COMPANY ANNOUNCEMENT  
11 December 2018

A nation-building development pathway for the Frieda River Project

PanAust Limited (PanAust) is pleased to announce a new nation-building development pathway for the Frieda River Project in Papua New Guinea (PNG).

Recognising the unique opportunity and responsibility of major resource projects to contribute to broad socio-economic uplift, the new approach focuses on the development of shared-use infrastructure that will support, and in turn be supported by, the mining operation.

Under this inclusive development model, the Frieda River Copper-Gold Project (FRCGP) will be a core component of a transformative nation-building opportunity - the Sepik Development Project.

The Sepik Development Project will deliver a world-class copper-gold mine and a long-life hydroelectric power facility. These two commercial projects will be enabled by third party development of an international maritime port, public roads, a regional airport and telecommunications services to establish a new economic corridor in an underdeveloped region of PNG. The Sepik Development Project will improve transport and connectivity, facilitate the delivery of services to remote communities, and boost domestic and international trade and investment.

The Sepik Development Project aligns with the Government of PNG’s development strategy and eschews an ‘enclave’ approach to mining development in which economic benefits are constrained. Moreover, it builds on recent infrastructure developments in Sandaun Province, including the construction of a road linking Vanimo to Green River and the planned Port of Vanimo redevelopment, and responds to stakeholder feedback received since the lodgment of the 2016 Special Mining Lease (SML) application for the FRCGP which contemplated a standalone mine development.

The Sepik Development Project will deliver significant direct and indirect local employment, create business opportunities, attract foreign investment and boost trade and commerce. Host communities, especially in rural areas, will benefit from access to improved transport, telecommunications, health, education and government services that will support a higher quality of life and greater social participation. More broadly, training and employment of Papua New Guineans will provide the skills and capacity to support the nation’s future development and prosperity.

The Hon. Rimbink Pato, OBE, MP, Minister for Foreign Affairs and Trade of the Independent State of PNG, publicly stated in April 2018 that “nation-building projects will enhance APEC economic partnerships
including the Frieda River Gold and Copper Mine Project [and] will also boost bilateral and regional trade and investment that will directly change the lives of our people forever”.

The new development pathway is confirmed by an updated feasibility study which, in turn, supports a doubling of the Ore Reserve estimate for the Horse-Ivaal-Trukai, Ekwai and Koki (HITEK) mineral deposits increasing the mine life from 17 to 33 years (refer ‘Frieda River Copper-Gold Project Ore Reserve update’ PanAust Company Announcement – https://panaust.com.au/company-announcements).

The 2018 feasibility study incorporates additional field and study work completed since the submission of a feasibility study and SML application to the PNG Mineral Resources Authority in June 2016, and a subsequent feasibility study addendum released in March 2017. A comprehensive Environmental Impact Statement (EIS) has been prepared for the Sepik Development Project.

The 2018 feasibility study and accompanying economic impact assessment identified several significant enhancements and outcomes arising from the Sepik Development Project:

- An estimated increase in real national gross domestic product (GDP) by a cumulative value of PGK90 billion (US$29 billion) over 40 years
- An estimated initial capital investment of over PGK26.5 billion (US$8 billion)
- Total tax, royalty and production levy revenue to the State and landowners of PGK29 billion
- A pathway to a 45 year mine life using the facilities to be established for the initial development and incorporating known extensions to the HITEK deposits and the nearby Nena deposit
- Average annual production rates of 175,000 tonnes (t) of copper and 230,000 ounces (oz) of gold metal
- Relocation of the integrated storage facility (ISF) from the Nena River to the Frieda River to establish a hydroelectric power facility with a generation capacity of up to 490 megawatts (MW) to supply the FRCGP and other customers
- Installation of a regional power transmission line from the hydroelectric facility to other customers subject to the Government of PNG’s power distribution objectives
- Increased capacity to securely and permanently store mine waste rock and process tailings under a deep water cover within the hydroelectric reservoir to protect the downstream environment
- A land-based logistics and infrastructure corridor connecting the mine to the Port of Vanimo (previously a riverine-based corridor from the mine to Wewak via the Sepik River).

The feasibility study analysis indicates the following economic outcomes for the FRCGP depending on the selected commercial structure (combined or separate ownership of the mine and the hydroelectric facility):

- All-in sustaining costs (AISC) from US$1.01 to US$1.57 per pound (lb) of copper including by-product credits
- Post-tax net present value (NPV) from US$1.8 to US$2.4 billion at 8 per cent real discount rate at long term metal prices of US$3.30/lb copper and US$1,390/oz gold.

The Sepik Development Project has been structured to facilitate funding from various sources. The long-life mine and hydroelectric facility offer attractive returns to equity investors, financiers and export credit agencies. The enabling shared-use infrastructure is well suited to public-private partnerships, state owned enterprises and sovereign funding in the form of grants, concessional loans and infrastructure funds.

PanAust Managing Director, Dr Fred Hess noted the significance of the feasibility study outcomes.

“The updated feasibility study demonstrates the attractiveness of the world-class, long-life mine development and the potential it holds as a catalyst for broader socio-economic development. Our approach
builds upon the findings of the 2016 feasibility study, new information and feedback received from stakeholders during our consultative processes,” Dr Hess said.

The incorporation of a shared-use infrastructure model has driven substantial improvements to the FRCGP economics and positive economic impacts for PNG. The model provides for the development of infrastructure for general use including a hydroelectric power facility, ocean port, regional road, airport, power grid and telecommunications.

“By incorporating a shared-use infrastructure model that aligns with the development goals of Papua New Guinea, the Sepik Development Project represents a transformative nation-building opportunity for the country,” Dr Hess noted.

The FRCGP hosts one of the largest undeveloped copper-gold deposits in the world. The HITEK Mineral Resource\(^1\) is estimated to contain over 2.6 billion tonnes (Bt) of mineralisation at an average grade of 0.44 per cent copper and 0.23 grams per tonne (g/t) gold and contains over 13 million tonnes (Mt) of copper and 20 million ounces (Moz) of gold.

A nation-building project

The Sepik Development Project aligns with, and will help realise, the Government of PNG’s development plans as outlined in Vision 2050 and the Papua New Guinea Development Strategic Plan 2010-2030 (PNGDSP). In particular, it will realise the PNGDSP’s ‘Border Corridor’ by providing important energy, transport and communications infrastructure that supports the integrated approach to mine development.

The Sepik Development Project contemplates four interdependent projects that together will create a new economic corridor across the Sandaun and East Sepik Provinces (Figure 1):

- the Sepik Infrastructure Project (SIP)
- the Frieda River Copper-Gold Project (FRCGP)
- the Frieda River Hydroelectric Project (FRHEP)
- the Sepik Power Grid Project (SPGP).

Once in development, the Sepik Development Project will increase national gross domestic product and export earnings and provide a long-term boost to government revenues. It will also generate benefit streams to landowners and host communities, as well as create new employment and business development opportunities during implementation and operations.

A comprehensive stakeholder engagement process has ensured stakeholders are aware of the Sepik Development Project and its potential impacts. Extensive structured engagement with landowners and host communities, along with all levels of government, has demonstrated high levels of support and provides a robust platform for sustainable social and business licenses to operate.

The Hon. Solan Mirisim, MP, Minister for Defence and Member of Parliament for the District of Telefomin, which hosts the Frieda River copper-gold deposits, spoke of development opportunities for local communities in close proximity to the Frieda River Project area.

“The local communities near Frieda River, the people of Telefomin, Sandaun Province and the region are hungry for development. I am pleased that the project facilitates government strategies for development

\(^1\) Refer to Appendix 1 for further details
including roads linking Telefomin to Green River to Vanimo, and from there, to other Sepik coastal and inland regions, and power to Sandaun and East Sepik provinces and other parts of PNG. Our people look forward to the project becoming a reality and it helping them to realise their ambitions for better lives”.

A study completed by economics consulting firm ACIL Allen Consulting indicates that real national GDP is estimated to increase by a cumulative value of PGK90 billion (US$29 billion) over 40 years as a result of the Sepik Development Project. Total tax, royalty and production levy revenue to PNG governments and landowners is estimated to total PGK29 billion over the same period. In addition to employment for approximately 5,000 people during construction and 2,100 personnel during FRCGP operations, there is the potential to create over 30,000 indirect employment opportunities.
The features of the Sepik Development Project are outlined in Table 1.

Table 1: Features of the Sepik Development Project components

<table>
<thead>
<tr>
<th>Frieda River Copper-Gold Project</th>
<th>Frieda River Hydroelectric Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,490Mt of mill feed (0.45 per cent copper, 0.24g/t gold) and 1,430Mt of waste rock over the life of mine from the HITEK open-pits.</td>
<td>Up to 490MW power generation from 10 turbines.</td>
</tr>
<tr>
<td>Subaqueous placement and storage of potential acid forming waste rock and tailings within the ISF.</td>
<td>Up to 2,800 gigawatt hours per annum (GWh/a) of energy generation.</td>
</tr>
<tr>
<td>39 kilometre (km) access road linking the mine site to Hotmin.</td>
<td>99.7 per cent power reliability.</td>
</tr>
<tr>
<td>Transport of concentrate by buried pipeline to the Port of Vanimo.</td>
<td>191 metre (m) high asphalt concrete core rock fill embankment with a gated concrete-lined spillway.</td>
</tr>
<tr>
<td>Initial power demand of 180MW, increasing to 280MW in Year 8, supplied by the FRHEP.</td>
<td>Low level power waterway intake for early power generation.</td>
</tr>
<tr>
<td>Peak construction workforce of 2,750 personnel and an operational workforce of approximately 2,000 people.</td>
<td>3.3 billion cubic metres (Bm³) of ISF storage capacity for mine waste rock, process tailings and sediment.</td>
</tr>
<tr>
<td>33 year operational life.</td>
<td>Peak construction workforce of 2,260 personnel and an operational workforce of approximately 130 people.</td>
</tr>
<tr>
<td>Seven year implementation period.</td>
<td>Nominal 100 year operational life.</td>
</tr>
<tr>
<td>Five year construction period.</td>
<td>Seven year implementation period.</td>
</tr>
<tr>
<td>Sepik Infrastructure Project</td>
<td>Sepik Power Grid Project</td>
</tr>
<tr>
<td>Redevelopment of the Port of Vanimo as a multi-berth facility suitable for international vessels up to Handymax size.</td>
<td>275 kilovolt (kV) Northern Transmission Line from the FRHEP to the Indonesian border (380km) via Hotmin, Green River and Vanimo.</td>
</tr>
<tr>
<td>Upgrade and extension of the Vanimo to Green River road (188km).</td>
<td>19.1kV single wire earth return distribution system providing rural electrification to three networks: Hotmin to Telefomin, Green River, and Vanimo.</td>
</tr>
<tr>
<td>Construction of a 110km road from Green River to Hotmin including a bridge spanning the Sepik River.</td>
<td>Construction to commence prior to FRCGP operations and energised in Year 2 of FRHEP operations when export power becomes available.</td>
</tr>
<tr>
<td>Construction of a 111km road from Hotmin to Telefomin.</td>
<td></td>
</tr>
<tr>
<td>Upgrade of the Green River Airport to accommodate Code 2 (50 seat) aircraft.</td>
<td></td>
</tr>
<tr>
<td>Construction to commence ahead of FRCGP and FRHEP construction.</td>
<td></td>
</tr>
</tbody>
</table>

Sepik Infrastructure Project

The SIP will establish transport and communications infrastructure between Vanimo and Telefomin, along the Border Corridor identified in the PNGDSP. The SIP underpins and enables the development of the entire Sepik Development Project through:

- Upgrade and expansion of the Port of Vanimo which is currently the subject of a feasibility study commissioned by the Government of PNG
- Upgrade of the existing road from Vanimo to Green River
• Construction of a new regional road from Green River to Telefomin, via Hotmin, which enables the movement of people and materials, access to markets and establishes access to the FRCGP, FRHEP and new agricultural projects
• Upgrade of a regional airport facility at Green River for commercial use
• Installation of a fibre optic cable and a commercial mobile phone network to provide communications services along the road corridor.

The SIP would be third party funded with development commencing prior to the other Sepik Development Project components. The total development cost is estimated to be US$739 million (Table 2).

Table 2: SIP capital cost estimate summary

<table>
<thead>
<tr>
<th>Development cost (US$ million)</th>
<th>Port of Vanimo</th>
<th>Green River Road</th>
<th>Hotmin Road</th>
<th>Telefomin Road</th>
<th>Green River Airport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>103</td>
<td>96</td>
<td>244</td>
<td>280</td>
<td>16</td>
</tr>
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</table>

Frieda River Copper-Gold Project

The FRCGP is a major greenfield mine development that is enabled by the SIP and integrates with the FRHEP. Copper mineralisation was first identified in the Frieda River area in 1966/67. Numerous studies have been completed over the subsequent decades by various owners. These studies were based on a traditional standalone ‘enclave’ mine development model.

The FRCGP will use a large-scale open-pit mine to extract ore from the HITEK porphyry copper-gold deposits. The peak mining rate will be 135 million tonne per annum (Mtpa) using large-scale conventional truck and shovel equipment. Waste rock from the open-pit mine will be crushed near the open-pit exit for conveying to large barges that will deposit the waste rock within the ISF. Crushed ore will be transported 8.5 km by overland conveyer to the process plant.

Ore will be processed using proven, conventional comminution and flotation processes to yield a high quality copper-gold concentrate. Concentrate slurry will be piped to Vanimo where it will be dewatered prior to export in ocean freighters. The ore processing rate will average 41Mtpa during the initial seven operating years. A process plant expansion is timed in Year 8 to increase the average ore processing rate to 46Mtpa to sustain annual cash flows through to Year 15 before the increasing strip ratio and decreasing head grade combine to reduce annual cash flow.

A schematic overview of the mining and processing activities is shown in Figure 2 with the site layout presented in Figure 3.

Total material mined will be approximately 2,920Mt comprising 1,490Mt of mill feed (0.45 per cent copper and 0.24g/t gold) and 1,430Mt of waste rock (strip ratio of 0.96:1) over the initial 33 year operating life. The mill feed has more than doubled compared to the 2016 feasibility study and extracts a much higher proportion of the HITEK Mineral Resource.

Annual production will average 670,000t of concentrate containing 175,000t of copper and 230,000oz of gold, based on average metallurgical recoveries of 86 per cent copper and 67 per cent gold. The copper-gold concentrate will be sought after by custom smelters due to the FRCGP’s proximity to key markets, its high quality concentrate and an anticipated shortfall in global copper concentrate supply by 2030.
The pre-production capital cost is estimated to be US$2.8 billion over five construction years. The feasibility study incorporated commercially available finance leasing of mobile mining equipment and a build, own, operate and transfer (BOOT) concentrate pipeline arrangement into the operating cost estimate.
Economic analysis of the FRCGP, using a scenario of electricity supply from the FRHEP under a commercial power purchase agreement, yielded robust outcomes based on the feasibility study assumptions which included revenue estimates derived from metal price forecasts of US$3.30/lb copper and US$1,390/oz gold.

- Gross revenue is estimated to average US$1.5 billion per annum over the life of the mine.
- A life of mine average AISC of US$1.57/lb copper after by-product credits.
- Post-tax free cash flow of US$13 billion, averaging US$690 million per annum in the first five years and US$480 million per annum over the life of the mine.
- Post-tax NPV of US$2.4 billion (8 per cent real discount rate).
- Post-tax internal rate of return (IRR) (real) of 16 per cent.
- Payback to occur four years after the commencement of production.

The known extent of the HITEK mineral deposits has the potential to support a mine life extension to at least 45 years and increase total copper equivalent metal production from 7Mt to more than 10Mt.

A scoping study for the Nena copper-gold deposit identified the potential for a brownfield mine development with an average annual production of 60,000t copper in cathode and 70,000oz of gold doré over a 15 year life. Development of the Nena deposit would occur after the initial HITEK development to make full use of power generated from the FRHEP.

The 2018 feasibility study supports the updated 2018 HITEK Ore Reserve which is presented in Table 3 relative to the 2017 HITEK Ore Reserve. The material increase between the 2017 and 2018 estimates is supported by key scope enhancements including relocation of the ISF from the Nena River to the Frieda River and expansion of the HITEK process plant from a peak of 49Mtpa to 65Mtpa in Year 8 of operations compared to 40Mtpa previously.

Table 3: Comparison between 2017 and 2018 HITEK Ore Reserve estimates

<table>
<thead>
<tr>
<th>Classification</th>
<th>2017 HITEK Ore Reserve</th>
<th>2018 HITEK Ore Reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tonnes (Mt)</td>
<td>Copper grade (%)</td>
</tr>
<tr>
<td>Proved</td>
<td>413</td>
<td>0.54</td>
</tr>
<tr>
<td>Probable</td>
<td>272</td>
<td>0.45</td>
</tr>
<tr>
<td>Total</td>
<td>686</td>
<td>0.50</td>
</tr>
</tbody>
</table>

2018 Ore Reserve notes:
(i) Estimated at commodity prices of US$3.30/lb copper and US$1,390/oz gold
(ii) Reported using a breakeven economic cut-off value that considers relevant modifying factors
(iii) The Ore Reserve is reported on a 100% ownership basis
(iv) Total values may include minor computational errors due to rounding.


2 Refer to Appendix 2 for further details
**Frieda River Hydroelectric Project**

The FRHEP is a long-life renewable energy source for the northwest region of PNG. The FRHEP will supply power to the FRCGP and can be configured to supply other customers. Hydroelectric power from the FRHEP will assist PNG to meet its target of 100 per cent renewable energy supply by 2050 and opens the opportunity for cross-border power export to the neighbouring Papua Province of Indonesia. The facility will generate power for many decades after closure of the FRCGP to sustain regional and national economic growth.

The FRHEP is a unique integration of individually proven components. It is engineered to store water for reliable low-cost hydroelectric power generation and permanently contain process tailings and mine waste rock from the FRCGP. A permanent cover of water of approximately 40m will be maintained above the process tailings and mine waste rock to limit the potential for acid generation and transport of soluble metals. This approach has been successfully demonstrated at PanAust’s Phu Kham Operation in Laos to minimise any impact on downstream water quality.

The FRHEP requires construction of an embankment, spillway, power generation system and associated facilities (Figure 4). The embankment will have a height of approximately 191m, requiring approximately 30 million cubic metres (Mm$^3$) of rock fill. It has been designed in accordance with international guidelines, was reviewed by a panel of leading international experts and is within the framework of relevant PNG legislation and leading industry practice.

**Figure 4: An artist’s impression of the FRHEP embankment from the downstream side**

The design parameters consider the high rainfall and seismicity in the area. The embankment and spillway are engineered to safely accommodate extreme water flows and potential earthquake events.
Water in the reservoir will reach a maximum depth of approximately 180m. Total process tailings and mine waste rock storage capacity is 3.3Bm$^3$ which exceeds the 2.2Bm$^3$ to be placed over the FRCGP’s initial 33 year operating life.

The hydroelectric facility will supply power to the FRCGP at 99.7 per cent reliability with excess power available for sale to other customers. The power system is configured to generate up to 490MW (2,800GWh/a) of renewable energy which represents almost half of the PNGDSP’s hydroelectric expansion target of 1,020MW by 2030.

Total installed capital cost is estimated at US$3.2 billion with a six year construction duration.

The FRHEP and FRCGP are interdependent projects that could support separate or joint ownership models. FRHEP ownership by either the Frieda River Joint Venture or a third party under an independent power producer model, were both assessed as commercially viable approaches in the feasibility study.

**Sepik Power Grid Project**

The SPGP aligns with the electricity super-corridor concept planned under the PNGDSP to connect areas where electricity can be generated at lowest cost with a national power grid. The SPGP could be installed to transmit power from the FRHEP to other customers to achieve the Government of PNG’s power distribution objectives.

Export power from the FRHEP will be available from the second year of FRCGP operations.

An independent market assessment concluded that there will be sufficient power demand to support the sale of power generated by the FRHEP:

- A base case forecast for the Jayapura power system in the neighbouring Papua Province of Indonesia shows a projected peak load in 2035 that exceeds planned capacity by 125MW
- PNG’s Ramu power system base case forecast shows additional capacity will be needed to meet peak load after 2032. The FRHEP would be able to sell increasing amounts of capacity around this time and there would be demand for full (planned) capacity by 2037.

The proposed 380km, 275kV Northern Transmission Line has been designed to deliver power to Vanimo and Indonesia’s Jayapura power system. Power could be distributed to villages along the public road alignment in support of the Government of PNG’s goal to provide at least 70 per cent of households with access to power by 2030.

An alternative Eastern Transmission Line could connect the FRHEP to the existing Ramu power system in PNG subject to future demand requirements.

The SPGP is contemplated as a third party development with an estimated construction cost of US$418 million.

**Environmental impact assessment**

Project planning has sought to avoid, minimise and offset environmental impacts. Comprehensive environmental baseline data has been collected over a period of ten years. The biodiversity surveys represent some of the most extensive ecological surveys conducted for a major project in PNG.
The key environmental aspects that require mitigation are fugitive sediment emissions during construction, dissolved metal emissions during FRCGP operations and closure, and general disturbance from project-related activities.

Important strategies for protecting the environment are the subaqueous deposition of mine waste rock and process tailings along with active treatment of open-pit contact water. Modelling and analysis shows that minimal impacts are expected to the water quality and aquatic ecology in the Sepik River.

Environmental management strategies will be guided by standards implemented by PanAust, an internationally recognised leader in environmental management and sustainability.

An independent advisory committee will be established to assist in addressing the environmental and related social impacts of mining activities upon the local and downstream communities. The committee will be established prior to the commencement of construction and will comprise prominent PNG citizens and local and international technical specialists. The committee will provide direction and technical oversight for monitoring and investigations of the environmental and social impacts in the mine area and downstream and will improve public understanding of the FRCGP’s impacts and independently review environmental performance and accountability. The findings of the committee will routinely be made public.

Project implementation

The Sepik Development Project is categorised as a megaproject by virtue of its high capital expenditure, multiple participants and spatial and time based interdependencies. Megaprojects typically have long implementation and construction periods. It is a complex undertaking that requires the involvement and commitment of multiple participants and will require due consideration by a number of parties including commercial partners and the Government of PNG and its regulatory agencies.

An integrated implementation strategy has been proposed to better manage the risks arising from this complexity. Combining the mine and the hydroelectric facility into a single venture is the preferred approach to mitigate the identified implementation risks. Project implementation would be overseen by a steering committee representing major stakeholders. A project management team will integrate an owner’s team with a project management contractor team. The project management team will be supported by design consultants and specialist engineering, procurement and supply contractors.

The project management team will use a mixed contracting and procurement strategy to engage suppliers and consultants who will undertake detailed engineering and sourcing of equipment, materials and contractors for construction works. Teams will project manage the delivery of each component project under a similar model.

Implementation including engineering, mobilisation and construction will require seven years from a positive final investment decision for the Sepik Development Project. The SIP can be implemented independently of the other Sepik Development Project components, however the FRCGP, FRHEP and SPGP all rely on completion of the SIP prior to the start of their construction. The SPGP is planned to be constructed concurrently with the FRHEP but, depending upon offtake commitments, could be deferred.
Commercial structure

There is an opportunity to combine the FRCGP and FRHEP under a single ownership structure with each entity separable at a future point in time to reduce the all-in sustaining costs and mitigate potential implementation risks.

Project permitting

Frieda River Limited will submit an update and revision to the Proposal for Development for the SML 9 application and to the supporting tenements on behalf of the Frieda River Joint Venture. The Environment Permit approval process will be progressed concurrently with lodgement of the Sepik Development Project’s EIS.

Project ownership

The Frieda River Project is held by the Frieda River Joint Venture, an unincorporated joint venture between Frieda River Limited, a PanAust subsidiary company, and Highlands Frieda Limited, a subsidiary company of Highlands Pacific Limited. Frieda River Limited manages the Frieda River Project and holds an 80 per cent interest; Highlands Pacific holds the remaining 20 per cent interest.

State equity

The Independent State of PNG has a right, prior to the grant of a SML, to purchase up to 30 per cent equity in the Frieda River Project at a price prorated to the accumulated historical expenditure.

The Joint Venture Agreement provides that if the State exercises its right to acquire up to a 30 per cent interest in the Frieda River Project, Frieda River Limited will sell down the first 20 per cent of any interest the State acquires. Thereafter, Frieda River Limited and Highlands Frieda Limited will each sell an equal interest to the State up to the maximum level of 30 per cent. Should the State exercise its full entitlement to 30 per cent of the Frieda River Project, Frieda River Limited will sell down to a 55 per cent controlling interest and Highlands Frieda Limited will sell down to a 15 per cent interest.

Final investment decision

A positive final investment decision is the trigger for committing to project development. A SML application does not represent a commitment to immediately develop the Frieda River Project.

A final investment decision for the Sepik Development Project components will be inextricably linked to the commitments of multiple stakeholders, potential equity ownership structure, funding package and fiscal terms agreed with the Government of PNG during the permitting and approvals phase.

There are a number of conditions that are required to be satisfied to ensure that key risks are adequately managed and, ultimately, that a positive final investment decision can be made. The conditions include, but are not limited to:

- A suitable and stable fiscal regime as part of the Proposal for Development to provide confidence in government and investor returns, noting that the current proposed changes to the Mining Act 1992 if enacted would likely render the Frieda River Project unviable
- Supportive copper and other commodity prices
- Completion of satisfactory financing arrangements and execution of all necessary debt and equity agreements
• Issue of the environmental permits
• Grant of the SML, supporting mining tenements and related tenure
• Construction of suitable shared-use infrastructure by third parties and access to this infrastructure on acceptable terms.

A positive final investment decision for the FRCGP and FRHEP will be preceded and expedited by the development of the SIP. Early development of public roads and the planned upgrade of the Port of Vanimo will reduce the lead time for the two commercial projects.

Forward-Looking Statements

This announcement includes certain “Forward-Looking Statements”. All statements, other than statements of historical fact, included herein, including without limitation, statements regarding forecast production performances, potential mineralisation, exploration results and future expansion plans and development objectives of PanAust Limited are forward-looking statements that involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements.

For further information contact:

Ms Kate Horan
T +61 3 117 2089
E kate.horan@panaust.com.au
Appendix 1: 2017 HITEK Mineral Resource estimate

<table>
<thead>
<tr>
<th>Classification</th>
<th>Tonnes (Mt)</th>
<th>Copper grade (%)</th>
<th>Gold grade (g/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>620</td>
<td>0.53</td>
<td>0.30</td>
</tr>
<tr>
<td>Indicated</td>
<td>1,240</td>
<td>0.44</td>
<td>0.22</td>
</tr>
<tr>
<td><strong>M+I subtotal</strong></td>
<td><strong>1,860</strong></td>
<td><strong>0.47</strong></td>
<td><strong>0.25</strong></td>
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<tr>
<td>Inferred</td>
<td>780</td>
<td>0.35</td>
<td>0.18</td>
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<tr>
<td><strong>MII total</strong></td>
<td><strong>2,640</strong></td>
<td><strong>0.44</strong></td>
<td><strong>0.23</strong></td>
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</tbody>
</table>

Mineral Resource notes:

(i) Reported at a copper cut-off grade of 0.2% (total copper)
(ii) The Mineral Resource is reported on a 100% ownership basis
(iii) May include minor computational errors due to rounding
(iv) The HITEK Mineral Resource is constrained within an optimiser shell with a Revenue Factor of 1.5. (RF1 is US$3.30/lb Cu and US$1,455/oz Au). The name of the lower limit triangulation file is “FRL_HITEK_V3_25x25x15_1608v1e HIT-MII_EK-MII_Shell_06_1.5.sft” and was based on the 2017 HITEK Mineral Resource.

2018 Nena sulphide Mineral Resource estimate

<table>
<thead>
<tr>
<th>Classification</th>
<th>Tonnes (Mt)</th>
<th>Copper grade (%)</th>
<th>Gold grade (g/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indicated</td>
<td>35</td>
<td>2.35</td>
<td>0.79</td>
</tr>
<tr>
<td><strong>M+I subtotal</strong></td>
<td><strong>35</strong></td>
<td><strong>2.35</strong></td>
<td><strong>0.79</strong></td>
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<tr>
<td>Inferred</td>
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<td>1.68</td>
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</tr>
<tr>
<td><strong>MII total</strong></td>
<td><strong>52</strong></td>
<td><strong>2.13</strong></td>
<td><strong>0.63</strong></td>
</tr>
</tbody>
</table>

Mineral Resource notes:

(i) Copper cut-off grade 0.3% (total copper)
(ii) The Mineral Resource is reported on a 100% ownership basis
(iii) Totals may include discrepancies due to rounding.

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3 PanAust Limited Company Announcement dated 4 May 2017 - Frieda River Copper-Gold Project feasibility study update, new Mineral Resource and Ore Reserve estimates
4 PanAust Limited Company Announcement dated 27 November 2017 - Frieda River Copper-Gold Project Mineral Resource update for the Nena copper-gold deposit
### 2018 Nena gold cap Mineral Resource estimate

<table>
<thead>
<tr>
<th>Classification</th>
<th>Tonnes (Mt)</th>
<th>Copper grade (%)</th>
<th>Gold grade (g/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Indicated</td>
<td>11</td>
<td>0.07</td>
<td>1.35</td>
</tr>
<tr>
<td><strong>M+I subtotal</strong></td>
<td><strong>11</strong></td>
<td><strong>0.07</strong></td>
<td><strong>1.35</strong></td>
</tr>
<tr>
<td>Inferred</td>
<td>10</td>
<td>0.06</td>
<td>1.28</td>
</tr>
<tr>
<td><strong>MII total</strong></td>
<td><strong>20</strong></td>
<td><strong>0.06</strong></td>
<td><strong>1.32</strong></td>
</tr>
</tbody>
</table>

**Mineral Resource notes:**

(i) Gold cut-off grade 0.5g/t with an upper copper grade limit of 0.3%

(ii) The Mineral Resource is reported on a 100% ownership basis

(iii) Totals may include discrepancies due to rounding.
Appendix 2: 2018 HITEK Ore Reserve estimate

<table>
<thead>
<tr>
<th>Classification</th>
<th>Tonnes (Mt)</th>
<th>Copper grade (%)</th>
<th>Gold grade (g/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proved</td>
<td>604</td>
<td>0.51</td>
<td>0.30</td>
</tr>
<tr>
<td>Probable</td>
<td>761</td>
<td>0.42</td>
<td>0.21</td>
</tr>
<tr>
<td>Ore Reserves</td>
<td>1,365</td>
<td>0.46</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Ore Reserve notes:

(i) Estimated at commodity prices of US$3.30/lb copper and US$1,390/oz gold
(ii) Reported using a breakeven economic cut-off value that considers relevant modifying factors
(iii) The Ore Reserve is reported on a 100% ownership basis
(iv) Total values may include minor computational errors due to rounding.

Competent Person Statements

Mineral Resource estimates

The data in this report that relate to the HITEK and Nena Mineral Resources are based on information reviewed by Mr Shaun Versace who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM).

Mr Versace is a full time employee of PanAust Limited. Mr Versace has sufficient experience relevant to the style of mineralisation and type of deposit 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 Versace consents to the inclusion in the report of the Mineral Resources in the form and context in which they appear.

Ore Reserve estimate

The data in this report that relate to the HITEK Ore Reserves are based on information reviewed by Mr Scott Cowie who is an Australasian Institute of Mining and Metallurgy Chartered Professional, (MAusIMM (CP)).

Mr Cowie is a full time employee of PanAust Limited. Mr Cowie has sufficient experience relevant 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 Cowie consents to the inclusion in the report of the Ore Reserves in the form and context in which they appear.

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5 PanAust Limited Company Announcement dated 10 December 2018 - Updated Ore Reserve estimate for the HITEK deposit