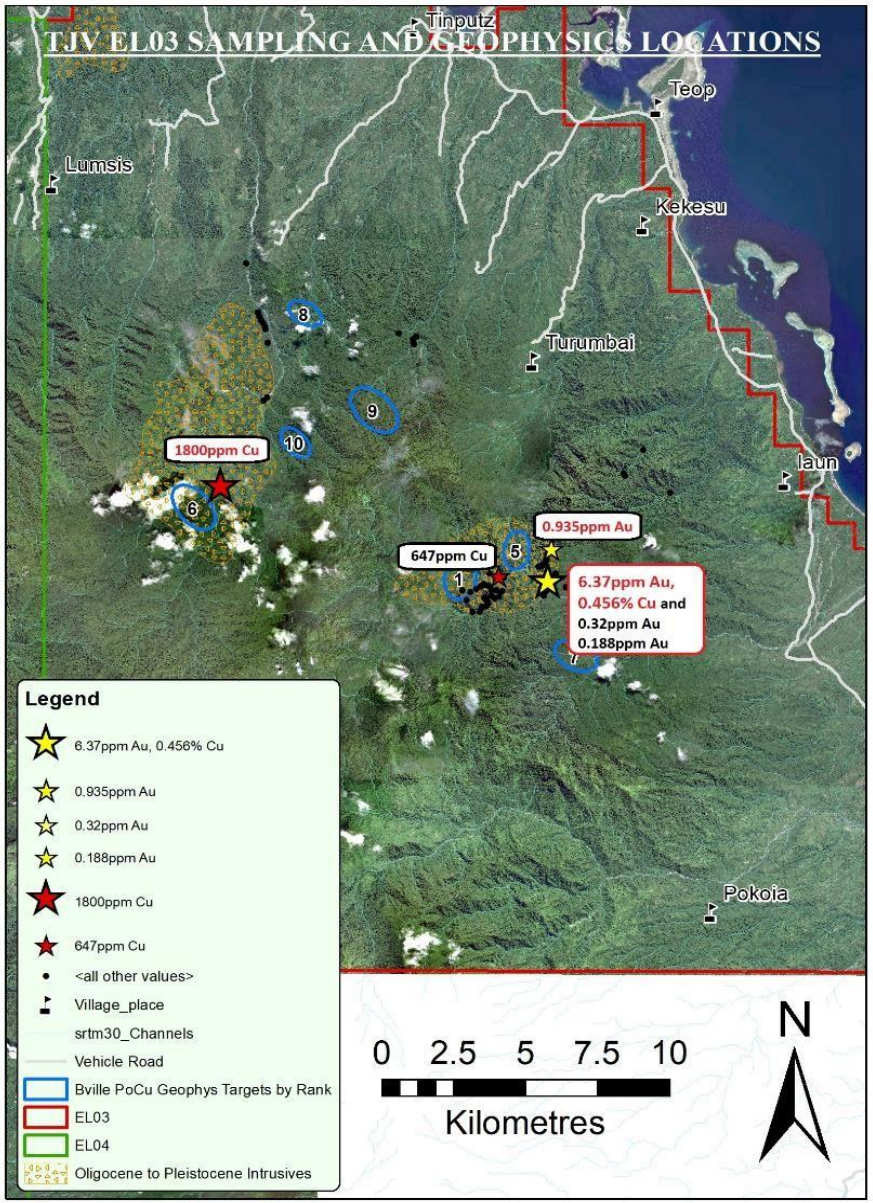
Samples from the Teoveane location enroute to Rarie/Puspa on 1st trip returned assay results that warranted a revisit on the second trip.

First trip rockchip sample returned a gold grade of 0.19 gpt Au from an altered diorite/granodiorite, an anomaly in the right rocks.

The results of the second sampling programme were also positive

- enhancing the extent of the original outcrop from anomalous gold grades,
- one sample returned a good copper result from the original outcrop
- more significantly a second and similar outcrop was located 1.1 kilometres from the original.

Sampling at the second outcrop returned anomalous gold and elevated copper results from rockchips.



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Exploration results – Teoveane 2

The alteration of the diorite outcrop appears zoned with epidote at the contact (left hand side of outcrop image below). Mineralogy changes to less epidote and introduction of magnetite (and biotite?).

This is the location of rock chip from outcrop, sample KTR00077, that assayed at **6.37 ppm Au and 0.45% Cu**

The field trip extended upstream to the north of this outcrop where, at a location 1.1km to the north of sample KTR00077 another altered diorite outcrop was sampled with one sample (KTR00112) anomalous with a gold grade of 0.935 ppm Au and elevated copper at 565 ppm Cu (0.05% Cu).

All sampling was rockchip from outcrop.

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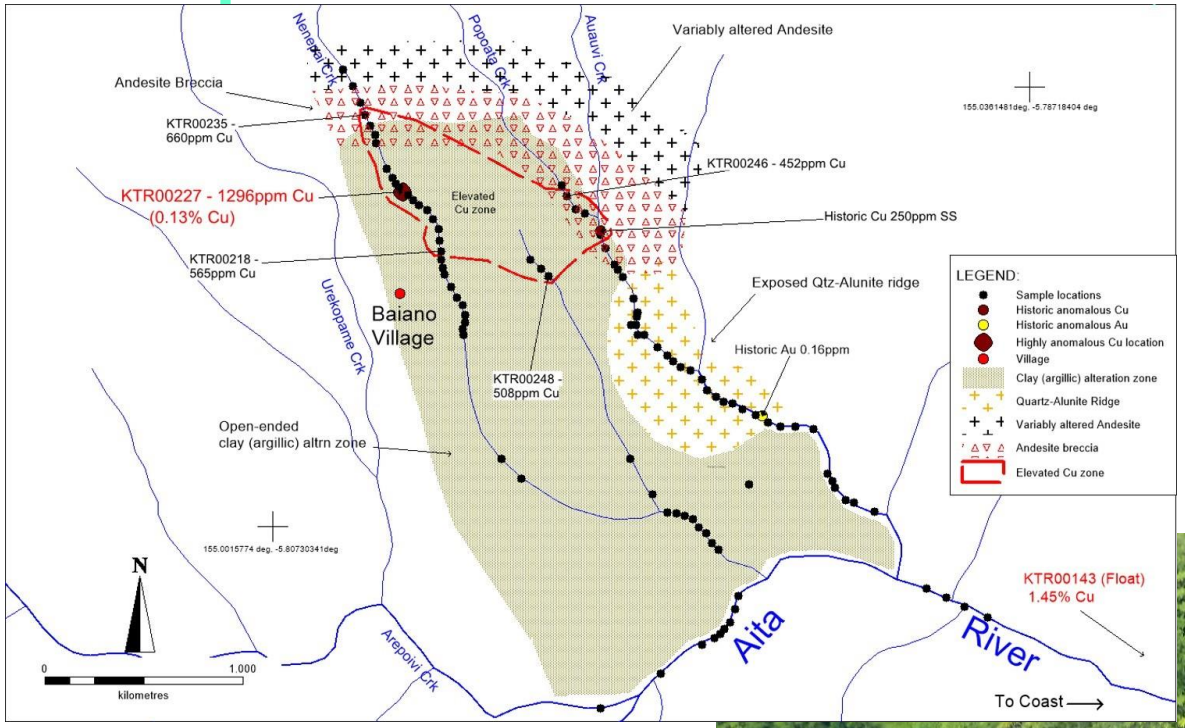
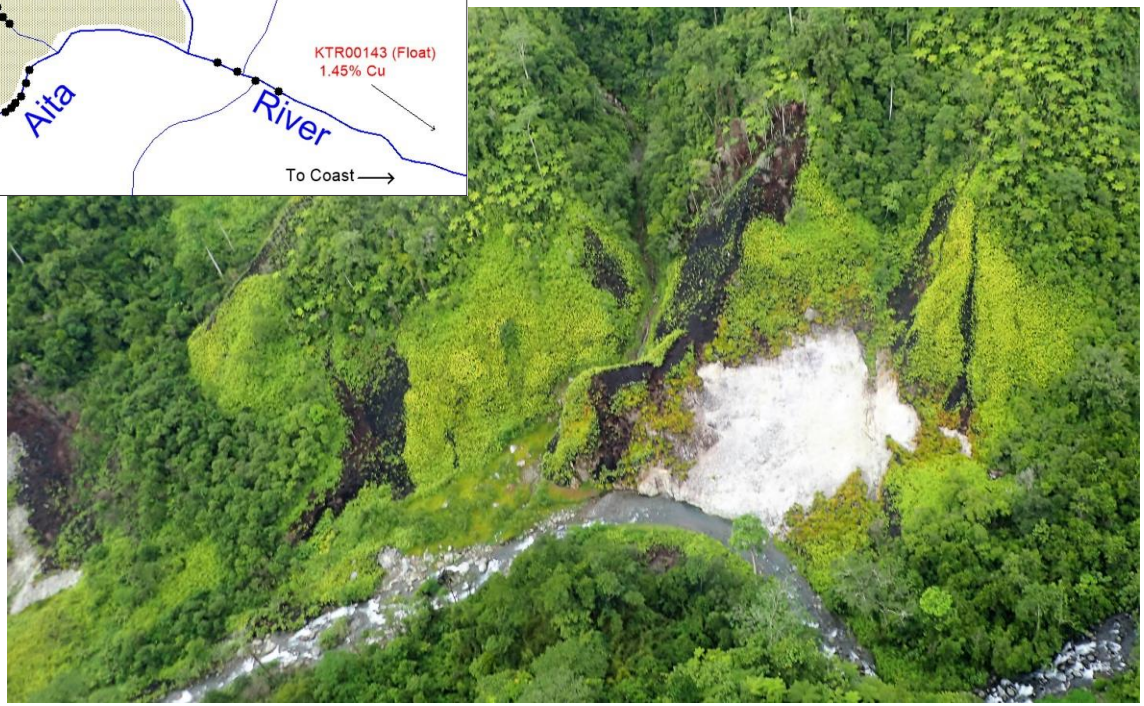
Exploration results – Baiano Area, Aita



Three field trips have been completed in the Aita region.

Access was negotiated to the north of the district where historic sampling indicated epithermal alteration with elevated copper signatures.

Mapping of the area has shown what appears to be a collapsed volcanic vent structure, with exposed quartz and alunite ridges. Sampling has defined a **1000m x 400m of elevated copper anomalism** in rock chips.



River float sampling, at Aita, produced the **highest grade copper in the North Bougainville region of 1.45% Cu.**

Turiviki, site of an historic 2.20 gpt Au result, is now clear for access and sampling.

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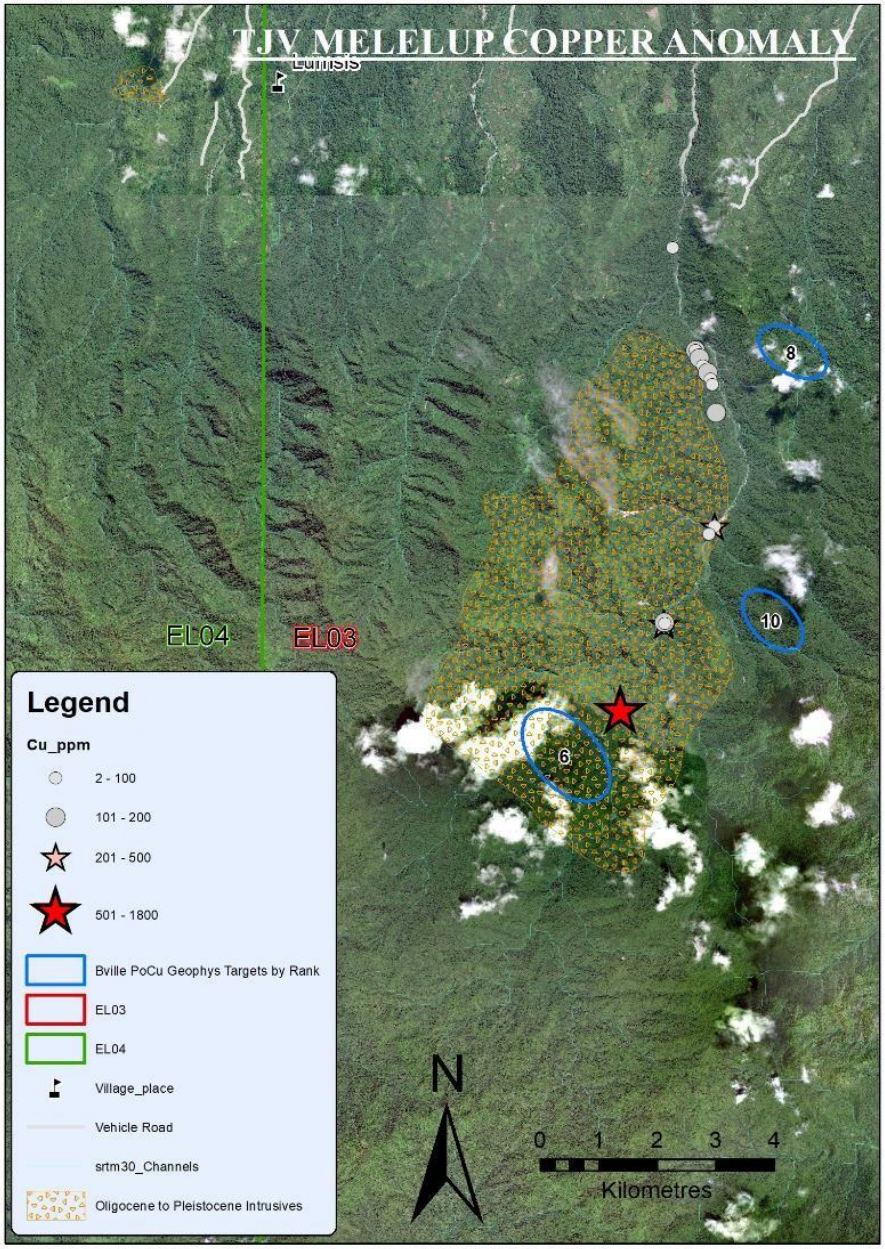
Exploration results - Melilup

Melilup has been an site of interest from the desktop study stage.

Only one field trip was possible prior to the need to renegotiate access with separate landowner groups. This trip did not reach the location of highest order geophysical anomaly for this region (#6 in picture).

Elevated copper results were returned for all samples within the projected intrusive zone of the sampling programme.

With the highest copper grade (#399621, 1800ppm Cu, see slide 9) resulting from sampling directly below the #6 location.



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Other geological fieldwork to date

Expeditions have been undertaken to the following areas:

- The **Teabai** area of Toanita Teop
  - Rocks presented by landowners reportedly from this area contained copper oxides
  - Reported alluvial gold from river in region
  - Geological samples have returned base mineral (copper) results returned limited elevated results
- **Kunai Hills** is an identified geophysical anomaly with no historic geochemistry
  - Geologists found minimal material of interest to sample
  - Assay of sampled material produced no geochemistry of interest
- **PetsPets** has two distinct areas (north and south) with historic geochemistry results for gold but has no existing geophysical data – new geophysics will assist in targeting exploration activity.
  - Geologists aimed to reach PetsPets north target area
  - Did not reach target due to challenging terrain
  - Samples collected enroute returned nothing of interest

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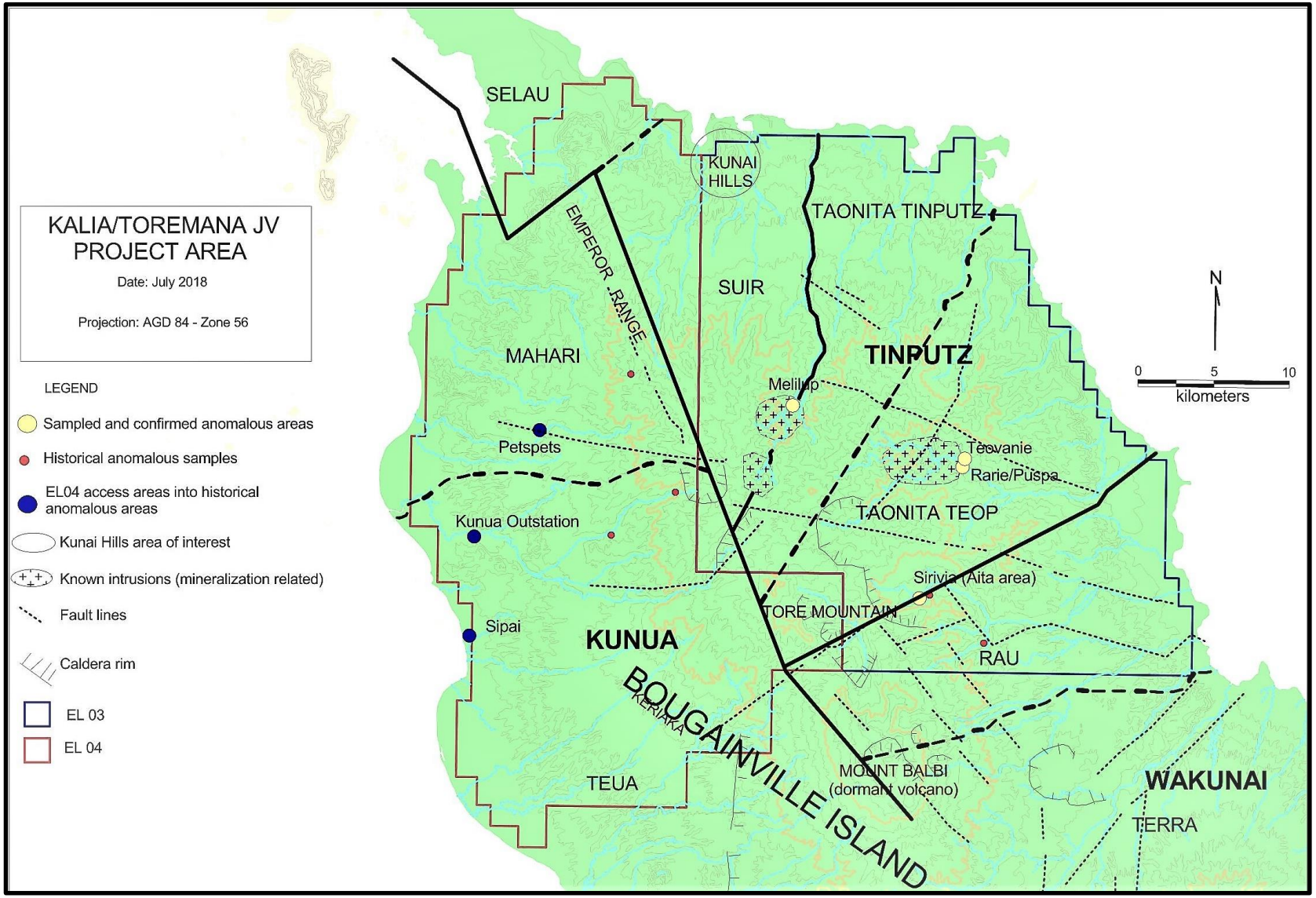
Orientation Map – pre updated Geophysics



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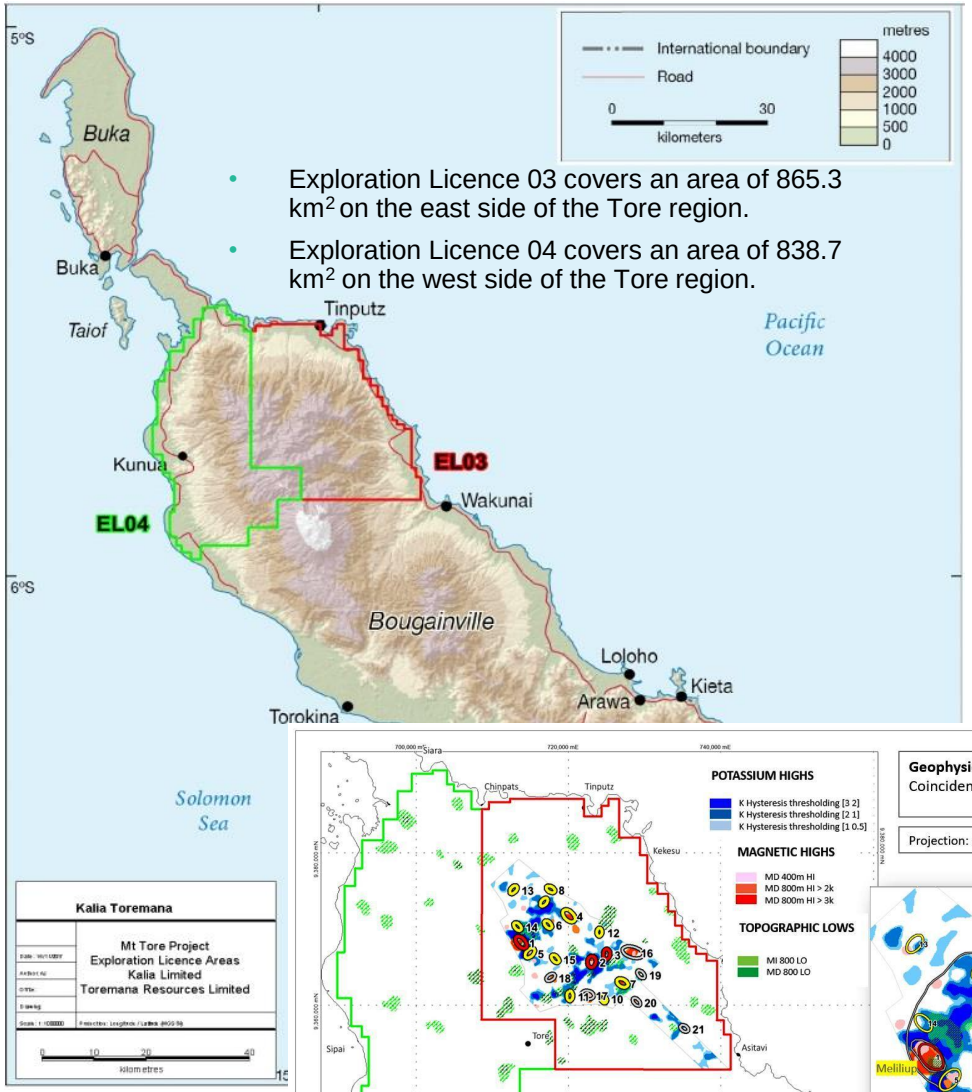
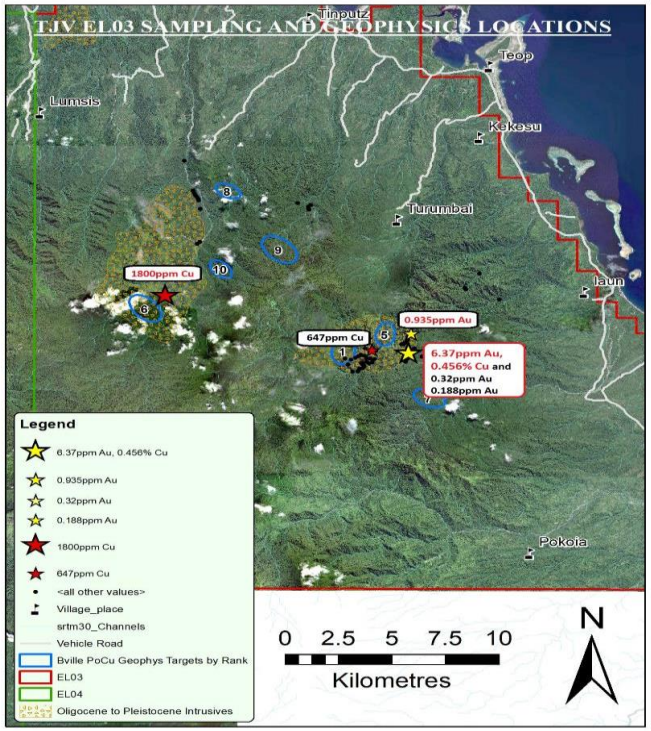
Summary TJV Lease Geology



- Exploration Licence 03 covers an area of 865.3 km^2 on the east side of the Tore region.
- Exploration Licence 04 covers an area of 838.7 km^2 on the west side of the Tore region.



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Planned Geological Activity

Current planned exploration areas

- Aita – Turiviki, sampling at landslide
- Aita – Baiano 1000m x 400m elevated copper anomalism
- Melilup – geological intrusion and elevated copper results
- Teoveane – alteration zone with sampled Au ~6g/t
- Rarie / Puspa – intrusion with historical Cu and Au anomalies

Geophysical Survey

- 10,636 line kilomteres of data collected
- 100% complete
- Data levelling complete December 2018
- Data analysis complete December 2018
- Geologist interpretation and reporting January 2019

Revised exploration plan based on geophysics and historical geochemical results January 2019

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Kalia's Bougainville Proposition

- Positioned on Ring of Fire and Panguna an indicator of development potential
  - Resources only available since May 2017
  - 1,704 km^2 under 2 exploration licences
  - Historical geochemical and geophysical study data obtained and reworked showing good potential
  - Targets identified off historical work and exploration underway
- 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
- Huge potential upside – analysis of geophysics covering whole licence area due on completion of programme in 2018
- Gateway to further opportunities

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References

- **Geology of Bougainville and Buka Islands, New Guinea,** Blake, D.H. and Miezitis, Y., 1967.
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- **Report No. 3, Interpretation of Aerogeophysical data and followup Aerogeophysical anomalies on the island of Bougainville, Papua New Guinea, text volume and Appendix I.** Dr. D. Bering, Prof. Dr. W. Bosum, Dr. K. Busch, F. Plattetschlager, Dr. D. Rammlmair, Dr. R. Robling, B. Stroheker, R. Sumaiang, 1990. (Federal Institute for Geosciences and Natural Resources, Federal Republic of Germany.)
- **Memoir 16: The Geology and Mineral Resources of Bougainville and Buka Islands, Papua New Guinea,** Rogerson, R.J., Hilyard, D.B., Finlayson, E.J., Johnson, R.W. and McKee, C.O., 1989 (Geological Survey of PNG.)
- **Report for the Fourth Field Trip for the North Bougainville Collaborative Research Project, 13th February to 07th March 2012, Version 2.** Tsiperau, C.U., 2012 (Unpublished).

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