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ASX:TOK

ASX Announcement

13 November 2023

Taula Vein Exploration Results and Tolukuma Near Mine Southeastern Gold Targets

HIGHLIGHTS:

- **Recent exploration by Tolu Minerals Limited confirms continuity of epithermal gold mineralisation in the Tolukuma structural corridor for at least 5km south southeast from the Tolukuma gold mine.**
- **Exploration Gold targets identified 1.5 to 3.2km southeast of the Tolukuma gold mine include Miliahamba/Kunda, Taula, Sisimonda and North Kunda.**
- **Results from the most recent trench and rock sampling by Tolu Minerals Limited at the Taula vein returned 1m @ 26.7 g/t Au + 98.5 g/t Ag within a broader mineralised zone of 2m @ 13.7 g/t Au + 52.3 g/t Ag.**
- **These most recent exploration results extend the gold and silver mineralisation of the Taula gold and silver vein system from a 750 m strike length to over a 1300 m strike length, demonstrating the significant potential to develop numerous near mine gold targets.**

Iain Macpherson, MD & CEO of Tolu Minerals Ltd. said:

"The notable results from recent exploration of the Southern extensions of the previously mined mineralisation on TGM are compelling confirmation of the Company's vision to grow a substantial high-grade gold/silver Mineral Resource. The expanded Mineral Resource will initially be centred on and immediately around the Tolukuma gold mine, but these results also support the undoubted potential of the broader Tolukuma structure.

Targeted exploration work will continue across the Company's substantial portfolio supported by the refurbishment of Tolukuma gold mine and I look forward to briefing the market on further developments shortly."

Tolu Minerals Limited (TML or the **Company)** is pleased to announce the results from its most recent exploration of the Taula gold and silver vein comprising trench and rock samples. The Taula vein occurs 3km south-southeast of the Tolukuma gold mine (**TGM**) in Papua New Guinea on EL2531 (Figure 1).

A total of 8 trenches were completed (Figure 2) during the 2023 Taula exploration program (TT17-21 and TT23-25 with a total **108** channel samples taken along with **34** rock samples.

Trench Results include:

- **1m @ 26.7 g/t Au + 98.5 g/t Ag** within a broader mineralised zone of **2m @ 13.7 g/t Au + 52.3 g/t Ag** within trench TT17 of quartz veins and quartz stringers
- 1m @ 1.20 g/t Au within trench TT25 of altered quartz veins
- 1m @ 1.06 g/t Au + 6.6 g/t Ag within trench TT24 of altered quartz vein stringers

Results from the 34 rock samples received include:

- 2.08 g/t Au + 14.9 g/t Ag, 0.45 g/t Au + 10.1 g/t Ag and 0.53 g/t Au + 7.4 g/t Ag

These results extend gold and silver mineralisation at surface from 750m strike length to over a 1300m strike length, demonstrating the potential to develop significant near mine gold targets.

Historical drilling at Taula totals 1,315.75 metres with results including:

- Hole SSD003 **3.0m @ 16.19 g/t Au** from 23m
- Hole SSD008 5.3m @ 7.19 g/t Au from37.6m
- Hole SSD010 **1.7m @ 12.55 g/t Au** from 31.1m
- Hole SSD011 5.3m @ 8.47 g/t Au from 66m

Gold Targets Southeast of the Tolukuma Gold Mine

The Tolukuma gold-silver mineralisation is hosted in a system of NNW, NW to SSE, SE trending fissure veins controlled by the Tolukuma Fault (Figure 1). Other major regional controlling structures parallel to the Tolukuma Fault include the Kimono, Saki and Ijav Faults which are in turn sub-parallel to the regionally significant Owen Stanley Fault.

The Tolukuma Fault is the main vein from which several sub-parallel and cross or splay veins have hosted gold mineralisation within ML104. Historic mining from 1995 to 2015 has taken place on the Tolukuma, Tolimi, Gulbadi, Tinabar, Zine and X-Veins over a strike length of 1,200m within ML104, but these results confirm continuity beyond the Southern boundary into TML's EL2531.

Surface and underground drilling has been carried out on several veins immediately adjacent to the mine workings, namely, the Fundoot, Degot, Gulbadi Red and Mystery veins. These veins remain undeveloped and currently host an inferred resource of 133koz Au* and are readily accessible from the existing underground infrastructure (* refer ASX Announcement dated 9 November 2023, Prospectus p173).

The mineralised Tolukuma Fault extends a further 4km to the south-southeast where several gold bearing splays and sub-parallel veins have had limited exploration in the past, including Miliahamba (Kunda), Kunda North, Taula and Sisimonda (Figures 1 to 3). Miliahamba, Taula and Sisimonda have had first pass drill testing. The Aivololop, Kagam and Waleb structures have seen no exploration to date.

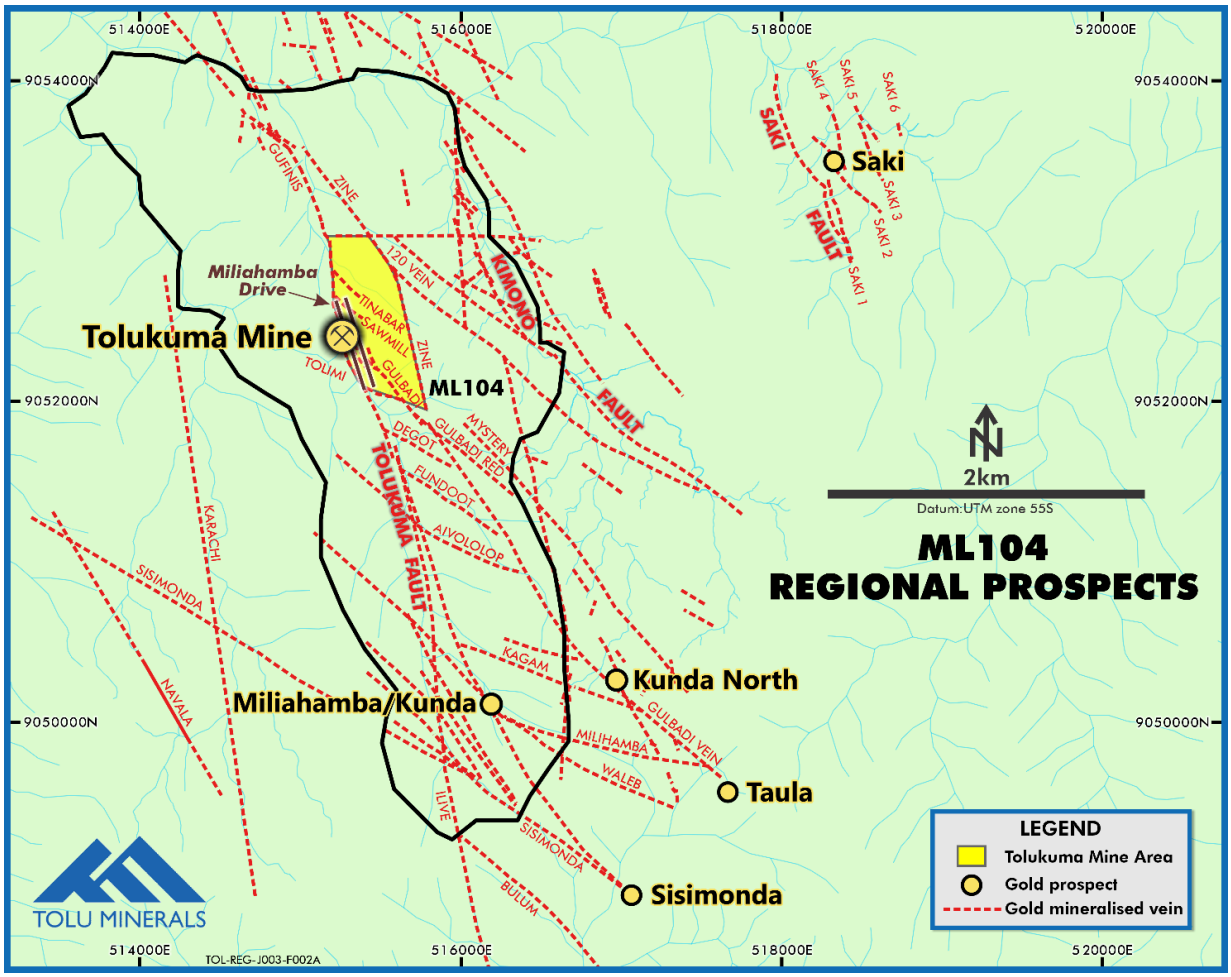

Figure 1: Tolu Minerals Ltd Exploration Targets Southeast of the Tolukuma Gold Mine

Taula Vein (EL2531)

Taula Vein is located approximately 1.7 km ESE from Miliahamba and about 3 km SSE from TGM (Figures 1 & 2). Taula is a 1-8m wide structure comprising quartz-sulphide-manganese-limonite vein with altered and brecciated wall rock. Historical rock float samples returned **25.8**, 4.4 & 1.53 g/t Au. Channel sampling of the discovery outcrop returned 5.3m @ 6.5 g/t Au, **including 3.0m @ 11.23 g/t Au.**

Follow-up fieldwork and drilling work by TGM between 2002-2004 confirmed the high- grade nature of the Taula Vein (refer to ASX:LNR Announcement dated 5 September 2019).

Rock chip results include: **118.0, 66.6** and 4.2 g/t Au.

Best trench highlights include: **1.0m @ 80.5 g/t Au and 1.2m @ 1,041.2 g/t Au.**

TGM drilled thirteen holes at Taula (SSD001-013) covering a strike distance of 300m. Drill highlights include:

- SSD002: 6.0m @ 3.9 g/t Au from 18.5m
- SSD003: **3.0m @ 16.19 g/t Au** from 23.0m
- SSD008: 5.3m @ 7.19 g/t Au from 37.6m incl.
  1.8m @ 18.8 g/t Au
- SSD009: 2.0m @ 3.21 g/t Au from 61.6m
  1.8m @ 3.21 g/t Au from73.2m
  2.0m @ 5.28 g/t Au from76.5m
- SSD010: **1.7m @ 12.55 g/t Au** from 31.1m
- SSD011: 4.2m @ 8.47 g/t Au from 66.0m

The Taula vein occurs as a 1m to 8m wide structure which trends NNW, NW to SSE, SE and dips steeply to the SW. Frontier Copper (PNG) Limited (**Frontier**) (2021-2022) and TML (2023) have mapped altered diorite intrusives hosting the Taula vein that were previously not identified. Weak porphyry style alteration was mapped in the intrusive in two separate areas at Taula by Frontier in 2021. Frontier's work traced the Taula vein for 750m through trenching. TML has extended the Taula vein by a further 600m to the SE with additional trenching increasing the known strike length to more than 1300m and the structure remains open ended to the SE.

Rock and trench assays from Frontier's work are shown in Figure 2 with historical geochemistry highlights (in green). Rock and trench assays from TML's 2023 work have been received (Appendix A and B) and follow up drilling is planned within the NW segment of the Taula vein.

These most recent exploration results extend the gold and silver mineralisation of the Taula gold and silver vein system from a 750 m strike length to over a 1300 m strike length, demonstrating the significant potential to develop numerous near mine gold targets.

A total of 8 hand trenches were completed (Figure 2) during the 2023 Taula exploration program (TT17-21 and TT23-25) with a total 108 channel samples taken along with 34 rock samples.

Significant trench Results include **1m @ 26.7 g/t Au + 98. 5 g/t Ag** with best rock sample results of 2.08g/t Au + 14.9g/t Ag (Table 1 and 2).

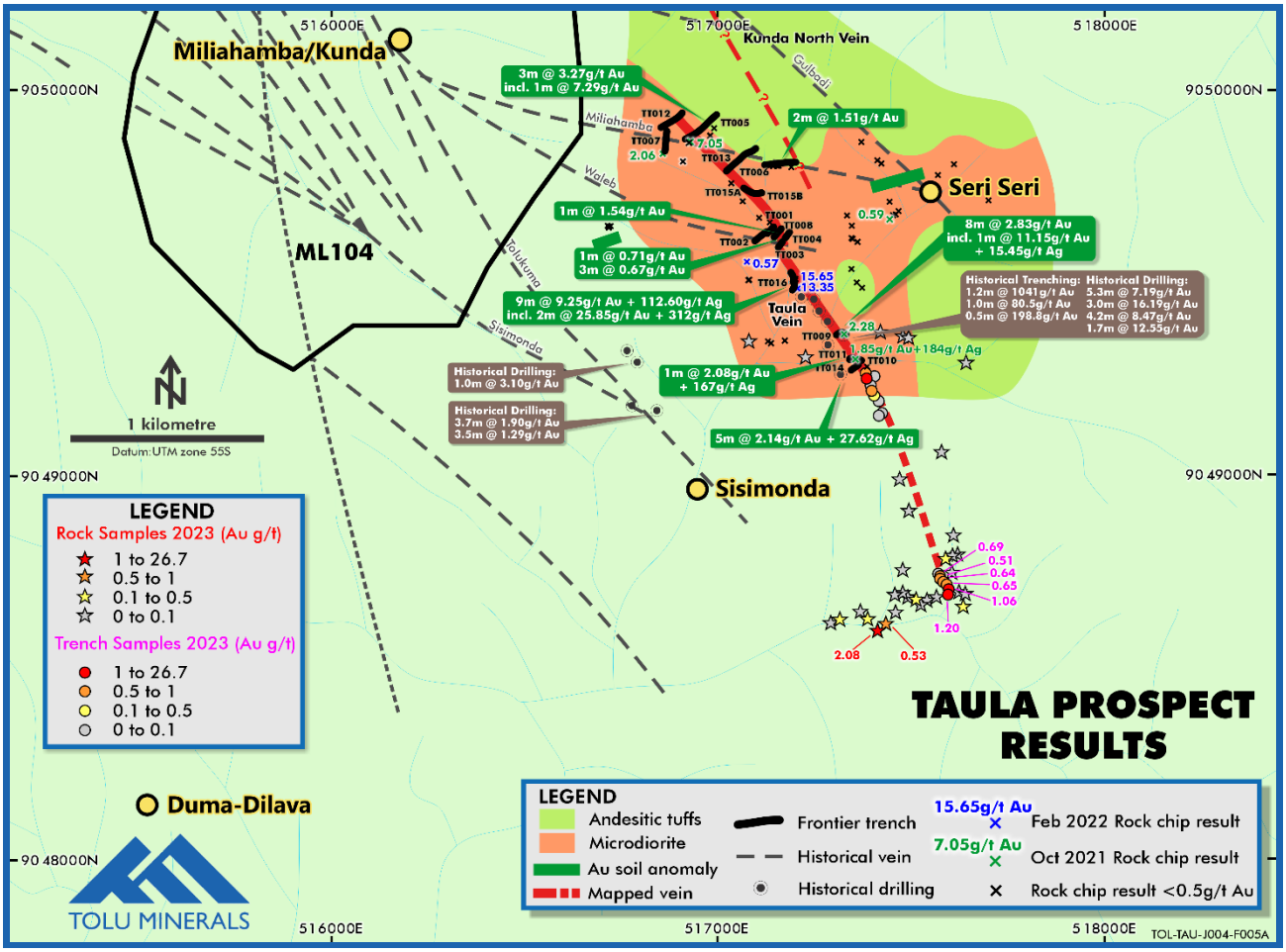

Figure 2: Taula Prospect Trench and Rock Sample Highlights

Table 2: Taula Significant Trench Intersections from Exploration by TML (refer to Appendix A)

Trench ID	Intersection (0.5g/t Au cut-off)	Geology Description
TT17	2m @ 13.7 g/t Au + 51.3 g/t Ag including, **1m @ 26.7 g/t Au + 98.5 g/t Ag**	Massive to coarse grained saccharoidal quartz vein with minor quartz vein stringers.
TT19	3m @ 0.52 g/t Au	Altered quartz vein fragments with 3-5mm thick comb quartz vein stringers.
TT21	1m @ 0.56 g/t Au	Altered quartz vein and drusy quartz growth within irregular vughs.
TT24	3m @ 0.50 g/t Au + 22.8 g/t Ag	Oxidized and fractured comb-drusy quartz vein with arsenopyrite disseminated 25-30% throughout the andesitic wall rock.
TT24	1m @ 0.69 g/t Au + 16.2 g/t Ag	Gossanous andesite with moderate alteration; late silica veinlets (2-3mm thick) along with argillic alteration.
TT25	1m @ 1.20 g/t Au	Fine-med grained bleached sericite-kaolinite-clay altered with alternating limonite-hematite-goethite bands; mod spotty hem altered groundmass.
TT25	1m @ 0.65 g/t Au + 4.9 g/t Ag	Strong silica-sericite-clay altered fine grained with drusy-comb quartz veining and fine disseminated pyrite (7-10%) throughout.
TT24	1m @ 1.06 g/t Au + 6.6 g/t Ag	Strong goethite oxidized med grained feldspar andesite bearing fragmented massive to coarse grained quartz vein stringers + 1-2% fine disseminated pyrite.

Table 2: Taula Rock Samples (0.5 g/t Au cut-off) from Exploration by TML (refer to Appendix B)

Sample ID	Easting	Northing	RL	Description	Au (g/t)	Ag (g/t)
YG-013	517375	9048644	2116.7	Altered medium grained andesite with quartz-alunite vein stringers (5mm-10mm thick) + fine disseminated pyrite (1-2%).	0.45	10.1
YG-014	517394	9048626	2120.9	Medium grained feldspar andesite + fine disseminated pyrite (7-10%) + minor quartz veinlets.	2.08	14.9
YG-015	517420	9048592	2131.0	Medium grained feldspar andesite + fine disseminated pyrite (1%) + minor quartz veinlets.	0.53	7.4

Sisimonda Vein

Sisimonda was discovered by Newmont at the same time as the Taula Vein during initial geological mapping, sampling and trenching. A total of 5 historical drillholes (SSD014-018) were drilled following drilling at Taula. Drill locations and highlights are shown in Figure 3.

Historical drill highlights include:

- SSD015: **1.0m @ 31 g/t Au** from 85.6m
- SSD016: 3.7m @ 1.9 g/t Au from 16.4m
  3.5m @ 1.29 g/t Au from 31.6m

Recent work by TML showed that the Sisimonda Vein passes through Solo Creek and is likely to intersect the Taula vein south of Solo creek. The intersection is a priority target for further investigation.

North Kunda

Kunda North was discovered by TGM in 2002 in Funduda Creek, at the headwaters of Muile Creek which drains the Kimono area. The target is located at the projected intersection of the Taula Structure with the SSE extension of the Gulbadi Structure (Figure 2).

Initial assays of the discovery outcrop were **29.4 g/t Au & 33.1 g/t Au** from a 1.0m quartz clast in a clay shear and a reported chip sample assayed **1,034 g/t Au**. Many samples returned >1.0 g/t Au with some assaying **10.2, 29.4, 33.1 g/t Au and 332 g/t Au**.

Kunda North Vein is interpreted to intersect the Taula Vein to the south.

Miliahamba / Kunda Vein

The Miliahamba Vein intersects the Tolukuma structure approximately 3 km South-Southeast from the mine (Figure 1). The intersection is adjacent to a mapped dioritic intrusive that is a separate target for possible porphyry-style mineralisation.

The Miliahamba vein is 2.0m wide and composed of quartz, quartz-sulphide, chalcedony, banded quartz-sulphide, clay, and minor adularia, described as similar in appearance to mineralisation exposed in the Tolimi open pit and is typical of low sulphidation epithermal style mineralisation found in the Tolukuma mine.

TGM completed a total of 20 trenches and 15 drill holes from 2001-2002 tracing the Miliahamba Vein at surface and at depth. Highly anomalous gold values were reported in surface samples, including an assay value of **1,043 g/t Au** from the discovery outcrop and **104 g/t Au in clay from which visible gold grains were panned**. Trenching results range from **1.0m @ 15.0 g/t Au to 0.2m @ 104 g/t Au** and include **1.0m @ 25.0 g/t Au, 1.1m @ 76.5 g/t Au and 1.0m @ 66.2 g/t Au** (Figure 3).

Historical trench sample highlights include:

- Trench 6**: 1.0m @ 85 g/t Au**
- Trench 20: **0.7m @ 107 g/t Au**
- Trench 34: **1.1m @ 76.5 g/t Au**
- Trench 41: **3.4m @ 13.54 g/t Au**
- Trench 46: **2.0m @ 15.45 g/t Au**

Historical drill assay highlights include:

- KD001: 1.8m @ 6.74 g/t Au from 26m
- KD002: 1.85m @ 6.37 g/t Au from 39m
  3.05m @ 4.8 g/t from 45m
- KD005: 1.2m @ 9.04 g/t Au from 15m
- KD009: 2.35m @ 2.9 g/t Au from 31m

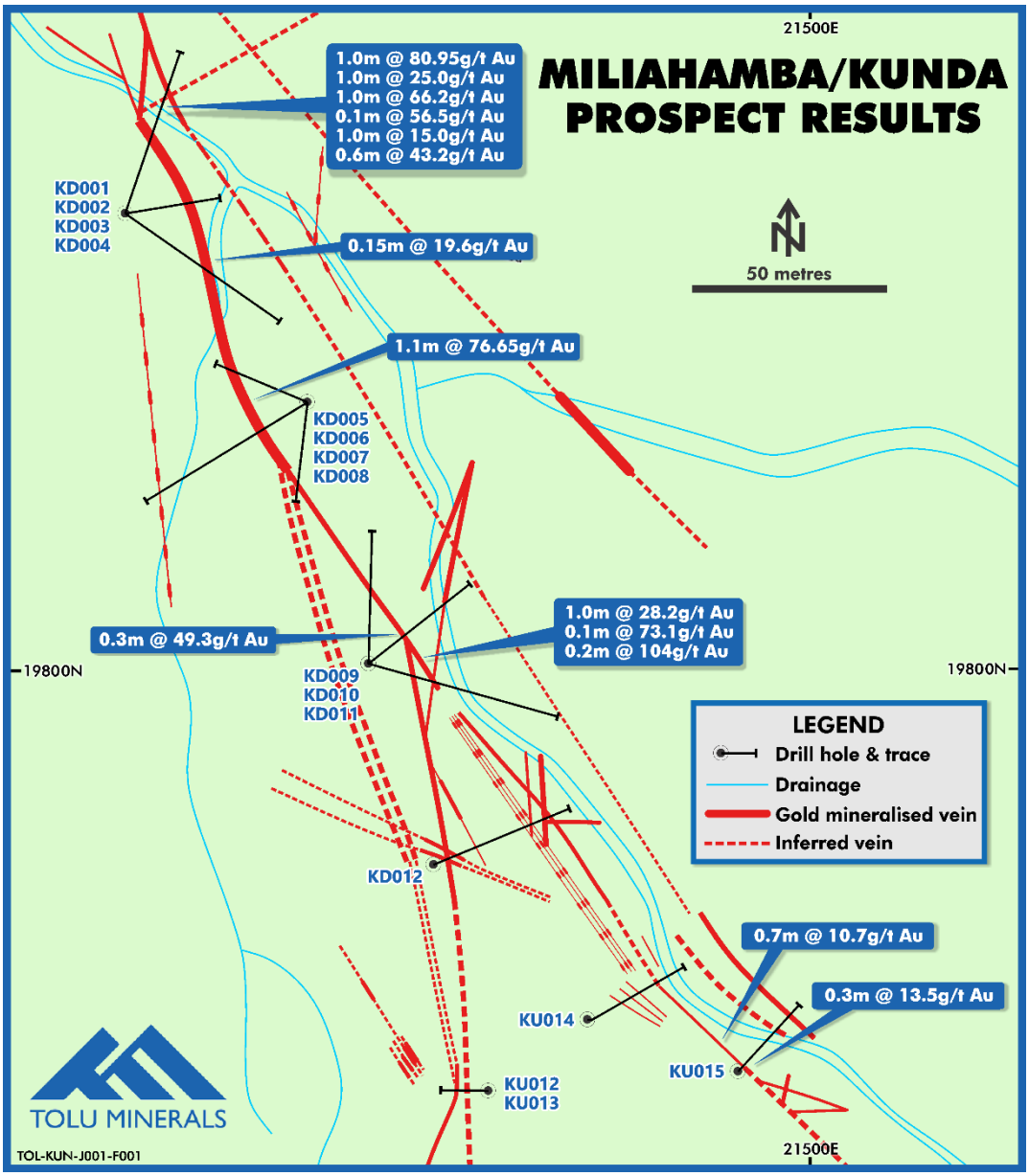

Figure 3: Miliahamba / Kunda Vein (ML104) Highlights of Historical Trench Sampling and Drill Hole Locations (local mine grid)

This announcement has been authorised for release by the Directors of the Company. For additional information please visit our website at www.toluminerals.com

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Competent Person Statement:
The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by or compiled under the supervision of Peter Swiridiuk - Member of the Aust. Inst. of Geoscientists. Peter Swiridiuk is a Technical Consultant and member of the Tolu Minerals Ltd. Advisory Board. Peter Swiridiuk has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Peter Swiridiuk consents to the inclusion in the report of the matters based on the information in the form and context in which it appears. Additionally, Mr Swiridiuk confirms that the entity is not aware of any new information or data that materially affects the information contained in the ASX releases referred to in this report.

TML Exploration Licence Information

Exploration Licence Number and Name	Ownership	Sub-blocks	Area (sq.km)*	Grant Date	Expiry Date
ML104 – Tolukuma	100% TML	N/A	7.71	01-Sep-21	28-Aug-32
EL2531 – Tolukuma	100% TML	33	118.4	25-Feb-19	24-Feb-23
EL2385	100% TML	58	197	26-May-16	25-May22
EL2535	100% TML	8	27.3	24-Jan-22	25-Jan24
EL2536	100% TML	37	125.7	24-Jan-22	25-Jan-24
EL2538	100% TML	14	47.7	24-Jan22	25-Jan24
EL2539	100% TML	58	197.8	24-Jan22	25-Jan-24
EL2723	100% TML	108	368.28	8-Nov22	07-Nov-24
EL2662 – Mt. Penck	100% TML	60	204.48	26-Oct-21	25-Oct-23
ELA2780	100% TML	116	392.33	N/A	N/A
	Total of EL's and ML104	480	1,686.70		

*1 sub-block approximately 3.41 sq.km

Notes: The PNG Mining Act-1992 stipulates that EL's are granted for a renewable 2 year term (subject to satisfying work and expenditure commitments) and the PNG Government maintains the right to purchase up to 30% project equity at "Sunk Cost" if/when a Mining Lease is granted.
Licence EL2531 and EL2385 are currently subject to an extension renewal process. The tenements remain in force until determinations are made by the Mining Advisory Council.

JORC Code Table 1, 2012 Edition – Report of Exploration Results

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Historical drill core samples were sawn in two, with half returned to the core tray for visual inspection and the other half sent to the TGM lab for assaying. Downhole surveys were completed. • Sampling was supervised and reported by on-site geologists to ensure sample representivity. • Historical diamond core HQ drilling was completed to obtain mineralised vein sections in multiples of 50cm. 2kg samples were oven dried for 6-8hrs @ 120DegC, crushed to -2mm, split by Riffle Jones splitter. 300g were pulverised to <75microns with >95% passing with a final 20g submitted for assay. • All trench and rock samples were collected, bagged and labelled onsite, and transported to the field Camp by or under the supervision of a geologist or experienced field assistant. • Soil samples were collected using a soil auger in the C Horizon of the soil profile at 25m slope corrected distances with lines 100m apart. • Material aspects of the mineralisation are noted in the text of the document.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Longyear man portable drill rig operated by United Pacific Drilling for historical drilling. • PQ and HQ diamond core was orientated. • No drilling has been undertaken by Frontier or TML.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Core was visually assessed on-site on tables constructed at the core shed. • Historical drilling recovery was essentially 90 – 100% with an average of over 95%. • Diamond impregnated bits and driller experience contributed to good core recoveries. No relationship exists between grade and recovery. • No drilling has been undertaken by Frontier or TML.

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Drill core was sampled and logged on paper by an experienced geologist for alteration mineralogy, lithology and mineralisation. Geotechnical parameters included recovery, compressive strength and RQD to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Core trays were photographed in two trays at a time. Part of the logging included unconfined compressive strength estimations. • Logging was qualitative in nature and based on geological observations. Detailed geological descriptions were hand-written into a drill log for each core section and transferred to spreadsheets. • The total length and 100% of all drill core was logged. • Trench samples are geologically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • No drilling has been undertaken by Frontier or TML.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Historical drill core samples were sawn in two, with half returned to the core tray for visual logging and all the other half sent to the TGM lab for assaying. • Drill half core 2kg samples were submitted to the Laboratory for sample preparation and assaying. • Sampling was supervised by TGM's Senior Geologists by visual inspection. Core sample sizes of 50cm as determined by the geologist by visual inspection are appropriate for the quartz vein material being sampled. • Core was transported to the on-site laboratory by vehicle or helicopter. • Procedures of drying, crushing, splitting and pulverising was practiced by TGM local laboratories for analysis. Pulps were irregularly sent to an outside independent laboratory for quality checking. Soil samples were submitted to the TGM local laboratories. • Sampling has been supervised by Senior Geologist and sample sized are appropriate for the quartz vein material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Historical procedures undertaken by TGM were appropriate. Half drill core samples crushed and prepared as 20g samples for assaying for a partial aqua regia digest and AAS for Au, Ag, Pb, Cu, Zn, Sb and Fe. 0.5g samples were submitted for Hg by cold vapor AAS. The principle of Aqua Regia digest is that gold can be dissolved by a mixture of 3 parts hydrochloric acid to one part nitric acid. • Trench/costean/soil samples were fire assayed for total gold and cyanide extractable Ag, Cu. Acceptable accuracy and precision levels were established and reported by the lab. • The 3DIP geophysics surveying was completed using a 64-channel survey by Search Exploration and data modelling was completed by independent consultants Southern Geoscience. • Acceptable levels of accuracy were obtained in the assaying results of Au 0.01 ppm, Cu 1 ppb & Ag 0.01 ppm. • Duplicates were not reported. • No Geophysical tools were used downhole.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Verified by senior geologist and other geologists onsite at the time. • No drilling has been undertaken by Frontier or TML in any fieldwork program. • All assay data is stored as digital Excel spreadsheets and stored in reports submitted to the MRA library in digital PDF and Excel formats.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Historical drill holes were located initially by tape and compass surveying for drill sections and long sections. • Trench and rock samples were located initially by GPS and tape and compass surveying of creeks and GPS readings taken. Trench sample spacing was generally 1.0m. • Map Datum is AGD66 unless otherwise stated • Topographic control is low with 40m contours from 1:100,000 plans and 10m contours from airborne DTM contours.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity*	• Refer to any attached plans and tables for rock and trench/costean spacing. • No drilling has been undertaken by Frontier or TML in

Criteria	JORC Code explanation	Commentary
	appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • *Whether sample compositing has been applied.*	any fieldwork program. • Drill hole locations and trench locations and hence data spacing and distribution is not yet sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures. • Sample compositing was not applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Historical drill holes are designed to intersect known mineralisation from surface trench results in a nominally perpendicular orientation as much as is practicable. • Sample intervals are selected based upon observed geological features and the strike of the narrow quartz veins. • Trench samples were taken to intersect known mineralisation from surface trench results in a nominally perpendicular orientation as much as practicable. Sample intervals are selected based upon observed geological features and the strike of the narrow quartz veins. • Sample intervals are selected based upon observed geological features and the strike of the quartz veins. • Trench/costean samples have been taken selectively within each trench. Potential for sampling bias has been reported in the text of this report where relevant. • Soil samples have been taken along lines 100m apart close to perpendicular to known veins.
Sample security	• *The measures taken to ensure sample security.*	• Access to site is controlled and rock trench and soil samples are stored on-site in a remote location. Site employees transport samples to the analytical lab. The laboratory compound is secured.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of sampling techniques and data have been performed.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Tolu Minerals Limited have a 100% ownership of Frontier Copper (PNG) Limited, which hold 100% title to Exploration Licence EL2531 and Mining Lease ML104. There are no joint ventures or partnerships in place. Frontier Copper PNG Ltd has IPA company registration number 1-48997. • There are no known impediments to operating in ML104 and EL2531. Tenements are granted by the Minister of Mines for a period of two years and security is governed by the PNG Mining Act 1992 and Regulation. • Frontier Copper has applied for a two-year tenement renewal (due 24th February 2023) which requires a 50% reduction in tenement size. As part of this renewal process, a landowner Warden's hearing was successfully completed, and all Technical Annual and Bi-Annual reports have been lodged with the MRA who are currently reviewing the information for recommendations to the Mining Advisory Council. • All TERM1 (YEAR1&2) and TERM2 (YEAR3&4) work and expenditure commitments have now been met. Frontier awaits approval for renewal of the tenement for a further two years (TERM3) by the Mining Advisory Council.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• EL2531 Tolukuma was initially stream sampled by Kennecott in the 1960's afterwards by CRAE who completed both steam sediment sampling and rock chip sampling. • Newmont 1985-1988 discovered the Tolukuma vein and completed costean and soil sampling and diamond drill holes testing the NW-SE Taula Vein. Newmont completed resource drilling and mine feasibility studies. From 1989-1992 Newmont completed 2nd phase drilling. • Dome Resources purchased the Exploration license from Newmont in 1992 and completed feasibility studies in the ML104, granted in 1994, with first gold poured in December 1995. • In 2000, Durban Roodepoort Deep purchased Dome Resources and took over all its interests in PNG. TGM's work programs (now 100% DRD included trench

Criteria	JORC Code explanation	Commentary
		sampling and mapping. Work commenced at Saki in 2002 with a programme of extensive trench sampling and mapping and drilling at the Kunda prospect both inside ML104 and within the current EL2531. • Petromin PNG Holdings acquired 100% of the Tolukuma projects including ML104 from Emperor Mines in 2008. Singapore company Asidokona purchased Tolukuma Gold Mines Ltd from Petromin (PNG Government) in November 2015. • The Tolukuma gold mine was held under the control of the MRA and the appointed liquidator/administrator until 100% ownership of ML104 was granted to Tolu Minerals Ltd 3rd October 2022 along with its associated assets and mine infrastructure to re-establish mining operations and re-commence exploration and resource drilling. • EL2531 was acquired by Frontier on a first application basis when it was offered by the MRA. • Tolu Minerals Limited has secured binding rights to EL2531 through its acquisition of Frontier Copper PNG Limited, which was previously a wholly owned subsidiary of ASX listed, Lanthanein Resources Limited.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Taula/Kunda vein is a single epithermal vein system consisting mainly quartz with minor sulphides including pyrite, marcasite, cinnabar and associated mangano-carbonate and gold mineralisation. The quartz veins are hosted within rocks of the Pliocene to Miocene Mt. Davidson Volcanics comprised of a complex of Andesitic flow units and Pyroclastic flow units that have been subsequently intruded by quartz Diorites and Monzonites. • The dominant lithology of Kunda is basaltic andesites with minor agglomerate breccias and tuffaceous volcanics, which are members of the Boundary Volcano Suite. • The Kagi Metamorphics comprise the basement rocks in the Tolukuma area. A sequence of subaerial volcanics of Middle Miocene to Early Pliocene age unconformably overlies the metamorphic basement rocks. Small stocks, 1-5km across, of diorite, porphyritic microdiorite, hornblende-feldspar porphyry, monzonite and granodiorite have been mapped intruding the Kagi Metamorphics and Mt. Davidson Volcanics in the licence area.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• No drilling has been undertaken by Frontier or TML in any fieldwork program.
		• A summary of all historical drillhole and geophysical anomaly information is noted within Tables in the text of this report or referenced reports.
		• Frontier has acquired historical reports with drillhole and trench information that have been reviewed and interpreted.
		• Digital databases have also been acquired over all known prospects within EL2531 and ML104.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Exploration results are reported typically within epithermal veins. Trench grades are compiled using length weighting. • No metal equivalent values are used.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• The relationship between historical mineralisation widths & intercept lengths from trench/costeans is well understood. • Historical drillholes are generally targeted perpendicular to known veins. True width projections are noted in Tables where relevant within the text of this report. • No drilling has been undertaken by Frontier or TML in any fieldwork program.

Criteria	JORC Code explanation	Commentary
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Appropriate maps, sections and tabulations of drillhole, rock, soil and trench/costean intercepts are included where relevant.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Comprehensive reporting of all drilling, trench and soil sample results has occurred in historical ASX releases and reported here where appropriate.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• All meaningful exploration data to date has been included in this ASX announcement. • Strength classification has been completed on all drill core.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Current TML exploration is aimed at testing for lateral extensions of known veins and interpreted vein systems that form part of the Tolukuma gold mine mineralised vein system. • Appropriate plans are included where possible. • The nature of planned further work is provided in the body of text.

APPENDIX A – Table of Taula Prospect Final Batch of Trench Assay Results

Trench ID	Interval (m)	Easting	Sample ID	Northing	RL (m)	Au (g/t)	Ag (g/t)
TT017	1-2	517399.1	106360	9049247.3	2155.7	0.01	4.07
TT017	2-3	517398.3	106361	9049246.7	2155.6	0.01	2.51
TT017	6-7	517394.9	106362	9049244.7	2155.5	0.32	1.43
TT017	7-8	517393.9	106363	9049244.4	2155.6	26.70	98.50
TT017	8-9	517393.0	106364	9049244.1	2155.7	0.66	4.01
TT017	9-10	517392.0	106365	9049243.7	2155.8	0.19	0.72
TT018	0-1	517405.4	106366	9049227.2	2156.7	0.03	0.12
TT018	1-2	517404.4	106367	9049226.9	2156.7	0.01	0.11
TT018	2-3	517403.5	106368	9049226.6	2156.7	0.02	0.08
TT018	3-4	517402.5	106369	9049226.3	2156.8	0.04	0.17
TT018	4-5	517401.6	106370	9049225.9	2156.8	0.14	0.66
TT018	5-6	517400.6	106371	9049225.6	2156.8	0.08	0.34
TT019	0-1	517406.9	106372	9049215.8	2171.0	0.02	0.02
TT019	1-2	517406.3	106373	9049215.0	2171.0	0.02	0.02
TT019	2-3	517405.8	106374	9049214.2	2171.0	0.46	0.29
TT019	3-4	517405.2	106375	9049213.4	2171.0	0.41	0.38
TT019	4-5	517404.6	106376	9049212.6	2171.1	0.70	0.41
TT019	5-6	517404.4	106377	9049211.6	2171.1	0.29	0.60
TT019	6-7	517404.2	106378	9049210.6	2171.1	0.12	0.15
TT020	1-2	517424.4	106379	9049188.3	2180.7	0.01	0.01
TT020	2-3	517423.5	106381	9049187.8	2180.5	0.01	0.01
TT020	3-4	517422.6	106382	9049187.4	2180.4	0.01	0.10
TT020	4-5	517421.8	106383	9049186.9	2180.3	0.01	0.03
TT020	5-6	517420.9	106384	9049186.4	2180.2	0.02	0.02
TT020	7-8	517419.2	106385	9049185.4	2180.0	0.04	0.05
TT021	3-4	517435.1	106386	9049155.1	2197.5	0.01	0.01
TT021	4-5	517434.2	106387	9049154.7	2197.5	0.03	0.01
TT021	5-6	517433.3	106388	9049154.3	2197.5	0.03	0.01
TT021	6-7	517432.3	106389	9049153.9	2197.5	0.56	0.02
TT021	7-8	517431.4	106390	9049153.5	2197.5	0.11	0.05
TT021	8-9	517430.5	106391	9049153.1	2197.5	0.05	0.01
TT021	9-10	517429.6	106392	9049152.7	2197.5	0.04	0.01
TT021	10-11	517428.7	106393	9049152.3	2197.5	0.03	0.01
TT021	11-12	517427.8	106394	9049151.9	2197.5	0.02	0.00
TT021	12-13	517426.9	106395	9049151.5	2197.5	0.01	0.00
TT021	13-14	517426.0	106396	9049151.1	2197.5	0.03	0.01
TT021	14-15	517425.0	106397	9049150.7	2197.5	0.05	0.02
TT021	15-16	517424.1	106398	9049150.3	2197.5	0.02	0.01
TT021	16-17	517423.2	106399	9049149.9	2197.5	0.02	0.01
TT021	17-18	517422.3	106401	9049149.5	2197.5	0.05	0.02
TT021	18-19	517421.6	106402	9049148.7	2197.5	0.05	0.02
TT023	0-1	517579.1	106403	9048708.1	2126.5	0.31	5.39
TT023	1-2	517579.7	106404	9048709.0	2126.5	0.01	0.68
TT023	2-3	517580.2	106405	9048709.8	2126.5	0.15	3.48
TT023	3-4	517580.8	106406	9048710.6	2126.6	0.03	1.64
TT023	4-5	517581.3	106407	9048711.5	2126.6	0.05	2.27
TT023	5-6	517581.9	106408	9048712.3	2126.6	0.21	5.60
TT023	6-7	517582.1	106409	9048713.2	2126.8	0.04	1.59
TT023	7-8	517582.3	106410	9048714.2	2127.0	0.11	4.66
TT023	8-9	517582.5	106411	9048715.2	2127.2	0.33	18.25
TT023	9-10	517583.4	106412	9048715.3	2127.1	0.17	4.44
TT023	10-11	517584.4	106413	9048715.5	2127.1	0.35	7.73
TT023	11-12	517584.9	106414	9048716.4	2127.0	0.06	2.34
TT023	12-13	517585.3	106415	9048717.3	2126.9	0.07	4.22
TT023	13-14	517585.8	106416	9048718.1	2126.8	0.16	4.87
TT023	14-15	517586.6	106417	9048718.7	2126.9	0.07	3.37
TT023	15-16	517587.4	106418	9048719.4	2126.9	0.09	2.50
TT023	16-17	517588.2	106419	9048720.0	2127.0	0.03	2.26
TT023	17-18	517589.0	106421	9048720.6	2127.0	0.06	3.83
TT023	18-19	517589.1	106422	9048721.5	2127.2	0.06	6.44
TT023	19-20	517589.3	106423	9048722.5	2127.5	0.29	23.30
TT023	20-21	517589.5	106424	9048723.4	2127.7	0.24	12.35
TT024	0-1	517588.9	106425	9048724.1	2128.2	0.25	13.05
TT024	1-2	517588.4	106426	9048724.8	2128.6	0.64	30.40

TT024	2-3	517587.8	106427	9048725.5	2129.1	0.22	8.18
TT024	3-4	517587.3	106428	9048726.2	2129.6	0.51	29.90
TT024	4-5	517586.7	106429	9048726.9	2130.0	0.19	13.75
TT024	5-6	517586.1	106430	9048727.6	2130.5	0.22	15.65
TT024	6-7	517585.6	106431	9048728.2	2131.0	0.17	10.80
TT024	7-8	517585.0	106432	9048728.9	2131.4	0.27	8.49
TT024	8-9	517584.6	106433	9048729.8	2131.8	0.23	8.83
TT024	9-10	517584.1	106434	9048730.6	2132.1	0.39	8.46
TT024	10-11	517583.7	106435	9048731.4	2132.4	0.69	16.20
TT024	11-12	517583.2	106436	9048732.2	2132.7	0.08	5.27
TT024	12-13	517582.7	106437	9048733.1	2133.1	0.05	2.15
TT024	13-14	517582.0	106438	9048733.6	2133.5	0.08	1.92
TT024	14-15	517581.3	106439	9048734.2	2134.0	0.07	2.53
TT024	15-16	517580.6	106440	9048734.7	2134.4	0.07	2.53
TT024	16-17	517579.9	106441	9048735.3	2134.9	0.06	2.10
TT024	17-18	517579.2	106442	9048735.8	2135.3	0.19	7.15
TT024	18-19	517578.5	106443	9048736.4	2135.8	0.35	22.50
TT024	19-20	517577.8	106444	9048736.9	2136.2	0.12	2.88
TT024	20-21	517577.2	106445	9048737.6	2136.7	0.18	2.61
TT024	21-22	517576.6	106446	9048738.2	2137.1	0.36	15.20
TT024	22-23	517576.0	106447	9048738.9	2137.5	0.09	5.02
TT024	23-24	517575.3	106448	9048739.6	2137.9	0.06	6.27
TT024	24-25	517574.7	106449	9048740.2	2138.3	0.06	18.50
TT024	25-26	517574.1	106450	9048740.9	2138.7	0.08	3.54
TT024	26-27	517573.5	106451	9048741.6	2139.1	0.05	3.23
TT025	0-1	517590.0	106452	9048703.0	2031.4	0.02	0.68
TT025	1-2	517590.7	106453	9048703.7	2031.5	0.03	1.76
TT025	2-3	517591.4	106454	9048704.4	2031.5	1.20	2.29
TT025	3-4	517592.0	106455	9048705.2	2031.6	0.28	3.39
TT025	4-5	517592.7	106456	9048705.9	2031.6	0.22	3.79
TT025	5-6	517593.7	106457	9048705.8	2031.6	0.65	4.94
TT025	6-7	517594.7	106458	9048705.6	2031.7	0.19	1.51
TT025	7-8	517595.7	106459	9048705.5	2031.7	0.08	3.09
TT025	8-9	517596.7	106460	9048705.4	2031.7	0.07	1.45
TT025	9-10	517597.6	106461	9048704.9	2031.8	0.14	3.14
TT025	10-11	517598.5	106462	9048704.5	2031.8	0.18	3.45
TT025	14-15	517602.0	106463	9048702.7	2032.0	0.05	1.39
TT025	15-16	517602.7	106464	9048702.0	2032.0	0.04	0.80
TT025	16-17	517603.3	106465	9048701.2	2032.1	0.03	1.72
TT025	17-18	517603.9	106466	9048700.4	2032.1	0.03	2.25
TT025	18-19	517604.6	106467	9048699.6	2032.1	0.04	2.38
TT025	19-20	517605.2	106468	9048698.9	2032.2	0.29	1.16
TT025	20-21	517605.8	106469	9048698.1	2032.2	1.06	6.64
TT025	21-22	517606.5	106470	9048697.3	2032.2	0.39	2.67

APPENDIX B – Table of Taula Prospect Final Batch of Rock Sample Assay Results

Sample ID	Type	Easting	Northing	RL	Description	Au (g/t)	Ag (g/t)
YG-001	Float	517491	9049212	2203.6	Grey moderately magnetic medium grained to sub-porphyritic feldspar andesite with pervasive silica flooding + fine disseminated pyrite (1-2%) within the groundmass	0.016	0.18
YG-002	Float	517584	9049057	2187.5	Grey fine-medium grained moderately magnetic basaltic andesite with semi-pervasive silica flooding; trace to 1% disseminated pyrite +/- trace chalcopyrite	0.005	0.09
YG-003	Outcrop	517396	9049325	2147.6	Grey medium grained to sub-porphyritic feldspar andesite with semi-pervasive si-ser-py (5-7%)	0.005	0.10
YG-004	Outcrop	517426	9049361	2138.3	Grey moderate pervasive si-ser-py (3-5%) altered medium grained to sub-porphyritic feldspar Andesite/ dacitic andesite	0.001	0.11
YG-005	Outcrop	517486	9049357	2151.5	Bleached cream white argillic-clay seam (30-50cm thick) within highly fractured andesite wallrock	0.007	0.14
YG-006	Outcrop	517495	9049346	2151.4	Medium grained mod magnetic semi-perv altered feldspar andesite with 1-2% disseminated pyrite	0.001	0.06
YG-007	Outcrop	517648	9049286	2165.5	Highly oxidized medium grained andesite with pervasive si-ser-py (1-2%) euhedral	0.011	0.69
YG-008	Outcrop	517087	9049344	2060.0	Grey medium grained porphyritic feldspar microdiorite/ andesite with pervasive si-chl-py (10-15%) alteration; pyrite occurring as clusters	0.001	0.10
YG-009	Outcrop	517233	9049300	2098.0	Grey semi-pervasive silica flooded typical feldspar andesite porphyry with conspicuous feldspar laths (3-5mm) within fine groundmass + minor	0.001	0.04
YG-010	Outcrop	517500	9048905	2126.0	Strongly oxidized and bleached med grained clay altered andesite with massive to comb quartz vein stringers	0.005	0.13
YG-011	Outcrop	517299	9048614	2104.4	Light grey weakly magnetic fine grained porphyritic feldspar andesite with up to 1% disseminated pyrite	0.001	0.06
YG-012	Outcrop	517321	9048618	2114.5	Bleached si-ser-cly altered medium grained andesite with quartz-alunite vein stringers (5mm-10mm thick) + fine disseminated pyrite (1-2%)	0.452	10.10
YG-013	Outcrop	517375	9048644	2116.7	Milky white massive quartz vein with minor vughs + remnants of host med grained Andesites with arsenopyrite (5-7%)	0.049	0.32
YG-014	Outcrop	517394	9048626	2120.9	Dark orange to black highly oxidized (geo-MnO) fine grained andesite with 2-3% fine disseminated pyrite; massive anhedral oxidized quartz vein stringers (5-10mm thick)	0.202	3.71
YG-015	Outcrop	517420	9048592	2131.0	Light grey medium grained feldspar andesite + fine disseminated pyrite (7-10%) + minor quartz veinlets (3-5mm thick)	2.080	14.85
YG-016	Float	517440	9048611	2132.4	Light grey med grained feldspar andesite + fine disseminated pyrite (1%) + minor quartz veinlets (3-5mm thick)	0.526	7.40
YG-017	Float	517466	9048640	2217.1	Grey-white si-ser-cly altered med grained andesite with 10-15% fine disseminated py + mod lim surface ox; late silica veinlets	0.038	1.46
YG-018	Outcrop	517464	9048689	2210.4	Massive to comb quartz vein with kaolinite-illite alteration	0.043	1.20
YG-019	Float	517484	9048749	2152.0	Cream white massive to comb quartz vein with andesitic wall rock; also drusy quartz surface encrusting	0.048	0.30
YG-020	Outcrop	517484	9048693	2140.5	Black strongly oxidized (MnO) coarse grained -comb quartz with ghosted bladed quartz textures	0.013	0.14
YG-021	Float	517496	9048682	2136.5	Alternating grey-white to yellow-red pervasive si-ser-cly + moderate spotty hematite altered med grained feldspar andesite with comb quartz vein stringers (quartz-alunite/quartz-adularia)	0.048	0.55
YG-022	Float	517520	9048671	2123.3	Grey-white to earthy oxidized (goe) and bleached si-ser-py (5-7%) altered fine grained andesite	0.113	7.64
YG-023	Float	517543	9048670	2133.2	Milky white massive med grained quartz with minor comb quartz veinlets + acicular quartz textures	0.047	0.99
YG-024	Float	517527	9048664	2119.4	Cream white to rusty oxidized quartz-adularia veins with comb textures + moderate hematite staining	0.021	3.14
CP-001	Float	517477	9048986	2169.5	Strongly bleached dusty white andesitic tuff with strong FOX (MnO) + pervasive ser-kao alteration	0.008	0.49
CP-002	Float	517569	9048678	2046.4	Dark fine-grained andesite with semi-perv + very fine grained trace pyrite	0.001	0.17
CP-003	Float	517645	9048682	2017.6	Dark grey med grained to sub-porphyritic weakly magnetic feldspar andesite + clusters of pyrite (0.5-1%)	0.001	0.06
CP-004	Float	517641	9048656	2023.6	Grey brecciated fine grained andesite + late massive to interlocking quartz veins	0.368	3.36
CP-005	Outcrop	517628	9048692	2020.0	Orange-brown oxidization (goethite) andesite with stockwork comb quartz veining	0.021	0.53
CP-006	Outcrop	517607	9048745	2047.1	Light grey semi-pervasive si-ser-py (1-2%) euhedral, medium grained andesite	0.007	0.20

CP-007	Outcrop	517597	9048774	2046.5	Grey fine grained semi-pervasive sil-ser altd andesite with very fine disseminated py +arsenopyrite (5-7%) + minor quartz veinlets (2-3mm thick)	0.285	8.07
CP-008	Outcrop	517609	9048784	2046.7	Light grey-white pervasive si-ser altered medium grained andesite bearing 12-15mm thick comb-interlocking quartz veins with fine disseminated pyrite (3-5%) within groundmass	0.045	2.40
CP-009	Float	517618	9048839	2074.8	Grey-white with moderate surface oxidized pervasive si-ser-py (1%) altered andesite + drusy quartz + comb quartz veinlets (5-7mm thick)	0.098	3.94
CP-010	Float	517617	9048787	2073.5	Cream white massive to coarse grained drusy quartz veins	0.084	0.20