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**ASX: FNT**

ASX Limited  
Market Announcements Platform  
16 April 2021

## **ACTIVITIES REPORT – QUARTER ENDED 31<sup>ST</sup> MARCH 2021**

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- Sampling results by Frontier along the Kimono Central Vein included rock sample values of **101g/t Au, 80.9g/t Au, 52.7g/t Au and 22.2g/t Au** and trench results of **2.1m @ 24.68g/t Au, including 1.1m @ 42.70g/t Au.**
  - The newly discovered Tassy vein is interpreted to extend to over 1km strike length with rock sampling results including **2.13g/t Au** and trench sampling results including **3.0m @ 2.87g/t Au and 1.0m @ 15.50g/t Au.**
  - Geologists re-mobilised to the Kimono gold prospect in January 2021 completing a sampling at the Kimono and Tassy veins collecting 218 trench samples from 15 hand dug trench sites and 54 rock outcrop samples.
  - An independent analysis of surface and drillhole geochemistry from the Saki-Yava-Soju vein systems **doubles the area of previously interpreted vein systems** with a 3.6km<sup>2</sup> target area for follow-up sampling and drilling.
  - Geotechnical site investigations of the proposed Saki to Tolukuma Mine access road has been completed along a 5km in length, connecting to mine roads within mining lease ML104 currently held by the Mineral Resources Authority (MRA).
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Frontier Resources Limited (**Frontier** or the **Company**) is focussed on high grade quartz vein gold exploration at its 100% owned tenement that completely surrounds the Tolukuma Mining Lease ML104, approximately 100km north of the PNG National Capital of Port Moresby.

During the quarter the Company released final results from its October/November 2020 mapping and sampling program at the Kimono prospect located on the eastern boundary of the Mining Lease 104 (Figure 1). A total of **102 soil, 102 rock chip (51 float and 51 outcrop) and 205 chip-channel trench samples were collected.** The **Tassy** vein was discovered in the upper reaches of the main Holsiga Creek.

The best rock chip sampling results from the Kimono Vein ranged from **101g/t Au to 1.42g/t Au** and include values of **80.9g/t, 52.7g/t and 22.2g/t.** Elsewhere the best rock chip results were **2.13g/t Au** at the Tassy Vein, **1.15g/t Au** in lower Holsiga Creek, **1.42g/t Au** in Fala Creek and **1.62g/t Au** at Kimono South. Mineralisation includes gold and silver as electrum, pyrite/marcasite, fine dark, stibnite, rare arsenopyrite and minor copper, lead, zinc base metal sulphides.

At Kimono Central anomalous gold-in-soil sampling results can be correlated with the trends of mapped and projected mineralised veins and indicate additional targets for follow up sampling. At Kimono South (Soil Line 5), a roughly 250m long NW-trending anomalous soil zone (As-Mo-Ba-Au) occurs sub-parallel to the projected strike extension of the historical Dudu Vein (Figure 1), adding to the extended targets the vein system.



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Hand trenching results (Figure 2) include (refer to ASX Announcement dated 13 January 2021):

- Kimono Vein      **KC-08: 2.1m @ 24.68g/t Au + 36.85g/t Ag, incl 1.1m @ 42.70g/t Au + 60.30g/t Ag;**  
**KC-01: 10.0m @ 1.99g/t Au + 8.45g/t Ag, incl 2m @ 3.46g/t Au + 15.13g/t Ag;**
- Tassy Vein      **KT-06: 4.0m @ 4.78g/t Au + 17.94g/t Ag, incl 3.0m @ 6.32g/t Au + 23.22g/t Ag,**  
**including 1.0m @ 15.5g/t Au + 24.6g/t Ag;**
- Lower Holsiga Ck      **KC-13: 5.0m @ 1.25g/t Au + 6.40g/t Ag, incl 1.0m @ 4.48g/t Au + 13.8g/t Ag;**  
**11.0m @ at 0.86g/t Au + 0.80g/t Ag, including 2.0m @ 3.18g/t Au + 3.8g/t Ag; and**
- Kimono South      **KT-09: 6.0m @ 1.48g/t Au + 2.30g/t Ag, including 2.0m @ 3.36g/t Au + 5.58g/t Ag.**

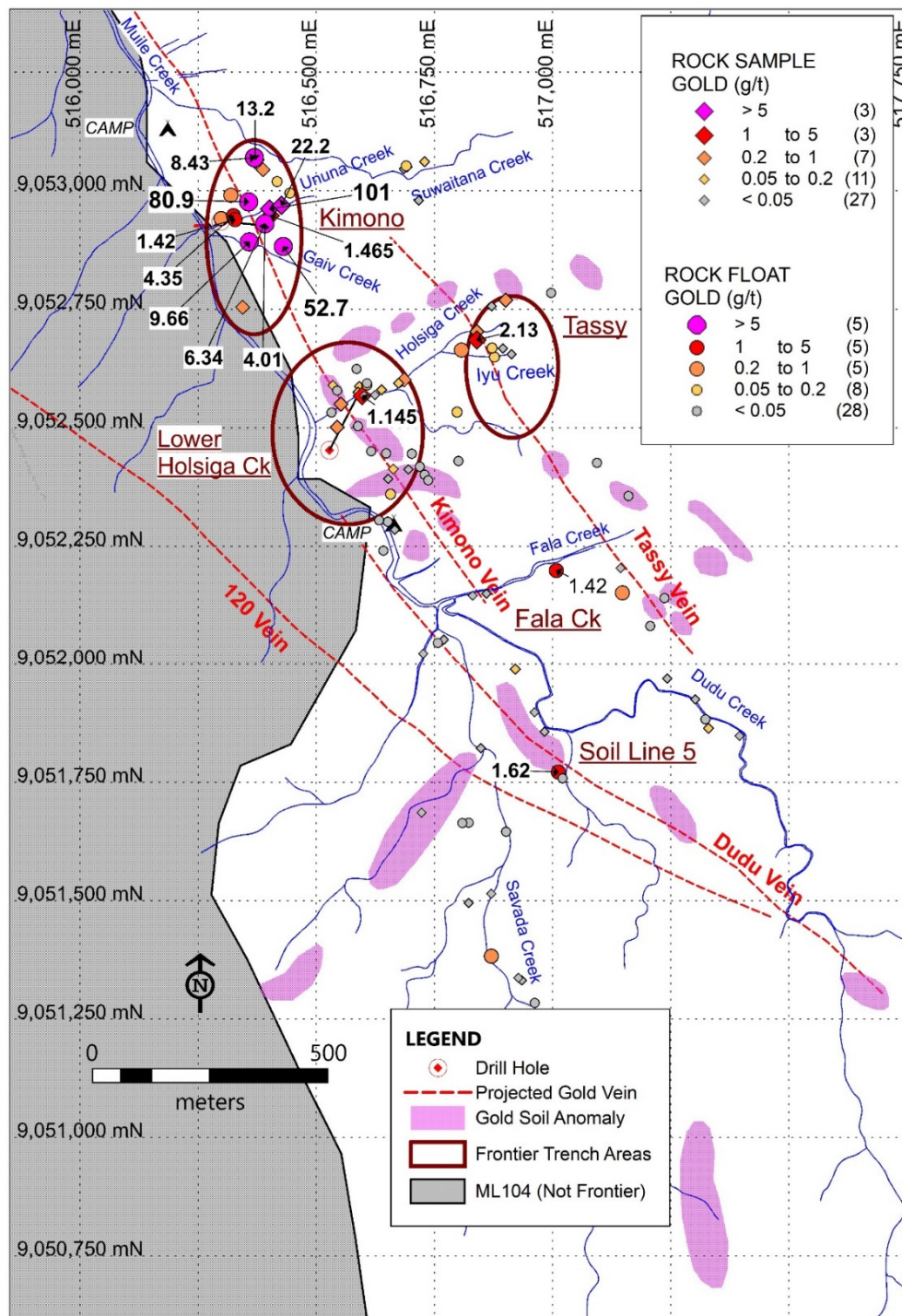


Figure 1: Kimono Rock and Soil Sample Results



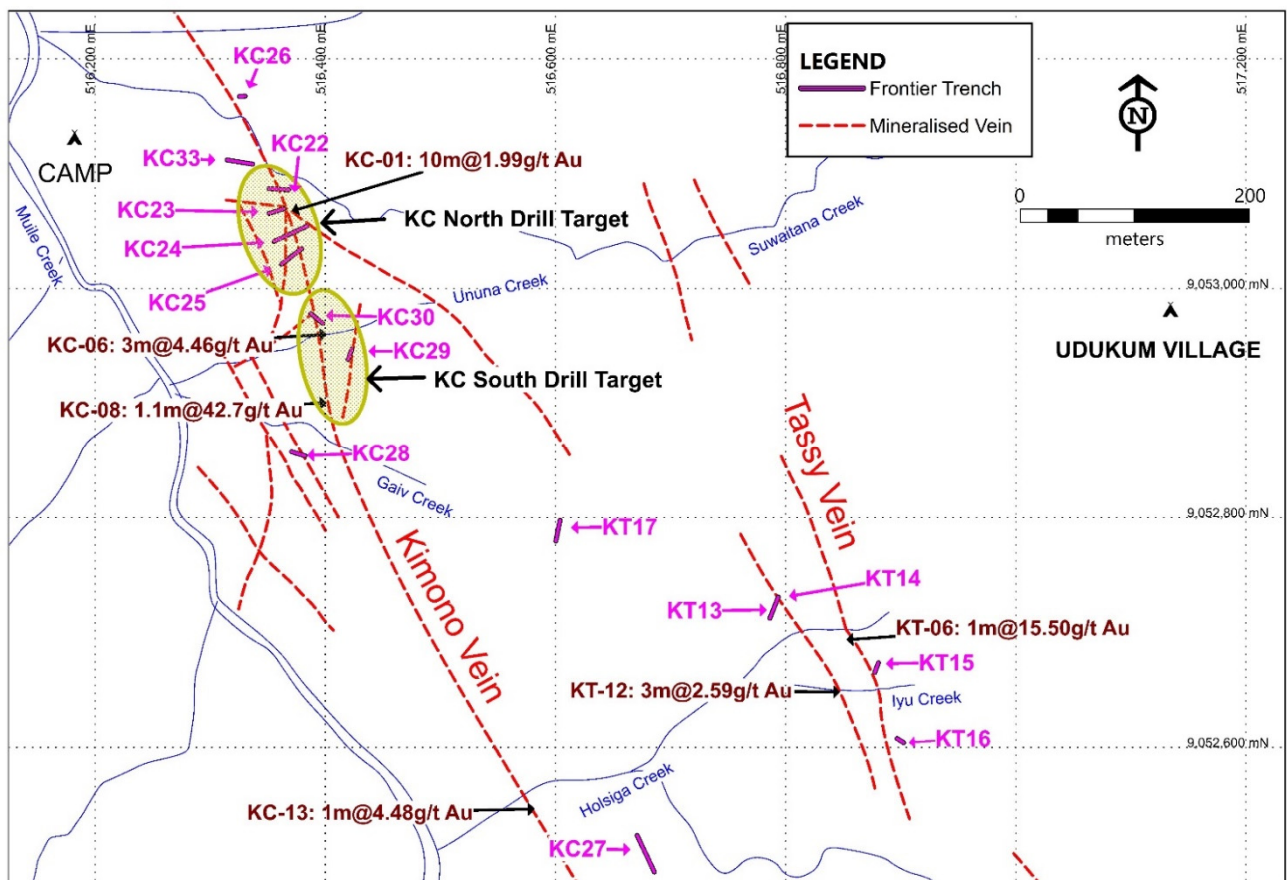
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In January 2021, Frontier re-mobilised to Kimono for a second phase of follow-up trench sampling program at the Kimono-Tassy vein areas to define drilling targets and complete regional geological mapping.

A total of **218 trench samples** from **15 hand dug trench** sites (Figure 2) and **54 rock outcrop samples** (Figure 3) were taken and dispatched to ALS laboratories in Brisbane. Assay results are expected in April. A total of 250m of the Kimono central vein has been visibly traced and forms part of the 4km strike length Kimono-Dudu gold target zone. Two drill target areas at Kimono Central have been defined pending final assay results.

The newly discovered Tassy vein consists of two mapped parallel veins splayed from the main Kimono vein. Trench sampling by Frontier in 2020 intersected **1m @ 15.5g/t Au** within trench KT-06 (Figure 2).



**Figure 2: Kimono Veins and Trench Sampling Sites in Phase 2 Sampling**

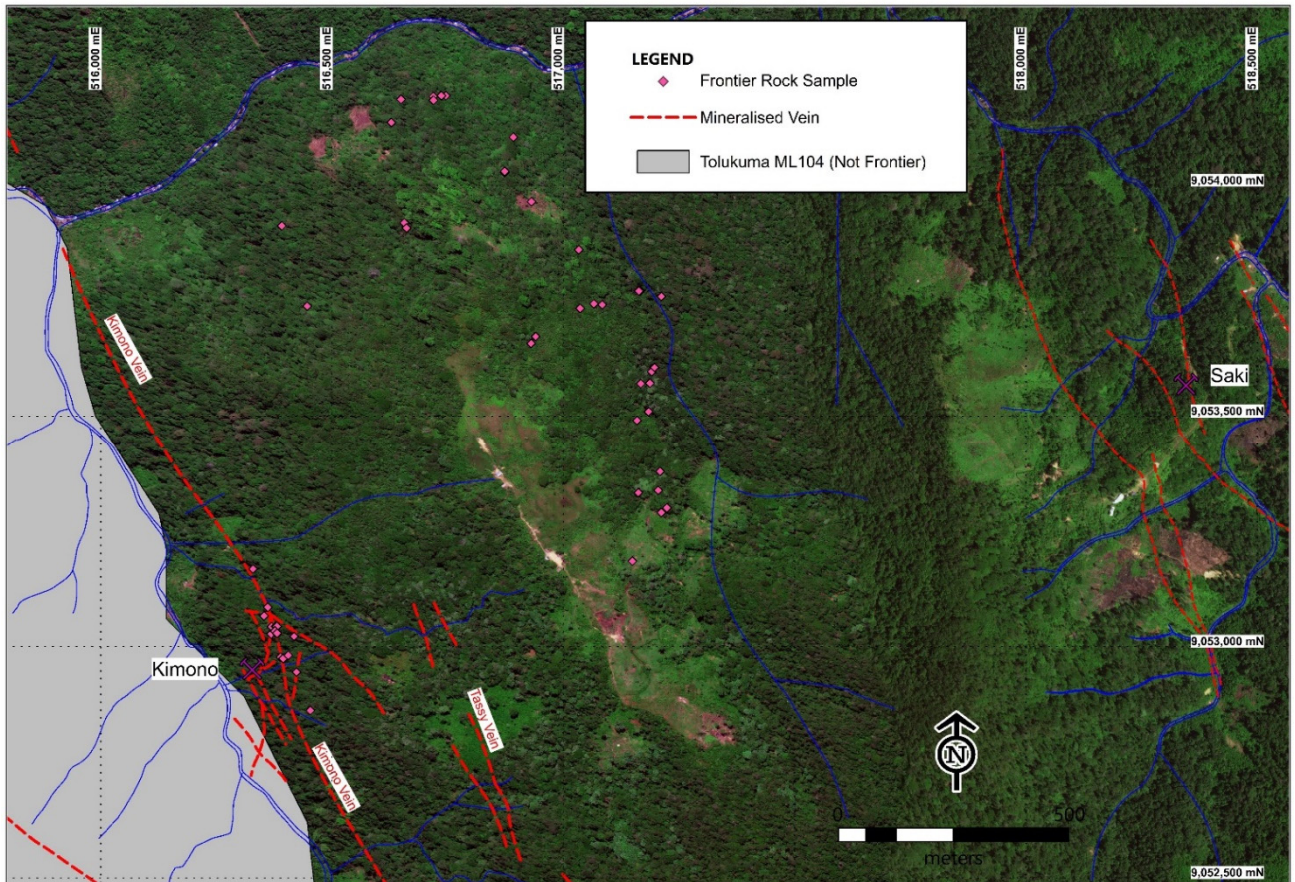
At trench site KC30 (Figure 2) in the “**KC South Drill Target**”, a rock float sample exhibits vuggy quartz textures with the sulphides leached out leaving large cavities with supergene-oxide overprint. The leached sulphides can create a **horizontal blanket of supergene high grade mineralisation**. Trench KC29 samples are comprised of massive silicified quartz with minor saccharoidal comb textures and minor fine grey colloform banded pyrite. Strong clay-limonite with quartz veining over 1m.

At trench KC22 and KC23 in the “**KC North Drill Target**”, quartz veins intersected were similar to those observed in Trench KC-01 where previous results included **10m @ 1.99g/t Au**. At KC24 the massive Kimono vein structure forms a resistant ridge with quartz veining and stockwork zones dominated by crustiform-colloform textures filled in by comb to botryoidal-rosette textures. Quartz veins are up to 0.5m width associated with stockworking. Trench KC25 is hosted in sub-intrusive andesite with a 30cm quartz vein with phyllic-argillic alteration that overprints propylitic alteration.



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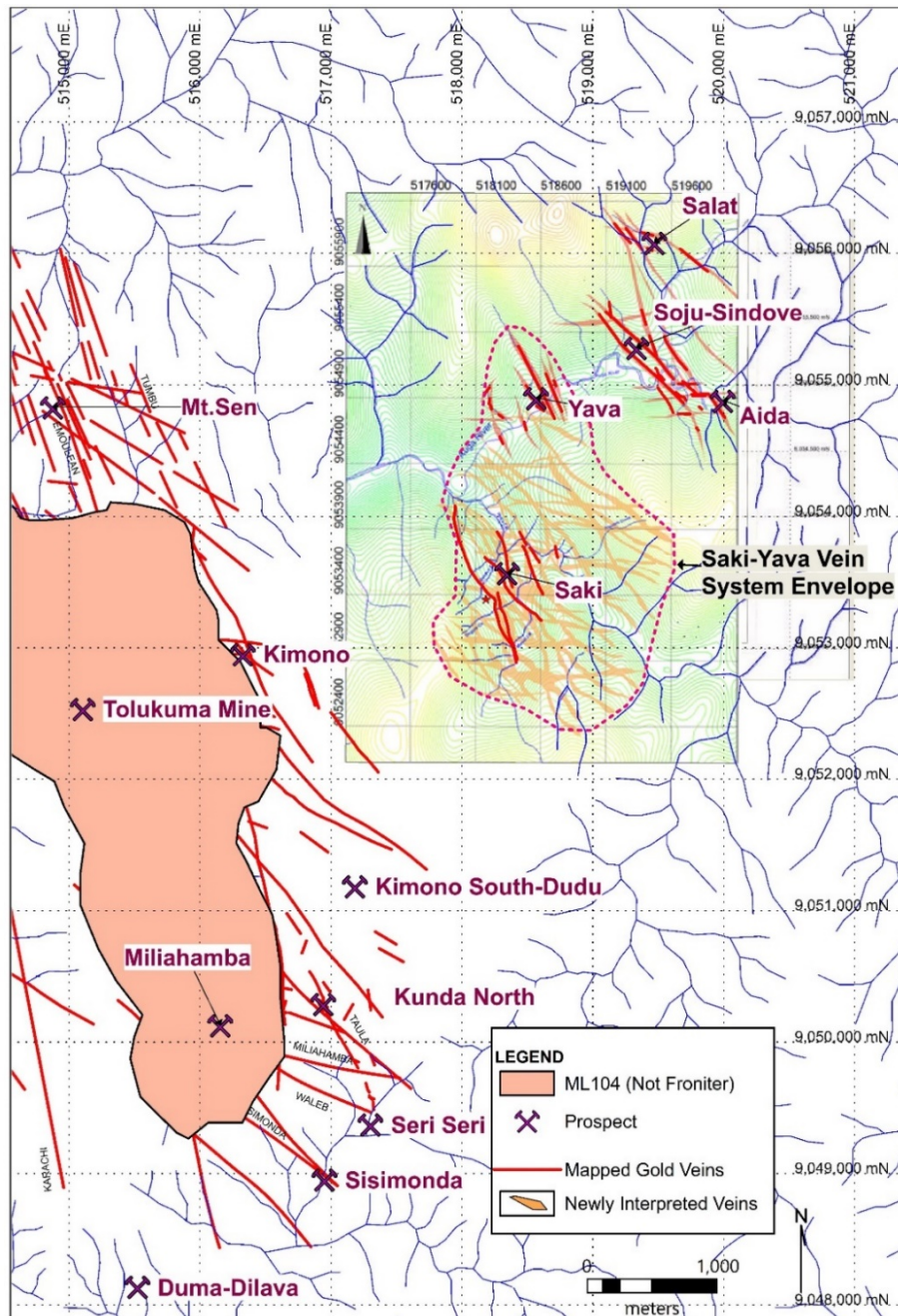
**Figure 3: Frontier Rock Chip Sampling Locations and Mineralised Veins**

### **Saki Project:**

A technical review of historical geochemistry from surface and drillhole aimed to identify anomalies from metal concentrations to map out previously undefined vein targets at the Saki-Soju-Yava prospect (Figure 4). Historical drilling at Saki targeted some of the 54 trenches that were anomalous in gold, some up to 6m wide, with best surface grades including **0.5m @ 535 g/t Au** and **1.0 m @ 55.69 g/t Au**. Many of the existing gold anomalous trenches are yet to be drill tested and will be followed-up in a future drilling program.

The newly interpreted system of gold veins over the Saki-Yava area occur within an envelope of mineralisation of more than **3.6km<sup>2</sup>** (Figure 4) and provides a substantial target area for follow-up trench sampling, geological mapping and subsequent drill hole targeting with an aim to develop a significant gold resource estimate for future “mill-feed” to the mine.

A total of 208 rock samples and 35 trench samples from the Soju-Yava gold prospects were analysed, with gold showing a close association with silver (Ag) and antimony (Sb). Best surface rock sample results taken by Newmont in 1989 include **1,750 g/t Au** and **183 g/t Au** and drilling results of **0.3m @ 6.13 g/t Au**. New veins have been interpreted and additional rock chip and trench sampling has been recommended to affirm the extension and existence of known and interpreted veins. High-level intrusives are reported near Soju, close to subsurface, and mineralisation observed at Soju-Yava may be associated with a **porphyry copper-gold** deposit at depth.



**Figure 4: Saki-Yava-Soju Gold Vein System and Veins Surrounding ML104**

A geotechnical site investigation of the proposed road access between the **Saki Gold Prospect** and **Tolukuma Gold Mine** was initiated by Frontier and conducted by Frontier’s consultant field geotechnical engineer to assess the surface conditions and slope stability of the ridges along the proposed road and to evaluate the road feasibility. The proposed Saki access road alignment is 5km in length starting from Hoyu Creek at location point PSR1 to New Gutiva village (Figure 5). The survey follows local bush tracks and old horse tracks along ridges to assess geological and geotechnical characteristics and identify any potential geohazards.

The proposed road access is confined to the ridge crests to avoid potential landslip issues along the slopes of the ridges due to their steep angles (40-60°). The main geohazard posed by the narrow steep ridges is major landslips when the forest cover is cleared by an excavator. Topsoil and pyroclastic rock overburden will need to be excavated down to bedrock level where the ground foundation is more competent and stable.

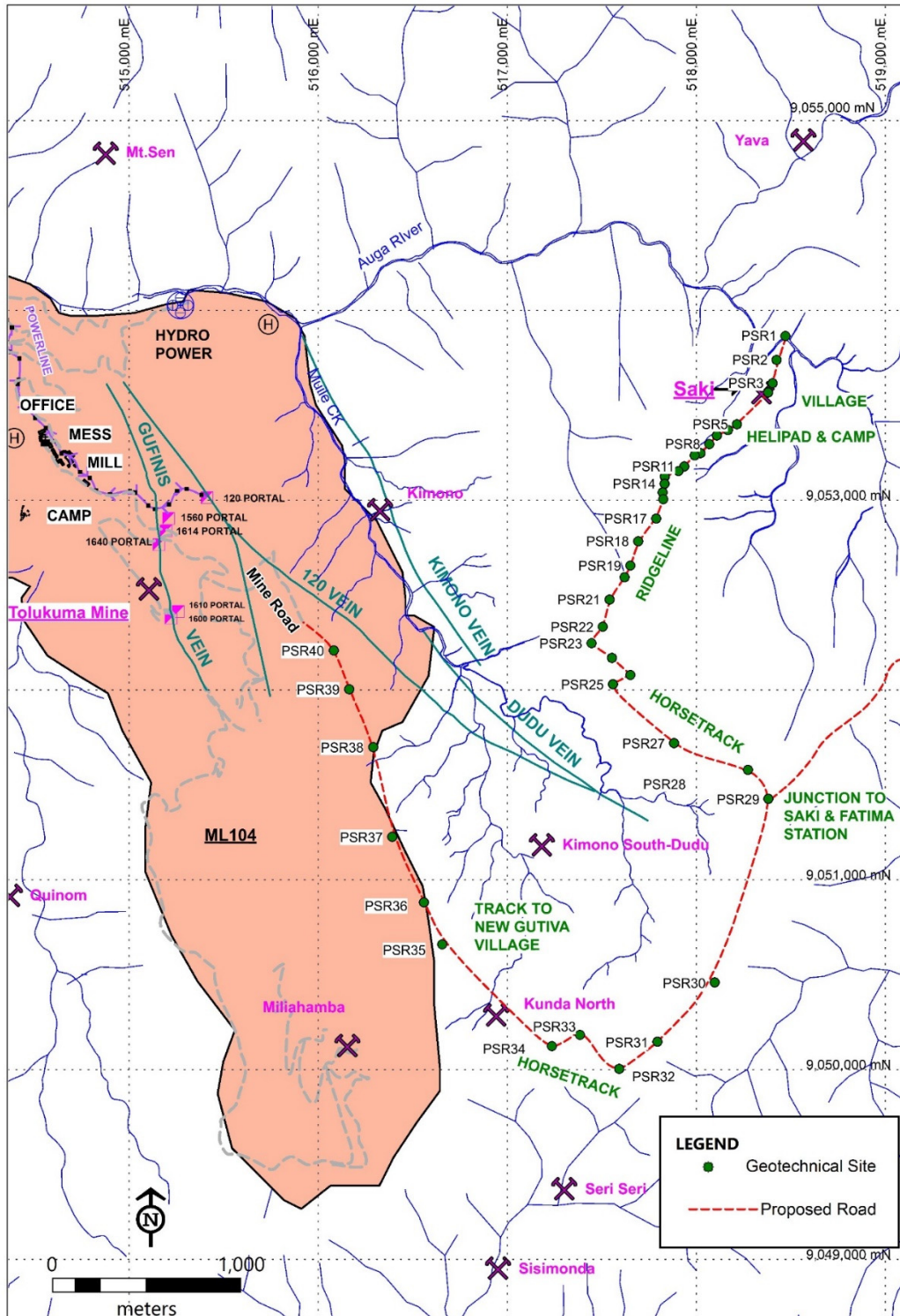


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The daily high rainfall and silty clay to clayey soil (medium to high plasticity) within the project area requires the design of an adequate drainage system to remove excess water and surface run-off from the road surface to avoid deterioration of the road surface. Most of the ridges are quite narrow (3-5m wide) with a few flat areas (6-10m wide) on top of the ridges.

Prior to clearing of the proposed road alignment sites, detailed geotechnical investigation studies will need to involve geotechnical drilling and laboratory testing of the drill core samples.



**Figure 5: Surveyed Proposed Road Access from Saki to the Tolukuma Mine**



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## **Landowner Relations:**

As part of the support to local landowners, school stationary has been donated to local school children at Kimono (Photo 1). In addition, emergency food has been provided to the nearby Saki village following the December 2020 Landslide at Saki. Frontier continues to meet regularly with landowners to discuss our fieldwork program.



**Photo 1: Assisting Local Landowner Families with Educational Material**

## **Next steps on the existing project portfolio:**

- Receive and interpret trench and rock sampling assay results from the Kimono and Tassy veins collected during the February 2021 fieldwork program.
- A tenement renewal application for a further two-year term has been lodged and a Warden's landowner hearing has been re-scheduled to 19<sup>th</sup> May 2021 as part of this process.
- Undertake a trench sampling program at Saki, following on from the Warden's hearing. This program will test and confirm vein continuity, extend zones of gold mineralisation and define drill targets.
- Seek strategic partners to more rapidly advance gold prospect within EL2531.
- Continue to assess additional project opportunities that fit within the Company strategy.

## **ASX Additional Information**

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the quarter was \$136,000. Full details of exploration activity during the March quarter are set out in this report.
2. ASX Listing Rule 5.3.2: There was no substantive mining production and development activities during the Quarter.
3. ASX Listing Rule 5.3.5: Payment to related parties of the Company and their associates during the quarter: \$56,925. The Company advises that this relates to non-executive directors' remuneration and additional technical consulting fees. Please see the Remuneration Report in the Annual Report for further details on Directors' Remuneration.



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**Releases submitted to the ASX during the Quarter included:**

13 January 2021	Significant Gold Mineralised Extensions at Kimono, including 101 g/t Au
1 February 2021	Fieldcrew Re-Mobilised to Kimono Gold Project
10 February 2021	Modelling Extends Saki-Yava-Soju Vein System
1 March 2021	Kimono Fieldwork Shows Continuity of Gold Veins
10 March 2021	Half Yearly Report and Accounts
18 March 2021	Kimono Fieldwork Completed and Samples Dispatched
31 March 2021	Saki Road Access Site Investigation

Authorised by the Board of Frontier Resources.

For additional information please visit our website at [www.frontierresources.net.au](http://www.frontierresources.net.au)

**FRONTIER RESOURCES LTD**

**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 Non-Executive Director for Frontier Resources. 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.

**Frontier Resources Ltd Exploration Licence Information**

Exploration Licence Number and Name	Ownership	sub-blocks	AREA (sq.km)*	Grant Date	Expiry Date
EL2531 - Tolukuma	100% Frontier Copper PNG Ltd	130	441.72	25-Feb-19	24-Feb-21
ELA2529 - Gazelle	100% Frontier Copper PNG Ltd	211	719.51	N/A	N/A
Total of Granted EL's		130	441.72		

\*1 sub-block approx. 3.41 sq.km

NB: 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. There was no change in the ownership status of the Company's tenements during the quarter.