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**ASX: FNT**

ASX Limited  
Market Announcements Platform

29 October 2020

## **ACTIVITIES REPORT – QUARTER ENDED 30<sup>th</sup> SEPTEMBER 2020**

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- An independent review of the historical data at the Soju-Yava prospect has been completed where trench sampling at the Kairo vein returned **1.5m @ 10.96 g/t gold**. Its mineralised vein system demonstrates a **3km wide zone** of continuous gold mineralised veins over the Saki-Yava-Soju-Salat prospects. Best surface rock samples include **1,750 g/t Au** and with drilling results of **0.3m @ 6.13 g/t Au**.
- An independent review of the historical Newmont sampling at the Duma-Dilava prospect area showed rock float samples of **54.4 g/t Au** and **13.3 g/t Au** occurring 3km further along strike from the Tolukuma gold mine on the same NNW-trending structure.
- A highly experienced team of geologists have mobilised to the Kimono project, 1km east of the Tolukuma mine to identify historical soil sample anomalies and extend known mineralised veins sampled by previous explorers.
- **Visible gold** was panned from quartz veining in a 7.0m wide zone which may be a continuation of one of the splays of the Kimono Vein with 1-3% disseminated pyrite. Trench sampling is underway at the main **Kimono Central vein** where historical Trench #4 (1.6m @ 7.84 g/t Au) and Trench #5 (2m @ 12.3 g/t Au) have been re-located. Two previously unknown historical drill sites have been located at Kimono and work is planned to re-log the core.

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Frontier Resources Limited (**Frontier** or the **Company**) is focussed on high grade gold mineral 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 a review of remaining historical results from the Soju-Yava system of gold mineralised veins 3km east of the Tolukuma mine. A similar review of the Duma-Dilava Prospect showed an extension of gold mineralisation continuing south from the Tolukuma mine veins system. The Company also commenced a fieldwork program along the Kimono gold vein system that runs 4km along the eastern boundary of the mining lease ML104 (Figure 1).

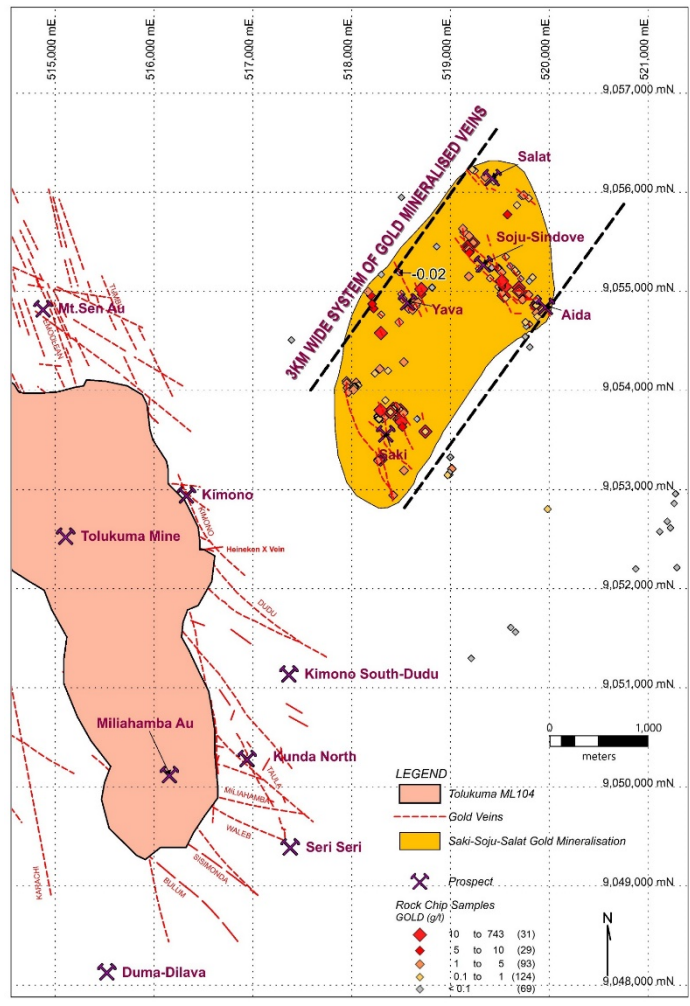
### **Saki-Soju-Yava Vein System**

The area was discovered and initially explored by Newmont during 1986-89 and subsequently explored by Tolukuma Gold Mines (TGM) in 1999-2000. Sampling by Newmont returned best rock float samples of **1,750 g/t Au** in eight separate vein systems at Ingesa, Kamikaze, Tevuna, Aida, Rong, Karuka, Justin, and Discovery (Figure 2 and Table 1). Subsequently, TGM made significant new vein discoveries including the Antonio Vein and the Valab X Vein with Trench results including **1.2m @ 18.8 g/t Au**. A first-pass scout drilling program of 7 holes totalling 1,043.6m was completed by TGM returning best drillhole intervals of **0.15m @ 25.2 g/t gold**. Six of the 7 holes were inclined in the same dip direction of the vein and as such the Soju-Yava vein system is virtually untested by drilling.



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**Figure 1: Location of Gold Vein Systems Near the Tolukuma Mine**

**Table 1: Soju-Yava Prospect – Newmont Trench Sampling Highlights**

Vein	Location	Description	Assay Result
<b>Soju Prospect:</b>			
Antonio Vein	519738.3E/9055975.7N	1.0m wide; possible continuation of the Discovery Vein	1.3m @ 1.49 g/t Au
Justin Vein	519569.8E/9055102.9N	0.3m quartz-sulphide vein, parallel to Tevuna Vein	<b>1.0m @ 158.37 g/t Au</b>
Valab X Vein	519713.9E/9055010.8N	Mineralised E-W cross vein; truncates Justin Vein	<b>1.2m @ 18.80 g/t Au</b>
Aida Vein	519976.1E/9054810.4N	SE extension of Aida Vein	1.5m @ 2.44 g/t Au
<b>Yava Prospect:</b>			
Kairo Vein	518297E/9054583.6N	Up to 2.0m wide quartz-sulphide vein	<b>1.0m @ 16.8 g/t Au</b>
Gimala Vein	518696.6E/9054940.0N	Newly discovered 2.0m wide quartz-sulphide vein with a 3.0m silicified envelope	1.5m @ 3.72 g/t Au
Marakus Vein	518708.8E/9055019.1N	Newly discovered 2.0m wide quartz-sulphide vein with a 3.0m silicified envelope	<b>1.5m @ 10.95 g/t Au</b>
Odeli X Vein	518192.4E/9054958.3N	Up to 3.0m wide quartz-sulphide vein	3.0m @ 8.65 g/t Au



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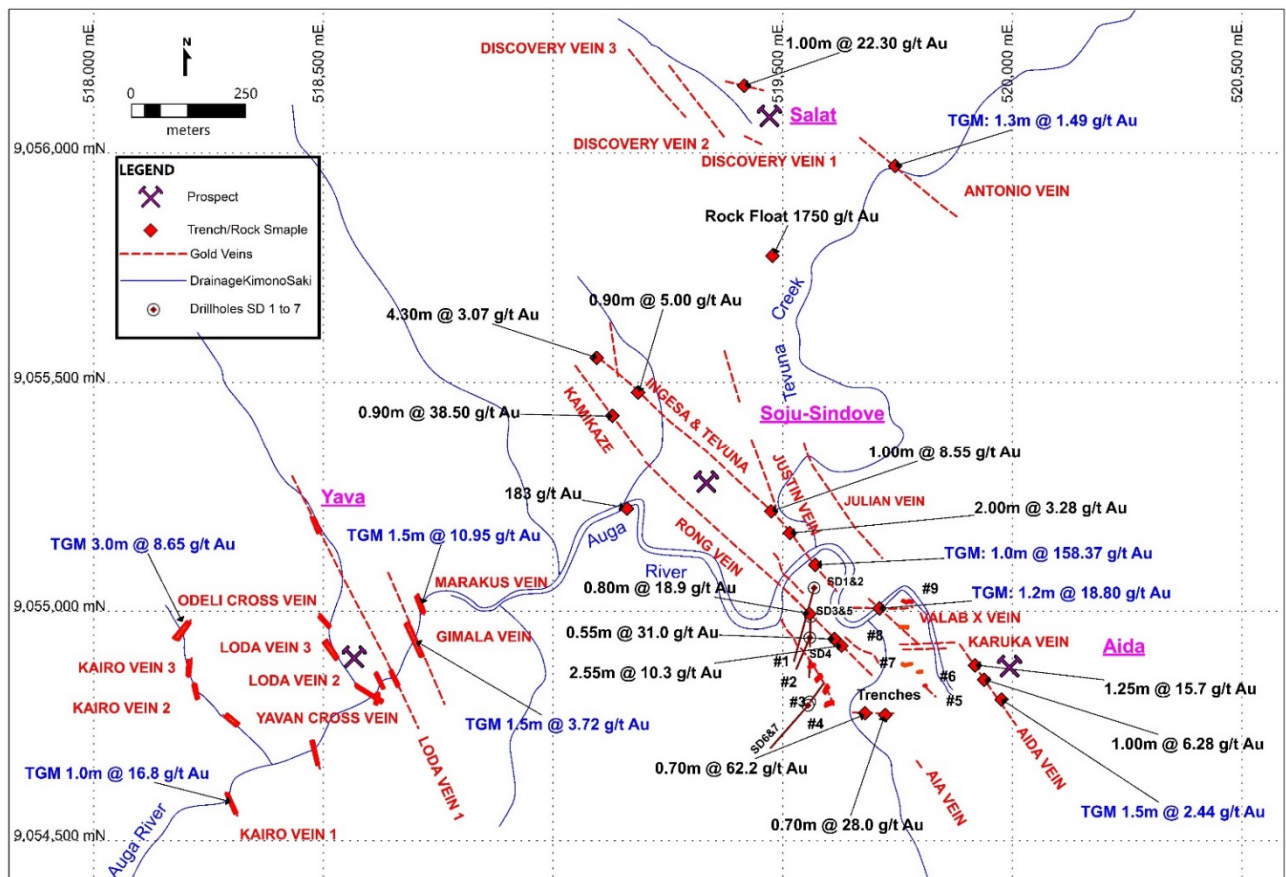


Figure 2: Soju-Yava-Salat Vein System

### Duma-Dilava Prospect

The prospect was discovered by Newmont in 1987 while following up gold drainage anomalies and vein quartz float found during reconnaissance sampling in 1986. Strongly anomalous gold in drainage anomalies of up to 41.7 ppb Au and rock float anomalies of up to **54.4 g/t Au** indicate the area is **highly prospective for vein style gold mineralisation** similar to Tolukuma.

Of 15 rock float samples collected by Newmont, eight contained >1.0 g/t gold; the highest value was **54.4 g/t Au** in white saccharoidal quartz. A 1.0m chip sample from an eastern tributary of *Bulum Creek* assayed **1.0m at 4.77 g/t Au** (Figure 3).

Three types of gold-bearing vein quartz float were recognised in the area:

- Crustiform and colloform banded to massive sulphide-poor vein quartz with gold values generally less than 2.0 g/t Au;
- Brecciated crustiform to massive quartz +/- volcanic fragments with up to 10% pyrite+MnO with gold values up to **6.35 g/t Au**; and
- Chalcedonic to chalky saccharoidal quartz, commonly brecciated with silica or Mn-rich matrix. Only two samples were assayed with results of **13.3 g/t Au** and **54.4 g/t Au**.

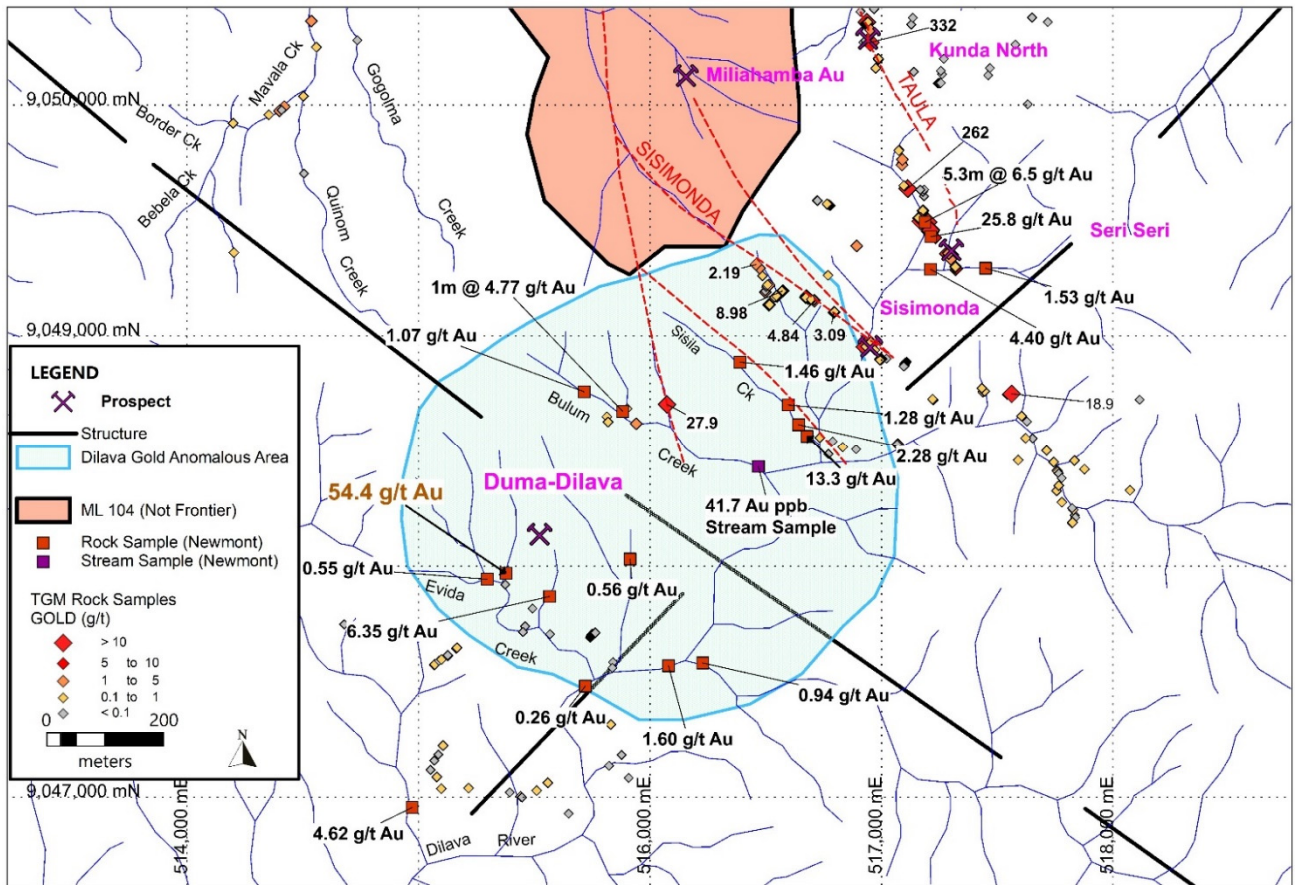


Figure 3: Dilava Prospect – Summary Map

**Kimono Vein System**

The “Kimono Project” is defined by a mineralised zone extending for about 4.0km encompassing the known Kimono Vein (Kimono Central), the 120 vein and Kimono South (formerly named Dudu). Historical rock sampling at the Kimono Central Vein includes **38.5 g/t Au** and trench results of **2m @12.3 g/t Au** (Figure 4). Along the 120 Vein, trench highlights include **13m @49.0 g/t Au**.

Frontier mobilised a highly experienced geological crew to the Kimono village and conducted awareness meetings with landowners who remain supportive of continuing exploration. A historical field camp at Kimono South was constructed to support the field team of three geologists and field workers to complete a sampling and mapping program.

Eight target areas (TARGET 1 to 8) have been defined at Kimono South Au over wide zones of historical gold-in-soil anomalies (Figure 4). TARGET 4 has historical rock samples of **8.25 g/t Au**. TARGET 5 in Upper Muile Creek has historical rock samples including **332 g/t Au** and **41.4 g/t Au**.

A total of sixty-one rock and trench samples (27 trench, 26 rock chip, 8 rock float) were collected from Kimono South during the first two weeks of fieldwork with an additional eight samples (2 trench, 2 rock chip, 4 rock float) collected more recently. Two previously unknown historical drill holes KI001 and KI002 were located and drill core currently stored at the Saki prospect is planned to be re-logged to help in understanding the geology and veining intersected at depth.



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Frontier fieldwork highlights include:

1. A 7.0m wide zone of quartz veining with 1-3% disseminated pyrite from which **fine colours of gold were panned** in Dudu Creek. This zone may be a continuation of one of the splays of the Kimono Vein and needs to be traced further;
2. A 10.0m wide zone of silicified breccia with 1-5% disseminated pyrite mapped in Holsiga Creek;
3. A 65cm wide quartz vein with 1-2.5% pyrite mapped in Holsiga Creek;
4. A 1.0-2.0m wide brecciated quartz vein mapped in Muile Creek;
5. Several new zones of alteration/veining/brecciation, mapped and sampled in Muile, Holsiga and Dudu Creeks; and
6. Located historical Trenches #4 and #5 where historical results included **2m @ 12.3 g/t Au**.

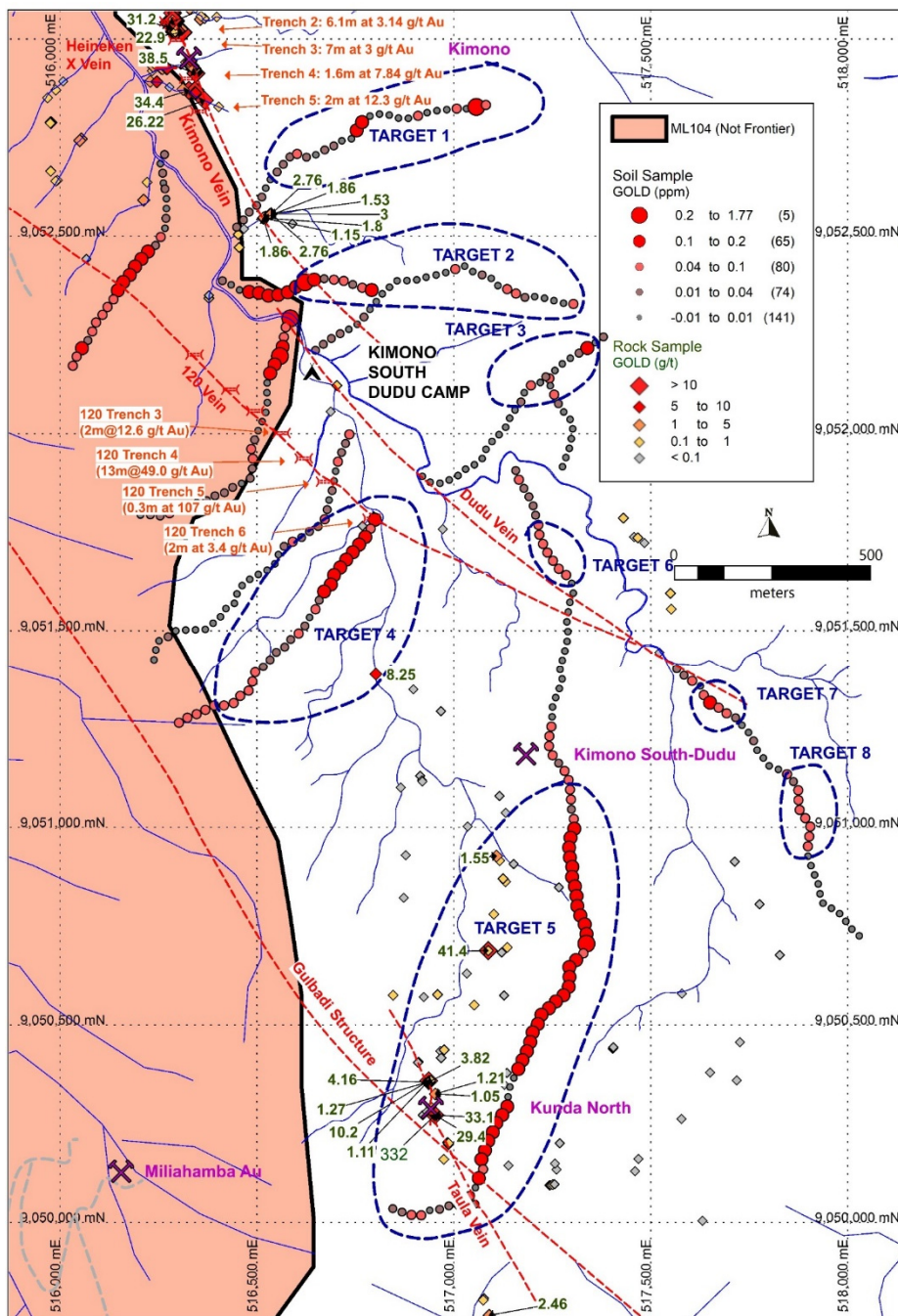


Figure 4: Kimono South Target Areas

A one-metre wide silicified outcrop was found with 2mm-100mm size quartz veining and strike/dip of 075/75SE (Photo 1-A), believed to be a splay/dilational jog between the Tolukuma vein and Kimono vein. Further north near the KI001 drill pad, a 1.0-2.0m wide outcrop of pinch and swell quartz vein with variable widths was exposed along a 15m section of the creek. The vein trends sub-parallel to the creek with quartz showing boytroidal, saccharoidal, colloform, comb and chalcedonic textures (Photo 1-B&C).



**Photo 1: Kimono Central Silicified Outcrop. (A) 1m wide quartz vein along walking track; (B) 1-2m wide quartz vein near KI001 drill pad dipping into the page; (C) Epithermal textures including colloform banding with abundant dark fine grain sulphides.**

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

- Regional review and target selection within EL2531.
- Landowner discussions for upcoming fieldwork programs at the Saki gold prospect.
- Undertake planned trench sampling at the Saki gold prospect in order to prepare for a drilling program to obtain a JORC Resource.
- 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 \$125,000. Full details of exploration activity during the September quarter are set out in this report.



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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: \$52,839. The Company advises that this relates to non-executive directors' fees only. Please see the Remuneration Report in the Annual Report for further details on Directors' Remuneration.

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

19 August 2020	Yava Gold Veins Demonstrate a 3km Wide Zone of Mineralisation
4 September 2020	Mobilisation of Fieldcrew to Kimono Gold Project
23 September 2020	Duma-Dilava Prospect Area an Extension of Tolukuma Gold Mine
25 September 2020	Kimono Fieldcrew Identifies 7m vein with Panned Visible Gold
30 September 2020	Annual Report to Shareholders

Authorised by the Board of Frontier Resources. For additional information please visit our website at [www.frontierresources.com.au](http://www.frontierresources.com.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.